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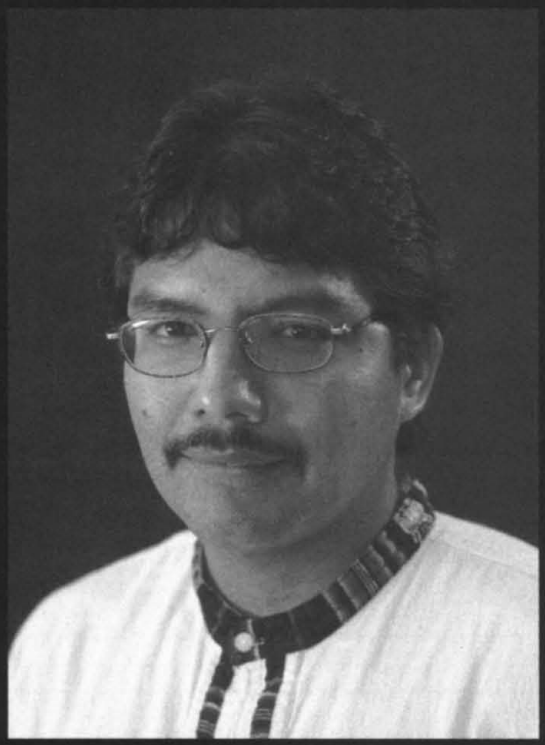

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The latest version of Axum offers extensive support of external file formats. The program opens and saves Microsoft Excel worksheets directly within Axum for analysis and plotting. It imports and exports data from and to Excel, Lotus, Minitab, Matlab, Quattro Pro, Systat, SAS 7, and SAS 8. Nonspreadsheet formats supported by the program include Access, dBase, FoxPro and Gauss96. Miscellaneous database support includes ODBC and SQL. Images created with the program can be saved in many popular formats (EPS, TIFF, GIF, BMP, WMF, Photoshop). An enhanced PowerPoint wizard allows direct creation of presentations without cutting and pasting items into Microsoft PowerPoint.

Axum offers a large gallery of two- and three-dimensional (2D and 3D) graphics. The 2D graph gallery includes line, bar, area, scatter, histograms, pie charts, box plots, polar plots, vector plots, and bubble plots. Some of the newer plot formats available in this version of Axum include Pareto diagram, a probability plot, horizontal box plots, and percentile plots. The 2D projections can be in represented in 3D as well. The 3D gallery includes 3D mesh and numerous types of contour formats. Graphs can be plotted using a combination of multiple data sets and multiple axes, allowing the display of multiple variables or lines on the same plot. Axum permits users to change plot types easily, and the adding and editing of legends, axes, shapes, and symbols are also simple to execute.

The software offers a wide collection of statistical techniques, including a correlation matrix; a frequency distribution; an analysis of variance (ANOVA); and Shapiro-Wilk, Komogorov's, and Durbin-Watson tests. Enhancements in this version allow access to functions, such as skewness and kurtosis, via a command line interface. Other powerful functions include linear and nonlinear curve fitting and multivariate regression analysis.

Axum's scripting language [version 4 of the S language (S-Plus)] makes it easy to write programs to peform repetitive and complex analyses. Due to backward incompatibility, scripts written in Axum 6 or lower have to be recoded.

The software occupies 175 MB of the free hard disk space and comes with an excellent printed manual as well as online help. The MathSoft Web site also provides a rich collection of information related to Axum.

—Krishna Pallavi and Satyam Priyadarshy

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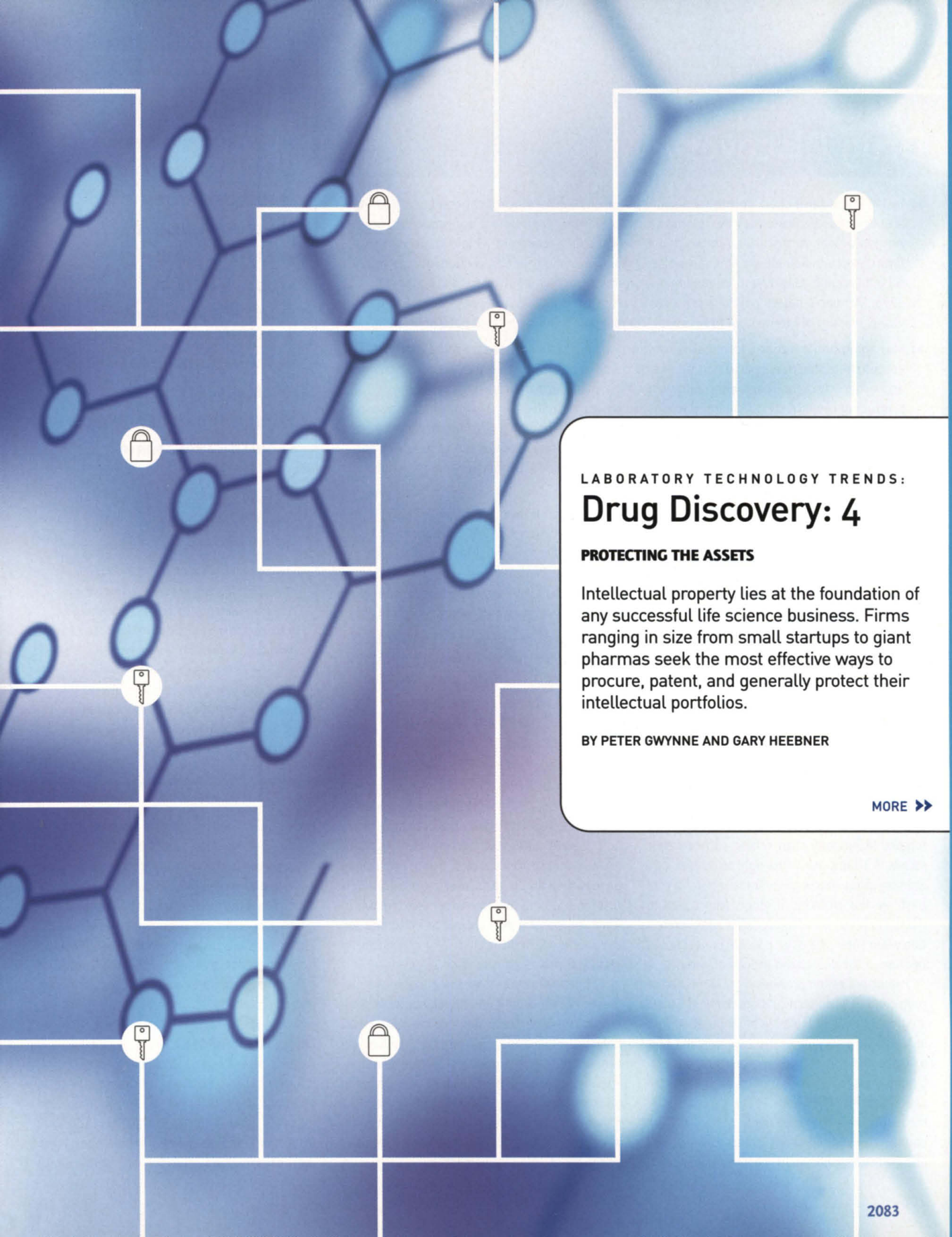

LABORATORY TECHNOLOGY TRENDS:

Drug Discovery: 4

PROTECTING THE ASSETS

Intellectual property lies at the foundation of any successful life science business. Firms ranging in size from small startups to giant pharmas seek the most effective ways to procure, patent, and generally protect their intellectual portfolios.

BY PETER GWYNNE AND GARY HEEBNER

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LABORATORY TECHNOLOGY TRENDS:

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SECTIONS:

- In 1991, a federal court decided a dispute between biopharmaceutical companies Amgen and Genetics Institute over ownership of the patent on recombinant erythropoietin in Amgen's favor. At the time, Amgen had a market capitalization of $9 billion. Today the figure exceeds $60 billion and sales of erythropoietin and related products bring Amgen $3 billion each year. Wyeth, meanwhile, acquired Genetics Institute for $1.3 billion in 1996. "Amgen's patent portfolio protects $3 billion in annual sales," says John Storella, vice president of intellectual property at **Ciphergen**. "It indicates that patents matter."
- Managing and patenting intellectual property (IP) is just as mission critical for long-established pharmaceutical companies. Big pharmas assert that protecting discoveries and other valuable information allows them to safeguard their investments in producing blockbuster drugs and to ensure a return on the large investment made in discovering, testing, and bringing a drug to market. "Nobody in the industry would deny that it's absolutely vital," says Clive Morris, head of patents, pharma and generics for **Novartis**, the multinational pharma based in Switzerland. "Otherwise drugs simply wouldn't be developed."
- The biotechnology industry claims its own benefits from IP and the patent system. American biotech firms raised over $32 billion in investments in 2000, up from $11 billion in the prior year. The trans–Atlantic market is learning quickly from the successes and failures of U.S. organizations. European firms have started to become significant players in the biotech business. The net result: more intellectual property issues for scientists, lawyers, executives, and everyone else in the industry.
- Patent protection has its critics. They argue that the system encourages corporate monopolies that work to the detriment of the research process and consumers of the products that stem from it. Nevertheless, the current system carries great weight in the life science business.

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 fourth of a five-part series. The first three parts appeared in the 15 February, 29 March, and 26 July issues issue of Science. *The final part will be published in the 1 November issue.*

WHAT IS IP?

The term *intellectual property* refers to a wide range of rights associated with inventions, discoveries, product designs, and other creations. Some of the rights, notably patents, have more characteristics of property than others, such as trade secrets. A patent grants the right to exclude others from using an invention. Trade secrets, in contrast, are less protected if others gain access to them. However, trade secrets offer some protection when patenting is not possible or not chosen because of the publication aspects of patents.

Patent protection provides a good method of protecting IP when secrecy is not required. To get a patent, an owner must file an application that includes full disclosure of the invention and how to make and use it. In many countries, this disclosure is made public 18 months after the application's earliest filing date. In the United States, the disclosure may not be made public until the patent is issued. However, patent closures will also be made public at 18 months if corresponding foreign applications have been field in early publication countries. Once the patent application is on file, disclosure will not jeopardize the applicant's ability to obtain the patent.

A patent gives the inventor the right to exclude others from making, using, and selling an invention for 20 years after the application is first filed. During the time when the patent is in force, an inventor may choose to make and sell the invention, or to license it to others on an exclusive or nonexclusive basis.

Patent protection has three basic requirements: novelty, utility, and nonobviousness. Novelty means that the invention was not known before. Determining this usually involves an exhaustive search of prior art to determine what knowledge existed in a field at the time the invention was made. Utility addresses the need for an invention to have a practical application, as opposed to being basic knowledge. The interpretation of this requirement has changed in recent years, but its essence remains. It distinguishes between basic discoveries that are more likely to be used effectively if left in the public domain and more practical technological applications that may require a patent to ensure adequate incentives for commercial development. The nonobvious test explores whether the invention represents a significant enough advance over what was previously known to justify patent protection.

DIFFERENT PURPOSES

Patents and licensing technology play critical roles for life science organizations as diverse as pharmas, manufacturers of instruments and reagents, biotechnology companies, academic institutions, and government laboratories. However, patents don't serve the same purpose for

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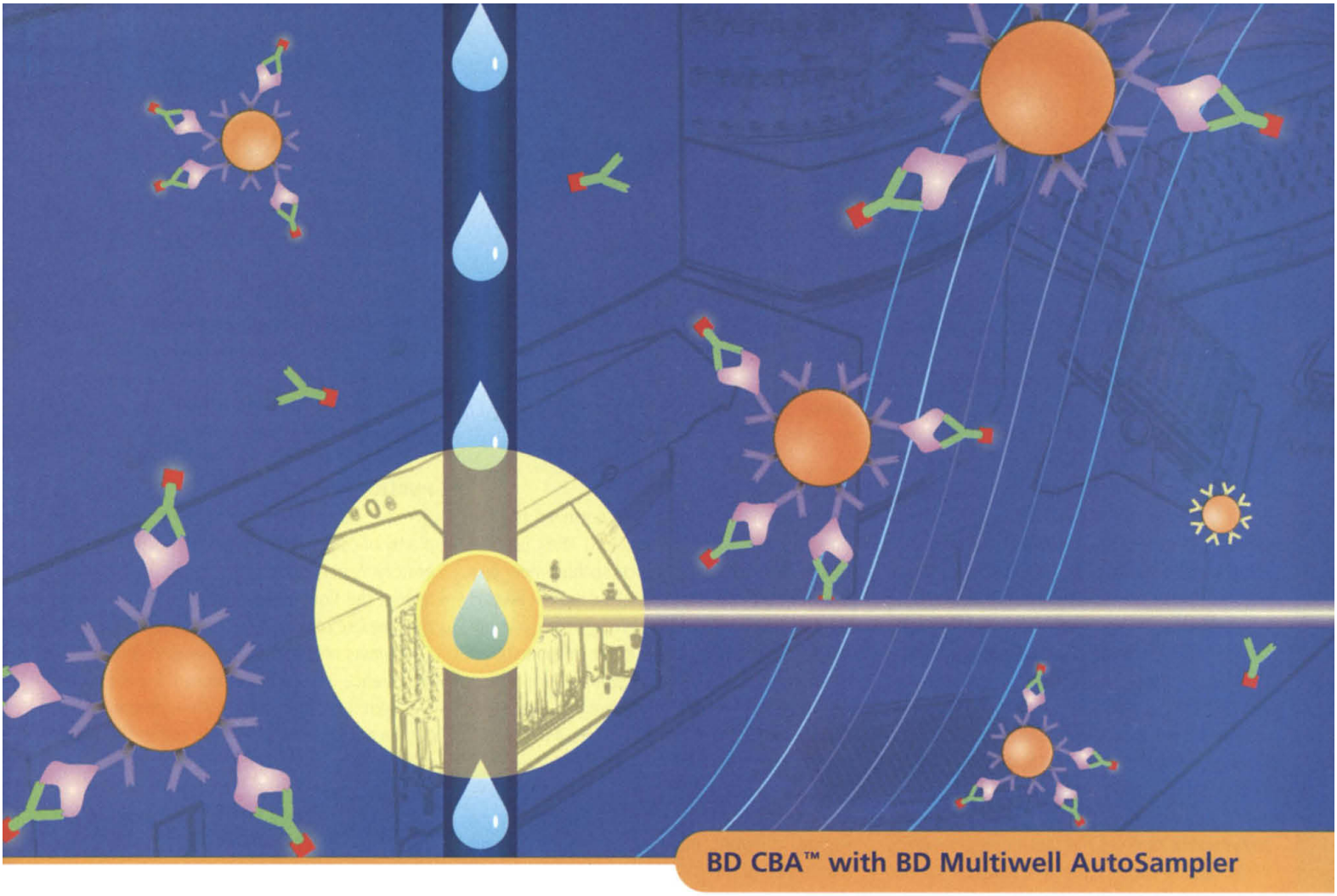

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each of these organizations. Biotechnology firms and pharmaceutical companies, in particular, value patents for very different reasons.

Biotechnology firms typically need to raise capital to fund their research operations long before they have a product to sell on the market. For these companies, developing a portfolio of protected intellectual property can be critical at an early stage in their research and development process. This portfolio will likely be critical to investors who want to see some evidence of significant earnings potential in the future. "Funding only follows a strong IP position," says Carl Feldbaum, president of the **Biotechnology Industry Organization** (BIO). "Patents have served as an asset for garnering venture capital. They provide incentives for companies and research institutions to view biotechnology as a viable market."

Barbara Caufield, executive vice president and general counsel of array producer **Affymetrix**, outlines the specific ways in which IP protection helps biotech startups. "We got our first patent in1989," she recalls. "Since then our intellectual property portfolio has done four things. Early on, when biotechnology was young, it helped value the company for investors. It also allowed the public to evaluate the company's market value. Third, it allowed people to feel confident investing in research opportunities as collaborators or users of the technology; they could look at the patent portfolio and the published articles and understand what the patents were all about. Finally, it allows companies to be compared one with another, locally and internationally."

PURSUIT OF PROTECTION

Pharmaceutical companies do not need to raise outside capital for new projects. They use the profits from existing products to fund new projects. But they do want to protect the intellectual capital that they develop through their own in-house research or by acquisitions. "We pursue all ways of protecting our drug products and take a defensive approach to protecting our research tools," says Morris of Novartis. "If we don't patent our research tools we'll get gazumped."

Companies that provide tools, technologies, and reagents for life science research have a slightly different interest in protecting their intellectual property. "It's quite important to distinguish between the two sides of our business," explains Robert Coleman, chief scientific officer of British drug discovery company **Pharmagene**. "If you're into pharmaceuticals, it would be difficult to justify spending millions and millions of pounds without the monopoly that a patent can provide. In our case, patenting is relevant to the new uses we're finding for compounds that don't have patent protection. We spend a lot of our time deciding how what our compounds do is novel and how they can be protected."

Why is protection important to technology providers? "A strong IP position provides us with a barrier to our competition. It gives us the ability to price more effectively and contributes to our margin," says August Sick, vice president of business development for **Invitrogen**. "Patent protection has enabled us to access other companies' technology, using our own IP as trading chips in discussions and negotiations," adds Catriona Hammer, vice president of intellectual property for **Amersham Biosciences**. "It also protects our R&D investments. Competitors have to work around our patents."

Plainly IP protection has a progressive effect on the life science industry. Patents permit the commercialization of new technologies; new technologies enable advances in science; and advances in science push the drug discovery process forward.

PUBLIC SKEPTICISM

On the other hand, the patent system stirs plenty of controversy inside and outside the laboratory. Some researchers argue that patents restrict the flow of new technology by limiting the free use of certain protected research tools. Consumers of drugs and other end products of life science echo that criticism. "There's a general sentiment that patents are inherently bad for the public as they drive up prices; the public sees a drop in prices when patents expire," explains Laurie Axford, counsel specializing in intellectual property for life science and health care at law firm **Morrison and Foerster, LLP**. "They believe that patents prevent things entering the marketplace."

Ciphergen's Storella agrees. "There is perpetual tension between the desire of technical companies to get broad IP rights on their inventions and the public's suspicion of those efforts," he says. "Companies always try to get broad patent claims and to extend their patents. The public sees patents as driving up costs and permitting monopolies."

BIO's Feldbaum attributes some of the public criticism to misunderstanding of the patent system. "Most legislators don't know what a gene is," he states. "Many people don't know what a patent is. When you get them together you can have trouble."

Members of the industry argue that IP protection offers benefits to consumers in the laboratory and the general public. "There are two classes of user: the product end user – the consumer – and the technical end user – the researcher," says Axford. "The benefit to the researchers is the classical tradeoff for obtaining patent protection. Once the patent becomes effective, companies can teach researchers to use it. Researchers can then combine the teaching from more than one field to contribute to drug design. That ultimately benefits the consumer."

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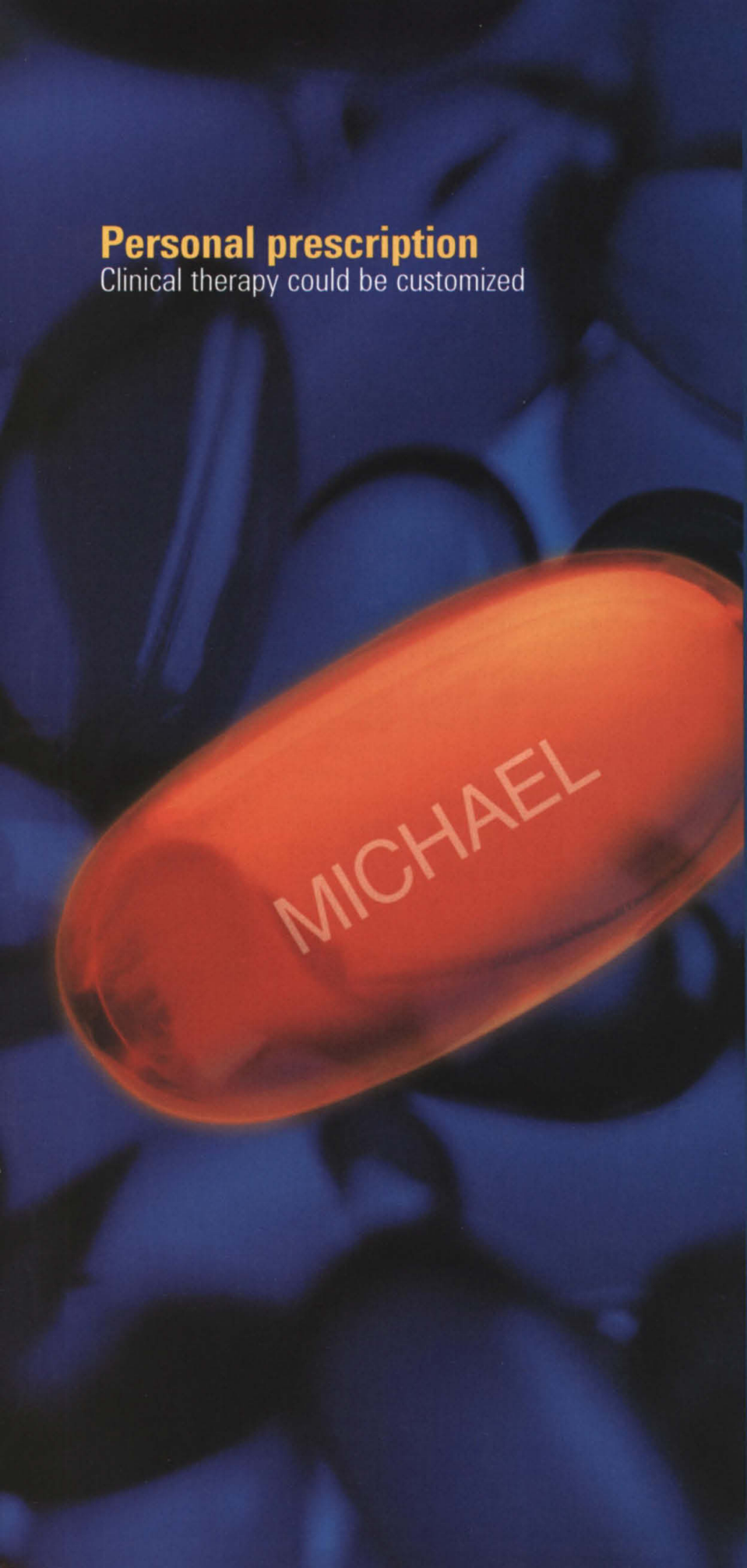

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Feldbaum uses numbers to make the same point. "As a result of the issuance of patents, 130 vaccines and therapeutics and 350 products have moved into the pipeline," he says. "It has also produced over 500 diagnostic tests for various diseases."

A DELICATE BALANCE

Jim Haley of **Fish & Neave**, a New York City law firm whose IP practice dates back to the Wright Brothers, amplifies that point. "From the standpoint of John Q. Public, there's value in having discoveries available to everyone," he says. "But there has to be some balance between encouraging disclosures to promote advances in technology and not allowing people to use patent inventions for limited patent terms."

In other words, the system should maintain a delicate balance between protecting inventors' rights and making research tools and inventions available to as many researchers as possible. The business of basic research has relied heavily on past discoveries that researchers left in the public domain. On the other hand, commercial development of certain tools and technologies would not present good investments to a company that could not protect for some limited time the inventions developed by their scientists. Such potential research tools might go undeveloped and as a result, not be made available for researchers to use. "You have to think of patents being the cost of innovation," says Ciphergen's Storella. "Users may be unhappy that patents reduce their ability to use products or increase costs. But there's very little chance that the technologies will get out there without patent protection. Technology has to exist before it's used."

Those arguments come against the background of a legal system with its own difficulties in interpreting IP laws. "There is not much scientific background in genetics in the district courts, circuit courts, or even the Supreme Court," Feldbaum says. "That can lead to inconsistent decisions." In response, BIO has set up what it calls its Biojudiciary program. The goal: to provide federal judges and their law courts with accurate information on life science.

Solid information is critical because intellectual property law doesn't stay static. Lawyers and scientists agree that several patents issued early in the biotechnology revolution were overly broad. "One of the big issues that I see involves the quality and validity of patents," says Ed Yoshida, senior director of legal affairs at **Rosetta Biosoftware**. "The existence of patents of questionable validity presents a problem when they are in an area in which a company needs a license. The cost of patent litigation usually runs into the millions of dollars."

BROAD VS. NARROW

Not surprisingly, life science companies make their patent claims as wide as possible. "They typically try to patent a new target and any drugs that might interact with it," says Novartis's Morris. "The problem is that the drugs may not yet have been discovered." Increasingly, though, the courts and patent offices require patentees and patent applicants to prove real world, credible use for genes and other items they want to patent. "You see courts holding claims too broad as applicants try to claim the future before it happens," says Haley of law firm Fish & Neave. "Reach-through claims that try to cover products that have not been invented yet defeat the basic bargain of any patent system – teaching how to make and use the invention in exchange for a limited monopoly to exclude others from using it during the patent term."

European patent organizations have come to a similar conclusion. "We can no longer obtain patents on pure DNA sequences," says Michael Schneider, patent and trademark attorney in the Munich office of pan-European law firm **Hammonds**. "You have to indicate the function at the filing date."

Another bubbling issue concerns the ability of the **United States Patent and Trademark Office** (PTO) to deal with growing numbers of increasingly complex patent applications in life science. This year alone the office expects to receive about 340,000 patent applications, adding to the backlog of over 400,000 applications waiting to be processed. In June, the office announced a series of changes in its operations that would substantially reduce the time required to obtain a patent. The essence of this change is that approved outside vendors will carry out the initial search, currently conducted by the PTO.

In addition, says Axford of Morrison and Foerster, "the PTO is undertaking to fund examination of more complex patents. You'll pay a premium for complex patent applications – those with numerous claims, for example. That additional revenue will hopefully give examiners more time to consider the applications." That may prove difficult. "I recently met with patent commissioner James Rogan to talk about keeping PTO funds in the PTO," says BIO's Feldbaum. "Congress has got into a bad habit of using those funds as a Congressional slush fund."

Europe has its own unique patent problems. "One issue," says Pharmagene's group legal counsel John Murphy, "is the failure of the European Union to agree on proposals for a community patent, with economies that benefit smaller companies, and to bring some consistency in how patents are enforced and interpreted. A European patent today can be interpreted and enforced in different ways in the EU's various member countries."

OBTAINING THE IP

To arrive at a patent or licensing situation, a company must first obtain usable IP. The obvious location for gathering IP is the corporate research laboratory. But for most life science firms, and particularly the larger ones, that no longer suffices. Even giant pharmas recognize that their own research teams can't cover the scientific waterfront. So they set out to obtain extra IP and the products and technologies that they protect through licenses, partnerships, mergers and acquisitions, and private funding of R&D in universities and other research institutions.

Keeping abreast of new technologies and developments relevant to drug discovery and biotechnology puts tough demands on life science organizations' researchers and lawyers. Keeping current with technical advances presents challenge enough. Understanding the nuances and legal implications of the intellectual property that surrounds the discoveries escalates the difficulties. Even internally generated IP must be analyzed for patentability. "As we come out with new products we hope to see

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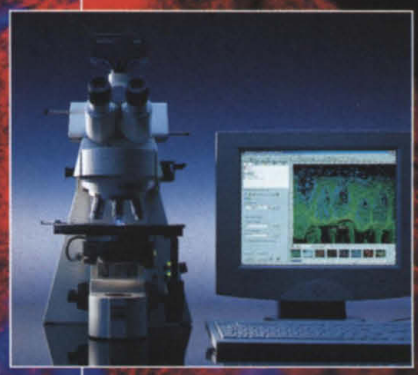

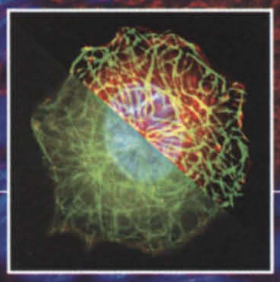

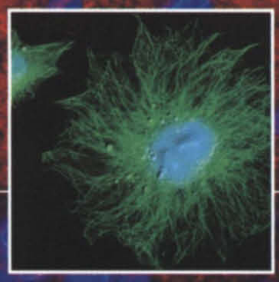

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Drug Discovery: 4

what type of IP is out there already so that we don't infringe," explains Alan Hammond, Invitrogen's chief intellectual property counsel.

Seeking IP from outside sources puts further demands on corporate scientists and lawyers. Companies such as Amersham Biosciences, Invitrogen, and **Eppendorf** have created departments to monitor developments in key fields and license new technologies for further development and commercialization. "We have two systems," says Hammer of Amersham Biosciences. "A business development team looks for new technology to bring in. We also screen other potential opportunities that come to us, often following conferences and similar events. The latter ideas are considered by R&D. Those that look interesting are reviewed at a meeting that also involves commercial and business development representatives. The IP team is involved in both aspects of the work."

Invitrogen, meanwhile, has developed a licensing model for "following the money," according to Sick. "We draw from the assumption that where money is being invested in R&D and technology, IP will follow," he says. "We have a core group of people who send reports to me on scientific leaders around the world. We want to be first to discover new technology and negotiate for it. Then we have an established process to assess its commercial value based on our business plan."

Companies can license a patented technology or invention on an exclusive or nonexclusive basis. In some cases, the inventor may benefit from granting an exclusive license to an organization interested in bringing a new technology to market. That applies particularly when the inventor seeks an unusually large investment. Securing sole rights to the product that will ultimately be brought to market reduces the investing firm's financial risk.

How important is licensing? "Virtually no biotechnology company can go from concept to market without some licensing deal," says Axford of Morrison and Foerster. "We always suggest that a thorough due diligence be performed to determine what sort of protection you obtain and what benefits and costs are involved in licensing the technology."

ACQUISITIONS AND PARTNERSHIPS

As an alternative to licensing IP with strategic value, big pharmas frequently buy it via mergers or acquisitions. For example, **Merck** bought **Rosetta Inpharmatics** to obtain a leading edge capability in drug discovery and bioinformatics. Now, says Yoshida, "the external scientific affairs group at Merck identifies new technologies outside and inside the company."

Novartis took a similar view. "Key IP was involved in our acquisition of Systems and Genetic Therapy, Inc., as platforms for going into new areas of cell therapy and gene therapy," Morris says. "If you're going into a new area and you need something to kick-start the whole project, acquisition is certainly a way to go about it."

Smaller life science firms have started to work together to develop new products. **Spotfire** and **Rosetta Biosoftware**, itself a joint venture of Merck and Rosetta Inpharmatics, jointly announced a three-year agreement to integrate their flagship products. The alliance gives customers connectivity between Rosetta's Resolver system and Spotfire's DecisionSite, an analytic application for genomics. Rosetta Biosoftware also offers customized integration of the two products through its professional services business, tailored to meet specific gene expression analysis requirements of mutual customers. The integration of both products will allow researchers to explore gene expression data within a single data access and analysis environment. Customers shared by the two partners include **Abbott**, **Aventis**, **GlaxoSmithKline**, **Immunex**, Merck, and **Monsanto**.

Last year Amersham Biosciences and **Aurora Biosciences** combined forces to commercialize green fluorescent protein (GFP), a technology used to accelerate drug discovery and development. GFP is produced when the luminescent jellyfish *Aequorea victoria* is stimulated. Incorporated into cellular DNA, it is produced by the cell. Then, following laser excitation, it shines with a bright green fluorescent glow that researchers can use to track proteins in living cells. Already used in research on cancer and Alzheimer's disease, GFP can dramatically advance drug discovery by enabling researchers to study real-time gene expression and protein migration and interactions. The commercial agreement will allow both Amersham and Aurora to broaden access to GFP for pharmaceutical companies, biotechnology companies, and academic research institutions.

ACADEMIC INTERESTS

A new source of life science IP has emerged in recent years: academic research. Several companies have found that funding academic scientists' projects can bring commercially promising inventions and technologies on board faster than other approaches. "The pharmaceutical and biotechnology industries are beginning to set themselves up to integrate with the research universities in a proactive way," says Michael Douglas, associate chancellor at the Center for Technology Management of **Washington University, St. Louis**. These initiatives stem in large part form the Bayh-Dole legislation of 1982 that gave universities ownership of IP that stemmed from federal funding. According to Douglas, that has resulted in about $3 trillion worth of sales by pharmas and other members of the life science industry.

The approach can benefit individual researchers who have an interest in helping to develop a new technology but don't want to work for a commercial organization. Funding from a company can also allow scientists to pursue lines of research that might be out of the mainstream of their main research efforts. In return, the firm providing the funds can gain access to discoveries that would otherwise have eluded it.

Companies put a lot of effort into setting up collaborations with academic scientists. "Our company and others frequently engage in R&D collaborations with universities that involve us in providing money and equipment in return for research and the opportunity to license technology that emerges from it," says Storella of Cipher-gen. "We have a very large collaboration practice scientifically and legally," says Wei Dhou, a patent attorney with Affymetrix. "We collaborate with every major academic institution, such as the Whitehead Institute, Harvard, and Stanford."

Julian Burke, chief scientific officer of British firm **Genetix**, notes the win-win character of industrial-academic collaborations. The firm's

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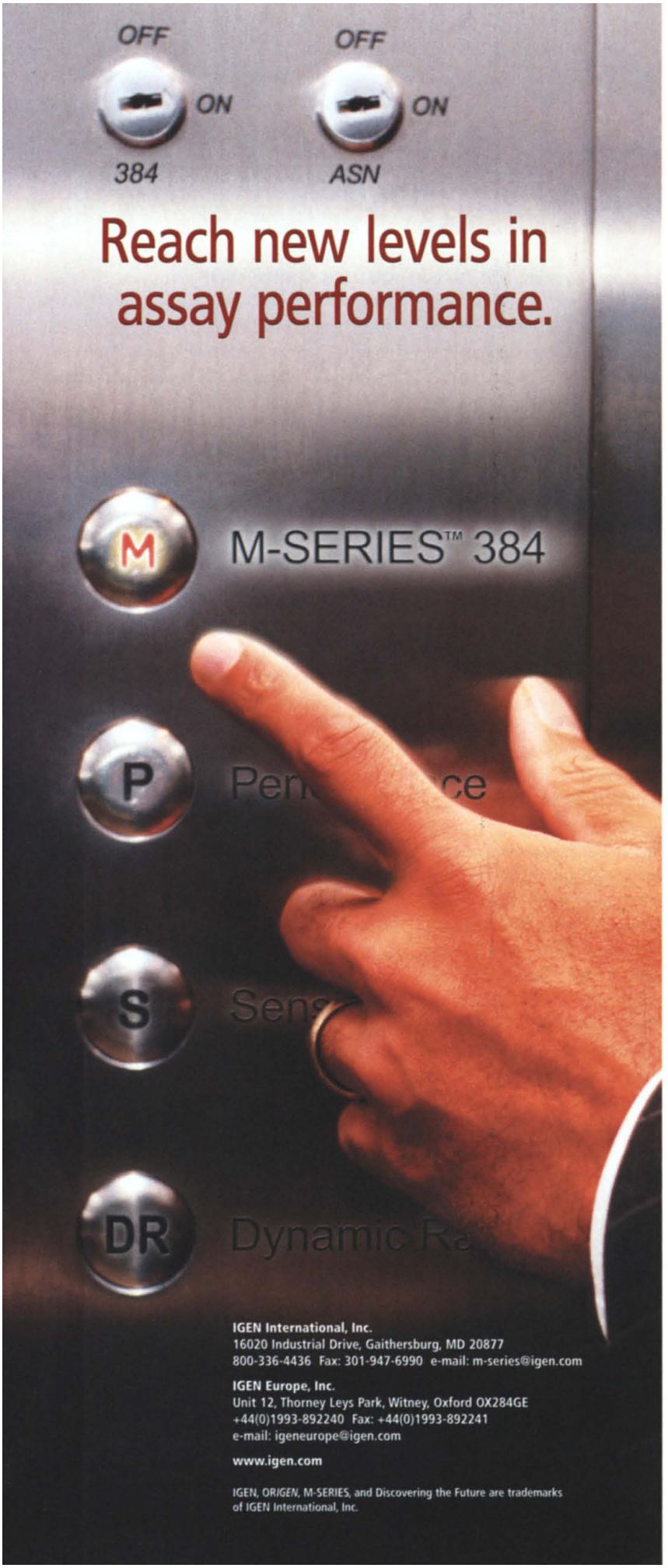

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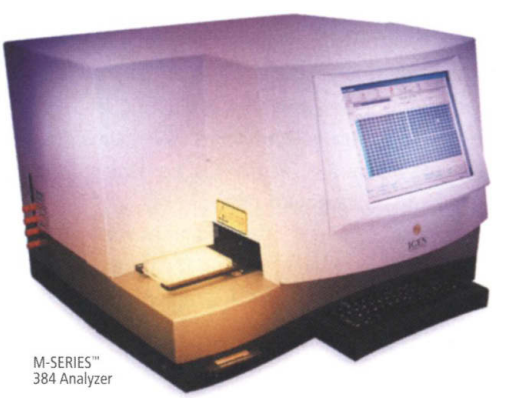

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Gelpix product for cutting spots in two-dimensional gels is based on technology licensed from Germany's **Max Planck Institute**. "It's highly likely that if we hadn't licensed the IP the institute wouldn't have been able to incorporate it into a product," Burke points out.

THE ART OF TECH TRANSFER

Several universities in the United States and elsewhere have developed specialized centers to help organize their intellectual property and to coordinate the transfer of technology from the university researcher to a company interested in licensing and developing it. The groups have the advantage of knowing how to deal with businesses and how to appraise the market value of different types of IP – abilities that even the most business oriented scientists lack. Most technology transfer centers have the goal of promoting the transfer of the university's IP for society's use and benefit while providing some income to the university.

While small compared with academic research grants, this income is hardly negligible. "We're measured on the percentage of licensing revenues that flows into the university as a function of the research dollars expended," explains Douglas of Washington University, which generates about 140 new invention disclosures each year. "Top tier universities tend to have a return on research of about 8 percent to 15 percent. Over all universities the return is about 2 percent."

Research universities go about evaluating IP in much the same way as companies. "We have a process by which the faculty disclose their inventions to us replete with data books," says Douglas. "We have lawyers on staff and as consultants. Then it's an issue of getting the patent process started. After that it's the job of the technology transfer office in effect to become a management consultant in terms of finding business partners and financial sources to develop the technology. It's very much a mating ritual that has to be followed."

The ritual can prove difficult. "There's a perception that the value of academic intellectual property is worth more than companies are prepared to pay for it," says Burke of Genetix.

Some analysts express concern that moves toward commercialization might prejudice universities' academic mission. "The divide between the academicians and the more entrepreneurial types is an issue that all research universities now face," Douglas says. "But our activities give the university the opportunity to recruit and retain top line faculty, many of whom are very entrepreneurial."

INSIDE OR OUTSIDE ATTORNEYS?

While academic entrepreneurs generally have lawyers on tap, companies must find their own. Executives must make one key decision: Should they have an in-house legal team or rely on a specialist law firm? "When a company first starts out it probably does not need an in-house patent lawyer; there's just not enough work to justify it," says Haley of Fish & Neave. "But as it grows there is a huge advantage in having a lawyer in-house. The lawyer can work with business managers and scientists to act as a conduit for IP issues."

Axford of Morrison and Foerster outlines the considerations that should go into the decision. "An in-house attorney has a much closer association with the scientists, which facilitates the patenting process," she explains. "Also, outside attorneys are expensive. But in-house attorneys can lack objectivity. When I managed the IP assets of a biotech firm I sometimes found it hard to render unpopular opinions." As a happy medium, she suggests that firms with fewer than 100 employees should hire a patent coordinator or patent agent with a scientific background to work with outside attorneys.

The larger the firm, the more it is likely to need its own internal legal team. "We act as a law firm with a single client: Affymetrix," says Caufield. Even those teams need outside help in some specialist areas. "We go outside for litigation because it's very resource intensive," says Invitrogen's Hammond. "The more specialized and resource intensive an issue or dispute it, the more likely outside counsel will become involved," advises Haley. "In the United Kingdom," says Adrian Spooner a solicitor in Hammonds's London office, "litigation will be taken on by external counsel."

QUALIFICATIONS FOR IP

Whether they work inside or outside a life science company, lawyers who provide IP need scientific as well as legal qualifications. "You can't become a member of the patent office in the U.S. without a scientific or engineering background," explains Fish & Neave's Haley, who has a Ph.D. in chemistry. "A science background is less important for courtroom practice. But there are many more Ph.D.s in the firm now than when I joined it 25 years ago." Europe has, if anything, tougher requirements for its patent specialists. "In any European country a patent attorney or patent agent needs a scientific background," says Hammonds's Schneider, who has a biochemical background. Life science firms set their own criteria. "I don't think we would recruit someone who didn't have a science degree to our intellectual property department," says Hammer of Amersham Biosciences. "You need to understand the issues scientists face and to know the right questions to ask."

Fostering R&D on new technologies and tools has become critical for life science companies, especially if they are to produce all that investors expect. Proponents of the current patent system argue that this cannot happen without the protection of intellectual property and patents. No smart investor, they say, would invest in a relatively risky opportunity with a low expected return. And no pharma would spend hundreds of millions of dollars to bring a drug to market if another company could simply copy the new drug and sell it at a cheaper price. With adequately protected IP, companies will continue to invest in the commercialization of new research tools.

That view is not universal. Opponents of the status quo in IP protection argue that the system stifles as much innovation as it permits. The argument over the extent of the patent system will plainly continue for several years to come. Meanwhile new research tools, technologies, and products, mostly protected by the current system, will enable scientific advances of the future.

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.

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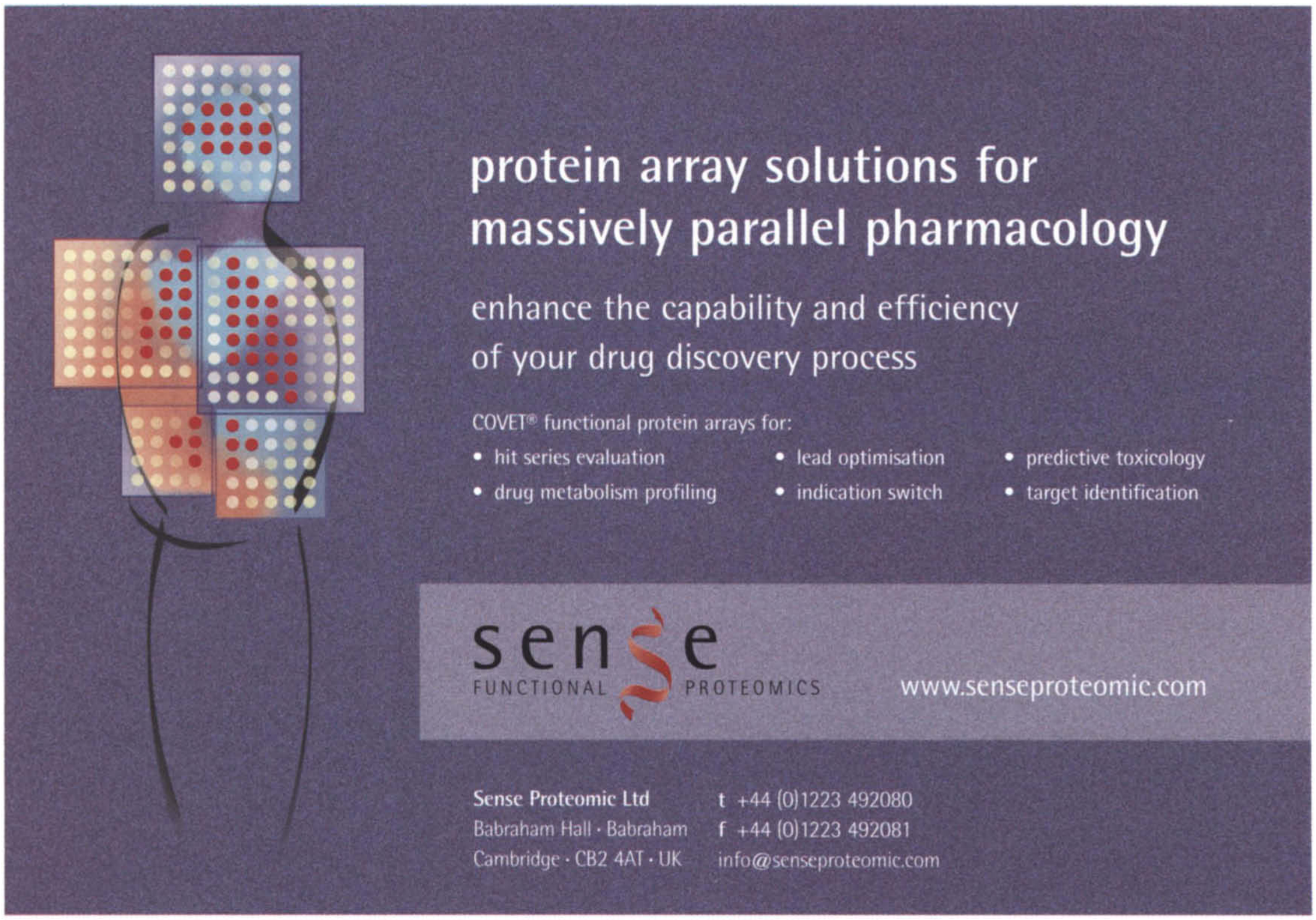
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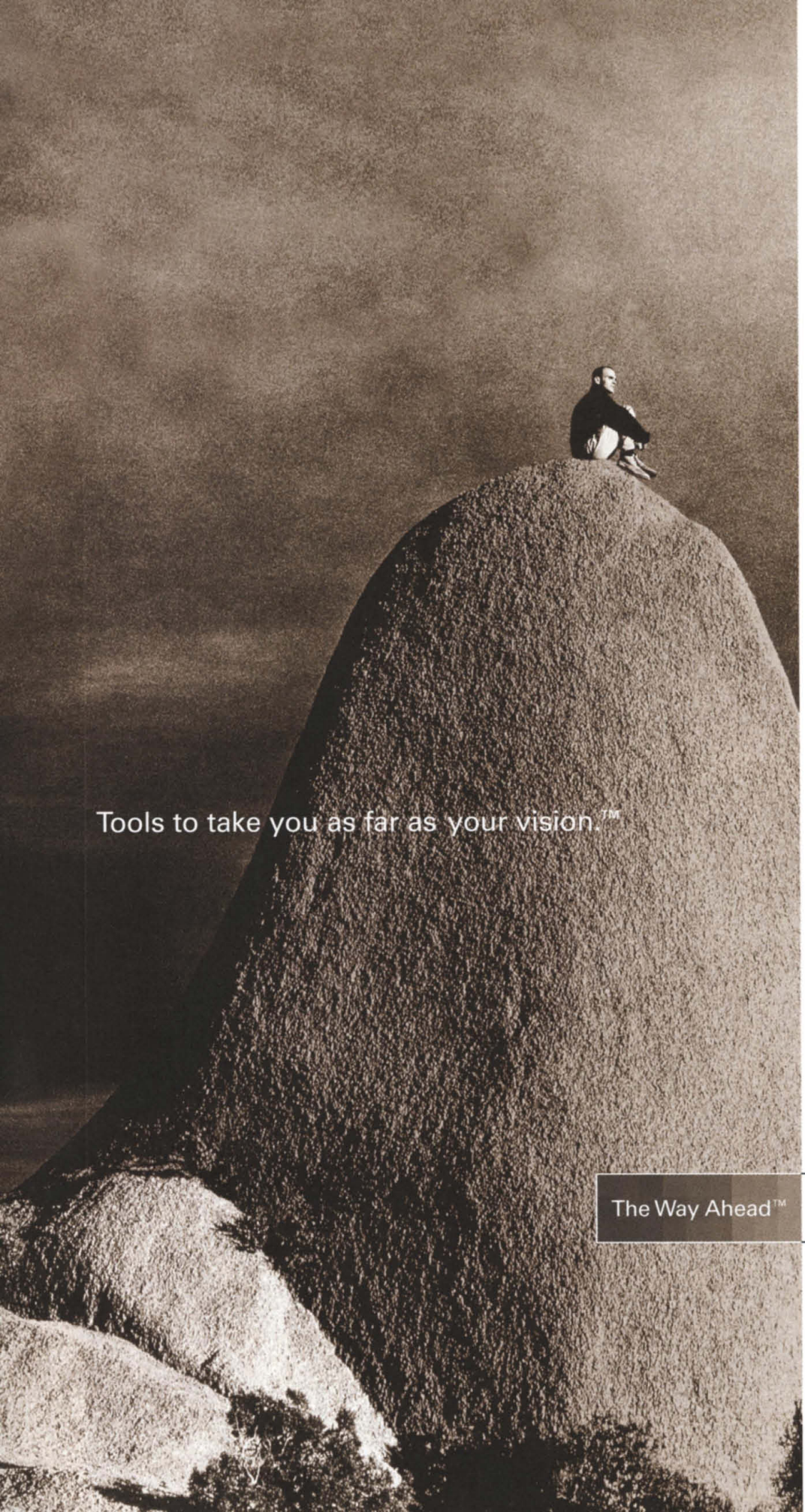

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TOP EMPLOYERS SURVEY

Companies of Choice

A survey sponsored by SCIENCE's Office of Publishing and Member Services asked life scientists which biotechnology and pharmaceutical companies made the best employers and why. Here are the results. **BY PETER GWYNNE**

During the past decade, the life science industry has undergone a period of rapid and sustained change. Biotechnology companies have started to play greater roles in drug discovery. The larger and more ambitious members of that cadre have even started to compete directly with pharmaceutical firms in developing diagnostics and therapeutics. At the same time the large pharmas, conceding that they can no longer stay on the cutting edge of all facets of drug discovery, have begun to contract out research projects and technological developments to partners in the biotechnology business. They have also undergone a series of mergers in the effort to improve efficiency.

Those changes in the corporate environment have occurred against the background of a revolution in life science research. The public and private efforts to sequence the genomes of humans and other creatures have opened the way to an era of drugs and diagnostic processes based on laboratory manipulation rather than natural products. That's critical in two ways. It promises to refill drug pipelines emptied in recent years as blockbuster drugs have outlived their patent protection. And it provides the opportunity for the emergence of personalized medicine, in which scientists will design drugs for specific classes of patients and their medical conditions instead of taking the one-size-fits-all approach common today.

Some factors don't change, however. The reputations of life science companies remain powerful forces in attracting the best and the brightest employees. Given the speed of the scientific revolution, that's critical when it comes to recruiting research scientists.

Science's Office of Publishing and Member Services recently commissioned a survey of scientists in the pharma and biotech industries to determine which companies in those two worlds enjoy the highest reputations. In the following pages we name the top 20 employers and pinpoint the reasons why they came out so high in the listing. We also outline the corporate attributes that scientists regard as most important and outline how top firms maintain their strengths in those attributes.

RATINGS ON ATTRIBUTES

Hughes Research Worldwide (HRW), a work culture research and consulting firm based in Rockville, Maryland, conducted the Internet based survey in April 2002. The sample consisted of *Science* readers and subscribers employed in the pharmaceutical, biotechnology, and biopharma industries in the United States and Western Europe. Potential respondents received an e-mail invitation to complete the survey from Donald Kennedy, Editor-in-Chief, *Science* magazine. They were given a unique, one-time-use URL to ensure that they could vote only once. Nonresponders received subsequent reminders before field work closed on the 17th day.

Once at the site, respondents were asked to identify the type of business that employed them and to cite individual companies with which they were familiar and chose to rate. Next, the survey asked them to

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Senior Level PhD Scientist - Assay Development/High-Throughput Screening - 4286HS

In this role, you will provide scientific leadership in the evaluation and development of new assay technologies for high-throughput screening. You will work closely with scientists throughout the various therapy areas of Schering Plough to bring novel therapeutic targets into HTS. To qualify, you must possess a PhD with a strong background in pharmacology or biochemistry, at least 7 years in pharmaceutical drug discovery, and experience in HTS technologies. Experience in cell-based HTS assays is highly desirable. Candidates with more extensive experience are also encouraged to apply. Excellent communication and collaboration skills are required.

Senior Level PhD Scientist - Oncology Research - 4287HS

In this role, you will provide scientific leadership in the molecular mechanisms of cancer. Areas of particular interest include: (1) biochemistry of signal transduction pathways involved in tumor cell proliferation and apoptosis; (2) development and utilization of molecularly-defined (transgenic or knock-out) animal models of cancer; or (3) expertise in high through-put target validation using RNA interference or antisense approaches. To qualify you must possess a PhD or MD/PhD with a strong background in molecular mechanisms of cancer. Post-doctoral research experience and at least 5-7 years of independent research experience in an academic or industrial setting are required. Expertise in the application of biochemical, molecular biological and/or in vivo modeling approaches to oncology research also required. Familiarity with small molecule drug discovery and evaluation would be an asset, along with strong communication and collaboration skills as well as a productive publication record.

Senior Level PhD Scientist - Antiviral Research - 4288HS

In this role, you will provide scientific leadership in the Antiviral area, which will include participation/supervision of an interdisciplinary research team, dedicated to the discovery and development of antiviral compounds/therapeutic proteins. To qualify you must possess a PhD in Molecular Biology, Microbiology, Biochemistry, Immunology or suitable field and 7 + years of post-graduate research with prior team management experience along with expertise in molecular virology and/or viral immunology. Candidates with prior research experience in HCV/HIV or related viruses are preferred, along with previous experience in drug discovery and pharmaceutical industry experience. This position requires overseeing the activities of a team of highly talented scientists; therefore applicants should possess prior scientific management experience and excellent leadership skills along with a productive publication record.

Senior Level PhD Scientist - Central Nervous System Research - 4321HS

In this role, you will provide scientific leadership to a group engaged in assay development, identification/in vitro pharmacological characterization of drug candidates, and validation of novel targets for the treatment of various CNS diseases. To qualify, you must possess a PhD with a strong background in molecular pharmacology or biochemistry and at least 5 years of independent research experience in an academic or industrial setting. Expertise in radioligand binding techniques, signal transduction assays, high throughput assay development, and all common molecular biology techniques is essential. Excellent oral and written communication skills, the ability to work in a team setting and a strong publication record are also required.

Senior Research Pathologist - 304HS

As a member of our multidisciplinary team, you will research mechanisms of drug efficacy and toxicity; evaluate drug safety measures; and develop strategies for the registration of superior new therapies worldwide. For this position, you must be a DVM/VMD (a PhD in Pathology and board eligibility/certification by the American College of Veterinary Pathologists desirable). Anatomic pathology experience in investigative and toxicologic pathology and various toxicity studies, including chronic toxicity and carcinogenicity studies, is highly desirable.

In vivo Toxicology Research Associate - 3691HS

In this role, you will conduct and oversee pre-clinical drug safety studies in a GLP environment. This includes ensuring compliance with protocol design and regulatory requirements in dosing, drug preparation and toxicity; collecting and tabulating data using applicable computer systems; and assisting in data verification and evaluation. To qualify, you must have a BS or MS in Biological/Animal Sciences and 5+ years experience conducting and/or overseeing pre-clinical drug safety studies in a GLP environment. You must also have strong oral/written communication skills. Supervisory experience preferred. AALAS certification desirable.

BS/MS Research Associate - Cardiovascular Pharmacology - 4279HS

As a member of our discovery research team, you will test novel compounds in in-vivo and ex-vivo models on various projects in the areas of thrombosis and heart failure. You'll also plan, schedule and analyze study data and communicate findings to the group. To qualify, you must have a BS in Biological Sciences and 4+ years of related research or experience (or) an MS with 2+ years experience. A strong understanding of cardiovascular physiology and pharmacology in the areas of thrombosis and heart failure is essential, as are surgical skills and the ability to evaluate in-vitro and in-vivo platelet function and thrombosis. You must also have excellent oral/written communication skills.

PhD Scientist - CNS Behavior - 4078HS

As a member of a core CNS behavior group, you will establish a team to develop novel pre-clinical tests of psychiatric disorders to support the assessment of novel drug targets; perform and oversee pharmacodynamic tests to study drug action; and work within multidisciplinary project teams to discover novel CNS-based therapeutics. To qualify, you must have a PhD in a Neuroscience and/or Pharmacology and 1+ years of postdoctoral experience, preferably in a drug discovery environment. A proven commitment in applying behavior techniques to study drug action is essential. You must also have excellent oral/written communication and interpersonal skills.

PhD Scientist - Cell Biologist (Cell-Based Assays) - 3783HS

In this role, you will provide leadership in the development of cell-based assays involving calcium and membrane potential responses, fluorescence-based reporter genes, and other miniaturized assays for GPCR and other HTS targets. You will also play a major role in evaluating and disseminating new assay technologies to scientists in all therapeutic areas of Schering-Plough. To qualify, you must have a PhD, extensive background in pharmacology or biochemistry, and 2+ years experience in a pharmaceutical drug discovery program. Experience in HTS technologies (i.e., FLIPR, FP, ECL, MS) and high-content screening will be helpful. A background with cell-based HTS or large quantity cell production is highly desirable.

Principal Engineer - Biotechnology Development - 3662HS

In this role, you will supervise and direct scientists, engineers, operating staff and serve as backup supervisor to the Purification Scale-Up and Production groups. Related responsibilities include providing technical leadership to the group; managing projects; preparing and reviewing regulatory submission documents (HRD, BLA, etc.); and ensuring GMP compliance. You'll also implement technology development and scale-up and provide leadership in product technology transfer. To qualify, you must have a PhD in Biochemical Engineering or a related field and 6+ years of experience. Extensive background in biochemical engineering (fermentation, cell culture and downstream processing) and a solid understanding of protein/virus characterization and scale-up related principles are essential, as is awareness of clinical/GMP manufacturing guidelines. You must also have excellent communication skills.

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CNS Obesity Research - 4071HS
Immunology - 4072HS

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Schering-Plough
Research Institute

TOP EMPLOYERS SURVEY

Companies of Choice

Top Twenty Employers

Rank	Employer (Global Headquarters)	Three Top Attributes		
1	Genentech, Inc. (South San Francisco, CA)	Does important, quality research	Innovative industry leader	Clear vision toward future
2	Millennium Pharmaceuticals, Inc. (Cambridge, MA)	Innovative industry leader	Does important, quality research	Work and personal values are aligned
3	Johnson & Johnson (New Brunswick, NJ)	Socially responsible	A good financial investment	Work and personal values are aligned
4	Eli Lilly and Company (Indianapolis, IN)	Does important, quality research	Loyal employees	Work and personal values are aligned
5	Pfizer, Inc. (New York, NY)	A good financial investment	Clear vision toward future	Innovative industry leader
6	Merck & Co., Inc. (Whitehouse Station, NJ)	Does important, quality research	Innovative industry leader	Socially responsible
7	Monsanto Co. (St. Louis, MO)	Clear vision toward future	Innovative industry leader	Loyal employees
8	Amgen, Inc. (Thousand Oaks, CA)	A good financial investment	Clear vision toward future	Does important, quality research
9	Pharmacia Corp.* (Peapack, NJ)	Clear vision toward future	Does important, quality research	A good financial investment
10	AstraZeneca International (London, England)	Loyal employees	A good financial investment	Work and personal values are aligned
11	Novartis Pharma (Basel, Switzerland)	Does important, quality research	Innovative industry leader	Clear vision toward future
12	Biogen, Inc. (Cambridge, MA)	Clear vision toward future	Provides job security	Does important, quality research
13	Chiron Corp. (Emeryville, CA)	A good financial investment	Does important, quality research	Socially responsible
14	Bayer AG (Leverkusen, Germany)	Provides job security	Loyal employees	Socially responsible
15	Schering-Plough Corp. (Kenilworth, NJ)	Socially responsible	Work and personal values are aligned	Provides job security
16	Abbott Laboratories (Abbott Park, IL)	A good financial investment	Socially responsible	Clear vision toward future
17	Wyeth Pharmaceuticals (Collegeville, PA)	A good financial investment	Does important, quality research	Clear vision toward future
18	Aventis Pharma AG (Frankfurt, Germany)	Work and personal values are aligned	Loyal employees	A good financial investment
19	GlaxoSmithKline (Uxbridge, Middlesex, England)	Does important, quality research	Socially responsible	Innovative industry leader
20	Roche (Basel, Switzerland)	Does important, quality research	Work and personal values are aligned	A good financial investment

Terry E. Smith

The 20 companies with the best reputations as employers, according to respondents in the survey undertaken for *Science's* Office of Publishing and Member Services.
*After the survey was completed, Pfizer Inc. announced that it will acquire Pharmacia.

rate those employers on 42 specific attributes organized in seven categories: corporate image; financial prowess; leadership and direction; work culture/environment; work/life balance; academics and collegial exchange; and compensation and benefits. Individuals were to base those ratings on their personal perceptions. Finally, the survey sought respondents' opinions on the future of their industry and details of their own career plans. HRW and *Science* guaranteed the anonymity of all respondents and responses.

A total of 685 individuals responded to the survey, 565 based in the United States and the remainder in Western Europe. More than 90 percent work in private industry, including 57 percent for pharmaceutical companies. The respondents specialize in a wide variety of disciplines. About three quarters have a Ph.D., M.D., or M.D.-Ph.D. A similar proportion is over 35 years old. Close to 60 percent say that they have established their careers but are still moving upward, while 12 percent are just establishing their careers, and 18 percent have reached their likely career peak.

To assign a unique ranking score for each company mentioned in the study, HRW used a mathematical process based on the attributes that most actively distinguished the firms' ratings. The process had the

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Increased research efforts in Research Area CNS&Pain Control at site Södertälje

Post-doctoral scientists for Proteomics & Peptide analysis

The Proteomics & Peptide Analysis group at the Department of Cell Biology & Biochemistry will recruit post-doctoral scientists for biomarker discovery and for protein analysis by mass spectrometry. The group of 8 persons has the responsibility for "proteomics" and analysis of endogenous peptides in our cardiovascular & gastrointestinal research areas. We are using the latest technology covering activities all the way from target identification to documentation of drug effects in clinical samples. A new activity is to set up a joint capability for biomarker discovery & analysis together with Department of Experimental Medicine.

Biomarker Discovery

Mölndal, Sweden

A position is open for 2 years for the development of our platform for biomarker discovery. The first task for the successful applicant will be to compare available technologies, which can be used for finding novel markers of disease and effects of treatment in clinical samples. Typically, you have a PhD in Analytical Chemistry or Biochemistry and experience of analysing complex biological samples using liquid chromatographic as well as mass spectrometric techniques. (Ref nr 171/02.)

For more information, please contact Johannes Hulthe, Experimental Medicine +46 (0)31 706 48 52 (johannes.hulthe@astrazeneca.com) or Björn Dahllöf, Cell Biology & Biochemistry +46 (0)31 776 21 51 (bjorn.dahllof@astrazeneca.com).

Protein Analysis

Mölndal, Sweden

To strengthen our protein analysis capability, a post-doc position is open for 2 years for protein analysis by mass spectrometry. Using primarily MALDI-TOF-TOF, the successful candidate will identify and characterize protein samples from protein expression profiling studies. A strong background in mass spectrometry and bioinformatics is appreciated. (Ref nr 172/02.)

For more information, please contact Björn Dahllöf, Cell Biology & Biochemistry +46 (0)31 776 21 51 (bjorn.dahllof@astrazeneca.com).

make a difference

Pharmacologists - senior scientist and scientist

Mölndal, Sweden

To further strengthen our discovery research in metabolism applications are sought for two new positions within the Department of Integrative Pharmacology from established researchers with experience in cardiovascular and metabolic preclinical studies in vivo.

These scientists will actively participate in, and guide in vivo experimental programs within projects aimed at prevention of cardiovascular disease via treatments of dyslipidemia and other disturbances included in the metabolic syndrome. The work will involve development of new methods and their application together with established methods during all phases of ongoing discovery activities ranging from target identification to extended documentation of compounds in clinical development.

Basic studies of pathophysiological mechanisms and pharmacodynamic principles constitute an important component of the responsibilities during certain phases, which are expected to result in external publications. Within the project setting, the successful applicants will interact with a range of internal scientists in other disciplines as well as with external academic groups.

Candidates for these positions should have a PhD or equivalent in physiology/pharmacology, and experience in the metabolic and/or cardiovascular field(s). It is essential that candidates, in addition to experimental skills, have a thorough understanding of integrative fatty acid, triglyceride, cholesterol and carbohydrate metabolism. Previous industrial experience is considered an additional qualification.

For more information please contact:
Nick Oakes, (nick.oakes@astrazeneca.com), +46 (0)31 776 13 09, or Håkan Wennbo, (hakan.wennbo@astrazeneca.com), +46 (0)31 776 28 18 - Metabolism & Vascular Biology Section, Department of Integrative Pharmacology, AstraZeneca R&D Mölndal.

Please send your applications marked "164/02 Pharmacologists", "171/02 Biomarker Discovery" or "172/02 Protein Analysis" by September 30 to: AstraZeneca R&D Mölndal, Human Resources, Annika I Johansson, SE-431 83 Mölndal, Sweden.

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Leading Innovation in World Healthcare

TOP EMPLOYERS SURVEY

Companies of Choice

effect of leveling the playing field between smaller, younger firms and larger, longer established companies.

One factor came through clearly. "Compared with other sectors, the life science industry has remarkably satisfied and dedicated employees," says Brian Reger, executive vice president of HRW, who oversaw the survey. Just as plainly, some firms in the industry enjoy higher reputations than the rest.

THREE GROUPS

The top 10 employers separated out naturally into three groups in terms of respondents' rankings. In the first tier stand two biotechnology companies that have become serious players in drug discovery and development. The clear number one is Genentech, the Bay Area firm whose foundation in 1976 marked the creation of the global biotechnology industry. Behind it in the top tier of companies, and second overall in the survey, comes Millennium Pharmaceuticals, a nine-year-old company in Cambridge, Massachusetts.

The next tier of companies contains four traditional pharmas: Johnson & Johnson, Eli Lilly and Company, Pfizer, and Merck. The third group, making up the rest of the top 10, consists of Monsanto, an agricultural products company that has just become independent of Pharmacia; Amgen, another biotechnology firm that has transformed itself into a pharma; Pharmacia, a pharma in process of being acquired by Pfizer; and AstraZeneca, a pharmaceutical firm based in England. The second 10 companies consist of a mixture of American biotechnology firms and American and European pharmas.

The attributes that respondents regarded as most significant divide naturally into two groups of four. The first group includes being an innovative leader in the industry, having loyal employees, having work culture and personal values aligned, and carrying out quality research. In the next group of attributes – important but less so than the top four – respondents recognized companies that that they consider good financial investments, have a clear vision of where they are headed, show social responsibility, and demonstrate job security. Significantly, each of the top half-dozen companies placed high on at least one of the primary four attributes. Genentech finished in the top three on all four *(see chart at right)*. It scored 97 percent on doing important, quality research, against an industry average of 65 percent. Genentech and Millennium both rated 96 percent on being an innovative industry leader, compared with an average company ranking of 59 percent.

The survey revealed differences in perception between male and female scientists. Females distinguished the best companies by the attributes, in order, of innovative industry leadership, alignment of work and personal values, and a clear vision of corporate direction. Male scientists regarded the alignment of values as the most important criterion, followed by innovative leadership and the nurturing of loyal employees.

Best In Class: Innovative Leader

Rank	Employer
1	Genentech, Inc.
1	Millennium Pharmaceuticals, Inc.
3	Monsanto Co.
4	Pfizer, Inc.

Best In Class: Loyal Employees

Rank	Employer
1	Johnson & Johnson
1	Eli Lilly and Co.
3	Genentech, Inc.
3	Monsanto Co.
5	AstraZeneca International

Best In Class: Work Culture Values Equal Personal Goals

Rank	Employer
1	Genentech, Inc.
2	Johnson & Johnson
3	Eli Lilly and Co.

Best In Class: Important Quality Research

Rank	Employer
1	Genentech, Inc.
2	Merck & Co.
3	Eli Lilly and Co.

The companies that have the best records on each of the four major driving characteristics, in the view of survey respondents.

Terry E. Smith

HOW DO THEY DO IT?

How do the top half-dozen companies explain their high reputations? "Over the last 25 years we have sustained a terrific record of research," says Richard Scheller, vice president of research at Genentech. "The values that our founders Herb Boyer and Bob Swanson imparted remain today: valuing employees' creativity and allowing freedom for individual scientists to innovate and be creative." That means encouraging a bottom up approach to research. "I try to be very careful not to put too much burden on our scientists from a top down perspective," Scheller continues. "I ask them to come up with ideas for new molecules to study in therapeutic areas. And we encourage our scientists to publish; we're seen in the literature."

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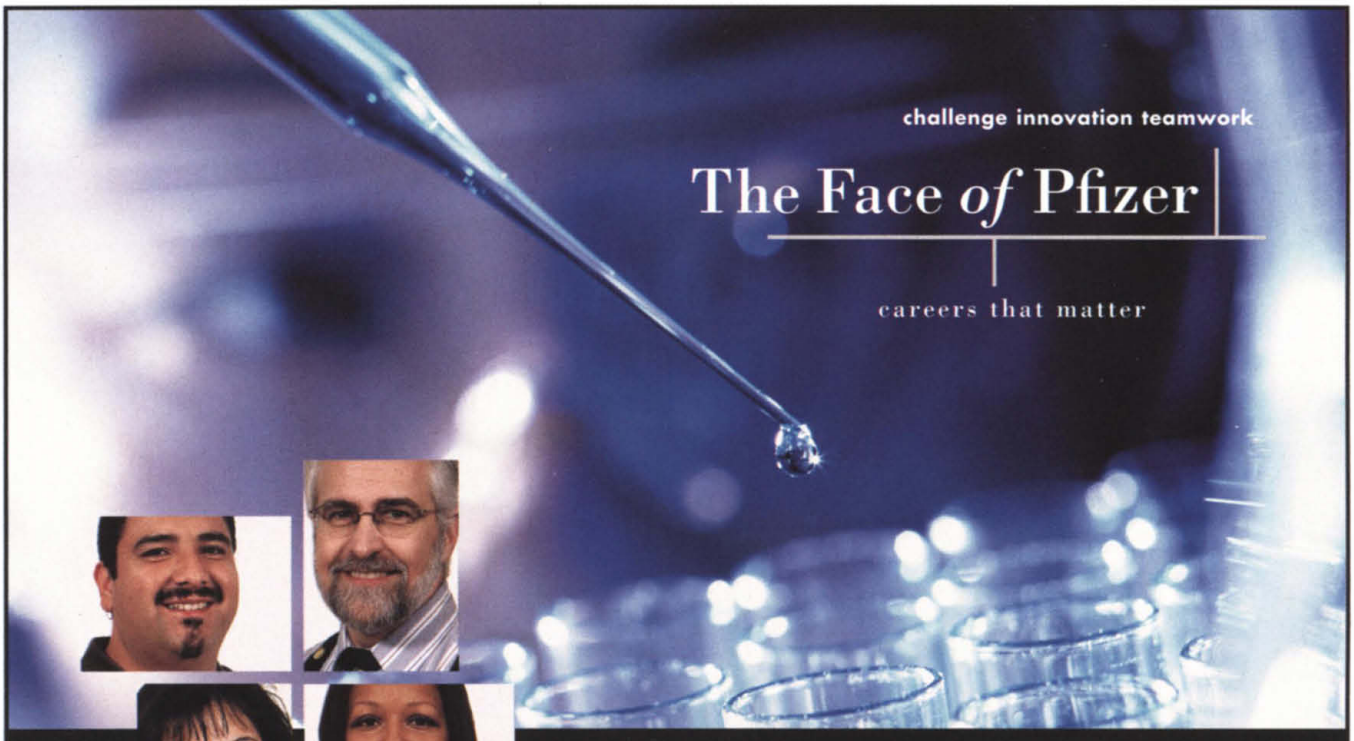

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Roche

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UNITED STATES

Palo Alto, California

Offering an exciting drug discovery environment in California's heart of innovation, Roche Bioscience is one of Roche's global research sites. Our 1,000 scientists and staff are engaged in basic, preclinical and early clinical research in focused disease areas. We are pursuing new medicines for the treatment of central nervous system and genitourinary disorders, arthritis, osteoporosis and respiratory and viral diseases.

Nutley, New Jersey

Our US pharmaceuticals headquarters is based in Nutley, New Jersey, just 12 miles from New York City. Located on a 127-acre campus, this impressive site is dedicated to the discovery, development, manufacture and marketing of numerous prescription drugs that enhance human health and quality of life. Our 500 research employees are focused on therapeutic areas in metabolic diseases and oncology.

SWITZERLAND

Basel, Switzerland

Roche's world headquarters is nestled on the Rhine River in Basel, Switzerland. More than 5,000 people from some 50 countries work here, engaged in Roche's corporate functions, research and development, production and quality control, logistics, international marketing, drug regulatory affairs, IT, finance and administration. Approximately 1,100 scientists are involved in CNS, vascular and metabolic research.

GERMANY

Penzberg, Germany

Located in upper Bavaria, the Penzberg facility of Roche was founded in 1972 and employs approximately 3,000 employees, 250 of whom are dedicated to pharmaceutical research in oncology and therapeutic proteins. As one of Roche's principal Oncology Research Centers, this facility also houses a Genomics Division and a DNA laboratory/teaching facility.

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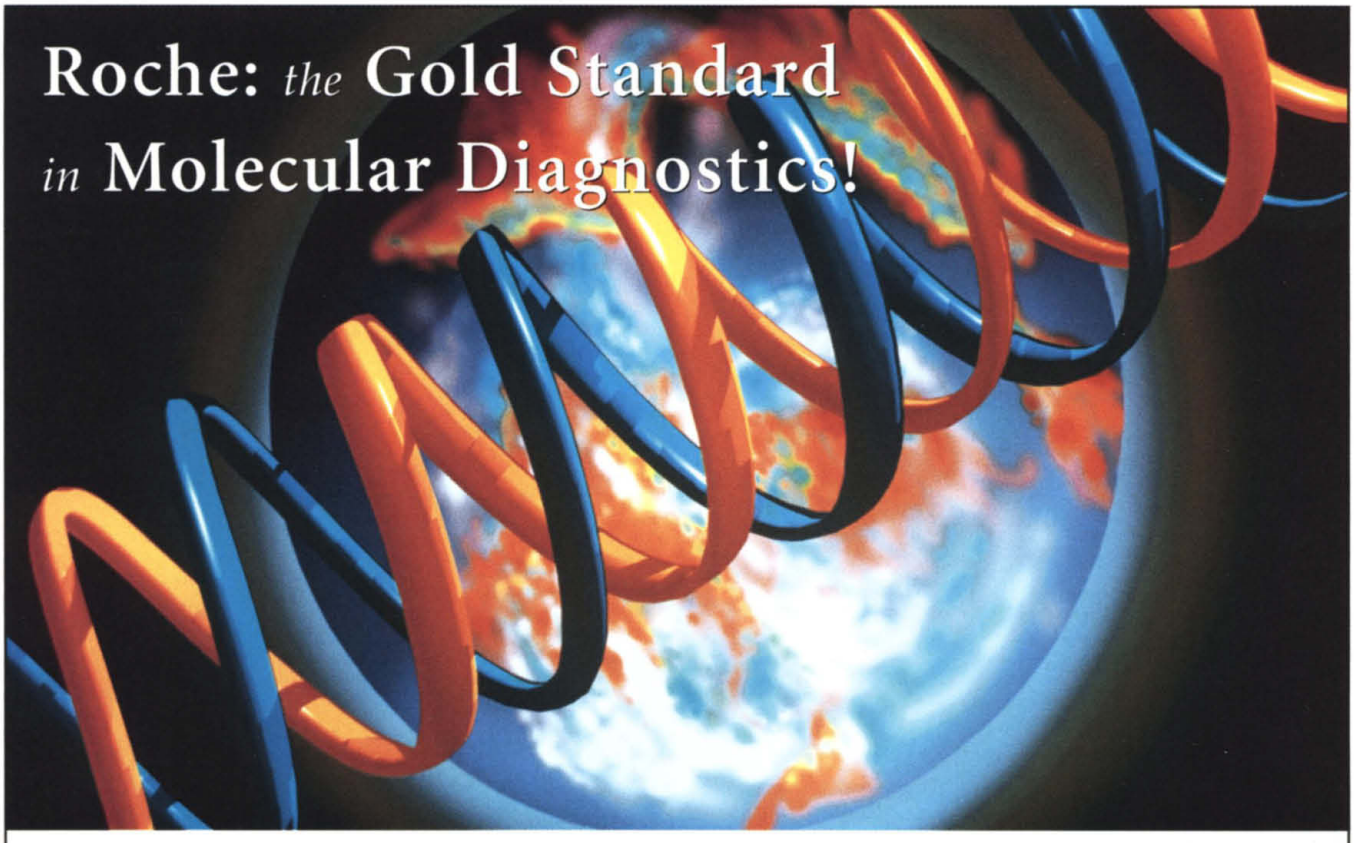
Roche is an equal opportunity employer, fully committed to workplace diversity.



As the pioneer of the Nobel prize-winning PCR technology, Roche Molecular Systems, Inc., also known as Roche Molecular Diagnostics (RMD), has launched the use of reliable DNA-based tests into laboratories worldwide, aiding the genetics revolution and dramatically altering the future of medical care. As the recognized leader in the development of molecular-based diagnostic tests and PCR automated testing platforms, RMD employs more than 1,000 innovative professionals at four sites in the US (Pleasanton, CA; Alameda, CA; Belleville, NJ; and Branchburg, NJ) and two in Europe (Penzberg, Germany and Rotkreuz, Switzerland).

Roche's PCR technology is recognized as one of the most important scientific developments of this generation. Our broad-based PCR-licensing program has established this technology as the "gold standard" for molecular diagnostics and the leading DNA probe technology in the world. Our long-standing commitment to investing in new R&D initiatives has contributed to our global success and leadership as a health information provider.

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TOP EMPLOYERS SURVEY

Companies of Choice

Scheller emphasizes that being an innovative leader in research is a means to an end rather than an end in itself. "It's not enough just to be creative and just to make scientific discoveries that are interesting and important," he says. "We want to translate those discoveries into medicine to help sick people. We want to help with unmet medical needs."

Millennium has a similar attitude. "Our vision to create a leading biopharmaceutical company and make a difference in patients' lives is something our employees feel about passionately," says senior vice president of human resources Linda Pine. "That's absolutely an integral part of what makes this a special place to work."

How does Pine account for Millennium's high reputation as an innovative leader? "We have the right people, technologies, and partnerships," she says. "We try to attract leading scientists who take a very innovative approach to developing new products. We also give them the tools to practice their science. We have developed leading edge technology internally, and we've acquired it externally. That means that we can deploy all our scientists using these breakthrough technologies."

Johnson & Johnson, which placed third in the survey, has its own focus on values. "For 116 years we have been a company that has as its foundation a value system called our credo," says Michael Carey, corporate vice president of human resources. The company had the opportunity to demonstrate that credo in 1982, when an outside hand introduced poison into some bottles of its over-the-counter painkiller Tylenol. The company immediately informed the public of the debacle and worked on more secure packaging. "Tylenol came back and captured more market share than it had previously," Carey recalls.

Johnson & Johnson scored top marks on the survey for employee loyalty. That's not coincidental. "In the late 1980s we put in place a myriad of programs and support systems and, most important, mandated training to help every supervisor understand the value of an employee less stressed by the challenge of balancing work and family," Carey says.

Earning a Reputation

If there is one thing that a startup life science firm needs more than working capital it is excellent scientists. "Hiring is the most important thing you'll do," says Geoffrey Duyk, chief scientific officer of Exelixis, Inc., a four-year-old firm in South San Francisco that specializes in genomics based drug discovery. "You have to decide to hire the best."

Those scientists inevitably have plenty of offers from prospective employers. "We know that the best and the brightest candidates will have choices about where they work," explains David Theil, chief financial officer of Psychiatric Genomics, Inc., a Gaithersburg, Maryland, company founded last year to develop genomics based therapeutics for psychiatric disorders.

How does a young firm develop the reputation that helps it to compete effectively for top talent against academic institutions and firms with established profiles in the industry? The list includes the opportunity to carry out cutting edge research, especially with well qualified colleagues; a corporate value system that aligns with applicants' beliefs; demonstration of commercial success; competitive salaries and benefits; and the potential for employees to improve their skills.

Technology that permits researchers to work at the limits of knowledge has become increasingly critical to new life science firms. "It became clear five or so years ago that access to technology was a competitive advantage," says Duyk. "People want to have access to technology." Theil expands on that thought. "Breaking new ground in a new area attracts those who enjoy being on the cutting edge," he says. "It's not just the technology. It's the application of the technology."

Certainly the quality of scientists already working for a firm has an impact on recruits. So does the ultimate value of the mission in which they will participate. "We're filling an unmet need in the scientific arena that has the potential to make a real difference to people's lives," says Sue Covello, Psychiatric Genomics' director of human resources. "Our employees developed and continue to maintain our company's mission and value statements."

Present commercial success and future promise have an obvious impact on a startup firm's reputation. "We've achieved our goals and milestones," says Duyk. "Any company needs to show that it has capital and access to it. Financial stability and a high quality of management are very important. So is being competitive in terms of benefits. That includes encouraging people to take courses and paying for them."

Duyk adds one caution for startup firms and potential employees. "Companies change over time," he explains. "Many work right at the edge when they start up. Some of the work has to remain at the cutting edge as companies mature and build a drug discovery pipeline; you have to maintain some innovation. But they have to balance it with some pragmatic considerations."

EMPLOYEE LOYALTY AND INNOVATIVE LEADERSHIP

Lilly also graded high on employee loyalty. Nancy Lange, director of U.S. recruiting and staffing, outlines why. "This is a culture in which employees are very aware that their own development is very important," she explains. "Experienced individuals who come into the company are often amazed at the time we take to align their values with ours and on their own personal development."

Lilly also has a good reputation for its research. "We ensure that our bright scientists have the right tools, technologies, and managerial environment to support their efforts," adds Emily Sun, human resources director of Lilly Research Laboratories Europe in Basingstoke, England. "Our scientists partner actively with the best labs and scientists anywhere in the world to keep the 'how' of innovative thinking inside Lilly."

One key driver of Pfizer's reputation is its position as an innovative leader that carries out high quality research. "This is a very challenging organization in that we don't sit on our laurels," says global head of

Please visit **www.sciencecareers.org** – for an expanded version and more results from our Top Employers survey.

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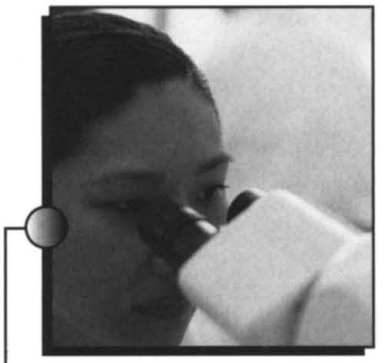

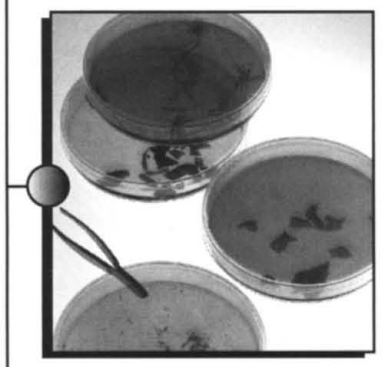

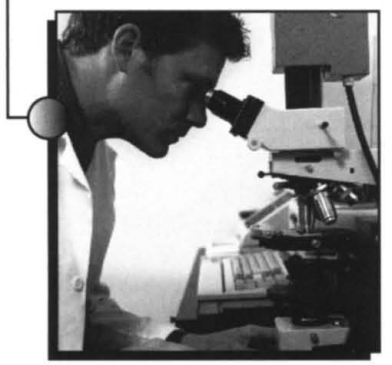

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research John LaMattina. "So we look at ways to do things better – more efficiently, with more productivity and higher quality. Our research budget of about $5 billion this year and $2 billion more next year, if the Pharmacia sale goes through, gives us the opportunity. We also spend $250 million per year in outside R&D investments." Beyond that, LaMattina continues, "We pride ourselves in empowering our scientists. We demand that they put together optimal portfolios to go after various diseases."

The same two factors helped to account for Merck's high reputation. "The resources required for the next phase of drug invention are complex and expensive," says Tom Salzmann, executive vice president for worldwide preclinical development. "When we identify technologies that we believe to be essential to our future success, the company has always supported us – the acquisition of Rosetta Inpharmatics being an outstanding recent example of this support." Elizabeth Quackenbush, a Merck research fellow working on a potential immunosuppressive, gives the bench viewpoint. "The company has a top-notch commitment to basic science and everything that has to be done to develop the drug," she says.

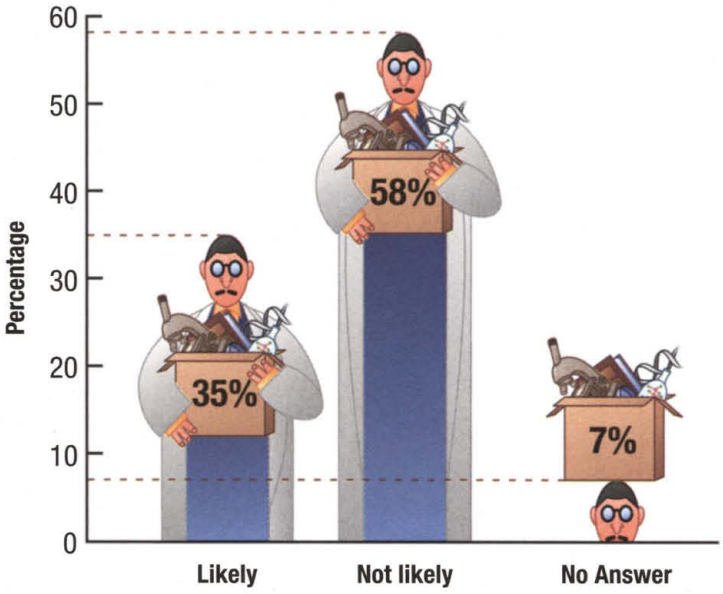
BEST AND BRIGHTEST

A common factor among the top employers is their dedication to hiring and keeping the best and the brightest, globally as well as locally. In this aspect of corporate life a good reputation has tangible value. "It's a tremendous advantage to us," says Scheller of Genentech. "Since I started here last year we have had literally thousands of applications from scientists. We've looked through each one and have chosen the best." Adds Pine of Millennium: "I'm very heartened by frequent anecdotes I hear from new employees who say that they have done exhaustive research on where their next job should be and have come up with Millennium at the top of their lists. Our reputation for doing great science and innovative business deals and our culture all help to convince them."

The top companies make sure to secure their high reputations globally. "When we expand into regions where we didn't previously have a presence, we'll send a seasoned executive whose primary mission is to identify and attract talent at the local level to take over," says Johnson & Johnson's Carey. Such local expertise can add significantly to a life science company's scientific skill and bottom line. "Our R&D lab in Sandwich, England, is one of the most successful in the world; it produced Cardura, Norvac, and Viagra," says Pfizer's LaMattina. "Having one of our major R&D centers in Europe gives us the opportunity to recruit outstanding people over there."

Who's Looking?

Respondents' assessments of the likelihood that they will seek a new employer within a year.



Terry E. Smith

Outstanding scientists don't necessarily stand pat. According to the survey, 35 percent of respondents reported some likelihood that they will look for a new job in a different company within a year *(see figure above)*. The most quoted reasons for wanting to move: an opportunity for career advancement in terms of more money, tougher challenges, greater authority, higher job satisfaction, and better facilities; lack of advancement in the existing job; doubts about job security and the present company's financial situation; problems with the corporate culture and working conditions; and the opportunity to live and work in a more desirable location and/or to have an easier commute.

Top companies generally maintain strong incentives for their employees to stay on board. They do so in several ways in addition to excellent benefits. "We work with our employees to have a career advancement path for them," says Scheller of Genentech. "We actively encourage professional growth and we let people know that their ideas count," adds Millennium's Pine.

One indirect result of that inclusiveness is that employees become a company's best recruiters, both directly and indirectly. "We rely very heavily on the people already here to identify others in the field," says Salzmann of Merck. "We encourage our people to keep their stature in the scientific community by publishing hundreds of research papers per year. Then when the Merck person knocks on the door, it opens more easily." For Merck and other firms in the top 20, a present-day reputation means the opportunity to recruit the scientists who will extend that reputation into the future.

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

McGill

McGill is one of Canada's oldest and most prestigious institutions of higher learning with some 30,000 full-time and part-time students, over 1,300 tenure-track professors as well as an important cadre of non-academic staff

Faculty of Science

The Faculty of Science at McGill University is dedicated to the creation of new knowledge and understanding for the benefit of society. Today's fundamental breakthroughs create the future and we are determined to continue our leading role in the advancement of science. Therefore we extend an invitation to outstanding scientists to join our stimulating community of teacher/researchers.

Building on our strengths, we have been hiring new faculty in almost every unit in the Faculty of Science and we expect this to continue into the foreseeable future. Faculty positions at all levels are being created through internal funding, through the Province of Quebec's Programme stratégique de professeurs-chercheurs, through the Government of Canada's Canada Research Chairs program, the Natural Sciences and Engineering Research Council of Canada's University Faculty Award program, and other programs.

The Faculty addresses major areas of intellectual interest including but not limited to: the Environment, Information Sciences, Life Sciences, and Materials Science, in addition to traditional core areas. The Departments in the Faculty are:

Atmospheric & Oceanic Sciences
Biology
Chemistry
Earth & Planetary Sciences
Geography
Mathematics and Statistics
Physics
Psychology
Redpath Museum
School of Computer Science

We invite applications from interested candidates with proven records of achievement for these positions. In general, all fields of research in each discipline are welcome. Detailed information on available positions can be obtained on departmental web pages accessible through www.mcgill.ca/science.

Complete applications must contain a full curriculum vitae, separate teaching and research proposals, and three confidential letters of recommendation sent under separate cover by the candidate's references upon the request of the candidate. Applications should be sent to the Chair of the relevant Department(s) at the address on the web site.

www.mcgill.ca

All qualified candidates are encouraged to apply; however, in accordance with Canadian immigration requirements, Canadian citizens and permanent residents of Canada will be given priority. McGill University is committed to equity in employment.

Faculty Positions in Nanoscience (Faculty of Science)

As part of McGill's major expansion into Nanoscience and technology, the Faculty of Science is currently seeking six new tenure track appointments in the Departments of the Faculty. Three of these positions are to be in the Departments of Chemistry and Physics, and the Departments of the other three are yet to be determined. Searches are also underway for a further seven positions in the Faculties of Engineering, Dentistry, and Medicine.

Besides their Departmental affiliations, successful applicants will participate in the McGill Institute for Advanced Materials (MIAM). MIAM coordinates interactions and partnerships across Faculties and Departments in the University, providing a stimulating interdisciplinary environment.

The fundamental vision underlying this expansion is the expectation that Nanoscience will lead to new basic science, new materials, and new technology, due to the unique properties of materials on the scale of nanometers. At the nanoscale, everyday solids and liquids change their properties dramatically, as the effects of quantum mechanics, atomic and molecular structure, and fluctuations compete.

This initiative will further strengthen the existing high-quality research being done on Nanoscience within the Faculty of Science, especially in the Departments of Chemistry and Physics. A major infrastructure facility for Nanoscience, the Nanotools Complex, is under construction in the Rutherford Physics Building. This multimillion-dollar facility was funded in part by the Canadian Foundation for Innovation and the Ministry of Education of the Province of Quebec. The Complex provides the necessary tools for the design, realization, and study of nanostructures. It includes instruments for micromachining cryogenic ultra-high vacuum microscopy and atomic manipulation, large-scale computing, as well as clean rooms spread over approximately 350 square metres.

Candidates from all disciplines related to Nanoscience are invited to apply. The successful candidates will be strong teachers and outstanding researchers. Candidates should submit a CV, a statement of research goals and plans, a statement of teaching interests and philosophy, the names and addresses of at least three referees, and arrange for at least three letters of reference to be sent directly to:

Robyn Wiltshire, Director of Administration
Faculty of Science
Dawson Hall
McGill University
853 Sherbrooke Street West
Montreal, Quebec, H3A 2T6, Canada

Review of applications will begin 1 January 2003, and continue until the positions are filled. Suitable candidates may be nominated for Canada Research Chairs, and will be supported by generous start-up packages.

Faculty Positions in Bioinformatics (Faculty of Science)

The Faculty of Science is currently seeking three new tenure track appointments with expertise in Bioinformatics. One will be in the School of Computer Science, one will be in the Department of Biology, and the department of the third position is yet to be determined. Four positions in other Faculties are also being recruited. The appointees will also be members of the newly formed McGill Centre for Bioinformatics. The Centre presently has approximately 10 members from the Faculties of Agricultural and Environmental Sciences, Medicine, and Science. The members are involved in large scale projects that include (but are not limited to) areas such as genomics, functional genomics, proteomics, protein-protein interaction, structural biology, clinical informatics, phylogeny, genome evolution, and cellular simulation.

The Faculty of Science is a prominent partner in this significant expansion of Bioinformatics at McGill University. In addition to the School of Computer Science and the Department of Biology, the Departments of Chemistry, Mathematics and Statistics, and Psychology are also interested in making an appointment in bioinformatics related to their disciplines. The Faculty seeks candidates with interests in: data analysis, functional genomics and proteomics systems, databases/mining, integrative and systems biology, algorithms and machine learning, neuroscience and imaging, phylogenetic combinatorics, biochemical/regulatory network analysis, stochastic modelling, statistical genetics, gene transcription, genetic epidemiology, structure/spectroscopy relationships, quantum computing and artificial intelligence/instrument interfacing.

McGill University has a large and dynamic research community both in the life sciences and in computation-related fields. There are major new Genomics and Proteomics, Information Technologies and Life Sciences buildings under construction on the campus, and a dynamic faculty hiring program is underway in all areas. New faculty may also benefit from McGill's world-class medical school and biomedical research programs. Montreal has several major universities and research institutes, a large student population, a burgeoning biopharmaceutical industry, and is renowned for its quality of life.

This is a unique opportunity to participate in major Bioinformatics initiatives in an academic context and to initiate new areas of integrative research in a highly collaborative environment.

Candidates should forward their CV together with a summary of their research plans and a statement of their teaching interests, the names and addresses of at least three referees, and should arrange for at least three letters of reference to be sent directly to:

Robyn Wiltshire, Director of Administration
Faculty of Science
Dawson Hall
McGill University
853 Sherbrooke Street West
Montreal, Quebec, H3A 2T6, Canada

Review of applications will begin 1 November 2002, and continue until the positions are filled. Suitable candidates may be nominated for Canada Research Chairs, and will be supported by generous start-up packages.

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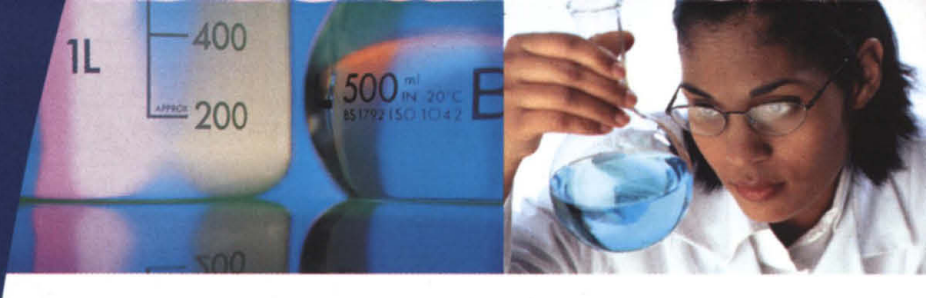

For over 26 years, Genentech has been at the forefront of the biotechnology industry, using human genetic information to discover, develop, commercialize and manufacture biotherapeutics that address significant unmet medical needs. Fifteen approved biotechnology products originate from or are based on our science, and Genentech manufactures and markets ten products providing innovative treatments for cancer, heart disease, and respiratory and growth disorders. We continue our groundbreaking research to discover new therapies and cures for life-threatening diseases. Do the research to advance your career. Research Genentech.

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An award-winning employer, Genentech has consistently been recognized by *Fortune* magazine as one of the "100 Best Companies to Work for in America" and by *Working Mother* magazine as one of the "100 Best Companies for Working Mothers."

Genentech demands the best from its employees. In return, we reward them with family-friendly benefits and programs that are among the best in the industry, including stock options, a paid sabbatical program, and one of the largest corporate-sponsored childcare centers in the country.

Below are just some of the departments that are currently seeking new talent. For a comprehensive list of job opportunities, please visit our website.

RESEARCH

Genentech is building a 280,000 square-foot expansion to our state-of-the-science research facility, overlooking the San Francisco Bay. Our research organization combines reputations grounded in academic achievement with world-class facilities and an environment that fosters collaboration.

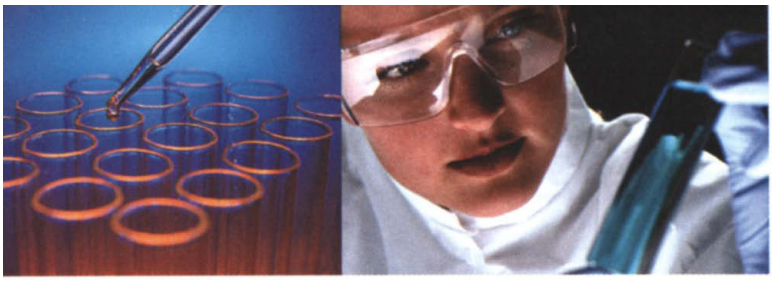
We are seeking

• Postdoctoral Fellows • Research Associates • Scientists

in the areas of

- Assay Technology
- Bioinformatics
- Biomedical Imaging
- Bioorganic/Medicinal Chemistry
- Immunology
- Molecular Biology
- Molecular Oncology
- Pathology
- Physiology
- Protein Chemistry
- Protein Engineering

Genentech is proud to be voted the "Top Employer of 2002" by *Science* readers.



MEDICAL AFFAIRS

We have a passion for scientific breakthroughs that save lives and alleviate suffering. Medical Affairs provides an environment where you can make a difference. Collaborating and creating strategic plans for Genentech and our patients, we produce clinical science and operational breakthroughs that matter.

We have ongoing needs for candidates throughout our department in the areas of:

- Biometrics
- Biostatistics
- Clinical Operations
- Clinical Research
- Data Management
- Drug Safety
- GCP/QA
- Medical Communications
- Oncology

DEVELOPMENT SCIENCES

We strive to translate late-stage research projects into potential drugs for Genentech. Our focus is defining and quantifying biological activity of molecules, and developing optimal manufacturing processes so that molecules enter late development with a high probability of becoming important drugs.

We have ongoing needs for candidates in Quality Assurance and Operations:

- Analytical Sciences
- Clinical & Experimental Pharmacology
- Development Sciences Operations
- Process Sciences
- Safety Assessment

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Research Positions in Bioinformatics

Rosetta Inpharmatics, Inc., a wholly owned subsidiary of Merck & Co. Inc., is recruiting four Sr. Research Scientists for its Informatics Division. These are highly competitive positions with research emphasis, intended to help maintain and extend Rosetta's leadership position in cutting-edge bioinformatics methods and their application to drug discovery. Each successful candidate will join a different existing group within the Informatics division and will be responsible for catalyzing its innovative research activities and helping to coordinate them with the other groups and with academic collaborators to achieve larger goals with a 3-5 year time horizon. Successful candidates will hold a PhD in biological, computational, or physical science, and will have a record of strong and innovative research, with major publications in one or more of the subject areas listed below.

Transcriptome Discovery and Analysis - Develop computational and microarray-based methods to study the mechanism, prevalence, and regulation of alternative pre-mRNA splicing for drug target genes, and the relationship of alternatively spliced isoforms to human disease.

Coherent Data Integration for Molecular Profiling - Develop methods of simultaneous coherent collection and analysis of mRNA, proteomic, genotypic, and metabonomic data to illuminate cellular mechanisms, alternative targets, and biomarkers.

Pathway Reconstruction and Representation - Develop methods of optimally constructing and revising pathway hypotheses based on measurements of molecular responses to cellular perturbations and on literature sources.

Target Characterization and Prioritization - Develop and use computational and statistical analyses of small-molecule drug targets, including target protein family sequence and structure, ligand binding site properties, pathways of pharmaceutical intervention, and available genomic data to advance strategy and create predictive methods of target validation. Help develop requirements for databases and data access systems to support these methods.

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.

www.rii.com

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ASSISTANT OR ASSOCIATE PROFESSOR IN COMPUTATIONAL BIOLOGY AND BIOINFORMATICS

Harvard Medical School
Department of Biological Chemistry and Molecular Pharmacology
Boston, Massachusetts, USA

The Department of Biological Chemistry and Molecular Pharmacology (BCMP) is searching for a new faculty member in the research area of computational biology and bioinformatics. Qualifications include a strong potential for imaginative research in the areas of bioinformatics, genetic epidemiology, computational functional genomics, biological network modeling, and/or computational research in chemical biology.

All departmental faculty have access to graduate students in Harvard Medical School's Biological and Biomedical Sciences program, in Harvard's Biophysics program, and in the Harvard-MIT Division of Health Sciences and Techology program.

BCMP is one of six basic science departments of Harvard Medical School. BCMP has a long and distinguished tradition of scholarship and teaching. It houses faculty members with diverse interests in a dynamic and rigorous research setting. For information about current faculty and research, please refer to **http://bcmp.med.harvard.edu/**.

Applicants for all positions should submit a curriculum vitae, bibliography, a brief description of research interests, and arrange to have **four** letters of recommendation sent to:

Search Committee Chair
BCMP, Harvard Medical School
240 Longwood Avenue, C-213
Boston, MA 02115

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The Laboratory of Experimental Rheumatology at the North Shore-LIJ Research Institute's Center for Genomics and Human Genetics is seeking:

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A highly motivated individual to join projects of gene identification and functional characterization of loci involved in the regulation of rodent models of autoimmune arthritis. M.D. and/or Ph.D.

Associate Research Scientist

A motivated individual with background in molecular immunology and/or genetics/genomics to join projects of gene identification and functional characterization of loci involved in the regulation of rodent models of autoimmune arthritis. A minimum of two years post-doctoral experience is required. Experience working with rodents is preferred. M.D. and/or Ph.D.

Please send CV and cover letter to: Human Resources Dept., North Shore-LIJ Research Institute, 350 Community Drive, Manhasset, NY 11030. E-mail: gcohen@nshs.edu

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WASHINGTON STATE UNIVERSITY VICE PROVOST FOR RESEARCH

Washington State University (WSU) is the land grant institution and a major research university in the State of Washington. WSU is classified by the Carnegie Foundation as a Doctoral/Research Extensive University. The main campus of the WSU system is located in Pullman. The Pullman campus, with an enrollment of nearly 17,000 students, is one of the largest residential universities in the West. There are 2,700 graduate students. The University offers 70 masters and 44 doctoral programs including international, summer, and distance degree programs and bachelor degrees in 55 study areas. Three branch campuses enrolling a total of about 4,000 students are located in the Spokane, Tri-Cities, and Vancouver metropolitan areas. Agricultural research and extension centers are located throughout the state. WSU's faculty of about 1,900 includes a substantial number of scholars with national and international reputations. Sponsored program activity for the University totaled $134 million for fiscal year 2001.

The Vice Provost for Research reports to the Provost; is the principal institutional research advisor to the President and Provost; and is the institutional advocate for research activities both inside and outside of the University. The Vice Provost for Research oversees the University's research mission and research-related strategic planning activities; anticipates and promotes research opportunities for faculty; encourages the institutional environment for research and scholarship; develops financial strategies; and assures legal compliance with proper research practices. The Vice Provost for Research administers the Office of Grant and Research Development, Office of Intellectual Property Administration, Laboratory Animal Resources Center, Radiation Safety Office, Social and Economic Sciences Research Center, Nuclear Radiation Center, Water Research Center, and Center for Integrated Biotechnology as well as the Office of the Vice Provost for Research.

Please visit our web page at **http://www.wsu.edu/provost/provost.html** for more information. Appointment is anticipated July 1, 2003.

Contact: Professor Don A. Dillman, Chair, Vice Provost for Research Search Committee, Washington State University, P0 Box 641046, Pullman, WA 99164-1046; e-mail: dillman@wsu.edu.

WSU is an EO/AA educator and employer.
Protected group members are encouraged to apply.

CHAIR DEPARTMENT OF ANATOMY AND NEUROSCIENCES

The School of Medicine of The University of Texas Medical Branch (UTMB) in Galveston, Texas, a leading academic health sciences center located on the Texas gulf coast, seeks candidates for the Chair of the Department of Anatomy and Neurosciences. The Department of Anatomy and Neurosciences comprises a faculty of 28 members including a strong group of research-oriented faculty that have achieved widespread recognition for the quality of their research in neurosciences as part of a campus-wide neurosciences program. There is an active graduate program in neurosciences. Vigorous leadership is sought for developing a group of scientists utilizing contemporary, molecularly oriented approaches to neurosciences research.

Rich opportunities for collaborative interdisciplinary research exist with centers of excellence in structural biology, molecular science, environmental health, aging, vaccine development, and biodefense and tropical and emerging infectious diseases. Core facilities include computational biology, mass spectrometry, membrane protein crystallization, NMR, protein expression and purification, recombinant DNA, research histology, and confocal microscopy. More information can be obtained at www.utmb.edu.

The successful candidate must have documented leadership skills, demonstrated academic achievement, and excellent interpersonal skills including the ability to be an advocate for the department and the University.

Located on an island, Galveston has a college environment, miles of open beaches and the charm of a vast collection of restored Victorian-era homes and businesses. Houston, the nation's fourth largest city with numerous world-class cultural activities, is a 45-minute drive north.

Interested applicants should submit a curriculum vitae to: **David H. Walker, M.D., Chairman, Department of Pathology, Chair, Anatomy and Neurosciences Search Committee, The University of Texas Medical Branch, 301 University Boulevard, Galveston, TX 77555-0609. E-mail: dwalker@utmb.edu.** UTMB is an equal opportunity affirmative action institution.

UTMB
The University of Texas Medical Branch

Drexel University
College of Medicine
In the tradition of Woman's Medical College of Pennsylvania and Hahnemann Medical College

Drexel University College of Medicine
Chair, Department of Microbiology and Immunology

Drexel University College of Medicine (formerly MCP Hahnemann School of Medicine), the largest private medical school in the United States, seeks a highly qualified individual to chair the Department of Microbiology and Immunology. Faculty in the department are research-intensive and well-funded, and are actively involved in graduate and medical student education, and in service to the University. Research activities within the department include: the molecular and cell biology of malaria parasites and pathogenic fungi; immunological analysis of malaria and viral pathogenesis and vaccine development; Neisseria host-cell interactions; anthrax pathogenesis; yeast cell cycle and cellular metabolism; strategies to enhance the role of CD8(+) T cells in anti-HIV immunity; molecular and genetic characterization of autoimmune diseases; and the relationship between aging and the immune response. In addition, the department operates the College of Medicine's molecular genomics core facility, with a complete microarray laboratory.

Applicants should have an M.D., Ph.D. or an equivalent degree, significant competitive research funding, a commitment to education, the necessary skills and experience to manage a highly successful basic science department, and the qualifications necessary for appointment at the rank of a Professor. Applicants' research interests are expected to complement and expand upon the areas listed above. A highly competitive start-up package is offered, as are opportunities to hire new faculty.

Please send a letter of application including a one-page summary of research interests, your curriculum vitae, the names of at least three references and their contact information, and copies of three representative papers to: **Daniel V. Schidlow, M.D., Search Committee Chair, Professor and Chair, Department of Pediatrics, Drexel University College of Medicine, St. Christopher's Hospital for Children, Erie Avenue at Front Street, Philadelphia, PA 19134-1095; Phone: 215-427-4801; Fax: 215-427-4805; Email: daniel.schidlow@drexel.edu.**

Please visit our website at **http://www.drexel.edu/med/microbiology_immunology/**

Drexel University College of Medicine is an Equal Opportunity - Affirmative Action Employer. Minority candidates are encouraged to apply.

Memorial University of Newfoundland
Faculty of Medicine
Tenure Track Faculty Position in Immunology

The Division of Basic Medical Sciences at Memorial University of Newfoundland invites applications for a tenure track faculty position in Immunology. Candidates for this position should hold a Ph.D. with relevant postdoctoral experience. Preference will be given to an appointment at the Assistant Professor level. The successful applicant will be expected to establish an independent research program and contribute to undergraduate medical and graduate student teaching in the area of Immunology. Active areas of research within the Immunology program at Memorial University include autoimmunity, viral immunology, tumor immunology and innate immunity. Potential applicants should refer to the Immunology Program website at **www.med.mun.ca/graduate/immuno.htm** for more information. The Division of Basic Medical Sciences also includes active research groups and graduate programs in Neuroscience, Cancer Research and Cardiovascular/Renal Physiology.

Applications must include a curriculum vitae, contact details for 3 referees, a letter of application describing research interests and a brief research plan. Applications or enquiries should be directed to: **Dr. Michael Grant, Faculty of Medicine, Memorial University of NF, St. John's, NF, Canada A1B 3V6 (mgrant@mun.ca)**. Review of applications will begin November 15, 2002.

In accordance with Canadian immigration requirements, priority will be given to Canadian citizens and permanent residents of Canada. Memorial University is committed to the principles of employment equity and welcomes applications from all qualified candidates.

Faculty Positions in Cell and Molecular Biology
Department of Biological Science
Florida State University

The Department of Biological Science seeks to fill two tenure-track Assistant or Associate Professor positions in the broadly defined area of cell and molecular biology. Successful applicants will be expected to develop problem-oriented research programs that use contemporary cellular and/or molecular tools to probe fundamental questions and that complement existing strengths in the Department, which include cellular and molecular neuroscience, cellular dynamics and contractility/motility, developmental biology and gene expression, structural biology and biophysics, computational biology, and molecular evolution. The research and graduate training efforts of the Department are strongly complemented by interdisciplinary programs in Neuroscience, Molecular Biophysics/Structural Biology, Computational Science and Information Technology, and Materials Research Technology. These programs are enhanced by the National High Magnetic Field Laboratory and the new FSU College of Medicine. The Department of Biological Science and allied units maintain fully staffed, state-of-the-art molecular cloning, hybridoma, bioanalytical, DNA sequencing, microarray, imaging and microscopy (including cryoEM), eukaryotic cell culture, X-ray crystallography, molecular modeling and physical biochemistry core facilities.

Applicants for entry-level positions must have significant postdoctoral training and a record of productivity that demonstrates promise for developing an independent, externally funded research program. Applicants that are more senior must have distinguished research, graduate training, and teaching records. Salary is competitive and commensurate with training and experience. A generous start-up package is provided for new faculty.

Applicants should submit electronic copies (.pdf files preferred) of a letter of application, a description of research with two selected reprints, and a curriculum vitae to: **cmbsearch@bio.fsu.edu**. Applicants should request letters from three references to be submitted electronically with hardcopies sent to: **Cell and Molecular Biology Search Committee, Department of Biological Science, Florida State University, Tallahassee, FL 32306-1100**. Completed applications will be evaluated on a rolling basis and should arrive no later than November 15, 2002 for full consideration. For more information: see **http://www.bio.fsu.edu** or write to **cmbsearch@bio.fsu.edu**.

Florida State University is an Equal Opportunity/Affirmative Action Employer, committed to diversity in hiring, and a Public Records Agency.

Tenure-track Faculty Position
Assistant or Associate Professor
of Wildlife Ecology

The Department of Biology and Wildlife and the Institute of Arctic Biology at the University of Alaska Fairbanks seek applications for a tenure-track position at the level of Assistant or Associate Professor of Wildlife Ecology. Applicants must have earned a Ph.D. in Wildlife Ecology or a closely related discipline. Postdoctoral and teaching experience, a strong record of extramural funding, the ability to supervise graduate students, collaborate with fellow faculty, and interact favorably with state and federal wildlife agencies are preferred.

The candidate must bring an innovative approach and play an important role in maintaining the excellence of our program in wildlife ecology. Preference will be given to applicants conducting quantitative research combining application and theory, and addressing spatial and temporal dynamics of habitats and bird or mammal populations. This position is 50% research and requires a teaching load of two courses per year, to include an undergraduate wildlife course and development and collaboration on graduate offerings. Numerous field stations and laboratory facilities are available at IAB to conduct research on captive and wild animals, including the R.G. White Large Animal Research Station, Animal Quarters, Toolik Field Station, Bonanza Creek LTER site, Spatial Ecology Laboratory, Alaska Geobotany Center, and the DNA Sequencing Core. Extensive collections of birds and mammals are available for study at the Univ. of Alaska Museum. The successful candidate will have the opportunity to interact and collaborate with 30 faculty studying a diverse array of topics. The Biology and Wildlife department has approximately 300 undergraduate and 110 graduate students, including 40 Ph.D. students. Additional details about our program are available at **http://mercury.bio.uaf.edu**.

Applications will be reviewed starting 1 November 2002. Please provide an applicant form (http://www.alaska.edu/hr/forms/PDF_ent/applicant_form_ent.pdf), cover letter, curriculum vitae, statement of research interests, statement of teaching interests, letters from 3 references and submit to: **Dr. Mark Lindberg (m.lindberg@uaf.edu), C/O UAF Human Resources, P.O. Box 757860, Fairbanks, Alaska 99775-7860, Fax (907) 474-5859, e-mail: fyjobs@uaf.edu**. Please reference: **PCN#240856, REQ# FF24085601**.

The University of Alaska Fairbanks is an Equal Opportunity/Affirmative Action Employer and Educational Institution. Women, protected, and minority applicants are encouraged to apply.

Department of Health and Human Services
National Institutes of Health
National Institute of General Medical Sciences

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 and those of NIH's research Institutes.

The National Institute of General Medical Sciences, a major research component of the National Institutes of Health (NIH) and the Department of Health and Human Services, is recruiting for a Director of the new Center for Bioinformatics and Computational Biology to lead a research program responsible for stimulating and funding research in these areas and to manage the NIH's Biomedical Information Science and Technology Initiative Consortium (BISTIC), (http://grants2.nih.gov/grants/bistic/bistic2.cfm). With a budget of $37 million and a staff of two, the individual selected for this position will serve to help meet the challenge, in the post-genomic era, of integrating and analyzing the vast amount of scientific data that are being generated in order to understand basic biological processes.

The successful individual will possess an M.D. or Ph.D. degree in a field relevant to the position, have research experience in either bioinformatics or computational biology (or a closely related area), an in-depth knowledge of biological processes, and leadership/managerial skills and experience that included responsibility for research in these areas.

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.

For additional information on this position, and for instructions on submitting your application, please see our website, at www.nigms.nih.gov.

DHHS and NIH are Equal Opportunity Employers

MAYO CLINIC

CLINICAL PSYCHIATRIC INVESTIGATOR
Rochester, Minnesota

The MAYO CLINIC is pursuing a national search for an outstanding psychiatric investigator to join a research team that is developing an integrated program of clinical research focusing on mood disorders but involving a broad spectrum of additional psychiatric disorders. Expertise in psychiatric genetics and interest in genomic investigations is important given the development of the programmatic priorities of the Department and Clinic. Demonstrated competence in the initiation and conduct of clinical research and evidence of successful extramural funding support is essential.

New research facilities within the Department at the Mayo Clinic have been developed and support for research staff and operations is available. The compensation package at the Mayo Clinic is highly competitive and includes exceptional professional benefits. The successful candidate will also receive an academic appointment at the Mayo Medical School.

For further information, please send a detailed letter describing your research interests and a complete curriculum vitae by e-mail or traditional mail to:

David A. Mrazek, M.D., F.R.C. Psych.
Professor and Chair
Department of Psychiatry and Psychology
Mayo Clinic
200 First Street SW
Rochester, MN 55905
E-mail: mrazek.david@mayo.edu

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

Clinical Director
Center for Cancer Research, National Cancer Institute
National Institutes of Health
Department of Health and Human Services

The Center for Cancer Research (CCR) of the National Cancer Institute (NCI) invites outstanding candidates to apply for the position of Clinical Director of the Center for Cancer Research. The primary responsibility of this position is clinical oversight of the intramural NCI clinical research program which includes monitoring and evaluating quality of care of all patients treated on four inpatient wards and multiple outpatient clinics. All patients are enrolled on one of over 150 clinical research protocols involving research programs of over 100 principal investigators. In addition, the Clinical Director directs the Protocol Review and Monitoring Committee, Biostatistics Section and patient and community outreach programs. The Clinical Director also oversees the credentialing of all physicians and represents the CCR at NIH-wide clinical administrative meetings and public relation forums Candidates should have an established record of excellence and accomplishment in clinical care and clinical research in oncology and have the leadership qualities required for the position. Candidates must be board certified in an oncology subspecialty and licensed to practice medicine in the United States.Applicants should send curriculum vitae and statement of relevant experience to:

Ms. Michelle Renehan
Center for Cancer Research
National Cancer Institute
Building 31, Room 3A19
Bethesda, Maryland 20892-2440

Applications must be postmarked by: COB 10/31/02

DHHS and NIH are Equal Opportunity Employer

EXERCISE PHYSIOLOGIST

THE DIVISION OF BIOLOGICAL SCIENCES, UNIVERSITY OF CALIFORNIA, DAVIS, invites applications and nominations for two positions in exercise physiology. These tenure-track positions may be at the **ASSISTANT PROFESSOR, ASSOCIATE PROFESSOR** or **PROFESSOR** level, as appropriate to the candidate's qualifications. These positions will be in the Exercise Biology Program, with the possibility of a joint appointment in the UC Davis School of Medicine. A Ph.D. (or equivalent) and postdoctoral experience is required. Candidates must have an outstanding record of research achievement and will be expected to develop a strong research program in exercise physiology. Particular attention will be afforded candidates who have an integrative perspective and employ mechanistic approaches to address important issues in exercise physiology, especially as related to muscle physiology/adaptation to exercise, and to candidates who would strengthen current campus initiatives on genomics, mouse biology, aging or gender-related responses to exercise. The successful candidates will be expected to teach undergraduate and graduate level courses in exercise biology and participate fully in the teaching and advising programs coordinated by the Divisions of Biological Sciences and Graduate Studies.

Applications should include: (1) curriculum vitae (with e-mail address), (2) statement of current and proposed research interests, (3) three relevant reprints, (4) statement of teaching experience/interests, (5) names, telephone numbers, and addresses (postal and e-mail) of at least three references, and (6) candidates should also arrange to have their reference letters mailed directly to the Committee Chair. All materials should be sent to: **Charles A. Fuller, Chair, Exercise Biology Search Committee, Exercise Biology Program, University of California, One Shields Avenue, Davis, CA 95616-8674**. Closing date: open until filled, but all materials must be received by **September 30, 2002** to be assured of full consideration.

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

Vertebrate and Invertebrate Biology Positions

Two tenure-track positions (Rank Open) are available starting August 1, 2003 for a **VERTEBRATE BIOLOGIST** and an **INVERTEBRATE BIOLOGIST** in the Department of Biology at the University of North Carolina at Greensboro. Successful candidates are expected to develop an extramurally funded research program involving graduate and undergraduate students. Renovated laboratory space and start-up funds are available. Areas of research emphasis are open. Applicants should have a Ph.D. and a strong research record. Teaching responsibilities will include vertebrate and invertebrate zoology, respectively, and specialty courses. Candidates for an appointment as Associate Professor or Professor must have a clear record of significant extramural research funding.

The Department of Biology consists of 28 tenure-track faculty and lecturers in addition to supporting staff. We offer degrees of BA and BS with concentrations in Biotechnology, in Environmental Biology, and in Human Biology, BS in Medical Technology, and an MS degree. Excellent facilities are available, which include automated sequencers, a core biotechnology facility, equipment for gene array analysis, a small animal care facility, tissue culture facilities, and SEM and microscopy facilities, a greenhouse, and a full suite of analytical and environmental monitoring equipment. Opportunities exist for involvement in a university-wide genomics initiative and for interactions with North Carolina's biomedical/biotechnology and environmental communities and at many nearby colleges and universities.

Send a cover letter, CV, statements of research and teaching interests, and arrange for three letters of reference to be sent, respectively, to: **Dr. John O'Brien, Chair, Vertebrate Biology Search Committee** OR **Dr. Esther Leise, Chair, Invertebrate Biology Search Committee, Department of Biology, UNC-Greensboro, P.O. Box 26170, Greensboro, NC 27402-6170** by **November 15, 2002**. For more information, visit our website at: **http://www.uncg.edu/bio**.

EEO/AA:W/M/V/D

FACULTY POSITIONS

Department of Biochemistry and Biophysics University of California, San Francisco

The Department of Biochemistry and Biophysics seeks candidates for tenure track faculty positions at the Assistant Professor level. We seek exceptional individuals working in two areas: cell or developmental biology and the structural analysis of large molecular machines.

Candidates are expected to hold a Ph.D. or M.D. degree, or equivalent, and to have demonstrated achievement in their fields. The successful candidate will be expected to establish a dynamic research program and to be an excellent teacher in both graduate and professional school courses.

Applicants should submit a curriculum vitae, a 1-2 page summary of research accomplishments, a 1-2 page description of future research plans, and copies of major publications. Applicants should also have three to five letters of recommendation forwarded to the chair of the search committee. The address for submission of all materials is:

Faculty Search Committee
Attn: Kathleen Yamamoto
Department of Biochemistry and Biophysics
University of California
San Francisco, CA 94143-0448

Applications received after December 1, 2002 may not be considered.

Our department is eager to diversify its faculty and we encourage women and minorities to apply. The University of California, San Francisco is an Equal Opportunity/Affirmative Action Employer.

Developmental Biologist

UNIVERSITY OF CALGARY

Creating the future of health.

The Genes & Development Research Group (GDRG) and the Department of Biochemistry & Molecular Biology invite applications for a full-time academic position as a Developmental Biologist using molecular genetic approaches in a model organism system. This position offers an excellent opportunity to develop an independent research program within a dynamic, collaborative and multidisciplinary environment. While duties include some teaching and graduate student supervision, at least 75% of time will be protected for research. Current strengths of the GDRG include molecular, genetic and neurobiological approaches to the study of the development of *C. elegans, Drosophila, Xenopus,* chick and mouse. For more information about the research interests of the GDRG members, see **http://www.ucalgary.ca/gdrg/**

The GDRG and Department of Biochemistry & Molecular Biology are part of the rapidly growing Faculty of Medicine, which is in the process of building a major new research facility. Calgary is a vibrant, multicultural city (population ~1,000,000) near the Rocky Mountains, Banff National Park and Lake Louise.

Qualifications include a PhD and/or MD, at least two years of post-doctoral experience and a proven record of research excellence in developmental biology. The selected candidate is expected to compete successfully for salary support and establishment funding from the Alberta Heritage Foundation for Medical Research and/or the Canadian Institutes of Health Research. We anticipate generous start-up funds will be available to a qualified candidate.

Please submit a curriculum vitae, a summary of research interests and reprints of two recent publications, and arrange to have three letters of reference sent directly, by **November 29, 2002,** to: **Dr. Samuel Weiss**, Chair, Genes & Development Research Group, Faculty of Medicine, 3330 Hospital Drive N.W., Calgary, Alberta, Canada T2N 4N1, email: weiss@ucalgary.ca

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

Principal Deputy Director
Center for Cancer Research, National Cancer Institute, National Institutes of Health
Department of Health and Human Services

The Center for Cancer Research (CCR) of the National Cancer Institute (NCI) invites outstanding candidates to apply for the position of Principal Deputy Director of the Center for Cancer Research. The primary responsibility of this position is to assist the Director in the basic, clinical and transitional research of the CCR.

The NCI's Center for Cancer Research primary goal is to promote closer links between basic researchers and clinical investigators, thereby enhancing their opportunities for both scientific discovery and translational research (bench-to-bedside and bedside-to-bench). The CCR is also committed to supporting and training young scientists and clinicians as they launch their careers in basic and clinical research. CCR offers numerous predoctoral, postdoctoral and clinical training positions with world-class scientists and physicians who are outstanding mentors and experts in their respective fields.

The CCR is composed of over 300 Principal Investigators in 54 Laboratories, Branches and Programs. As one of the world's largest cancer research centers, the CCR takes advantage of the breadth of its researchers to foster interdisciplinary programs and facilitate translational research.

The CCR mission is to reduce the burden of cancer through exploration, discovery and translation. The goals of the NCI restructuring with the creation of the Center for Cancer Research are:
(1) to foster interdisciplinary research,
(2) to facilitate translational research,
(3) to expedite technology development,
(4) to enhance training, particularly in interdisciplinary and translational research, and
(5) to build partnerships between NCI and other NIH Institutes, Federal agencies, academia, biotechnology companies and the pharmaceutical industry.

Candidates must have an M.D., or Ph.D. and an established record in translational research, regulatory affairs, and the management of a large and complex research program. The salary range will be commensurate with prior training and experience.

Applicants should send curriculum vitae and statement of relevant experience to:

Michelle Renehan
Center for Cancer Research
National Cancer Institute
Building 31 Room 3A19
Bethesda, Maryland 20892-2440

Applications must be postmarked by: **October 31, 2002.**

HHS and NIH are Equal Opportunity Employers

SIU
Southern Illinois University Carbondale

Tenure Track, Faculty Position
Biochemistry and Molecular Biology

The Department of Biochemistry and Molecular Biology at Southern Illinois University Carbondale, School of Medicine invites applications for a tenure track position at the Assistant or Associate Professor level. The candidate's research program should be in areas such as signal transduction, programmed cell death or eukaryotic gene regulation with an emphasis on understanding biochemical and molecular biological aspects of disease. Special consideration will be given to those who use genomic and/or proteomic approaches. Applicants must have a M.D. or Ph.D. in life sciences or related area. We will give preference to those with two or more years of postdoctoral experience. The candidate will have the opportunity to participate in the Center for Alzheimer Disease and Related Disorders and in the newly established SIU Cancer Institute. The ability to develop an active, externally funded research program and to contribute to teaching medical and graduate students is essential. The position is a 12-month appointment with a competitive salary, excellent facilities and substantial start-up funds.

All applicants must submit curriculum vitae, one page research plan and three letters of reference to: **Dr. Joseph C. Schmit, Chair, Dept. of Biochemistry and Molecular Biology, 1245 Lincoln Drive, Neckers Room 229C, Southern Illinois University School of Medicine, Carbondale, IL 62901-4413; jschmit@siumed.edu**. Application review will begin November 15, 2002 and continue until the position is filled.

Southern Illinois University Carbondale is an Equal Opportunity/ Affirmative Action Employer.

MAYO CLINIC

Research Scientists: Cell Adhesion — Angiogenesis
Rochester, Minnesota

The Mayo Clinic Cancer Center, the Department of Medicine, and the Department of Biochemistry Molecular Biology announce openings for geneticists, and cell and molecular biologists at the Assistant, Associate, and Professor levels to study the molecular basis of cell adhesion, cell-cell contact, and angiogenesis. Qualified individuals are expected to initiate and maintain an outstanding, extramural-funded, research program in these fields as they apply to cancer or cardiovascular diseases. Requirements include evidence of an ability to obtain extramural funding and to work in a collaborative environment. Opportunities at Mayo include well-equipped core facilities, interaction with talented basic and clinical scientists with an outstanding track record in obtaining extramural federal funding, and access to a wide array of clinical material. Women and minorities are encouraged to apply.

Applicants should send a curriculum vitae and a statement of research interests by e-mail or mail to:

Ms. Kristi Simmons
(Cancer Cell Biology Search)
Mayo Clinic
Guggenheim 1701
200 First St. S.W.
Rochester, MN 55905
simmons.kristi@mayo.edu

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

ASSISTANT/ASSOCIATE PROFESSOR
Baylor College of Medicine

The Division of Cardiothoracic Surgery, Michael E. DeBakey Department of Surgery at Baylor College of Medicine, has a tenure-track faculty position available at the Assistant or Associate Professor level. The successful candidate will serve a bridging function between basic and clinical Scientists in a large research setting that focuses on the molecular mechanisms of cardiovascular diseases such as aortic aneurysms and cardiac abnormalities. The new faculty member will be expected to develop an independent grant portfolio and participate in collaborative research. Candidates must possess a Ph.D. or M.D. degree. Interested applicants should submit complete curriculum vitae, a brief description of research interests, and names and addresses (including e-mail and telephone numbers) of three references to:

Alan P. Stolz, M.Ed.
Baylor College of Medicine
One Baylor Plaza, FBRN B–452
Houston, TX 77030
E-mail: astolz@bcm.tmc.edu

Baylor College of Medicine is an Equal Opportunity/Affirmative Action/Equal Access Employer.

ASSISTANT PROFESSOR
Gene Therapy/Molecular Biology

Assistant Professor position is available at the Musculoskeletal Disease Center of Loma Linda University and the VA Loma Linda Healthcare System. Join a large, multidisciplinary team working on basic molecular mechanisms of gene therapy for musculoskeletal diseases such as osteoporosis, arthritis, and hematopoietic diseases. The opportunity exists to closely interact with experienced Investigators in retroviral vectorology, molecular genetics, and bone biology. A strong background in molecular biology is essential as well as a strong publication record and proven ability to successfully compete for external grants. Salary and benefits are competitive plus the possibility of a long-term position. The Musculoskeletal Disease Center is ideally located in the inland empire of Southern California, one hour from metropolitan Los Angeles, Orange County, beaches, mountains, and the desert. Please send your curriculum vitae, cover letter, and the names of three references to: **A. MacMurray, M.B.A., Musculoskeletal Disease Center, P.O. Box 7210, Loma Linda, CA 92354. E-mail: macmua@lom.med.va.gov**. *Equal Employment Opportunity/Affirmative Action Plan Employer.*

PHYSIOLOGY FACULTY POSITION

A full-time position at the **ASSISTANT** or **ASSOCIATE PROFESSOR** level is available in the Department of Physiology of the College of Medical Sciences at Nova Southeastern University in Fort Lauderdale, Florida. The candidate's responsibilities will include participation in team-taught human physiology courses to health profession students, scholarship, and service. Individuals with teaching experience in endocrine or renal physiology at the medical school level will be given special consideration. The position requires a Ph.D. Although primarily a teaching position, opportunities for research do exist. Salary is dependent on qualifications. Please send a letter of interest; curriculum vitae; and the names, addresses, and telephone numbers of three professional references to: **Nova Southeastern University, Office of Human Resources (Position Number 999028), 3301 College Avenue, Ft. Lauderdale, FL 33314**. Visit our **website: http://www.nova.edu**. *Affirmative Action/Equal Opportunity Employer.*

POSITIONS OPEN

DEAN, SCHOOL OF MARINE SCIENCE
DIRECTOR, VIRGINIA INSTITUTE OF MARINE SCIENCE
College of William and Mary

Nominations and applications are invited for the joint position of Dean, School of Marine Science (SMS), and Director, Virginia Institute of Marine Science (VIMS). SMS/VIMS is dedicated to development of new knowledge through research, to graduate education, and to provision of technical advice relating to marine issues of Virginia.

At present, the Dean and Director administers a scientific and support staff of approximately 375, of whom 61 are academic faculty; an annual operating state general fund budget of $18 million; a research vessel fleet; and a large existing physical plant spanning two campuses, with the anticipated addition of a Marine Science Research Complex of some 114,000 square feet that is currently in the planning phase. Expenditures for extramural research awards in fiscal year 2000/2001 were $13 million. The faculty is organized into five departments: Biological Sciences, Environmental and Aquatic Animal Health, Fisheries Science, Physical Sciences, and Coastal and Ocean Policy. Regional, national, and international research and advisory programs are conducted across the broad subdisciplines of marine science with an emphasis in the coastal ocean. The academic program offers M.S. and Ph.D. degrees in marine science (with a student body of about 100) and an outstanding level of postgraduate achievement in private, government, and academic positions. The Institute is mandated as Virginia's official scientific advisor to state agencies on marine-related issues.

The collective resources, along with its success during the past decade and the recent federal emphasis on coastal issues, create the potential for SMS/VIMS to be the nation's premier coastal marine science program. The successful candidate will be expected to have the vision and necessary skills to realize this goal. In particular, expectations for the position include (1) leadership qualities that will facilitate the continued success of academic, research, and advisory programs; (2) the ability to communicate effectively with federal, state, and private entities in order to achieve fiscal and policy goals; and (3) the desire to continue the expansion of collaboration with other schools and departments at the College. Nominations; confidential inquiries; and (in the case of applicants) a letter of application, detailed résumé, and names and addresses of at least three references should be directed to:

Dr. Steven A. Kuehl
School of Marine Science
Virginia Institute of Marine Science
College of William and Mary
Gloucester Point, VA 23062 U.S.A.
E-mail: kuehl@vims.edu

Review will begin October 15, 2002, and we will continue to accept materials until the position is filled, with an anticipated starting date of 1 July 2003.

The College is an Equal Employment Opportunity/Affirmative Action Employer.

FIELD BIOLOGIST/ECOLOGIST. Simpson College invites applications for a tenure-track **ASSISTANT PROFESSOR** beginning August 2003. Ph.D. in either field biology or ecology with teaching experience preferred. Candidate must have a strong commitment to undergraduate research, teaching, campus life, and development of an environmental science major. Teaching responsibilities include general ecology with laboratory, a nonmajors course in environmental science (with laboratory), and at least two other courses of the candidate's choosing. Simpson College is a private, selective, liberal arts college affiliated with the United Methodist Church. Review of applications will begin on November 1, 2002. Please send a letter of application including statement of ideas for environmental science major and courses, curriculum vitae, and three letters of recommendation to: **Dr. Patricia Singer, Chair, Department of Biology and Environmental Sciences, Simpson College, 701 North C Street, Indianola, IA 50125**. *Women and minorities are encouraged to apply.*

POSITIONS OPEN

TENURE-TRACK FACULTY POSITION
University of Pittsburgh School of Medicine
Department of Pharmacology

An opening is available for a tenure-track faculty position in the Department of Pharmacology. The ideal candidate will be a research-oriented individual who has a Ph.D. or equivalent graduate degree. We are particularly interested in individuals with a research program focused on neuropharmacology who will complement the existing departmental strengths in cell signaling, cell death, cancer pharmacology, and drug discovery. Applicants appropriate for appointment at the **ASSISTANT PROFESSOR** level will be given priority in this search.

We expect the successful candidate will develop outstanding independent research programs and will be committed to the teaching mission of the Department. Very competitive start-up packages are available. Interested applicants should provide a one-page statement on their proposed research, curriculum vitae, and the names and contact information of three professional references. The review of applications will begin immediately, and we expect to fill these positions by spring 2003. Application should be sent to:

Ian J. Reynolds, Ph.D.
Chair, Faculty Search Committee
Department of Pharmacology
University of Pittsburgh, School of Medicine
W1340 Biomedical Science Tower
Pittsburgh, PA 15261

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

THE UNIVERSITY OF TEXAS SOUTHWESTERN MEDICAL CENTER
The Endowment for Scholars in Biomedical Research

UT Southwestern is pleased to announce the continuation of the Endowed Program for Scholars in Biomedical Research. The Program, which is fully funded from private endowment, will provide $600,000 over four years to support the research activities of each new **ASSISTANT PROFESSOR** (tenure track) appointed to the Program; five will be appointed annually. In addition, regular funding for salary as well as research space will be provided by the medical school department or research center offering the appointment. Positions in both basic science and clinical departments are available. The goal of the program is to assure a successful beginning of the research careers of an ever-growing cadre or outstanding young Investigators at UT Southwestern.

For detailed information about currently available faculty positions, please access our website: http://www.utsouthwestern.edu/home_pages/scholars/. *Southwestern, The University of Texas Southwestern Medical Center at Dallas.*

UT Southwestern is an Equal Opportunity Institution.

ASSISTANT PROFESSORSHIPS IN INORGANIC, ORGANIC, AND PHYSICAL CHEMISTRY
Harvard University Department of Chemistry and Chemical Biology

Applicants are invited to apply for Assistant Professorships in inorganic, organic, and physical chemistry. Applicants should arrange to have three letters of recommendation sent independently and should provide curriculum vitae, a list of publications, and an outline of their future research plans. Applications and supporting materials should be sent to: **Chair, c/o Ms. Carol Gonzaga, Department of Chemistry and Chemical Biology, Harvard University, 12 Oxford Street, Cambridge, MA 02138-2902**. The deadline date for receipt of applications and supporting materials is November 30, 2002. *Harvard University is an Affirmative Action/Equal Opportunity Employer and welcomes applications from women and minority group members.*

The University of Texas at Austin

Microscopy and Imaging Staff Position

The Institute for Cellular and Molecular Biology

Position available for Manager of the microscopy and imaging core facility in the Institute for Cellular and Molecular Biology at the University of Texas at Austin. The successful candidate will assist in all aspects of optical microscopy, experimental design, and interpretation. Responsibilities will include managing the facility, operating and maintaining confocal, fluorescence, and multi-photon microscopes and associated computer systems, as well as providing instruction and assistance to researchers using the facility. The candidate will also be expected to assist with a fluorescence activated cell sorter. Experience with microscopy and fluorescent labeling of biological samples, competence with multiple computer platforms, and general technical ability are desirable. A PhD in biological or physical science is required. Please send curriculum vitae / résumé and cover letter to:

Dr. Henry R. Bose, Jr.
Associate Director
Institute for Cellular and Molecular Biology
The University of Texas at Austin
Austin TX 78712

Homepage • http://www.icmb.utexas.edu

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

Department of Microbiology & Molecular Genetics Seeks Assistant Professor

The Department of Microbiology & Molecular Genetics at The University of Texas Medical School at Houston seeks an exceptional scientist for a tenure track position at the Assistant Professor level. The successful candidate should have a Ph.D. and/or M.D., and several years postdoctoral experience. Excellence in fundamental research is of greater significance than the particular area of research; however, the Department is especially interested in research areas involving molecular bases of eukaryotic and prokaryotic pathogenesis. Other areas of equal importance are microbial molecular genetics, molecular virology, physiology and genomics. The successful candidate will join a department with strengths in the area of cell signaling, signal transduction and the molecular genetics of prokaryotes and eukaryotic microbes involving a diversity of microbial systems. The successful candidate will receive a competitive salary and start-up package and will be expected to participate in teaching graduate students and medical students. Applicants should submit a curriculum vitae, the names of at least three references and a statement of research goals and interests, including a description of how the research program reflects the future directions of microbiology. For full consideration, completed applications should be submitted by **December 1, 2002.**

Applications should be submitted to:

Samuel Kaplan, Ph.D.
Microbiology & Molecular Genetics
The University of Texas Medical School
PO Box 20708
Houston TX 77225
(713) 500-5502
Fax: (713) 500-5499
E-mail: Samuel.Kaplan@uth.tmc.edu
Web Address: mmg.uth.tmc.edu

The University of Texas Health Science Center-Houston is an Equal Opportunity Employer. Women and Minorities are encouraged to apply.

UNIVERSITY OF THE WITWATERSRAND JOHANNESBURG, SOUTH AFRICA FACULTIES OF SCIENCE AND HEALTH SCIENCES EXPERIENCED SENIOR BIOINFORMATICIST (NAT392)

Applications are invited from an independent and dynamic bioinformaticist to spearhead and develop interdisciplinary bioinformatics research and teaching at The University of the Witwatersrand. The scope includes enhancing the research capability of the University by providing support and forming collaborations with scientists in the biological and computational sciences in the Faculties of Science and Health Sciences as well as the formal development of teaching and training programmes for bioinformatics together with interested staff at the University.

Biotechnology has been identified as a national growth area in South Africa. This is a unique opportunity to make a major impact on the development of bioinformatics at the University of the Witwatersrand and to interact with groups of talented scientists by developing new areas for research and by becoming involved in existing projects in a stimulating research environment.

Qualifications: a PhD or equivalent in a relevant biological or computational field. At least four years experience and an established publication record in bioinformatics coupled with an in-depth knowledge and hands on experience with bioinformatics tools for genomics and proteomics.

Enquiries: Professor M Ramsay
email: **micheler@mail.saimr.wits.ac.za**.

To apply, submit a covering letter, detailed CV with names, addresses and contact details and e-mail addresses of 3 referees and certified copies of degrees/diplomas: **Mrs. Kalpana Patel, HR Manager, Faculty of Science, University of the Witwatersrand, Private Bag 3, WITS, 2050, Johannesburg, South Africa** by 31 October 2002.
Email: **508kappa@atlas.wits.ac.za** **www.wits.ac.za**

CENTRAL DRUG RESEARCH INSTITUTE

(Council of Scientific & Industrial Research)
Chattar Manzil Palace, P.O. Box No. 173,
Lucknow, India-226 001

ADVERTISEMENT No. 3/2002
Positions for Biomedical Scientists

Applications are invited from the persons of Indian Nationality for the following posts in Central Drug Research Institute, Lucknow.

1. **SCIENTIST 'E.I [GROUP IV(3)]:04 POSTS (Scale of Pay:** Rs.12,000-375-16,500)
   Post No. 1: In Bioinformatics/Computational Biology for Structural Biology Unit
   Post No. 2 & 3: In Cell & Molecular Biology for Molecular & Structural Biology Division
   Post No. 4: In Protein Chemistry for Molecular & Structural Biology Division

2. **SCIENTIST 'C' [GROUP IV(2)] : 07 POSTS**
   (Scale of Pay: Rs. 10,000-325-15,200)
   Post No. 1: In Endocrinology Division
   Post No. 2: In Pharmaceutics Division
   Post No. 3: In Pharmacology Division
   Post No. 4: In Endocrinology Division
   Post No. 5: In Pharmacokinetics Division
   Post No. 6: In Bioinformatics for Structural Biology Unit
   Post No. 7: In Structural Biology for Structural Biology Unit

The candidates must clearly indicate their age, which should not exceed 35 years for Scientist 'C' and 40 years for Scientist 'E.I as on 30th November, 2002. Candidates residing abroad must send their detailed Bio-data indicating full details of academic career from Matriculation/High School onwards providing all the required information with copy of their outstanding publications and names of three referees immediately, which should reach the **Director, Central Drug Research Institute, Chattar Manzil Palace, Post Box No. 173, Lucknow - 226 001, India** on or before **November 30, 2002** positively. Age limit, qualifications and/or experience can be relaxed if considered necessary.

For details of qualifications etc. please download our Website: **http://www.cdriindia.org**

ASSISTANT PROFESSORS
Institute of Molecular Biology

The Institute of Molecular Biology and the Department of Biology at the University of Oregon (**website: http://www.molbio.uoregon.edu**) seek to fill two new tenure-track faculty positions to begin fall 2003. We seek outstanding individuals studying fundamental problems in molecular, cellular, and developmental biology as well as genetics, structural biology, molecular genetics of behavior, and molecular evolution but will consider applicants working in other areas. Individuals who are using genetic, genomic, and/or proteomic approaches are especially encouraged to apply. These positions provide an opportunity to build on connections to the Institute of Neuroscience. We anticipate filling these positions at the tenure-track Assistant Professor level. The successful candidate will have an outstanding research program and a commitment to excellence in teaching. Interested persons should forward curriculum vitae; statement of research plans and teaching interests; and arrange for three letters of recommendation to be sent by November 1, 2002, to: **Molecular Biology Search, Department of Biology, University of Oregon, Eugene, OR 97403-1229.**

ASSISTANT PROFESSOR
Institute of Neuroscience

The Institute of Neuroscience and the Department of Biology at the University of Oregon seek applications from Researchers studying fundamental problems in neuroscience and/or developmental biology to fill a tenure-track position to begin fall 2003. The interests of our group encompass all levels of analysis from molecular, genetic, and cellular to behavioral in a diversity of species (**website: http://www.uoneuro.uoregon.edu**). We especially encourage applications from individuals whose research integrates multiple areas and complements existing research programs in life sciences at the University of Oregon (**website: http://lifesci.uoregon.edu**). The successful candidate will have an outstanding research program and a commitment to excellence in teaching. Interested persons should forward curriculum vitae; statement of research plans and teaching interests; and arrange for three letters of recommendation to be sent by November 1, 2002, to: **Neuroscience/Development Search, Department of Biology, University of Oregon, Eugene, OR 97403-1210.** *The University of Oregon is an Equal Opportunity/Affirmative Action Institution committed to cultural diversity and compliance with the Americans With Disabilities Act.*

CELL PHYSIOLOGIST: Department of Biology, DePauw University. Tenure-track position, Department of Biology, DePauw University, starting August 2003. Rank and salary commensurate with credentials and experience. Teaching duties include courses in animal physiology, cell and molecular biology, and introductory classes. Candidates who can develop research programs involving undergraduates and who employ molecular techniques in their research preferred. For more information about the Department, visit **website: http://www.depauw.edu/acad/biology**. DePauw has exceptional programs for supporting its faculty including generous start-up funding and pretenure leaves for new faculty and funding for professional and curriculum development activities (see **website: http://www.depauw.edu/admin/acadaffairs/facdev.htm**). Review of applications will begin October 10, 2002, and continue until position is filled. Submit letter of application, curriculum vitae, three letters of recommendation, transcripts, a statement of teaching interests and philosophy, professional development plans, and a statement of research interests to: **Search Committee, Department of Biology, DePauw University, Greencastle, IN 46135.** *DePauw University is an Affirmative Action/Equal Opportunity Employer and encourages applications from women and members of underrepresented groups.*

POSITIONS OPEN

ASSISTANT PROFESSOR
Cell/Developmental Biology

The Section of Molecular Cell and Developmental Biology at The University of Texas at Austin seeks a tenure-track faculty member who uses molecular approaches and modern imaging techniques to address important issues in cell and developmental biology. We are especially interested in individuals using genetic and/or vertebrate model systems. While we are primarily searching at the Assistant Professor level, exceptional candidates of higher rank may also be considered. Generous start-up funds are available and, in addition, the successful candidate will 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 biology community at UT Austin is in an exciting phase of growth with recent hires in cell biology, developmental biology, structural biology, and related areas.

Applications will be considered from 15 October 2002 until the position is filled. Applicants should send their curriculum vitae, statement of research and teaching interests, and representative publications as well as the names and contact information of at least three references to:

Janice Fischer
Chair, Search Committee
Section of Molecular Cell and Developmental Biology
University of Texas at Austin
BIO 311, 205W 24th Street
Austin, TX 78712
Websites: http://www.biosci.utexas.edu/MCDB/
and **http://www.icmb.utexas.edu/**

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

BIOCHEMISTRY, ORGANIC. The Department of Chemistry and Biochemistry at Baylor University invites applications for two positions in biochemistry at the **ASSISTANT** or **ASSOCIATE** level and a named **CHAIR** in organic chemistry. One biochemistry position must be in physical biochemistry. Organic may be in any area. Required qualifications: Ph.D. in chemistry or biochemistry and commitment to exemplary teaching and a vigorous, independent research program with significant external funding. Research should complement existing programs and support interdisciplinary efforts in biochemistry and drug discovery. Candidates for the Chaired position must have established research programs that are nationally recognized with a proven record of extramural support. Send letter of application, current curriculum vitae, description of research interests, estimated start-up, academic transcripts, statement of teaching philosophy, and three letters of recommendation to: **Dr. Marianna Busch, Chair, Chemistry and Biochemistry, P.O. Box 97348, Baylor University, Waco, TX 76798-7348. E-mail: marianna_busch@baylor.edu.** Applications received by October 15, 2002, will receive full consideration; however, the search will continue until the positions are filled. *Baylor University is a Baptist University affiliated with the Baptist General Convention of Texas. As an Affirmative Action/Equal Opportunity Employer, Baylor encourages minorities, women, veterans, and persons with disabilities to apply.*

The Department of Chemistry of the University of Chicago invites applications from outstanding individuals for the position of **ASSISTANT PROFESSOR** of chemistry. This search is in the areas broadly defined as inorganic, organic, physical/theoretical, and biological and materials chemistry. Applicants should submit curriculum vitae, a list of publications, and a succinct outline of their research plans. Candidates should arrange for three letters of recommendation to be sent to: **James R. Norris, Jr., Chairman, Department of Chemistry, the University of Chicago, 5735 South Ellis Avenue, Chicago, IL 60637.** Deadline for application materials is October 18, 2002. *An Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

Washington University in St. Louis
SCHOOL OF MEDICINE
TENURE-TRACK ASSISTANT PROFESSOR

Computational Biologists with research interests in macromolecular biochemistry and biophysics are invited to apply for a tenure-track position as Assistant Professor in the Center for Computational Biology (CCB) at Washington University. Candidates are sought who will complement current faculty research programs (**website: http://www.ccb.wustl.edu**). This person will be a member of the Department of Biochemistry and Molecular Biophysics at the School of Medicine, and the successful candidate will have research interests also related to those of the Department (**website: http://www.biochem.wustl.edu**).

The interdisciplinary environment of the CCB is fostered by its administration through the Departments of Biochemistry and Molecular Biophysics and Genetics in the Medical School and the Washington University Biomedical Engineering program. CCB faculty and students occupy a newly renovated building on the medical school campus. The ideal candidate is one who actively participates in the intellectual life of this community including teaching graduate students in the Division of Biomedical Sciences.

Applicants must submit curriculum vitae; a statement of research interests; and names of three references by December 15, 2002, to: **Dr. Kathleen B. Hall, Department of Biochemistry and Molecular Biophysics, Box 8231, Washington University School of Medicine, 660 South Euclid Avenue, St. Louis, MO 63110.** Applications might also be sent electronically to: **Ms. Anna Blanchard; e-mail: blanchard@biochem.wustl.edu.** *Washington University is an Equal Opportunity Employer.*

ASSISTANT PROFESSORSHIPS IN ORGANIC CHEMISTRY AND CHEMICAL BIOLOGY
Harvard University Department of Chemistry and Chemical Biology

Applicants are invited to apply for Assistant Professorships in organic chemistry and chemical biology. Fields of particular interest include organic synthesis, catalysis, organic materials, chemical biology, and macromolecular structure and function, although candidates in all areas of organic chemistry, broadly defined, will be considered. Applicants should arrange to have three letters of recommendation sent independently and should provide curriculum vitae, a list of publications, and an outline of their future research projects. Applications and supporting materials should be sent to: **Chair, c/o Ms. Carol Gonzaga, Department of Chemistry and Chemical Biology, Harvard University, 12 Oxford Street, Cambridge, MA 02138-2902.** The deadline date for receipt of applications and supporting materials is November 30, 2002. *Harvard University is an Affirmative Action/Equal Opportunity Employer and welcomes applications from women and minority group members.*

BIOLOGY: ASSISTANT PROFESSOR, tenure track, beginning August 2003. Teaching responsibilities include introductory biology (emphasis on cellular and molecular biology), upper-level courses in the candidate's specialty, and courses for nonscience students. Ph.D. required; undergraduate teaching experience highly desirable. Research specialization within biology is open but preference will be given to candidates that complement the Department's strengths. Austin College is a selective, liberal arts college with a biology faculty of eight. Send letter of application, curriculum vitae, graduate transcripts, three letters of reference, and one-page descriptions of teaching philosophy and research interests to: **Michael Imhoff, Vice President for Academic Affairs, Austin College, Sherman, TX 75090-4400.** For more information, see **website: http://artemis.austincollege.edu/acad/bio/WebPages/Biology.html.** Review of applications begins October 15, 2002. *Affirmative Action/Equal Opportunity Employer.*

VIROLOGIST
Uniformed Services University (USUHS)

The Department of Microbiology and Immunology at USUHS invites applications from Virologists for a full-time tenure-track position at the **ASSISTANT PROFESSOR** level. Candidates must possess a Ph.D. degree or its equivalent, postdoctoral experience, and a demonstrated record of outstanding research productivity in human viral diseases. Applicants with a strong background in the areas of hepatitis C virus, emerging viral diseases, virus-host cell interactions, viral pathogenesis, viral oncogenesis, or viral immunology are encouraged to apply. The successful candidate is expected to establish an independent and externally funded research program that complements the research activities of existing Virologists at the university whose interests include molecular biology of human retroviruses, mechanism of viral entry, gene expression, cell cycle regulation, cell transformation, and HIV vaccine development. The candidate must also demonstrate a strong commitment to the teaching mission of the Department. Full salary support, a competitive start-up package, and state-of-the art core facilities are available. Interested individuals should submit the following: a letter of application; curriculum vitae; a statement of research interests and goals; and the names, telephone numbers, and addresses of three references. All materials should be sent to:

Chair, Virologist Search Committee
Department of Microbiology and Immunology
Uniformed Services University of the Health Sciences
4301 Jones Bridge Road
Bethesda, MD 20814-4799

The deadline for submission of applications is October 31, 2002. *USUHS is an Equal Opportunity Employer.*

Gustavus Adolphus College invites nominations and applications for an interdepartmental, tenure-track position of **ASSISTANT PROFESSOR** in the Departments of Biology and Chemistry to begin September 1, 2003. Ph.D. in biochemistry or related discipline required. Competitive salary and start-up funds. Responsibilities include introductory and advanced biochemistry courses plus a January-term elective. Active undergraduate research program expected as a commitment to excellence in scholarship and teaching within liberal arts setting. Interest in teaching chemistry courses preferred. Postdoctoral research, demonstrated teaching ability, and enthusiasm for cross-disciplinary interactions highly valued. Send letter of application, curriculum vitae, transcripts, statements of teaching philosophy and research interests, and three to five professional reference letters to: **Dr. Allan Splittgerber, Chair, Department of Chemistry, Biochemistry Search, Gustavus Adolphus College, 800 West College Avenue, St. Peter, MN 56082-1498. Website: www.gustavus.edu/oncampus.humanresources/index.cfm**. Review of applications will begin October 21, 2002, and continue until position is filled. *Affirmative Action/Equal Opportunity Employer.*

BIOLOGY/ENVIRONMENTAL SCIENCE. Austin College, a selective, liberal arts institution, seeks a tenure-track **ASSISTANT PROFESSOR** of biology and environmental science to begin August 2003. Ph.D. required. The successful candidate will be committed to liberal arts education and research with undergraduates and will enjoy contributing to both the vitality and visibility of a thriving, broadly interdisciplinary environmental studies program. The research specialty is open but should bridge biology and environmental science. Send letter of application, curriculum vitae, graduate transcripts, three letters of reference, and one-page descriptions of teaching philosophy and research interests to: **Michael Imhoff, Vice President for Academic Affairs, Austin College, Sherman, TX 75090-4440**. Review of applications begins October 11, 2002. For more information, consult **website: http://artemis.austincollege.edu/acad/envstud/EnvStudies/.**

Affirmative Action/Equal Opportunity Employer.

POSITIONS OPEN

THE UNIVERSITY OF CHICAGO

CANCER BIOLOGIST
The Ben May Institute for Cancer Research
The University of Chicago

The University of Chicago is seeking applicants for a tenure-track position at the **ASSISTANT PROFESSOR** level. The Ben May Institute for Cancer Research (**website: http://huggins.bsd.uchicago.edu**) is a basic research unit that for over 50 years has been committed to the study of basic mechanisms of cancer. The current faculty is committed to an interdisciplinary approach using established and newly emerging biochemical, genetic, molecular, and structural biological tools to attack basic problems in cancer biology. We are seeking outstanding individuals interested in diverse aspects of cancer biology including but not limited to cell growth and differentiation, signal transduction, and structural biology.

The Institute is closely interfaced with the University of Chicago NCI-designated Comprehensive Cancer Center and the University of Chicago Center for Molecular Oncology. Additionally, the Institute is closely affiliated with the graduate degree-granting Committee on Cancer Biology, and Institute faculty have access to outstanding Ph.D. and M.D./Ph.D. students. Candidates should have sufficient research experience to demonstrate both significant accomplishments and outstanding potential. The successful recruit will be expected to teach undergraduate and graduate students. Curriculum vitae, bibliography, a brief statement of research interest, and three letters of recommendation should be sent to: **Jane Booker, Faculty Recruitment Coordinator, Ben May Institute for Cancer Research, 5841 South Maryland Avenue, MC 6027, Chicago, IL 60637**.

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

BIOCHEMISTRY

The Department of Chemistry at George Mason University is seeking a Biochemist for a tenure-track position at the **ASSISTANT PROFESSOR** level. The Department will consider applicants in all subdisciplines of biochemistry. Candidates are expected to develop a vigorous research program with extramural funding and must have a commitment to excellence in undergraduate and graduate chemistry education. The Biochemist will reside in a newly established interdisciplinary biosciences center at the Prince William Campus of GMU in Manassas, Virginia. Additional information is available at **website: http://www.gmu.edu/departments/chemistry**. Applicants should submit curriculum vitae; a statement of current and future research plans; and arrange for three letters of recommendation to be sent by November 15, 2002, to: **Faculty Search Committee, Department of Chemistry, MSN 3E2, George Mason University, 4400 University Drive, Fairfax, VA 22030**. *George Mason is an Affirmative Action/Equal Opportunity Employer. Women and minority candidates are particularly encouraged to apply.*

ANIMAL BIOLOGIST. The Department of Biology invites applications for a tenure-track **ASSISTANT PROFESSOR** position. The teaching responsibilities include human anatomy and physiology courses for allied health and premedical students and an upper-division course in the area of expertise. Research area is open and may involve undergraduate and Master's students. Submit a letter of application, curriculum vitae, and three letters of reference to: **William E. Cooper, Chair, Animal Biology Search Committee, Department of Biology, Indiana University/Purdue University Fort Wayne, Fort Wayne, IN 46805-1499**. Review of applications will begin on 15 November 2002. **E-mail: cooperw@ipfw.edu; website: http://www.ipfw.edu/biol**. *An Affirmative Action/Equal Opportunity Employer.*

POSITIONS OPEN

FACULTY POSITION
BIOANALYTICAL CHEMISTRY
University of Florida

The Department of Chemistry at the University of Florida invites applications for a tenure-track position at the **ASSISTANT** or **ASSOCIATE PROFESSOR** level in bioanalytical chemistry starting fall 2003. Candidates are expected to have a Ph.D. and postdoctoral experience in chemistry, biochemistry, or a related field. Applications from candidates with research interests in bioanalytical chemistry with emphasis on nanoscience are especially encouraged. The successful candidate must be able to teach effectively and to develop an independent and vigorous research program. The new faculty member will join a Top-10 ranked analytical chemistry program. The College of Liberal Arts and Sciences and the College of Engineering are together planning at least eight new faculty hires for 2002–2005 in the area of nanoscience/technology as part of a commitment to create a universitywide nanoscience institute. The Department of Chemistry at **website: http://www.chem.ufl.edu** offers nationally competitive salaries and benefits and substantial start-up funds. Applicants should submit curriculum vitae, publication list, a detailed statement of research interests and proposed activities, and arrange to have three letters of recommendation sent separately. All correspondence should be sent to: **Chair, Analytical Chemistry Search Committee, Department of Chemistry, P.O. Box 117200, University of Florida, Gainesville, FL 32611-7200**. To ensure full consideration, all application materials should be received by November 15, 2002. *Women and underrepresented minorities are strongly encouraged to apply. Anyone requiring special assistance in completing the application should contact the Committee Chair. Equal Opportunity/Affirmative Action Employer.*

The Vanderbilt Institute of Chemical Biology (VICB) and the Department of Chemistry at Vanderbilt University are seeking applicants for a tenured position at the level of **ASSOCIATE PROFESSOR** or above or a tenure-track position at the level of **ASSISTANT PROFESSOR**. A goal of the VICB is to build on institutional strengths in proteomics, structural biology, and toxicology and interface with world-class centers in cancer, diabetes, and clinical pharmacology by application of the tools of chemical analysis (e.g., mass spectrometry) to relevant biological problems. Individuals who bridge the chemistry-medicine interface are of particular interest. Junior candidates are expected to develop a vigorous, internationally recognized research program, whereas senior candidates will already have established such a program. Successful candidates must demonstrate a commitment to excellence in teaching in the graduate and undergraduate programs of the Department of Chemistry. Applications will be evaluated on a rolling basis and the search will continue until filled. Senior applicants should submit curriculum vitae to: **Professor Lawrence J. Marnett, Chair of the Search Committee, Vanderbilt Institute of Chemical Biology, Department of Chemistry, 7332 Stevenson Center, Vanderbilt University, Nashville, TN 37235**. Junior applicants should submit curriculum vitae and summaries of research and teaching plans. *Vanderbilt University is an Equal Employment Opportunity/Affirmative Action Employer.*

ASSISTANT PROFESSOR
Behavioral Neuroscience

In connection with a neuroscience initiative, Princeton University's Department of Psychology anticipates making an appointment at the Assistant Professor level to begin September 2003. The position is in behavioral neuroscience with expertise in animal research. Applicants should have an active program of laboratory research and be prepared to teach at both undergraduate and graduate levels. Ph.D. required. Send curriculum vitae, one-page research description, and three letters of recommendation to: **Neuroscience Search Committee, Department of Psychology, Princeton University, Princeton, NJ 08544-1010**. Deadline is October 15, 2002. *Princeton is an Equal Opportunity/Affirmative Action Employer.*

WANTED
BY THE U.S. DEPARTMENT OF JUSTICE
Chief, Science Advisor

REWARD: Help create the 21st Century Department of Justice.

This position is temporary not to exceed 3 years. It will be filled under a Senior Executive Service Limited Term Appointment Authority. In addition, it may or may not be filled under the provisions of the Intergovernmental Personnel Act.

The U.S. Department of Justice, the nation's premier law enforcement agency, has initiated an intensive search for an energetic and proactive individual with proven executive level experience to assist the Deputy Attorney General on a wide range of scientific issues including National and Homeland Security. The successful candidate will possess excellent technical, managerial, analytical, and interpersonal skills and experience in the application of science to law enforcement technology and technology policy needs.

CLAIM YOUR REWARD:

If you are ready to accept the challenge of leading a science program for the world's premier law enforcement agency, contact us for an application package:

By Mail: **U.S. Department of Justice**
Executive Resources Group
1331 Pennsylvania Avenue, NW
Suite 1170
Washington, DC 20530
Attn: Sherry A. Mahoney
By Email: **Sherry.A.Mahoney@usdoj.gov**
By Phone: **(202) 514-6794**

NATIONAL CANCER INSTITUTE

Postdoctoral Fellowship in Immunology

The laboratory of **Richard J. Hodes, M.D.** is recruiting for a postdoctoral fellowship position. This laboratory is in the Experimental Immunology Branch of the National Cancer Institute (NCI), a highly collaborative group of principal investigators that carries out a broad program of basic immunobiology research. Applicants should have an M.D., Ph.D., or equivalent degree, with the most recent degree awarded within the past five years. Postdoctoral fellows will carry out a mentored research program studying the regulation of the immune response, conducted in an intensive training environment. Major research activities in this laboratory include: (1) molecular and cellular studies of costimulatory function in T and B lymphocyte activation, and (2) regulation of cellular proliferation and function by mechanisms including telomerase expression and telomere length maintenance. Further information about these programs can be found on the laboratory home page: **http://ccr.cancer.gov/Staff/Staff.asp?StaffID=472**

Applicants should send curriculum vitae and three references to: **Richard J. Hodes, M.D., Experimental Immunology Branch, Center for Cancer Research, National Cancer Institute, National Institutes of Health, Building 10/Room 4B36, 10 Center Drive, Bethesda, Maryland 20892**.

The NCI is a major research component of the National Institutes of Health (NIH) and the Department of Health and Human Services. 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 for the National Institutes of Health and those of NIH's research Institutes.

HHS and NIH are Equal Opportunity Employers

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.*

Southwestern University
Biology – Two positions available
Microbiologist and Animal Biologist

The Southwestern University Department of Biology invites applications for two tenure-track faculty appointments to begin August 2003. **One position is for a Microbiologist:** Primary teaching responsibilities will include cell biology for first year biology majors and Microbiology for upper-level undergraduates. Additional teaching responsibilities may include Molecular Genetics, Immunology, and a microbiology course designed for non-science majors. **A second position is available for an Animal Biologist:** Primary teaching responsibilities will include physiology for first year biology majors and at least two upper-level courses such as Comparative Vertebrate Morphology, Histology, Organ Physiology, or Invertebrate Biology. Animal biologists with expertise in organismal studies of the physiology of morphology for any animal or group of animals are encouraged to apply.

A Ph.D. and a strong commitment to undergraduate teaching are required for both positions. Teaching experience and post-doctoral research work are desired. The successful candidates will develop research programs that actively involve undergraduates. Appointments will be made at the Assistant Professor, Associate Professor, or Professor rank, depending on previous experience.

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 1,200 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. Southwestern is located in Georgetown, Texas, 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 for the specific position in which you have an interest, curriculum vitae, statements of teaching and research philosophies, graduate and undergraduate transcripts, and three current letters of recommendation to: **Faculty Search Committee, Animal Biologist or Microbiologist, Southwestern University, P.O. Box 770, Georgetown, TX 78627-0770.** The deadline to apply is **November 8, 2002**.

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

FACULTY POSITION
Department of Biology
Indiana University
High-Throughput Analyses of DNA, RNA, or Proteins

The Department of Biology at Indiana University is seeking applications for a tenure-track position at the **ASSISTANT PROFESSOR** level from individuals with interests in global analyses of complex biological problems using the tools of functional genomics and/or proteomics. While the candidates are expected to use state-of-the-art methods, the focus of the research should be on biological questions, not on instrumentation or analytical method development. Research could focus on prokaryotic or eukaryotic organisms.

This position is part of a significant expansion of IU–Bloomington's efforts in the life sciences. The expansion encompasses construction of two major research buildings; a new interdepartmental initiative in biochemistry and biophysics; and numerous recent hirings that have greatly expanded our strengths in the areas of microbiology, biochemistry, cell and developmental biology, molecular evolution, and ecology. One consequence of this expansion is that we welcome applications and inquiries from two-career couples at any level including those with partners in other areas of biology, biochemistry, and biophysics.

The successful candidate will be provided with a competitive start-up package and will both interact with and benefit from The Center for Genomics and Bioinformatics and from the Proteomics Research and Development Facility, centers supporting research in these areas. S/he will also benefit from intercampus programs sponsored by the Indiana Genomics Initiative fostering collaborations with the Indiana University School of Medicine and from training grants in genetics and in evolution, development, and genomics. For more information about the Biology Department and for links to information about the campus and the Bloomington community, see **website: http://www.bio.indiana.edu**. Applicants should send curriculum vitae; a statement of research (past, present, and planned) and teaching interests; representative publications; and arrange to have three (or more) letters of recommendation sent to: **Functional Genomics Search Committee, Department of Biology, Indiana University, 1001 East Third Street, Bloomington, IN 47405-3700**. Additional information regarding this position can be obtained by contacting: **Yves Brun, Director of the Microbiology and Biochemistry and Molecular Biology Programs; Telephone: 812-855-8860; e-mail: ybrun@bio.indiana.edu**. A review of applicants will begin November 1, 2002, and will continue until the position is filled. *Indiana University is an Affirmative Action/Equal Opportunity Employer. Women, minority candidates, and couples are encouraged to apply.*

FACULTY POSITIONS
Microbial Pathogenesis
New York Medical College

The Department of Microbiology and Immunology at New York Medical College invites applications for several tenure-track faculty positions in the broad area of microbial pathogenesis. It is expected that appointments will be made at all faculty ranks. Our focus will be on candidates who will employ molecular approaches to pathogenesis/immunopathogenesis of microbial infections. Areas of particular interest include but are not limited to newly emerging pathogens, microbial genomics/bioinformatics, and cellular microbiology. We are seeking individuals with a commitment to teaching and the establishment of a vigorous, independent research program and the willingness to interact with other members of the Department and medical school faculty. The search process will begin immediately and will continue until the available positions are filled. Interested individuals should submit curriculum vitae, selected reprints, a description of current and future research plans, and arrange to have three letters of recommendation sent to: **Dr. Ira Schwartz, Chairman, Department of Microbiology and Immunology, New York Medical College, Valhalla, NY 10595. E-mail: schwartz@nymc.edu**.

POSITIONS OPEN

STATE UNIVERSITY of West Georgia

BIOLOGY CHAIRPERSON

The State University of West Georgia invites applications for the position of Chairperson of the Department of Biology. The successful candidate will have a Ph.D. in a biological science with demonstrated excellence in teaching, research involving undergraduate and graduate students, leadership, and administration. Preference will be given to applicants who can enhance departmental activities by fostering external funding and expanding relationships with regional industry, governmental agencies, and educational institutions. Candidates must have credentials qualifying for appointment at the rank of **ASSOCIATE** or **FULL PROFESSOR**. Appointment begins August 1, 2003. The Department includes approximately 750 majors, 20 graduate students, and 13 faculty positions. The university is a residential, liberal arts institution with an approximate enrollment of 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: **Dr. Joseph J. Hendricks, Department of Biology, State University of West Georgia, Carrollton, GA 30118**. Direct inquiries to: **e-mail: jhendric@westga.edu**. Review of applications will begin September 2002 and will continue until the position is filled. *The State University of West Georgia is an Equal Opportunity/Affirmative Action Employer.*

REMOTE SENSING
Terrestrial Ecosystems

The Department of Botany, University of Wyoming, seeks a full-time, nine-month, **TENURE-TRACK FACULTY POSITION** in remote sensing of terrestrial ecosystems starting August 2003. Minimum requirements include a Ph.D. at the time of appointment; a demonstrated potential for developing and maintaining a strong, extramurally funded research program; and a commitment to high-quality teaching at both the undergraduate and graduate levels. Preference will be given to candidates with postdoctoral experience, research focus on terrestrial ecosystems, broad experience with digital imagery platforms and processing software, skills in ecological modeling, and commitment to collaborative research. The successful candidate will conduct a productive research program, develop courses in remote sensing and modeling (one at the graduate level), participate in teaching introductory biology, advise students, and participate in the usual service activities. Where appropriate, outreach education may be used to meet instructional obligations.

To apply, submit a letter of application, curriculum vitae, selected reprints, statements of research and teaching interests, and arrange to have at least three letters of reference sent to: **Mr. Terry Shearin, Search Coordinator, Department of Botany, University of Wyoming, Laramie, WY 82071-3165**. Review of applications will begin October 11, 2002. *The University of Wyoming is an Equal Opportunity/Affirmative Action Employer.*

The Department of Biology, California State University, Bakersfield, invites applicants for an **ASSISTANT PROFESSOR** tenure-track position in molecular biology. Candidates must have a Ph.D. in the biological sciences and will be expected to teach molecular biology, cell biology and genetics, and conduct research in their area of specialization. Available September 1, 2003. Application deadline December 15, 2002. See **website: http://www.csub.edu/biology** for full description and application instructions or contact: **Department of Biology, California State University, Bakersfield, CA 93311. Telephone: 661-664-3089; FAX: 661-665-6956**. *CSUB is an Affirmative Action/Equal Opportunity Employer.*

POSITIONS OPEN

FACULTY POSITION
Evolutionary Developmental Biology
Department of Biology
Indiana University, Bloomington

The Department of Biology invites applications for a tenure-track **ASSISTANT PROFESSOR** working in evolutionary developmental biology. We seek candidates with interests and backgrounds in evolutionary and developmental biology whose research focuses on the evolution of development in any system and potentially interfacing micro- and macroevolution. This position is part of a significant expansion of IU-Bloomington's life sciences. The expansion includes construction of two major research buildings; initiation of a new NSF IGERT program in evolution, development, and genomics; establishment of the Center for Genomics and Bioinformatics; and numerous recent hirings in the areas of microbiology, biochemistry, cell and developmental biology, molecular evolution, and ecology. The successful candidate will be provided with a competitive start-up package and will be expected to establish a vigorous, externally funded research program and to participate in teaching undergraduate and graduate courses. For information about the Biology Department and for links to the campus and the Bloomington community, see **website: http://www.bio.indiana.edu**.

Candidates should send curriculum vitae, a statement of research, and representative publications, and arrange to have three (or more) letters of recommendation sent to: **Professor Rudolf Raff, Evolutionary Developmental Biology Faculty Search, Department of Biology, Indiana University, Myers Hall 150, 915 East Third Street, Bloomington, IN 47405-7107**. Review of applications will begin November 1, 2002, and will continue until suitable candidates are identified. *Indiana University is an Affirmative Action/Equal Opportunity Employer. Women and minority candidates are encouraged to apply.*

FACULTY POSITION
Department of Chemistry and Biochemistry

The Department of Chemistry and Biochemistry, University of Maryland at College Park, invites applications for a tenure-track position in biochemistry at the **ASSISTANT PROFESSOR** level. Excellent candidates at other levels will also be considered. Candidates interested in developing outstanding research programs in the molecular mechanisms of significant biological processes are encouraged to apply. The successful applicant will join a dynamic and highly interactive faculty with ample opportunities for collaborations within the Department as well as with the NIH, USDA, FDA, NIST, and the University of Maryland Biotechnology Institute. The Department has an active graduate program and all faculty members participate in the instructional program. Additional information about the Department can be found at our **website: http://www.chem.umd.edu**. The University of Maryland at College Park is the flagship campus of the University of Maryland system. It is located in the heart of the Baltimore–Washington research corridor, just 15 minutes from downtown Washington, D.C. Applications should be received by November 1, 2002, to receive full consideration but the search will continue until the position is filled. Materials including a letter of application, curriculum vitae, a three-to-four-page description of research plans, and the names of three references should be directed to: **Biochemistry Search Committee, Department of Chemistry and Biochemistry, University of Maryland, College Park, MD 20742-2021**. *UMCP encourages applications from women and minorities and is an Equal Opportunity/Affirmative Action Employer.*

UNIVERSITY OF CONNECTICUT HEALTH CENTER

An **ASSISTANT PROFESSOR** position is available for investigative work in cardiovascular biology and diseases. Applicants must have a Ph.D. and/or M.D. Send curriculum vitae to: **Dr. Bruce Liang, Neag Distinguished Professor and Cardiology Chief; e-mail: bliang@uchc.edu**. *University of Connecticut is an Equal Opportunity Employer; Minorities/Females/Veterans/Persons With Disabilities.*

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

DHHS and NIH are Equal Opportunity Employers

STAFF RECRUITMENT CLASSIFIED ADVERTISEMENT

703 **JOB OPENING** **SRS**

Research Microbiologist

We are currently recruiting a microbiologist, specializing in microbial detection and characterization, to join the Environmental Biotechnology Section of the Savannah River Technology Center. This position may be staffed as a mid-career researcher or more senior level – depending on the qualifications of the applicant.

The successful applicant will join a multi-disciplinary team of scientists focused on the development and application of new technologies for the detection and assessment of target microorganisms in a variety of environmental matrices. The microbiologist will utilize state-of-the-science molecular biology techniques, bioanalytical instrumentation, RNA/DNA molecular probes, microbial characterization tools and immunochemistry technologies to measure the presence, activity and impact of microorganisms in projects related primarily to biodetection, biomonitoring, and biosensors. The work will be supported by a new, state-of-the-art biotechnology laboratory. An established record of scientific achievement and excellent written and oral communication skills are mandatory. Salary is commensurate with your training and experience. Our highly regarded benefits program includes relocation assistance.

For consideration please forward resumé and salary history to:

Mr. Lamar Cherry | Westinghouse Savannah River Company
Employment | Bldg. 703-47A | Aiken, SC 29808
Fax: (803) 725-8781 | Email: lamar.cherry@srs.gov

SRS savannah river site

BECHTEL BNFL

Westinghouse Savannah River Company – An Equal Opportunity Employer. All qualified applicants will be considered, regardless of race, color, sex, national origin, religion, disabilities or veteran status.

U.S. Citizenship & ability to obtain DOE clearance REQUIRED

BTI Boyce Thompson Institute

FACULTY POSITIONS IN 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. One position will be filled at the Assistant level and the other at the Assistant or Associate 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. Successful candidates are expected to establish vigorous, extramurally funded research programs. They will have opportunities for collaborations within the Institute and are also expected to develop close ties with a department at Cornell University. Excellent start-up funds and state-of-the-art genomics and plant growth facilities are available at the Institute. Review of applications will begin November 1 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 information about the Institute **(http://bti.cornell.edu/)**.

Boyce Thompson Institute is an Affirmative Action, Equal Opportunity Employer and is committed to increasing the diversity of its faculty and staff. Applications from women and minorities are encouraged.

GEORGETOWN UNIVERSITY
Department of Biology

Applications are invited for a tenure-track position to commence August 2003, likely at the rank of **ASSISTANT PROFESSOR**. We seek an individual pursuing fundamental research in ecology or evolutionary biology to complement and extend the coverage of our program (**website: http://www.georgetown.edu/departments/biology**). Specific areas of interest include but are not limited to population; community or evolutionary ecology; and phylogenetics, speciation, or molecular evolution. This position requires both excellence in research and innovative, effective teaching. The successful applicant will share responsibilities for teaching one semester of introductory biology (emphasizing organismal biology) and teach a course in his/her area of expertise. Research expectations include establishing a vigorous, grant-supported research program that involves both graduate and undergraduate students. Applicants must have postdoctoral experience and demonstrate potential as an Instructor. Applications should include (1) full curriculum vitae, (2) three letters of reference, (3) a statement of research interests and plans, and (4) a statement of teaching philosophy. Review of completed applications begins November 4, 2002. Send applications to: **Ecology/Evolution Search Committee, Department of Biology, Reiss 406, Georgetown University, 37th and O Streets N.W., Washington, DC 20057-1229**.

Georgetown University is an Affirmative Action/Equal Opportunity Employer.

INVERTEBRATE BIOLOGIST
Kalamazoo College

Applications are invited for a tenure-track position starting September 2003; postdoctoral experience preferred. Salary is competitive and commensurate with experience. Teaching responsibilities include an organism diversity course and offerings in organism/ecology courses appropriate to the candidate's interest and curriculum. Examples would be animal behavior, invertebrate zoology, entomology, or aquatic ecology. Kalamazoo College is a highly selective, nationally recognized liberal arts college that takes pride in its outstanding undergraduate science education program. A recent study ranked the College fifth among baccalaureate institutions in the proportion of its graduates who ultimately received Doctorates in the life sciences. Candidates are expected to have a high aptitude and interest in undergraduate teaching, a commitment to the liberal arts, and a desire to involve undergraduates in scholarship both inside and outside the classroom. Completed applications received before November 1, 2002, will receive full consideration with later applications reviewed as appropriate. Send letter of application, curriculum vitae, undergraduate and graduate transcripts (unofficial is acceptable), statements on teaching philosophy and research interests, and three letters of recommendation to: **Dr. David Evans, Chair, Department of Biology, 1200 Academy Street, Kalamazoo, MI 49006-3295**. *To ensure that its searches consider women and minority candidates, the College especially invites such qualified individuals to apply and to identify themselves if they wish. Equal Opportunity Employer.*

The University of Northern Colorado seeks a **DIRECTOR** for the Sponsored Programs and Academic Research Center (SPARC). A complete vacancy announcement is available at **website: http://www.unco.edu/sparc** or by contacting **e-mail: ddyer@arts.unco.edu**. UNC is a Carnegie Research Intensive Institution enrolling 10,670 graduate and undergraduate students. Application review begins November 1, 2002; starting date is negotiable. *UNC is an Affirmative Action/Equal Opportunity Employer and committed to fostering diversity in its student body, faculty, and staff.*

POSITIONS OPEN

FACULTY POSITION
STRUCTURAL BIOLOGY
Department of Biochemistry and Molecular Biology
SUNY Upstate Medical University
Syracuse, New York

We invite applicants for a tenure-track position at the **ASSISTANT PROFESSOR** level for candidates with research interests and experience in X-ray crystallography. Through this position, the Department is expanding its commitment to structural biology. We have received a federal grant to establish an X-ray crystallography laboratory with substantial funding for equipment and other start-up expenses. Convenient access to a synchrotron source is available. Preference will be given to candidates whose interests complement existing departmental strengths in membrane proteins, nucleic acid-binding proteins, and multisubunit protein complexes. Applicants must have a Ph.D. or equivalent degree, postdoctoral experience, demonstrated research productivity, and a commitment to excellence in teaching medical and graduate students. Send letter of application, curriculum vitae, and descriptions of past research accomplishments and future research plans to: **Dr. Richard Cross, Department of Biochemistry and Molecular Biology, SUNY Upstate Medical University, 750 East Adams Street, Syracuse, NY 13210**.

Please have three letters of reference sent directly to the above address and include the names of the references in your application letter. Review of applications will begin October 15, 2002, and continue until the position is filled. Further information is available at **website: http://www.upstate.edu/biochem**. *An Affirmative Action/Equal Employment Opportunity/Americans With Disabilities Act Employer.*

FACULTY POSITIONS
Cell and Molecular Biophysics, Chemical Biology, and Structural Biology
Weill-Cornell Medical College
New York, New York

As part of a major expansion in its basic biomedical sciences research programs, Weill Medical College of Cornell University is undertaking a major program initiative in the general areas of biophysics and chemical and structural biology. Candidates with research interests in the structure and function of macromolecular assemblies, organelles, and cells are encouraged to apply. Targeted areas of research include membrane structure and dynamics, signal transduction mechanisms, and chemical biology. Candidates for **ASSISTANT PROFESSOR** should demonstrate the potential for establishing a vigorous, independent research program; candidates for **ASSOCIATE PROFESSOR** should have an outstanding record of productivity. The recruited faculty will occupy recently renovated laboratory and office space and generous start-up support will be provided. In addition to medical student teaching, candidates will participate in the Graduate School of Medical Sciences program, which includes faculty from the Weill-Cornell Medical College and the Sloan-Kettering Institute, and in the Tri-Institutional M.D.-Ph.D. program and Training Program in Chemical Biology, which also includes faculty from The Rockefeller University. Applications should include curriculum vitae, statement of research interests, and three letters of recommendation. Applications should be sent to: **Dr. Frederick R. Maxfield, Chairman, Recruitment Committee, Box Number 27, Weill-Cornell Medical College, 1300 York Avenue, New York, NY 10021**.

Equal Employment Opportunity/Affirmative Action/Minorities/Females/Disabled/Veterans.

HEAD, SAFETY EVALUATION

Searching for an accomplished **MEDICAL DOCTOR** with clinical experience to become Head of Safety Evaluation for the Japanese subsidiary of a major global pharmaceutical organization. Fluency in English and Japanese is essential. Competitive salary and benefits. Send curriculum vitae to **e-mail: cheemalp@yahoo.com**.

POSITIONS OPEN

FACULTY POSITION IN THE LABORATORY OF GENETICS
University of Wisconsin–Madison

The Laboratory of Genetics at the University of Wisconsin–Madison (**website: http://www.genetics.wisc.edu**) seeks to hire a tenure-track **ASSISTANT PROFESSOR** for appointment beginning July 2003 or thereafter. This appointment is one of four positions targeted to strengthen mammalian and human genetics on campus. We encourage applications from individuals with research interests that emphasize contemporary issues of human or mammalian biology including, for example, population genetics, medical genetics and disease, neurobiology and basic mammalian genetics using model organisms. The specific area of investigation is not strictly limited. Applicants should send curriculum vitae; a one-to-two-page statement of research interests; and arrange to have at least three letters of reference sent by December 15, 2002, to:

Laboratory of Genetics Search Committee
c/o Dr. Betsy Goodwin
University of Wisconsin
445 Henry Mall
Madison, WI 53706-1574

The UW–Madison is an Affirmative Action/Equal Opportunity Employer. Women and minority Scientists are especially encouraged to apply. Unless confidentiality is requested in writing, the list of applicants must be released upon request. Interviewed finalists, however, cannot be guaranteed confidentiality.

ASSISTANT PROFESSOR, BIOCHEMISTRY

Muhlenberg College Biology Department seeks a tenure-track Assistant Professor beginning fall 2003 in biochemistry. Candidates should be committed to excellence in undergraduate education in the classroom and in their research program. Teaching responsibilities include biochemistry, introductory biology, and advanced courses in area of expertise. Ph.D. required. Candidates with expertise in plant biochemistry, structural biology, or bioinformatics preferred. Muhlenberg College is a highly selective, private, liberal arts college of more than 2,000 students (see **website: http://www.muhlenberg.edu**). Located in the scenic Lehigh Valley, Pennsylvania, the college is within easy reach of New York City and Philadelphia, as well as coastal and mountain recreation areas. To apply, send curriculum vitae, statements of teaching and research interests, and three reference letters to: **Dr. Paul Meier, Chair of Search Committee, Biology Department, Muhlenberg College, Allentown, PA 18104-5586**. Application review begins 28 October 2002. *Equal Opportunity Employer.*

YALE UNIVERSITY
SCHOOL OF MEDICINE
Department of Genetics

The Department of Genetics at the Yale University School of Medicine is seeking outstanding candidates to fill a tenure-track position as **ASSISTANT PROFESSOR**. The successful applicant will be provided generous start-up funds and space and will establish a strong, independent research program in vertebrate genetics or a related area. Curriculum vitae, a brief statement of research plans, and three letters of recommendation should be sent to:

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

An Equal Opportunity/Affirmative Action Employer. We strongly encourage applications from women and minority candidates.

MEDICAL COLLEGE OF WISCONSIN

Cancer Research Positions

The Cancer Center of the Medical College of Wisconsin is actively expanding its scope and size. Successful candidates are expected to assume leadership roles and help develop cancer research programs. Development funds, core support, and traditional-track appointments are available for each position.

Breast Cancer Research	Molecular Genetics and Oncogenesis	Pediatric Oncology	Biochemistry	Signal Transduction and Angiogenesis	Cancer Epidemiology
Laboratory-based or translational research Focus on genetic mechanisms in breast cancer desired Eligible for **Joan A. Van Deuren Professorship in Breast Cancer Research**	Joint recruitment with Microbiology/Molecular Genetics and the Human and Molecular Genetics Center Eligible for **Joseph F. Heil, Jr. Professorship in Molecular Oncogenesis**	**Midwest Athletes Against Childhood Cancer (MACC) Fund Endowed Professor** Expertise in cancer genetics, molecular oncogenesis, or genetic interventions Affiliate of Children's Hospital of Wisconsin	Chair of Basic Science Department Lead active, well-funded department Develop cancer focused programs within department	Develop and lead a cancer focused program in signal transduction Laboratory-based or translational research	PhD-level research in Cancer Prevention and Control Develop a focused epidemiological research program in cancer prevention and control Collaborate with other population researchers in the Cancer Center
David Ota, MD Chief, Surgical Oncology 414/805-5751 dota@mcw.edu	Paula Traktman, PhD Chairman, Microbiology and Molecular Genetics 414/456-8253 ptrakt@mcw.edu	Robert Kliegman, MD Chairman, Pediatrics 414/456-4110 bobkay@mcw.edu	Paula Traktman, PhD Search Committee Chairman 414/456-8253 ptrakt@mcw.edu	William Campbell, PhD Chairman, Pharmacology and Toxicology 414/456-8267 wbcamp@mcw.edu	Peter Layde, MD, MSc Search Committee Chairman 414/456-4319 playde@mcw.edu

Clinician Scientists Concurrent with the above recruitments, MCW is actively seeking MD and MD/PhD clinicians specializing in Medical Oncology and Surgical Oncology.

To apply, send CV to contact listed above at: **The Medical College of Wisconsin, 8701 Watertown Plank Road, Milwaukee, WI 53226.**
For more information about MCW, visit our website (**www.mcw.edu/cancercenter**), or contact **Bruce H. Campbell, MD, FACS, Interim Director of the Cancer Center 414/805-4455** or **bcampbel@mcw.edu**.

EOE M/F/D/V

Keck Graduate Institute ***of Applied Life Sciences***

Computational Biology Faculty

The Keck Graduate Institute *of Applied Life Sciences* is the newest member of the Claremont Colleges, dedicated to professional training and research in the applied life sciences. The basic objective of the Institute is to translate into practice the power and potential of the life sciences. Our focus is on the synthesis of multiple disciplines into applications-centered science and engineering in the life sciences. We are continuing our search for outstanding new faculty.

Faculty in **computational biology/bioinformatics and the modeling of complex biological systems** are sought at all levels, particularly the junior level, with the dedication to excellence in teaching and research. They should have a commitment to setting the directions for this new institution for **applied life sciences**, including its innovative curriculum.

Successful candidates will be creative and independent in spirit with significant experience in **academic or industrial science and/or engineering**, and a desire to build interdisciplinary groups. They will be expected to establish a high quality research program, create and teach in a strong educational program and forge connections with industry (e.g., biotechnology, pharmaceuticals, biomedical instrumentation). The faculty of the Institute comes from both industry and academia. Expertise in the analysis of gene or protein expression data, pathway and network modeling, biological database design and development or the innovative application of internet technologies in bioinformatics would be of particular interest. Competitive salaries, excellent facilities, liberal leave and consulting policies also contribute to the spirit of this start-up institution.

For further information see: **http://www.kgi.edu**. Applicants should send a letter of interest, curriculum vitae, names and contact details of three references to: **Dr. T. Gregory Dewey, Keck Graduate Institute, 535 Watson Drive, Claremont, CA 91711; FAX: 909/607-8586; email: greg_dewey@kgi.edu**.

EOE

MAYO CLINIC

Research Scientist: Cardiac and Vascular Biology
Rochester, Minnesota

The Department of Biochemistry and Molecular Biology, and the Division of Cardiovascular disease at Mayo Clinic Rochester have joint positions open for a junior or senior scientist with research interests in vascular or cardiac biology. The individual should have an MD or PhD and research interest in the broad field of cardiac or vascular biology as it pertains to heart failure or arteriosclerosis and thrombosis. Particular interests in cardiac development, bio-molecules that alter-regulate cardiac function, endothelial cell biology, and smooth or cardiac muscle biology are useful. Requirements include evidence of an ability to obtain extramural funding and to work in a collaborative environment with scientists, clinician-investigators and clinicians. Opportunities at Mayo include interaction with talented basic and clinical scientists with an outstanding track record in obtaining extramural federal funding, a longstanding cardiovascular training grant, and access to a wide array of clinical material and a research community. Women and minorities are encouraged to apply.

Applicants should send a curriculum vitae and a statement of research interests by e-mail or mail to:

Ms. Kristi Simmons
(CV Search)
Mayo Clinic
Guggenheim 1701
200 First St. S.W.
Rochester, MN 55905
simmons.kristi@mayo.edu

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

BIOANALYTICAL CHEMISTRY
Indiana University/Purdue University Indianapolis, Indiana

Applications are invited to fill a tenure-track **ASSISTANT PROFESSOR** position within the IUPUI Department of Chemistry. Applicants should hold a Ph.D. in chemistry or a related discipline, have the ability to initiate and carry out research at the interface between biological and analytical chemistry and to be innovative and effective in undergraduate and graduate teaching. While the areas of research are open, we seek individuals who will contribute to IUPUI's central position in Indiana's life sciences initiative (see **website: http://www.indygov.org/mayor/cilsi/**) and whose work may complement interdisciplinary campuswide efforts in the area of proteomics with the IU School of Medicine at IUPUI, i.e., the Indiana Genomics Initiative-INGEN (see **website: http://www.ingen.iu.edu/**). The appointment will commence August 1, 2003, and will include teaching responsibilities in undergraduate analytical and introductory biochemistry courses. Applicants should submit curriculum vitae, a statement of research accomplishments and future plans, and a list of required instrumentation and start-up needs. Candidates must also arrange to have three letters of recommendation sent to: **Professor Eric C. Long, Chair, Faculty Search Committee, Department of Chemistry, Indiana University/Purdue University Indianapolis, 402 North Blackford Street, Indianapolis, IN 46202-3274. Website: http://www.iupui.edu/**. Candidates are assured full consideration if all required materials are received by October 31, 2002. *IUPUI is an Equal Employment Opportunity/Affirmative Action Employer.*

DIRECTOR
Applied Physics Laboratory University of Washington

The Applied Physics Laboratory of the University of Washington is seeking a new Director. The Laboratory conducts a broad program of fundamental and applied research, development, and engineering that is focused in the areas of oceanographic, atmospheric, and polar sciences as well as acoustics and medical ultrasound. It has strong ties to the University's academic departments and to the U.S. Navy. The annual budget is approximately $30 million. For additional information about the Laboratory, please see **website: http://www.apl.washington.edu**.

Candidates should have a strong background in one or more of the Laboratory's areas of research and the ability to lead a diverse group of Investigators within a research university environment. Some work at the Laboratory involves classified projects and "sensitive but unclassified" information. Consequently, a top-secret clearance and experience with Navy projects is desirable; ability to obtain a top-secret clearance is required. The successful applicant may be considered for appointment in an academic department.

The position will remain open until filled. Applications will be evaluated starting October 1, 2002. Applications should be sent to: **Dean Marsha L. Landolt, Chair, APL Search Committee, The Graduate School, Box 353770, University of Washington, Seattle, WA 98195**.

The University of Washington is an Affirmative Action/Equal Opportunity Employer. The University of Washington is building a culturally diverse faculty and staff and strongly encourages applications from women, minorities, individuals with disabilities, and covered veterans.

MICROBIAL PHYSIOLOGIST ASSISTANT PROFESSOR. Teach microbial physiology/genetics, general microbiology, and either medical microbiology or microbial ecology and bioremediation. Conduct research, advise and mentor undergraduates and Master's candidates, and participate in department and university activities. Ph.D. related to microbiology is required. Position begins August 18, 2003. See **website: http://www.mnsu.edu/humanres/employment.html** for application procedure or contact: **Department of Biological Sciences; Telephone: 507-389-2786**. *Minnesota State University, Mankato, is an Affirmative Action/Equal Employment Opportunity Employer.*

POSITIONS OPEN

BIOCHEMISTRY/MOLECULAR BIOLOGY
Ohio University

The Edison Biotechnology Institute (**website: http://www.ohiou.edu/biotech/**) and the Department of Chemistry and Biochemistry (**website: http://www.chem.ohiou.edu**) at Ohio University invite applications for a **TENURE-TRACK JOINT APPOINTMENT** at all professorial ranks in the area of biochemistry, molecular biology, or related fields. The candidate should have a Ph.D. or M.D. degree and significant postdoctoral experience. Preference will be given to candidates who have established a funded research program. The successful applicant will join a group of Scientists with research strengths in molecular, cellular, endocrine, and developmental biology emphasizing gene discovery and functional genomics using transgenic and gene-disruptive technology. We seek an outstanding, innovative, and creative Scientist who utilizes modern tools and approaches to investigate genetically based human health issues. The applicant will have access to Master's and Doctoral students in the Department of Chemistry and Biochemistry and state-of-the-art research facilities at the Edison Biotechnology Institute. The Department of Chemistry and Biochemistry has 24 full-time, tenure-track faculty with approximately 350 undergraduate majors and 65 graduate students. Duties will include the development of a vigorous and creative externally funded research program that includes protection of intellectual property with the potential to develop and commercialize the novel technologies through the Edison Biotechnology Institute, an organization that proactively fosters this type of activity. Additionally, the candidate will be expected to assist in undergraduate and graduate teaching and service responsibilities in the Department of Chemistry and Biochemistry. Applications including curriculum vitae, a statement of research interest, and three letters of recommendation should be sent to:

Martin T. Tuck, Ph.D.
Department of Chemistry and Biochemistry
Clippinger Laboratories
Ohio University
Athens, OH 45701
E-mail: tuck@ohio.edu

The screening of the applications will begin on October 15, 2002, and continue until the position is filled. *Ohio University is an Equal Opportunity/Affirmative Action Employer.*

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.*

POSITIONS OPEN

FACULTY POSITION
PLANT MOLECULAR BIOLOGY
Indiana University, Bloomington

The Department of Biology and the Indiana Molecular Biology Institute invite applications for a tenure-track **ASSISTANT PROFESSOR** position in the area of plant molecular biology. Candidates should be investigating fundamental questions in plant biology at a mechanistic level.

IU–Bloomington is significantly expanding in the life sciences. These efforts include construction of a major research building; a new interdepartmental initiative in biochemistry and biophysics; and numerous recent hires that have greatly expanded our strengths in the areas of microbiology, biochemistry, structural biology, cell and developmental biology, molecular evolution, and ecology. We are now expanding in the plant sciences and will be hiring at least two additional Plant Molecular Biologists in the next few years. The plant molecular biology group occupies a set of large contiguous laboratoriess in newly renovated Myers Hall, the home of the Indiana Molecular Biology Institute. For more information about the Biology Department and the Institute and for links to information about the campus and the Bloomington community, see **website: http://www.bio.indiana.edu**.

Candidates should send curriculum vitae; a statement of research (past, present, and planned); representative publications; and arrange to have three (or more) letters of recommendation sent to: **Dr. Mark Estelle, Plant Molecular Biology Faculty Search, Department of Biology, Indiana University, 1001 East Third Street, Bloomington, IN 47405-3700.** Review of applications will begin October 15, 2002, and will continue until suitable candidates are identified. *Indiana University is an Affirmative Action/Equal Opportunity Employer. Women, minority candidates, and couples are encouraged to apply.*

THE UNIVERSITY OF CALIFORNIA, SAN DIEGO, DEPARTMENT OF CHEMISTRY AND BIOCHEMISTRY (website: http://chem.ucsd.edu) invites applications for a faculty position in bioinformatics with a strong preference for the **ASSISTANT PROFESSOR** level. Candidates must have a demonstrated ability for creative research and teaching at the undergraduate and graduate levels. Successful candidates will be individuals who develop new approaches to understanding the flow of information in living things and who apply bioinformatic thinking to fundamental questions of biomolecular structure, function, and evolution. Salary commensurate with qualifications and based on University of California pay scale. Candidates should send curriculum vitae, list of publications, reprints of up to five representative papers, and a summary of research plans to: **Chair, Bioinformatics Search Committee 4-108S, University of California, San Diego, Department of Chemistry and Biochemistry, 9500 Gilman Drive 0332, La Jolla, CA 92093-0332.** Candidates should also arrange to have three letters of reference sent under separate cover. Review of applications will begin November 1, 2002, and continue till the positions are filled.

UCSD is an Equal Opportunity/Affirmative Action Employer with a strong institutional commitment to the achievement of diversity among its faculty and staff.

FACULTY RESEARCH ASSISTANT position in viticulture research and extension. B.S. in horticulture or related field (M.S. preferred) and experience/training in viticulture or fruit tree production. This position is funded by education and general funds. Send résumé; copies of transcripts; three reference letters; and a letter of research interest outlining the experience/training you would bring to the position to: **Viki Freeman, Department of Horticulture, Oregon State University, ALS 4017, Corvallis, OR 97331-7304** by October 1, 2002. **Telephone: 541-737-5475; FAX: 541-737-3479**. *Oregon State University is an Affirmative Action/Equal Opportunity Employer and has a policy of being responsive to dual-career needs.*

PENNSTATE

Altoona

BIOCHEMISTRY (Tenure-Track)

The Pennsylvania State University, the Altoona College, invites applications for a tenure-track position in Biochemistry. Candidates must have a Ph.D. in Biochemistry or a closely related discipline and a strong interest in undergraduate instruction. Teaching responsibilities include introductory courses for science and non-science majors, and upper division lecture/laboratory courses in biochemistry and in the candidate's related specific area(s) of interest (e.g., molecular and cell biology, chemistry, biology, etc.).

Penn State Altoona is located in a suburban setting forty-five miles from the University Park Campus. The approximately 3800 undergraduate students can complete one of twelve baccalaureate majors or nine associate degrees at Altoona. The college also offers the first two years of 190 Penn State baccalaureate degrees. Degree offerings at Penn State Altoona will continue to expand.

The position requires an earned doctorate and is a tenure-track appointment at the level of assistant professor or a rank commensurate with qualifications beginning in Fall 2003. Applicants should present a record of evidence and potential effectiveness in teaching, research, and service. Candidates with a commitment to undergraduate education, interest in undergraduate research, and/or experience in program development will be given strong consideration. Penn State Altoona offers a competitive salary and an attractive benefits package.

Applicants should send a letter of application establishing their qualifications; a current vita; a description of teaching philosophy and evidence of teaching effectiveness; a statement of research interests; transcripts (official transcripts required at the time of an interview); and a minimum of three letters of reference. Applicants are strongly encouraged to submit their applications and accompanying materials electronically to academicaffairs@psu.edu in Word or PDF formats. Review of applications will begin the week of November 1, 2002, and continue until the position is filled. Non-electronic inquiries, applications, and additional materials should be sent to:

Chair Search Committee for Biochemistry
Penn State Altoona
Box S-13721
3000 Ivyside Park
Altoona, PA 16601-3760

For additional information about Penn State Altoona, please visit our web page at http://www.aa.psu.edu.

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

NORTHWESTERN UNIVERSITY

CHAIR
DEPARTMENT OF MICROBIOLOGY-IMMUNOLOGY
THE FEINBERG SCHOOL OF MEDICINE

Northwestern University's Feinberg School of Medicine in Chicago is searching for a new Chair of its Microbiology-Immunology Department. The Department presently has 19 primary research faculty, all with active research programs in Virology, Immunology, and Bacteriology (**http://bugs.mimnet.northwestern.edu/labs/**). The search committee is soliciting applications from Ph.D. or M.D. scientists whose interests and experience span research and teaching. The new department chair is expected to have an outstanding, internationally recognized and well-funded research program in an area of Microbiology or Immunology, and be able to lead expansion of the departmental and school-wide research programs in Microbial Pathogenesis, Infectious Diseases, and Immunology. The Chair of Microbiology-Immunology will be responsible for promoting the research programs and teaching efforts of the departmental faculty. The position is full-time with salary and starting date negotiable.

A letter of intent, curriculum vitae, and contact information for at least three references should be submitted to:

D. James Surmeier, Ph.D.
Chair of the Microbiology/Immunology Search Committee
Department of Physiology
303 E. Chicago Avenue
Ward 5-311
Chicago, IL 60611

Applications will be reviewed as received, but for full consideration should be received by **November 1, 2002.**

Northwestern University is an Affirmative Action/Equal Opportunity Employer. Hiring is contingent upon eligibility to work in the United States. Women and minorities are encouraged to apply.

Center for the Study of
BIOLOGICAL COMPLEXITY
DIVISION OF INFECTIOUS DISEASES

Assistant, Associate or Full Professor in Systems Biology/Bioinformatics of Microbial Pathogens

The Center for the Study of Biological Complexity (CSBC) and the Division of Infectious Diseases of Virginia Commonwealth University invite applications for a 12-month, tenure-track faculty position at the level of Assistant, Associate or Full Professor in the area of microbial genomics and bioinformatics. The successful applicant will have a Ph.D. in microbiology, biochemistry, bioinformatics, computational biology, or a related field, and relevant postdoctoral experience. He or she will establish a productive, externally funded research program, direct graduate students, and collaborate with other faculty in the CSBC, the Division of Infectious Diseases, Medicine, Microbiology and Immunology, Biology, and other relevant departments. The successful candidate will assist in the development of undergraduate and graduate curricula in bioinformatics in the CSBC.

The successful applicant will be housed in the new Trani Center for Life Sciences; he or she will present evidence of excellence in scholarship in microbial genomics and pathogenesis and is expected to take advantage of the many interdisciplinary research opportunities available within the university. Preference will be given to individuals applying contemporary systems approaches to studies of microbial pathogens. Competitive start-up funds are available.

The Center for the Study of Biological Complexity is a new program of research and scholarship that represents the focus of bioinformatics, genomics and proteomics in VCU Life Sciences. Please visit the Web at www.vcu.edu/csbc. Submit vitae, statement of research and teaching interests, and three letters of reference no later than November 15, 2002, to: Dr. Gregory A. Buck, Director; Center for the Study of Biological Complexity, Suite 111; Trani Center for Life Sciences; 1000 West Cary Street; Virginia Commonwealth University; Richmond, VA 23284-2030. E-mail application materials to: buck@hsc.vcu.edu. Virginia Commonwealth University is an Equal Opportunity/Affirmative Action Institution. Women, minorities and persons with disabilities are encouraged to apply.

Virginia Commonwealth University

POSITIONS OPEN

BIOLOGY DEPARTMENT CHAIR
The University of Mississippi

The Department of Biology invites applications for Department Chair, a tenure-track, 12-month position at the rank of **FULL PROFESSOR**, beginning July 1, 2003. Salary is negotiable. Candidates must have the following qualifications: Ph.D. in biological sciences or a closely related field, an active research program and significant experience with extramurally funded research programs, excellent teaching credentials, and the rank of Full Professor prior to the time of appointment. Effective interpersonal and administrative skills are required. Responsibilities include supervising academic programs, supporting faculty research, coordinating new research and teaching initiatives, managing departmental resources, contributing to the curricula in biology, and representing the Department to the University. Departmental information is available at **website: http://www.olemiss.edu/depts/biology**. Applicants should submit curriculum vitae; a letter discussing their current research program, teaching interests, and administrative philosophy; and the names of four references who are willing to provide letters directly to the Committee. Send applications to: **Dr. Charles L. Hussey, Biology Chair Search Committee, Department of Chemistry and Biochemistry, The University of Mississippi, University, MS 38677**. Review of applications will begin November 15, 2002. The position will remain open until filled or until an adequate applicant pool is established. *The University of Mississippi is an Equal Employment Opportunity/Affirmative Action/Americans With Disabilities Act/Age Discrimination in Employment Act.*

NEUROBIOLOGIST
The University of South Dakota

Neurobiologists with research involving development, molecular biology, or behavior are especially invited but all are encouraged to apply for a tenure-track appointment at the **ASSISTANT/ASSOCIATE PROFESSOR** level (salary commensurate with experience) starting fall 2003. Those studying comparative or evolutionary questions will complement current faculty interests. A Ph.D. and postdoctoral experience are required. The candidate will be expected to develop a vigorous, externally funded research program and successfully mentor graduate students. Participation in the Neuroscience Group, which includes faculty from both the Department of Biology and the School of Medicine, is anticipated. Information about the Group can be found at **website: http://www.usd.edu/NeuroGroup/**. The appointment will be in the Department of Biology, the School of Medicine, or a joint appointment. Teaching expectations may include courses at the graduate and undergraduate levels. Please submit curriculum vitae, brief statement of research and teaching goals, and names of three references to: **Neuroscience Search Committee, Ms. Wanda Johnson, Division of Basic Biomedical Sciences, The University of South Dakota School of Medicine, Vermillion, SD 57069**. Review of applications will begin October 20, 2002. *USD is an Equal Employment Opportunity/Affirmative Action Employer.*

TWO FACULTY POSITIONS
Winthrop University

The Department of Biology invites applications for tenure-track **ASSISTANT PROFESSORSHIPS** in (1) anatomy/physiology and (2) microbiology. Candidates should consult the **website: http://www.winthrop.edu/hr/employment.htm** for position descriptions. Send a letter of application along with curriculum vitae, statement of teaching philosophy, future research plans, and names and addresses of three references to: **Dr. James W. Johnston, Department of Biology, Winthrop University, Rock Hill, SC 29733. E-mail: johnstonj@winthrop.edu; FAX: 803-323-3448.** To ensure full consideration, applications must be received by January 15, 2003. *Winthrop University is an Affirmative Action/Equal Opportunity Employer.*

POSITIONS OPEN

CHAIR
Biochemistry and Molecular Biology
Georgetown University Medical Center

Georgetown University Medical Center invites qualified individuals to apply for the position of Chair, Department of Biochemistry and Molecular Biology. The Department has active research programs in eukaryotic gene expression; cell signaling; chromosomal replication; DNA-damage repair; posttranslational modifications; biomembrane transport and is the academic home of the Protein Information Resource, an internationally renown reserve of protein informatics.

The ideal candidate will have a Ph.D., M.D., or M.D./Ph.D; possess an outstanding record of research and scholarly achievements; and demonstrate excellence in leadership and administrative skills. The candidate also should be knowledgeable about the current trends in the education of medical and graduate students.

This position offers an excellent opportunity to lead a department committed to research and education and to develop collaborative programs within the Medical Center and with the Main Campus of Georgetown University, Georgetown University Hospital, and other MedStar-affiliated hospitals. Review of applications will commence on November 4, 2002, and continue until the position is filled. Candidates should send a letter of interest stating their qualifications for this position, a copy of their curriculum vitae, and names of references to:

Ken Dretchen, Ph.D.
Chair, Biochemistry and
Molecular Biology Search Committee
Georgetown University Medical Center
SE402 Med-Dent Building
3900 Reservoir Road, N.W.
Washington, DC 20007
E-mail: dretchek@georgetown.edu

Georgetown University is an Affirmative Action/Equal Opportunity Employer. Georgetown University encourages applications from qualified women and minorities.

PROGRAM MANAGER
Basic Research

The American Foundation for AIDS Research (amfAR), the nation's leading nonprofit organization dedicated to the support of AIDS research, prevention, treatment education, and advocacy, seeks a Manager for its basic research program. This is a challenging opportunity for a Scientist interested in accelerating the pace of HIV/AIDS research.

As Manager, you will collaborate with Scientists and Foundation officials in development of new research and consult on scholars' grants and awards. You will analyze prior and current research activities and communicate with grantees, making site visits and providing technical support. You will manage communication with Scientists and interpret these communications in reports, newsletters, and commentaries prepared for the general public and lay Foundation staff.

Qualified candidates possess a Ph.D. in the biological sciences; knowledge of scientific research; teaching experience; and prior experience with a health-related foundation in communications, grantmaking, or public education. Excellent communications skills and knowledge of database applications required; knowledge of HIV/AIDS issues is a plus.

Compensation package is competitive. Send résumé and cover letter stating salary requirements by October 15, 2002, to:

Director, Human Resources
amfAR, 120 Wall Street, 13th Floor
New York, NY 10005
E-mail: susan.kennedy@amfar.org
FAX: 212-806-1606
Website: http://www.amfar.org

Committed to diversity.

POSITIONS OPEN

FACULTY POSITIONS
Ornithology
Marine Invertebrate Biology
Microbial Ecology/Environmental Microbiology

The Department of Biological Sciences at California State University, Long Beach (CSULB), invites applications for three tenure-track positions beginning with the fall 2003 semester. We are primarily interested in **ASSISTANT PROFESSOR**-level candidates, although exceptionally experienced candidates in marine invertebrate biology and microbial ecology/environmental microbiology will be considered for the **ASSOCIATE PROFESSOR** level.

Candidates must have a Ph.D. in biological sciences with training and research in the specified field. Candidates must have a strong commitment to teaching their specialty area at the undergraduate and M.S. levels and participate in introductory/intermediate-level core courses in an ethnically and culturally diverse campus community. Must have a record of published research and show potential for developing and sustaining an independent, externally funded research program involving students. Postdoctoral or other professional research experience preferred. Submit a letter of application, curriculum vitae, a detailed statement of research and teaching interests, reprints of two relevant publications, and three letters of recommendation to: **Dr. Laura Kingsford, Chair, Attention: (give name of search), Department of Biological Sciences, California State University, Long Beach, CA 90840-3702. Telephone: 562-985-4807; e-mail: ssuetsug@csulb.edu**. Screening will commence November 1, 2002, for ornithology and November 15, 2002, for the other two positions. For additional information, see **website: http://www.csulb.edu/depts/biology/**. *CSULB is an Equal Opportunity Employer committed to excellence through diversity and takes pride in its multicultural environment.*

PLANT BIOLOGY FACULTY POSITION
Stanford University

The Department of Biological Sciences at Stanford University seeks applicants for a tenure-track faculty appointment in plant biology at the rank of **ASSISTANT, ASSOCIATE,** or **FULL PROFESSOR** to begin in September 2003. We particularly encourage applicants exploring molecular, cellular, and/or developmental processes unique to plants. For information about the Department, consult **website: http://www.stanford.edu/dept/biology/**. The successful applicant is expected to conduct a vigorous research program and to contribute to our teaching programs for both undergraduate and graduate students.

Applicants should send a letter of application (include e-mail address and FAX number), curriculum vitae including bibliography, research statement, description of teaching experience, and names and e-mail addresses of three references willing to write letters of recommendation to:

Plant Biology Search Committee
Department of Biological Sciences
371 Serra Mall
Stanford University
Stanford, CA 94302-5020

All materials should be received by November 1, 2002. *Stanford University is an Equal Opportunity/Affirmative Action Employer. Women and minority candidates are encouraged to apply.*

JUNIOR FACULTY POSITION
Harvard Medical School

Junior faculty member (Instructor in medicine) with demonstrated research excellence in the field of human sleep or circadian rhythm research sought to conduct NIH-funded research protocols within the Division of Sleep Medicine (**website: http://www.hms.harvard.edu/sleep**). To apply for this position, send statement of interests and curriculum vitae to **e-mail: facultysearch@circadian.bwh.harvard.edu**. *Brigham and Women's Hospital and Harvard Medical School are Equal Opportunity/Affirmative Action Employers. Women and minorities are encouraged to apply.*

Postdoctoral Position

The American Health Foundation is a multidisciplinary cancer research institute located 20 miles north of New York City in Valhalla, NY in a suburban setting on a campus shared with the Westchester Medical Center and the New York Medical College. A position is available for a Ph.D. with strong experience in molecular and cellular biology. Project focus on colon cancer, NO and NSAIDs (Nature Med 5:1348; J Exp Med 190:445; Canc Res 61:3285).

Please send / E-mail CV to:

Dr. Basil Rigas, Director
Molecular Cancer Prevention Section
American Health Foundation
One Dana Road
Valhalla, New York 10595
Email brigas@ahf.org

EEO M/F/D/V ADA

NATIONAL CANCER INSTITUTE

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

Biologist, GS-401-14, salary range ($78,265 to $101,742)

A Biologist, GS-14, position is available in the Molecular Targets Discovery Program (MTDP), Center for Cancer Research (CCR), National Cancer Institute (NCI), National Institutes of Health (NIH), Department of Health and Human Services (DHHS), in Frederick, Maryland.

The candidate will be assigned to the MTDP and will assist in the organization and implementation of an internal high throughput screening (HTS) core resource facility providing support for all appropriate intramural CCR research laboratories. The MTDP develops, adapts, evaluates and applies novel screening assays, protocols and emerging technologies for molecular target validation, molecularly targeted lead discovery and research. It also provides screening support for bioassay-guided lead isolation and dereplication of natural products, and lead elucidation and deconvolution of synthetic, semi-synthetic and biosynthetic chemical libraries **(http://home.ncifcrf.gov/mtddp/index.html)**

The candidate must have a mastery of the principles, theory and established methodologies of bioassay development and HTS sufficient to serve as a technical authority in this area. The candidate must also have a mastery of the principles, theory and methodologies to adequately evaluate current technologies, hardware and software optimal for HTS of synthetic compounds, natural product mixtures and crude extracts. The candidate must possess broad and substantial knowledge of cell biology and biochemistry to select biologically relevant targets in cancer and microbial diseases and to develop HTS assays pertinent to these targets. The position requires skill and experience in applying experimental developments and theory in this specialty area to problems not amenable to accepted methods. The incumbent must be able to devise new approaches to critical and unusual problems.

Interested applicants should view the full vacancy announcement at **http://careerhere.nih.gov** for qualification requirements and, submission requirements and deadlines. The vacancy announcement number is **NCI-02-1119A**.

HHS and NIH are Equal Opportunity Employers

Creighton UNIVERSITY Medical Center

School of Medicine
Department of Medical Microbiology and Immunology

Faculty Position (Virology)

As part of an ongoing expansion in the basic sciences, Creighton University School of Medicine's Department of Medical Microbiology and Immunology invites applications for a tenure-track position as an Assistant or Associate Professor with expertise in Virology. The appointee will be expected to conduct a vigorous independent research program, and have an interest and aptitude for teaching graduate students as well as medical, dental, and other allied health profession students. Laboratory space with equipment, start-up funding, and ongoing support will be available.

Applicants should have the following qualifications: Ph.D., M.D., or M.D./Ph.D. degrees; postdoctoral training and experience, evidence of significant research accomplishments and scholarly promise. Applicants for the Associate Professor level position should have NIH-funding and have demonstrated the potential to maintain peer-reviewed funding for their research. Applicants should send a curriculum vitae, a brief summary of their research plans and teaching interests, and arrange for three letters of recommendation to be sent to: **Roderick Nairn, Ph.D., Professor & Chair, Department of Medical Microbiology and Immunology, Creighton University, 2500 California Plaza, Omaha, NE 68178.** Applications will be screened immediately and will continue to be accepted until the position is filled.

Creighton University is an Affirmative Action/ Equal Opportunity Employer.

Tenure-Track Research Positions

Biomedical research programs at the Wadsworth Center are undergoing significant expansion. Multiple faculty-level researchers will be added to develop outstanding programs in the following areas:

Molecular and Cellular Biology of Prokaryotes
Microbial Pathogenesis
Molecular Virology

The Wadsworth Center enjoys a century of excellence as a research-intensive institution and is the country's most comprehensive state public health laboratory. With a staff of 1,100, including 160 doctoral-level scientists, the Center provides a dynamic environment focused on the molecular, cellular, and genetic aspects of public health-related disease. Research programs in molecular genetics, immunology, cellular and structural biology and bioinformatics are supported by excellent core facilities. Albany offers a reasonable cost-of-living, a growing and interactive academic community, diverse cultural activities, and easy access to a wealth of outdoor activities and to other Northeast cities.

We are seeking outstanding scientists at the Assistant, Associate, and Full Professor levels who will develop active, well-funded research programs. Applicants must possess a Ph.D., M.D. or equivalent. Successful candidates may mentor graduate students in the Department of Biomedical Sciences, of the University at Albany's School of Public Health. AA/EOE.

Review of applicants will begin October 15, 2002, with appointments to be initiated in the summer of 2003. Applicants should submit a *curriculum vitae*, a summary of research interests and future plans, and names and addresses of three references to: Dr. K. M. Derbyshire, Search Committee, David Axelrod Institute, Wadsworth Center, New York State Department of Health, P. O. Box 22002, Albany, NY 12201-2002.

www.wadsworth.org

Science in the Pursuit of Health

Wadsworth Center
New York State Department of Health

FACULTY POSITION
Population Genetics

The Department of Biological Sciences at Wellesley College invites applications from broadly trained **POPULATION GENETICISTS** for a tenure-track, entry-level position to begin July 1, 2003. Applicants should have a strong background in classical genetics. The successful candidate will serve as a bridge between molecular genetics and evolution, two areas of current strength in the Department. Wellesley College has a tradition of excellence in undergraduate teaching as well as research involving undergraduates. Teaching responsibilities will include introductory organismal biology, intermediate genetics, and an advanced course in population or community ecology. The successful candidate will be expected to establish a research program and to compete for extramural funding. Start-up funds, intramural support, and excellent facilities are available for initiating a research program. The Department encompasses a broad range of teaching and research interests; potential applicants should visit the Department's **website: http://www.wellesley.edu/Biology/biodept4.html** for additional details.

Qualifications include a Ph.D. and postdoctoral training. Interested individuals should send curriculum vitae, a list of undergraduate and graduate biology courses completed, statement of research and teaching interests, and three letters of reference to: **Search Committee, Department of Biological Sciences, Wellesley College, Wellesley, MA 02481**. Deadline for applications is November 1, 2002. *Wellesley College is an Equal Opportunity/Affirmative Action Educational Institution and Employer; successful candidates must be able to work effectively in a culturally diverse environment. Applications from women, minorities, veterans, and candidates with disabilities are encouraged.*

UNIVERSITY OF CALIFORNIA, SAN DIEGO, FACULTY POSITION IN PHYSICAL CHEMISTRY. The Department of Chemistry and Biochemistry at UC San Diego is expanding its commitment to research in physical chemistry and related interdisciplinary fields as shown by the recent recruitment of three senior-level faculty in this field (see **website: http://chem.ucsd.edu**). Applications are invited for a faculty position with strong preference for the **ASSISTANT PROFESSOR** level in physical chemistry in the broadest sense. Candidates must have a Ph.D., a strong record of research accomplishment, and a forward-looking research plan that pioneers new areas of investigation. The successful candidate will be expected to teach at both the graduate and undergraduate levels. Applicants should provide curriculum vitae, a detailed research plan (three to five pages), and a brief teaching plan to: **The Physical Chemistry Search Committee 4-110S, UCSD Department of Chemistry and Biochemistry, 9500 Gilman Drive MS 0332, La Jolla, CA 92093-0332**. Candidates should also arrange to have three letters of reference sent under separate cover. All applications received before November 1, 2002, will be considered. Salary commensurate with qualifications and based on University of California pay scale. *UCSD is an Equal Opportunity/Affirmative Action Employer with a strong institutional commitment to the achievement of diversity among its faculty and staff.*

SCIENCE INFORMATICS
Central Michigan University

Tenure-track **ASSISTANT PROFESSOR** position in informatics beginning fall 2003. Joint appointment in computer science, natural science. Ph.D. with background applying informatics to natural sciences required. Commitment to teaching, research, and external funding required. Further information at **website: http://www.cst.cmich.edu**. Submit application, résumé, transcripts, teaching and research statements, and three recommendation letters to: **Informatics Committee, College of Science and Technology, Central Michigan University, Mount Pleasant, MI 48859.** See **website: http://www.cmich.edu/aaeo/**. Screening starts October 31, 2002, and continues until position filled. *Central Michigan University is an Affirmative Action/Equal Opportunity Institution.*

POSITIONS OPEN

VASCULAR BIOLOGY FACULTY POSITION

The Department of Medicine at the University of Minnesota Medical School is seeking candidates for a tenure-track position at the **ASSISTANT PROFESSOR** level. We particularly seek M.D.-Ph.D. applicants but will consider applications from those with either single degree. The selected candidate will join a new vascular biology center but have a primary appointment in the Department of Medicine. Applicants should have a research interest related to human disease and should logically fit into one of the subspecialty disciplines of internal medicine. For this first of several recruitments, we seek an individual having a research focus on some aspect of endothelial cell biology to complement our existing strengths in vascular medicine; endothelial biology; angiogenesis; stem cell biology; inflammation; and blood disease (sickle, hemophilia). Successful candidates will have evidence of successful external funding and research productivity. The selected applicant will be expected to establish an outstanding, externally funded, independent research program and to participate collaboratively with the local scientific community. The Medical School provides a resource-rich and intellectually stimulating atmosphere for research development. Interested candidates should submit curriculum vitae, a statement of research interest and future goals, and the names of three references with address/e-mail/telephone contact information. Applications will be reviewed upon receipt and accepted until this position is filled. Please submit applications to:

Robert P. Hebbel, M.D., Chair
Vascular Biology Search Committee
Department of Medicine
University of Minnesota Medical School
Mayo Mail Code 480
420 Delaware Street, S.E.
Minneapolis, MN 55455

The University of Minnesota is an Equal Opportunity Employer and Educator. Applications are particularly encouraged from minority and female candidates.

TRINITY COLLEGE: ASSISTANT PROFESSOR IN PSYCHOBIOLOGY. The Department of Psychology seeks to fill a tenure-track position in behavioral neuroscience. Four-fifths of the FTEs of this position are in the Psychology Department with one-fifth in the Neuroscience program. The position will start in August 2003. We are looking for a Ph.D. (or Ph.D. expected) in behavioral neuroscience who will develop and maintain a program of excellent empirical research and who will engage bright, motivated students in the research. The successful candidate will teach courses in biological psychology and neuroscience and will contribute to such service courses as the First-Year Seminar and General Psychology. Send curriculum vitae; a statement of your research and teaching interests; three letters of reference; evidence of teaching effectiveness; and representative research papers to **Dr. William Mace, Department of Psychology, Trinity College, Hartford, CT 06106** before October 15, 2002. *Trinity College is an Affirmative Action/Equal Opportunity Employer.*

The Biology Department invites applications for a nine-month, **TENURE-TRACK FACULTY POSITION** in cell biology to begin August 2003. A Ph.D. in cell biology or related subject and postdoctoral experience are required. Favorable consideration given to candidates with demonstrated ability to maintain and assist in the use of scanning and transmission electron microscopes. Ability to balance quality teaching with research is necessary. The successful candidate is expected to teach graduate and undergraduate courses in biology, develop cell biology courses, and guide thesis research. Screening will begin January 12, 2003. Submit complete application including letter of application, curriculum vitae, statement of teaching and research interests, official graduate transcripts, and contact information for five professional references to: **Dr. William Cook, Chair, Biology Department, Midwestern State University, 3410 Taft Boulevard, Wichita Falls, TX 76308.** *Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

FACULTY POSITION
Toxicology

The Department of Environmental Health, University of Washington in Seattle (**website: http://depts.washington.edu/envhlth/**), seeks applicants for tenurable, junior faculty appointment(s) (**ASSISTANT** or early **ASSOCIATE PROFESSOR** rank) for the Sheldon D. Murphy Chair in Toxicology and Environmental Health. Requirements include a Doctoral degree (M.D., Ph.D., D.V.M.) with at least two years of postdoctoral training in toxicology, pharmacology, or a closely related field. The successful applicant(s) will be expected to establish a strong, externally funded research program. Applicants with expertise in molecular toxicology (e.g., toxicogenomics, proteomics, metabonomics) are especially encouraged although candidates with other specialty areas in toxicology will also be considered. Strong preference will be given to candidates with interests in environmental and/or occupational health problems and studies in human populations. Teaching two or more courses in basic or advanced toxicology annually, collaborative interactions with other programs within the Department, and participation in one or more NIEHS-funded Centers at the University of Washington will be expected. Applications should be submitted by January 1, 2003, or until the position is filled. Interested candidates should send two copies each of curriculum vitae, statement of research and teaching interests and career goals, and names of four references to: **Dr. Terrance J. Kavanagh, Chair, Toxicology Faculty Search Committee, Department of Environmental Health, University of Washington, 4225 Roosevelt Way N.E., Suite 100, Seattle, WA 98105-6099**. *The University of Washington is building a culturally diverse faculty and strongly encourages applications from female and minority candidates. Equal Opportunity Employer.*

BOTANY: ASSISTANT PROFESSOR, Tennessee Technological University, beginning August 2003. The successful candidate will teach an introductory biology course, systematic botany, plant ecology, and advanced botany courses. The candidate will also develop an externally funded research program and serve as Curator of the herbarium and an advisor to undergraduate and graduate students. Candidates must have a Ph.D. in botany or a related discipline, demonstrated potential to teach systematic botany and plant ecology and to develop a funded research program, and research interests that complement those of current faculty. Candidates must submit a résumé, letter of application describing teaching and research interests, copies of all transcripts, TTU application (on the TTU website), and names of three references to: **Botany Search Committee, Department of Biology, Box 5063, Tennessee Technological University, Cookeville, TN 38505**. Screening deadline is October 20, 2002. For complete position summary, see **website: http://www2.tntech.edu/jobs**. *Affirmative Action/Equal Employment Opportunity.*

Tampa Bay Research Institute (TBRI) is an independent, not-for-profit biomedical research organization situated on a lakeside setting in the scenic Tampa Bay, Florida, area. The Institute is housed in a modern facility with excellent laboratories suitable for research on molecular biology, virology, and immunology of human diseases.

As part of our ongoing plans for expansion, TBRI seeks to recruit researchers at the **ASSISTANT** or **ASSOCIATE MEMBER** level (equivalent to an **ASSISTANT** or **ASSOCIATE PROFESSOR**) to study immune mechanisms associated with antiviral and antitumor vaccines and adjuvants. Successful candidates should have a strong background in molecular and cellular immunology and/or virology. While these positions come with ample setup funds and an attractive compensation package, candidates will be expected to establish an innovative, independently funded research program. Please send current curriculum vitae and statement of research plans to **e-mail: dtippins@tampabayresearch.org**. *TBRI is an Equal Employment Opportunity Employer.*

CONFERENCE

Towards Computational Models of a Mammalian Cell: The Neuron

December 6, 2002: New York, New York
A New York Academy of Sciences Conference

This conference brings together experts in experimental and theoretical sciences to explore recent progress and identify areas that deserve attention in the next five years to develop a reasonably accurate model of a mammalian cell. A typical mammalian cell is a myth – different cell types have differing and specialized organizational and functional characteristics. Although no one cell type displays the full repertoire of functions, the neuron – the focus of this conference – has many of the elements of spatial and dynamic complexities that are characteristic of mammalian cells.

Speakers:
Marvin Cassman (UCSF); *Ravi Iyengar* (Mt. Sinai, NYC); *Eric Kandel* (Columbia); *Eve Marder* (Brandeis); *Adam Muzikant* (Physiome Sciences); *Charles Peskin* (NYU); *Michael Sheetz* (Columbia); *Shankar Subramaniam* (UCSD); *Nam Suh* (MIT); *Shelagh Wilson* (invited) (GlaxoSmithKline)

To receive program and registration information, contact:

Science and Technology Meetings
NEW YORK ACADEMY OF SCIENCES
2 East 63rd Street, New York, NY 10021
T: 212.838.0230, ext. 324
F: 212.838.5640
E: conference@nyas.org
W: www.nyas.org

New York Academy of Sciences

BIOTECHNOLOGY RESEARCH SCIENTIST

The Hong Kong Applied Science and Technology Research Institute (ASTRI) Company Limited invites applications for the position of Biotechnology Research Scientist.

Responsibilities include the formulation and implementation of R & D strategies; building up and managing a R&D team conducting technology and product development for transfer to industry or spin off ventures; and managing collaborations with industry and university partners. The Scientist will be fully funded by ASTRI and will be located at a collaborating university in Hong Kong.

Requirements: Ph.D. Degree in relevant disciplines, with more than ten years of industrial experience; exceptional knowledge of technology development and market trends; good interaction and management skills; and strong analytical and technical problem solving skills.

Remuneration: Annual salary starts at USD 200K, plus medical, dental and life insurance benefits. Royalty or equity sharing through IP licensing or spin off venture is expected. Appointment will be on a three-year renewable contract basis.

For application, submit your resume via mail, e-mail or fax to:

Director of Administration
Hong Kong Applied Science and Technology Research Institute Co Ltd
18/F, Tower 6, The Gateway, 9 Canton Road, Tsimshatsui, Kowloon,
Hong Kong
E-mail: **enquiry@astri.org;** Fax: (852) 3406 2802

See **www.astri.org** for detailed description of the position and the company.

Professor/Clinical Investigator in NeuroAIDS

The University of Puerto Rico is seeking a clinical scientist to join the Specialized Neuroscience Research Program (SNRP) in NeuroAIDS at the Medical Sciences Campus. This position requires a MD, PhD or both with neurology, neurosciences or neuropsychology training and the candidate should have an established background in HIV neurosciences and/or knowledge of the neurological complications of HIV/AIDS. Past expertise could include neuroepidemiology, therapeutic trials, or longitudinal cohort studies. It is anticipated that the candidate would meet the criteria for assistant/associate or full professor, with federal funding, or equivalent foundation support. The individual will oversee the ongoing clinical research activities within the SNRP, and provide mentorship and assistance to junior investigators in the design and implementation of clinical studies.

Send biographical sketch, a brief description of research interests and names, addresses, telephone numbers and e-mails of three references to:

Dr. E. Kraiselburd
Chair, Search Committee
UPR Medical Sciences Campus
NeuroAIDS Research Program
GPO Box 365067
San Juan PR 00936-5067

In order to receive full consideration, applications should be received no later than **December 15, 2002.**

For general information on the NeuroAIDS Research Program contact **Dr. Edmundo Kraiselburd** at **ekraiselburd@rcm.upr.edu**.

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

Research

Where can you find clinical, research and educational programs that are state-of-the-art, combined with Texas Hill Country living that puts you in a better state of mind? In the country of course, **Scott & White country**.

Post-Doctoral Research Fellow

This position is a medical research position and will provide research and technical assistance in studies and projects conducted by a senior principal investigator. Doctoral degree in Cellular or Molecular Biology required. Candidates should have experience in recombinant DNA technology, cell transfections, protein isolation techniques, cell culture and FACS analysis and fluorescence microscopy.

We provide excellent benefits, career advancement opportunities, a progressive work environment, and relocation assistance.

Qualified candidates may submit their CVs/resumes to:

Scott & White Hospital
Human Resources, ATTN: B. Thompson
2401 S. 31st Street, Temple, TX 76502
Fax: 254-724-5591 or
E-mail: BRThompson@swmail.sw.org

An equal opportunity employer.

www.sw.org/jobs

S&W SCOTT & WHITE

Total career satisfaction. It's why we're here.

BIOLOGY POSITION

Centenary College of Louisiana invites applications for a tenure-track position at the **ASSISTANT PROFESSOR** rank in molecular/cellular biology beginning fall 2003. Candidates must be able to teach a guided-inquiry, studio-format introductory biology course as well as develop a course in cell biology at the sophomore level. There will be an opportunity to develop at least two upper-division courses in areas of expertise including but not limited to virology, immunology, cell physiology, molecular techniques, and developmental biology. Teaching experience at the undergraduate level is expected, and molecular/cellular wet laboratory skills are highly desirable. The biology department at Centenary College has a well-equipped core molecular facility funded by the Howard Hughes Medical Institute, and opportunities exist for collaborative research with faculty at the nearby Louisiana State University Health Sciences Center. There are excellent funding opportunities, and the college has a high success rate in securing funds for teaching and research.

Centenary College, a member of the Associated Colleges of the South, is a selective liberal arts college with an endowment of $115 million and a student/faculty ratio of 12 to 1. The Shreveport metropolitan region has a population of 400,000 and is located on the Red River in the northwest corner of the state.

Candidates are requested to submit curriculum vitae, three letters of recommendation, a statement of teaching experience, copies of student evaluations, and a list of completed graduate courses to: **Dr. Beth Leuck, Department of Biology, Centenary College of Louisiana, P.O. Box 41188, Shreveport, LA 71134-1188**. The deadline for applications is 10 December 2002. *Equal Opportunity Employer.*

FACULTY POSITIONS
Department of Molecular Biology

Tenure-track and tenured positions available at the **ASSISTANT, ASSOCIATE PROFESSOR,** and **FULL PROFESSOR** levels in the Department of Molecular Biology, University of Medicine and Dentistry of New Jersey, School of Osteopathic Medicine and Graduate School in Biomedical Sciences. Applications are invited from individuals with broad research interests in the areas of molecular oncology or infectious diseases.

The successful candidate will be expected to develop (or at the senior level to already have) an independent, extramurally funded research program. You will also be expected to participate in the teaching of osteopathic medical students and graduate students. State-supported salary and excellent start-up and support packages are available to the successful candidates.

Submit curriculum vitae, a statement of research interest, and three references to: **Sal J. Caradorma, Ph.D., Professor and Chair, Department of Molecular Biology, UMDNJ, School of Osteopathic Medicine, 101 Laurel Road, Stratford, NJ 08084**. For more information, please visit **website: http://www3.umdnj.edu/mobioweb/molebio.html**. *UMDNJ is an Affirmative Action/Equal Opportunity Employer; Minorities/Females/Disabled/Veterans.*

The University of Texas Southwestern Medical Center at Dallas: Division of Nephrology seeks faculty at the **ASSISTANT/ASSOCIATE/FULL PROFESSOR** level who will develop independent research programs in kidney biology and disease. Individuals with interests in genetics, glomerular disease, kidney development, or polycystic kidney disease are particularly encouraged to apply. Brand-new, state-of-the-art laboratory facilities and competitive start-up packages will be provided. M.D. candidates should be Board certified/Board eligible in nephrology. Visit our **website: http://www.swmed.edu/home_pages/nephrology**. Send curriculum vitae, description of research, and names of three references to: **Peter Igarashi, M.D., Chief of Nephrology, UT Southwestern, 5323 Harry Hines Boulevard, Dallas, TX 75390-8856. E-mail: peter.igarashi@utsouthwestern.edu**. *UT Southwestern is an Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

TENURE-TRACK FACULTY POSITION
MICROBIOLOGIST
Department of Biology
Ball State University
Muncie, Indiana

Tenure-track faculty position (years toward tenure considered) available August 22, 2003. Responsibilities: teaching introductory microbiology, medical microbiology, introductory biology, and biotechnology courses; conducting and promoting student involvement in research specialty in support of biology major/microbiology option; providing service to the academic community. The person chosen should have a commitment to excellence in teaching and competency in current approaches in microbiology.

Minimum qualifications: earned Doctorate in a biological science by August 17, 2003; effective written and oral communication skills; commitment to excellence in teaching; and competency in current approaches in microbiology. Preferred qualifications: demonstrated teaching ability, publications, and/or evidence of other scholarly activity.

Send letter of application, curriculum vitae, documentation of scholarly activity and teaching ability, copies of transcripts, and three letters of reference to: **Chair, Microbiology Search and Selection Committee, Department of Biology, Ball State University, Muncie, IN 47306. Website: http://www.bsu.edu**. Review of applications will begin October 14, 2002, and will continue until the position is filled. *Ball State University is an Equal Opportunity/Affirmative Action Employer and is strongly and actively committed to diversity within its community.*

TENURE-TRACK FACULTY POSITIONS
Program in Development, Cell, and Neurobiology
Louisiana State University Health Sciences Center
New Orleans

The Program in Development, Cell, and Neurobiology (**website: http://www.cellbiology.lsuhsc.edu/dcn/dcn.htm**) invites applications for two faculty positions at the **ASSISTANT PROFESSOR** level. We are seeking individuals with cellular, molecular, and/or genetics expertise and research interests in any aspect of developmental biology or developmental neurobiology. Applicants must have a Ph.D. and postdoctoral experience. Successful candidates will develop an independent but interactive research program and participate in the teaching of team-taught cell biology and histology for health professionals and in graduate courses. To apply, please send curriculum vitae, statement of research interests, and the names of three references to: **Dr. Reha Erzurumlu, Chair of the Faculty Search Committee, Program in Development, Cell, and Neurobiology, Box P6-2 Louisiana State University Health Sciences Center, 1901 Perdido Street, New Orleans, LA 70112-1393**. *LSUHSC is an Equal Opportunity/Affirmative Action Employer.*

FACULTY POSITION
Molecular Biophysics
Johns Hopkins University School Medicine

The Department of Biophysics and Biophysical Chemistry (**website: http://biophysics.med.jhmi.edu**) seeks outstanding candidates for the position of **ASSISTANT PROFESSOR**. Applications are sought in all areas of molecular biophysics and biophysical chemistry including structural biology. Priority will be given to applications received by November 30, 2002. Please submit curriculum vitae, a summary of current and proposed research, and arrange to have three letters of recommendation sent to:

Search Committee
Department of Biophysics and Biophysical Chemistry
Johns Hopkins University School of Medicine
WBSB 713
725 North Wolfe Street
Baltimore, MD 21205-2185
FAX: 410-502-6910

The Johns Hopkins University is an Equal Opportunity Employer.

POSITIONS OPEN

FACULTY POSITIONS in molecular/cellular microbiology, University of Maryland, Baltimore. Two full-time, tenure-track faculty positions are currently available. The positions are primarily at the **ASSISTANT** or **ASSOCIATE PROFESSOR** levels. We are interested in outstanding individuals who will establish independent research in molecular or cellular microbiology focused on molecular mechanisms of pathogenesis and/or the cell biology of infection. The successful applicants will join an internationally recognized community of researchers with related interests in infection and immunity across several departments in the Dental and Medical Schools. For more information on research in molecular/cellular microbiology at the University of Maryland, please visit **websites:http://www.umaryland.edu/dental/OCBS/; http://medschool.umaryland.edu/Microbiology/; http://www.umaryland.edu/bmb/;** and **http://medschool.umaryland.edu/cvd/som.html**.

Minimum qualifications: Ph.D. in microbiology, cell biology, or related discipline. The positions will remain open until they are filled with qualified candidates. To apply, please submit curriculum vitae, summary of research and teaching interests, and the names and addresses of three references to: **Chair, Search Committee, Room 5-A-06, Department of OCBS, University of Maryland, Baltimore, 666 West Baltimore Street, Baltimore, MD 21201**. *The University of Maryland is an Affirmative Action/Equal Employment Opportunity/Americans With Disabilities Act Employer. We especially encourage women and minorities to apply.*

The Department of Biology at the University of North Florida invites applications for **TWO TENURE-TRACK BIOLOGY POSITIONS** beginning August 2003. Candidates must have a Ph.D. in biology, a strong commitment to undergraduate teaching, and the ability to conduct meaningful research involving undergraduates. Postdoctoral experience and the ability to procure external funding are valued assets. Genetics: Candidates should be able to teach general genetics and an upper-level course in their area of specialty and share responsibility for introductory biology. Physiology: Candidates should be able to teach introductory physiology and an upper-level course in their area of specialty and share responsibility for anatomy and physiology. Research areas and interests within each field are open. The successful candidates will play a key role in the development of a new Master's degree program in biology. 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: **Search Committee (specify genetics or physiology), Department of Biology, University of North Florida, 4567 St. Johns Bluff Road South, Jacksonville, FL 32224-2661** by postmark deadline November 1, 2002.

UNF is an Equal Opportunity/Equal Access/Affirmative Action Institution.

DEPARTMENT OF PHYSIOLOGY AND BIOPHYSICS
Case Western Reserve University

The Department of Physiology and Biophysics invites applications for a tenure-track **FACULTY POSITION** at the junior or senior level. Suitable areas of research include but are not limited to cellular and molecular approaches to questions in cardiovascular, pulmonary, and/or neurophysiology. We offer a highly competitive compensation package, ample start-up funds, and state-of-the-art research facilities. Submit curriculum vitae; a brief statement of research interest(s); three representative reprints; and the names, addresses, and telephone numbers of four references to: **Nanduri Prabhakar, Ph.D., Professor and Chair, Search Committee for Cardiovascular and Pulmonary Physiology, Department of Physiology and Biophysics, 10900 Euclid Avenue, Cleveland, OH 44106-4970. E-mail: mxs45@po.cwru.edu** by October 31, 2002. *Case Western Reserve University is an Equal Opportunity/Affirmative Action Employer.*

FACULTY POSITION
Microbial Physiology
The Ohio State University
Department of Microbiology

Applications are invited for a tenure-track faculty position at the **ASSISTANT** or **ASSOCIATE PROFESSOR** level in the Department of Microbiology at The Ohio State University. Applicants must have a Ph.D. in microbiology or a related discipline and postdoctoral research experience, documented evidence of high-quality research, and a strong commitment to teaching and research at a major research university. The successful applicant will be expected to develop and maintain a productive research program with extramural support and to participate in teaching at the undergraduate and graduate levels. Preference will be given to individuals with expertise in microbial physiology and a research program focused on physiology and molecular biology of an important environmental, pathogenic, or industrial prokaryote. The Department has added six new faculty members over the past three years, and an additional position is now vacant for a research-oriented scholar to join this vigorous and internationally recognized research community. The successful applicant will be provided with a very competitive salary and an excellent start-up package. To expedite the review process, applicants should send a copy of their curriculum vitae and a short description of their research interests by **e-mail: microsearch@osu.edu**. In addition, please submit a letter of interest, curriculum vitae, description of future research plans, and the names of at least three potential references to: **Dr. Joseph A. Krzycki, Search Committee Chair, Department of Microbiology, The Ohio State University, 484 West 12th Avenue, Columbus, OH 43210-1292**. For a more detailed description of the Department, please visit the **website: http://www.biosci.ohio-state.edu/~microbio/**. To ensure full consideration, applications should be received by November 1, 2002, but applications will be accepted until the position is filled. *OSU is an Equal Opportunity/Affirmative Action Employer. Women, minorities, veterans, and individuals with disabilities are encouraged to apply.*

ASSISTANT PROFESSORS
Department of Biology
College of Charleston
Charleston, South Carolina

The Department of Biology, College of Charleston, invites applications for two tenure-track positions at the Assistant Professor level. Both positions are to begin August 2003. Candidates must possess a Ph.D., a strong commitment to teaching, and an active research program with the potential for undergraduate involvement. (1) **COMPARATIVE ANIMAL PHYSIOLOGIST**: We are seeking a broadly trained Comparative Animal Physiologist. Teaching responsibilities will include the lecture and laboratory components of general and comparative animal physiology. (2) **GENETICIST**: We are seeking a Biologist who can teach genetics. Occasional teaching in introductory biology courses may also be required. The College of Charleston is a public liberal arts and sciences institution of 10,000 students. The College's primary goals are teaching and research excellence. In addition to its undergraduate programs, the Department offers an M.S. degree in marine biology and participates in two interdisciplinary Master's programs, one in environmental studies and the other in science and math for teachers. Information about the Biology Department is available at **website: http://www.cofc.edu/~biology/**. Applicants should submit curriculum vitae, statement of teaching and research interests, and three letters of reference by 18 October 2002 to: **Chair, Department of Biology, Animal Physiologist (or Geneticist) Search Committee, College of Charleston, Charleston, SC 29424**. *The College of Charleston is an Equal Opportunity/Affirmative Action Employer and encourages applications from women and minorities.*

POSITIONS OPEN

RESEARCH FACULTY POSITIONS
ASSISTANT, ASSOCIATE, OR
FULL PROFESSOR OF MEDICINE
Brown Medical School
Division of Endocrinology
Hallett Center for Diabetes and Endocrinology
Department of Medicine, Rhode Island Hospital

Two Research Faculty Positions are available in the Division of Endocrinology and the new Hallett Center for Diabetes and Endocrinology. The primary appointment will be in the Department of Medicine with potential for extensive interaction with Ph.D.-granting basic science programs at Brown Medical School. Rank of Assistant Professor in the Research Scholar Track at Brown Medical School requires documented ability and potential for conducting quality research published in peer-reviewed journals plus demonstrated ability as a teacher in biomedicine. In addition, rank of Associate Professor requires a national reputation with appropriate scholarly achievement for that level. Specific responsibilities include conduct of an independent research program in the field of diabetes mellitus, diabetes complications, or a related area in endocrinology and metabolism plus participation in the teaching of medical students, graduate students, and/or residents and Fellows. Space in the newly constructed Endocrinology and Diabetes Research Laboratories, protected time, and start-up funds will be provided. Candidates must have an M.D. and/or Ph.D. degree, demonstrated research expertise, and a strong record of publication in peer-reviewed journals. Review of applications will begin immediately and continue until the position is filled or the search is closed. Interested candidates should send their curriculum vitae to: **Robert J. Smith, M.D., Director, Division of Endocrinology, Rhode Island Hospital, Middle House 301, 593 Eddy Street, Providence, RI 02903**. *Rhode Island Hospital is an Equal Employment Opportunity/Affirmative Action Employer and actively solicits applications from women, minorities, and protected persons.*

ANALYTICAL CHEMISTRY
Ohio University

The Department of Chemistry and Biochemistry invites applications for a tenure-track position as an **ASSISTANT/ASSOCIATE PROFESSOR** of analytical chemistry. We seek an analytical/bioanalytical Chemist with postdoctoral or related experience and a research interest in forensic science or related fields. The successful applicant will be expected to establish a research program that will attract external funding and to enjoy teaching analytical and forensic chemistry at both the undergraduate and graduate (M.S. and Ph.D.) levels. Please submit curriculum vitae, a statement of teaching philosophy, an outline of research plans, and arrange to have at least three letters of recommendation sent to: **Chair, Analytical Search Committee, Department of Chemistry and Biochemistry, Clippinger Laboratories, Ohio University, Athens, OH 45701-2979**. Review of applications will begin on October 1, 2002, and continue until the position is filled. Further information on the College of Arts and Sciences can be viewed at **website: http://www.cas.ohiou.edu** and on the position and the Department at **website: http://www.chem.ohiou.edu**. *Ohio University is an Affirmative Action/Equal Opportunity Employer. Minority and female applicants are especially encouraged to apply.*

RESEARCH ASSISTANT PROFESSOR

The Department of Radiation Oncology at University of Alabama Birmingham is recruiting a nontenure-track Research Assistant Professor with a Ph.D./M.D. in virology and experience in molecular biology and construction of gene therapy vectors to carry out research in molecular chemotherapy, antiangiogenic therapy, and apoptosis-mediated therapy in combination with chemotherapy and radiation. Candidates should submit complete curriculum vitae to: **Donald J. Buchsbaum, Ph.D., Professor and Director, Division of Radiation Biology, University of Alabama at Birmingham, 1530 Third Avenue South, WTI 674, Birmingham, AL 35294-6832**. *An Affirmative Action/Equal Opportunity Employer.*

POSITIONS OPEN

As part of the Indiana Genomics Initiative, the Department of Medical and Molecular Genetics at the Indiana University School of Medicine is seeking applicants for a tenure-track position at the **ASSISTANT** or **ASSOCIATE PROFESSOR** level. Applicants should have a Ph.D. or M.D. and have completed postdoctoral training with a strong research record in molecular genetics. Outstanding individuals with the ability to conduct independent, extramurally funded research programs are sought. Preference will be given to applicants with demonstrated teaching experience. The successful candidate will join a department composed of basic Scientist and clinical faculty. The Department has a longstanding excellence in clinical genetics, cytogenetics, molecular genetics, and population genetics. The gene transfer expertise of the Indiana University Vector Production Facility, an NIH-designated National Gene Vector Laboratory, is also located within the Department. Faculty will participate in teaching and training programs including Ph.D., medical residency, laboratory and medical genetics (American Board of Medical Genetics), and genetic counseling. Additional information about the Department can be found on our **website: http://www.iupui.edu/medgen**.

Applicants should submit a letter of interest, curriculum vitae, and three letters of recommendation to: **Kenneth Cornetta, M.D., Professor and Chairman, Department of Medical and Molecular Genetics, Indiana University School of Medicine, 975 West Walnut Street, IB–130, Indianapolis, IN 46202**. *IU is an Equal Employment Opportunity/Affirmative Action Employer; Minorities/Females/Disabled.*

ASSISTANT PROFESSOR
BIOLOGY

Assistant Professor, tenure track, to begin August 2003. We seek an individual with expertise broadly defined as interactions between physiological processes and the environment. Areas of interest may include environmental physiology, developmental plasticity, toxicology, immunology, or related fields. Teaching duties will include anatomy and physiology and/or introductory biology as well as courses in area of expertise. The successful candidate will be expected to establish an ongoing research program involving undergraduates. A Ph.D. and at least one year of postdoctoral experience are required. Submit curriculum vitae, description of research and teaching interests, and arrange for three letters of recommendation to be sent to: **Dr. Thomas Clark, Chair of Search Committee, Department of Biological Sciences, Indiana University South Bend, South Bend, IN 46634**. Deadline for receipt of completed applications is December 15, 2002. *Indiana University South Bend is an Equal Opportunity Employer and encourages application from all qualified candidates.*

ASSISTANT EDITOR
BioTechniques

Eaton Publishing, Westborough, Massachusetts, seeks an Assistant Editor to join the staff of the journal *BioTechniques*. The position includes responsibilities related to the solicitation, evaluation, and selection of manuscripts for publication. The qualified candidate will have a life science Ph.D.; excellent written, verbal, and personal communication skills; and an interest in and understanding of techniques used in basic and applied research. Editorial experience is preferred but not required. To apply, please send a cover letter, curriculum vitae, and salary requirements to **e-mail: mccarthy@biotechniques.com**. *Affirmative Action/Equal Employment Opportunity.*

RESEARCH ASSOCIATES

The Molecular Sciences Institute (**website: http://www.molsci.org**) has positions available for Research Associates to pursue independent research programs in the areas of genome evolution, cell cycle, signal transduction, and related fields. Required: Ph.D. in biological sciences; entry level to three years of postdoctoral experience. FAX or e-mail curriculum vitae and three references: **FAX: 510-647-0699; e-mail: jobs@molsci.org**. *The Molecular Sciences Institute is an Equal Opportunity Employer.*

French Republic
The State and Ile-de-France Paris Region
launch an appeal for proposals for
5 new "Blaise Pascal" International Research Chairs

Each Chair will enable a **top foreign researcher** in exact or applied sciences, earth and environmental sciences, new technologies and human or social sciences, to be hosted for 12 months full time, possibly spread over 2 years, in one or more further education or research establishments in Paris/ Ile-de-France.

- Applications are sought from scholars and researchers in any academic discipline.
- Applications should propose a **scientific project** and specify requirements ; they have to **be compiled jointly with the hosting establishment**.
- The amount of finance dedicated to each project is **198 183 Euros (1.3 MF)** (salaries, social security charges, management costs, taxes and support expenses, etc. included).
- Recipients will be expected to give a series of ten lectures, the last of which should be broader in scope.
- A multi-disciplinary panel, drawn from the Institut de France, will select applicants according to the scientific interest of the project and the quality of the application.

Applications submitted: before 31 December 2002

Application forms available from the following address :
Fondation de l'Ecole Normale Supérieure
Chaires Internationales de Recherche "Blaise Pascal"
45 rue d'Ulm, F-75230 Paris cedex 05
www.chaires-blaise-pascal.org

Information :
Professor W. Mercouroff - Tel.: 33 (0) 1 44 32 3185 / 3581 / 3913
Fax 33 (0) 1 44 32 3183
E-mail: fondation@ens.fr

ANNOUNCEMENT OF REQUEST FOR PROPOSALS (RFP): N01-CN-25026-76 PRECLINICAL *IN VITRO* AND *IN VIVO* SCREENING ASSAYS FOR CANCER PREVENTIVE AGENT DEVELOPMENT
National Cancer Institute

The Division of Cancer Prevention (DCP), National Cancer Institute (NCI) is seeking proposals from qualified organizations who have the ability to screen potential cancer preventive agents in a variety of *in vitro* and short-term *in vivo* assays and to establish the infrastructures composed of one or more collaborating institutions that will conduct these screening assays. The assays will assess the potential of various agents to inhibit, reverse, or delay the early process of carcinogenesis by evaluating the biologic effects of these agents on a variety of endpoints, such as for example, on specific molecular targets; on processes involved in the development and maintenance of carcinogenesis, *e.g.,* transformation, proliferation, and apoptosis; and on validating new assays and techniques, such as quantitative image analysis. For the *in vivo* tests a required endpoint shall be the histopathologic evaluation of cancers.

Application due date is **November 13, 2002**.

See the following website: **http://rcb.nci.nih.gov** under Current Requests for Proposals

ASSISTANT PROFESSOR OF PHARMACOLOGY
Human Neoplastic Disease

The Medical Sciences Program of the Indiana University School of Medicine in Bloomington invites applications from candidates with postdoctoral experience and a strong publication record for a 12-month, tenure-track position as Assistant Professor of Pharmacology starting July 2003. The successful applicant is expected to participate in teaching pharmacology to medical and graduate students and to establish an extramurally funded, independent research program, asking questions of fundamental importance to human neoplastic disease. The Program also wants to strengthen existing ties with the NCI-designated Cancer Research Institute and the Indiana Genomics Initiative. Preference will be given to those candidates who can document both teaching and cancer research expertise and whose research interests complement those of current faculty. More information may be obtained from **website: http://medsci.indiana.edu**. Applicants should send curriculum vitae, a statement of teaching commitment and philosophy, a summary of current and anticipated research activities, and arrange to have three letters of reference sent to: **Pharmacology Search Committee, Medical Sciences Program, Indiana University School of Medicine, Jordan Hall, Bloomington, IN 47405-4201**.

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

ECOLOGIST: The Department of Zoology, Oregon State University, seeks candidates for a tenure-track position in conservation ecology with emphasis on research in terrestrial systems, available September 16, 2003. Level of appointment is expected to be **ASSISTANT PROFESSOR** but we will consider outstanding applicants at the **ASSOCIATE** or **FULL PROFESSOR** level. We seek applicants with postdoctoral research experience and the ability to develop an active, grant-supported research program in conservation ecology with emphasis on research integrating empirical and theoretical approaches and contributing to the scientific understanding of conservation, sustainability, or complex adaptive systems. Teaching responsibilities will include an undergraduate nonmajors course in conservation biology, the ecology section of majors introductory biology, and a graduate course in an area of specialty. The successful candidate will be expected to develop a strong graduate training program as well as have a serious commitment to undergraduate instruction. For full consideration, apply by December 15, 2002. Position is funded by education and general funds. Complete announcement at **website: http://osu.orst.edu/jobs**. Send a letter of application, curriculum vitae, statement of research interests, statement of teaching interests and qualifications, reprints of no more than four significant papers, and names and contact information of three references to: **Ecology Search Committee, Department of Zoology, OSU, 3029 Cordley Hall, Corvallis, OR 97331-2914. Telephone: 541-737-3705**. *OSU is an Affirmative Action/Equal Opportunity Employer.*

MARINE LABORATORY
Sanibel-Captiva Conservation Foundation (SCCF)

The Marine Laboratory at SCCF has openings for two **MARINE SCIENTISTS** with interests and experience in the following areas: seagrasses, benthic ecology, productivity, indicators, recruitment, and water quality. Other areas also considered. Candidates should have a B.S., M.S., or Ph.D. in any science associated with the marine environment. Submit a statement of research interests, résumé, and the names and contact information for three individuals to serve as references to: **Dr. S. A. Bortone, Director, Marine Laboratory, Sanibel-Captiva Conservation Foundation, 900A Tarpon Bay Road, Sanibel, FL 33957. E-mail: sbortone@sccf.org; Website: http:// www.sccf.org**. Review will begin 1 November 2002.

THE UNIVERSITY OF CALIFORNIA, SAN DIEGO, DEPARTMENT OF CHEMISTRY AND BIOCHEMISTRY (website: http://chem.ucsd.edu) invites applications for faculty positions in biochemistry with strong preference for the **ASSISTANT PROFESSOR** level. Candidates must have a Ph.D. and a demonstrated ability for creative research and teaching at the undergraduate and graduate levels. The Department will consider applicants in all areas of biochemistry, particularly the following: structure of supramolecular machines, proteomics/mass spectroscopy, molecular evolution/protein design, signaling at membranes, functional genomics, carbohydrate biochemistry, cell signaling in stress responses, and quantitative analysis and modeling of complex molecular ensembles. Salary commensurate with qualifications and based on University of California pay scale. Candidates should send curriculum vitae, list of publications, reprints of up to five representative papers, and a summary of research plans to: **Chair, Biochemistry Search Committee 4-109S, University of California, San Diego, Department of Chemistry and Biochemistry, 9500 Gilman Drive 0332, La Jolla, CA 92093-0332**. Candidates should also arrange to have three letters of reference sent under separate cover. The deadline for applications is November 1, 2002, but until positions are filled, all applications received will be assured full consideration. *UCSD is an Equal Opportunity/Affirmative Action Employer with a strong institutional commitment to the achievement of diversity among its faculty and staff.*

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.*

FACULTY POSITION
Molecular or Cell Biology of Parasites

The Department of Microbiology and Immunology of the University of California, San Francisco, School of Medicine, is seeking outstanding candidates to fill an **ASSISTANT PROFESSOR** position in the area of parasite biology and pathogenesis. In addition to departmental affiliation, the position includes membership in the Biomedical Sciences Graduate Program. The search will consider candidates with demonstrated creativity and research productivity in parasite-related cell biology, biochemistry, or molecular biology. Candidates with clinical credentials are also encouraged to apply and may elect primary appointment in the Department of Medicine or Pathology. Interested candidates should send curriculum vitae; a statement of future research plans; and three reference letters by November 15, 2002, to: **Search Committee, c/o Charlotte Haight, Department of Microbiology and Immunology, Box 0414, University of California, San Francisco, San Francisco, CA 94143-0414**. *UCSF is an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.*

RESEARCH SCIENTIST
Molecular Genetics

A Research Scientist position is available immediately in the Molecular Genetics Division of our Musculoskeletal Disease Center. Projects include mapping and identification of candidate genes for the musculoskeletal system in animal and human studies with particular focus on soft-tissue regeneration using state-of-the-art molecular genetic techniques. Candidates must have a Ph.D. in molecular biology/genetics with experience in linkage or association studies, statistics, and state-of-the-art molecular biology techniques to identify candidate genes and evaluate their functions. A strong record of scientific publications in molecular genetics and demonstrated ability to compete for external grant funding are essential. Our molecular genetics division focuses on mouse genetics and human genetic diseases with special emphasis on osteoporosis. Salary and benefits are competitive, and the possibility exists for a long-term position. Most of our Research Scientists are also nominated for research faculty positions at Loma Linda University, one of our affiliated educational institutions. Send curriculum vitae with cover letter, salary requirements, and names/e-mail addresses of three references to: **Carol Farrell, Director of Human Resources, LLVARE, P.O. Box 11238, San Bernardino, CA 92423-1238. E-mail: hrm@llvare.org**. *Equal Employment Opportunity/Affirmative Action Plan Employer.*

FACULTY POSITION IN CELL BIOLOGY
University of Texas Southwestern Medical Center at Dallas

The Department of Cell Biology at The University of Texas Southwestern Medical Center, in conjunction with the Endowment for Scholars in Biomedical Research, announces an opening for a tenure-track **ASSISTANT PROFESSOR** in the field of molecular cell biology. The Department of Cell Biology offers a vibrant, collaborative research environment and exceptional start-up packages. Applicants should submit curriculum vitae, the names of three references, and a brief description of their research goals to: **Dr. Richard G. W. Anderson, The University of Texas Southwestern Medical Center, Department of Cell Biology, 5323 Harry Hines Boulevard, Dallas, TX 75390-9039**. Applications will be considered through January 15, 2003. **Website: http://www.swmed.edu/home_pages/cellbio/dw/index.html**. *The University of Texas Southwestern Medical Center is an Equal Opportunity/Affirmative Action Employer.*

ASSISTANT PROFESSOR
Department of Neurobiology

The Department of Neurobiology at the University of Alabama at Birmingham (UAB), School of Medicine, invites applications for a nontenure-track position at the Assistant Professor level. The Department is seeking an outstanding individual who has at least three years of postdoctoral experience with methods for analyzing teen parent/child interactions and maternal neglect. The successful candidate will either have or be competitive for NIH funding for K-type awards and be highly versed in statistical analysis and experimental design in the social and behavioral sciences. Strong interaction/communication skills with a broad neuroscience research community are essential. Send curriculum vitae and statement of research plans and have three letters of recommendation sent to: **Dr. Michael Friedlander, c/o Robin Lucas-Biles, Department of Neurobiology, 1719 Sixth Avenue South, CIRC 516, University of Alabama at Birmingham, Birmingham, AL 35294**. *UAB is an Affirmative Action/Equal Opportunity Employer.*

POSTDOCTORAL POSITION available for individuals who have a Doctoral degree and expertise in mechanotransduction, vascular biology, cell biology, molecular biology, virology, and transgenic animal model. Salary starting from $32,000. Send curriculum vitae and references to: **Dr. John J-Y Shyy, Division of Biomedical Sciences, University of California, Riverside, Riverside, CA 92521. E-mail: john.shyy@ucr.edu**.

Call for Proposals
BMBF Competition "Nanotechnology"

The Federal Ministry of Education and Research (BMBF) intends to give **young scientists** from Germany and abroad who are **experienced in heading a research group** the opportunity to work on new, basic research-oriented approaches in the nanosciences in Germany, independently and in their own team in order to

- generally improve career prospects in industry or science in Germany or
- encourage self-employment in the private sector (setting up businesses or spin-out companies).

The teams (staff: 1 group leader, 1-2 postdocs, 1-2 doctoral students, 1-2 technicians; investments and expendable materials: depending on the technical support required in each case) are to work for a period of 5 years on topics covering the technological use of physical, i.e., mechanical, electronic and optical phenomena characteristic of the nanometer scale (not mainstream developments aimed at merely reducing the size of today's microstructures, incl. microelectronics and those phenomena which can be achieved with individual molecules).

Non-repayable grants will be awarded to the projects selected by a jury.

Deadlines: 15 June 2002 (first call) and 15 October 2002 (second call).

Further information:
Dr G. Schumacher, PTJ-FZJ, D-52425 Juelich
tel +49(0)2461 61-3545; e-mail: G.Schumacher@fz-juelich.de

POSITIONS OPEN

THREE POSITIONS
Aquatic Science and Biotechnology
Great Lakes WATER Institute
University of Wisconsin–Milwaukee

The University of Wisconsin–Milwaukee (UWM), Great Lakes WATER Institute, invites applications for scientific leaders who will apply the rapidly advancing fields of biotechnology, bioinformatics, and biomolecular science to the problems of freshwater supplies and security and to the health of the ecosystems dependent upon them. Supported by the newly created UWM Freshwater Initiative and the Shaw Fund of the Greater Milwaukee Foundation, the WATER Institute is recruiting three new Scientist positions in the broad areas of (1) environmental genomics and molecular biology, (2) bioinformatics and the analysis of complex systems, and (3) applied aquatic biotechnology and engineering. This initiative will also support outstanding opportunities for graduate students through 20 new Shaw Graduate Student Research Fellowships over the next five years. These permanent, **TENURE-TRACK RESEARCH POSITIONS** are open at all ranks for Scientists with demonstrated potential to establish vigorous, interdisciplinary research programs, with a willingness to join a multidisciplinary group of marine and freshwater Scientists and with the desire to bridge the interfaces between limnology and oceanography and molecular biology, genomics, bioinformatics, and engineering across studies of freshwater and marine ecosystems, aquatic biogeochemistry, organismal and ecosystem health, water security, aquaculture, environmental change, and advanced underwater technologies. For more information, visit **website: http://www.glwi.uwm.edu**. Candidates should send a letter postmarked no later than 1 November 2002 with a description of research interests, detailed curriculum vitae, and the addresses/e-mail addresses of three references to: **Chair, Shaw Scientists Committee, Great Lakes WATER Institute, University of Wisconsin–Milwaukee, 600 East Greenfield Avenue, Milwaukee, WI 53204**. *UWM is an Equal Opportunity/Affirmative Action Employer.*

NOAA's Great Lakes Environmental Research Laboratory (GLERL) in Ann Arbor, Michigan, has an opening for a National Research Council (NRC) **POSTDOCTORAL SCIENTIST** in aquatic toxicology or risk assessment with a special emphasis in one of the following areas: (1) investigation of the utility of contaminant body-residue as the dose metric for pulsed exposures in aquatic toxicity or (2) investigation of the impact of mixtures on the utility of body-residue as the dose metric for aquatic toxicity studies. Candidates will develop a research proposal in collaboration with a GLERL Scientist based on the above areas. Proposals involving experimental investigations or mathematical modeling and risk assessment are encouraged. Applicants for the Postdoctoral Research Associate position should have a recent Ph.D. in aquatic toxicology, environmental risk assessment, or related field. The NRC appointment is for one year with a second-year extension funded by GLERL, assuming satisfactory performance. There is also a provision for applications from a Senior Research Associate (Ph.D. for more than five years); this appointment is for one year. Proposals are to be submitted for the February review to the NRC. Information on the application procedure can be obtained from the NRC **website: http://www4.nationalacademies.org/pga/rap.nsf** or by **e-mail: rap@nas.edu**. Refer to Opportunity 26.65.01.B0644 on Assessment of Sediment-Associated Pollutant Exposure for Great Lakes Invertebrates under the National Oceanic and Atmospheric Administration program. Specific details on the research should be directed to: **Dr. Peter F. Landrum; e-mail: peter.landrum@noaa.gov; Telephone: 734-741-2276. Website: http://www.glerl.noaa.gov/about/jobopps.html.**

POSITIONS OPEN

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.

Gemin X Biotechnologies Inc. is an apoptosis-based biotechnology company located in Montreal, Quebec, Canada. Gemin X uses its expertise in protein:protein interactions to discover novel small-molecule therapeutics to treat life-threatening diseases including cancer and viral diseases. To support our ongoing successes, we are currently looking for a **RESEARCH SCIENTIST**, protein chemistry.

As a Ph.D. Scientist with at least three years of industrial research experience and a solid publication record, you will contribute to a better understanding of cancer biology using chemical genetic approaches and your results will be applied for drug screening programs. A versatile individual with the potential to grow into a leadership position, you are able to juggle multiple priorities while demonstrating scientific innovation. Experience in mass spectroscopy and/or membrane proteins would be an asset (Number 010702S).

Please send your curriculum vitae by **e-mail: hr@geminx.com**; by **FAX: 514-281-1065**; or mail to: **P.O. Box 477, Place du Parc, Montreal, Quebec H2X 4A5 Canada**, referring to the appropriate offer number.

A **POSTDOCTORAL POSITION** is available to study transposon-mediated gene therapy of endothelial cells. The project will focus on *in vivo* gene delivery of reporter and therapeutic gene products. Applicants with a recent Ph.D. or M.D. and a strong background in molecular/cell biology are encouraged to apply. Experience with animal models preferred. Submit curriculum vitae and three references to: **Brad Fletcher, M.D./Ph.D., University of Florida, Department of Pharmacology and Therapeutics, P.O. Box 100267, Gainesville, FL 32610. E-mail: bsf@college.med.ufl.edu.**

The University of Florida is an Equal Opportunity Employer and minorities and women are encouraged to apply.

POSTDOCTORAL POSITION

A Postdoctoral position is available immediately to study the mechanism of DNA damage signaling in lung cancer drug resistance. We are interested in protein modification/phosphorylation in response to antitumor agents in lung cancer cells. Previous experience in molecular/cellular biology is required. Submit curriculum vitae and contact information to the following: **Peilin Zhang, M.D., Ph.D., Pathology, West Virginia University, P.O. Box 9203, Morgantown, WV 26506. E-mail: pzhang@hsc.wvu.edu** is preferred. *West Virginia University is an Affirmative Action/Equal Opportunity Employer.*

POSITIONS OPEN

POSTDOCTORAL POSITIONS are available at the University of Texas at Austin. One position will focus on factors that modulate the formation, activity, and inhibition of caspase-activating complexes during toxicant-induced apoptosis (**Cain et al.,** *J. Biol. Chem.* **275:6067–6070; Bratton et al.,** *EMBO. J.* **20:998–1009; Bratton et al.,** *Cell Death Differ.* **9:881–892**). Candidates should have a recent Ph.D. with a background in molecular biology as well as experience with recombinant protein expression and cell transfection techniques. A second position will focus on protein identification by mass spectrometry. Preference will be given to those candidates who also possess significant experience in LC-MS, MALDI-TOF, and bioinformatics. A third position will focus on mechanisms of ROS-induced oncotic and apoptotic cell death. Candidates should have a background in molecular biology including transfection/infection technology and experience in chromatin structure and function. Please provide curriculum vitae and the names of at least three references to: **Dr. Shawn B. Bratton (e-mail: sbbratton@mail.utexas.edu), Dr. Serrine S. Lau (e-mail: slau@mail.utexas.edu)**, or **Dr. Terrence J. Monks (e-mail: scouser@mail.utexas.edu)** respectively; **The University of Texas at Austin, PHAR-Pharmacology, 1 University Station A1915, Austin, TX 78712-0125. Website: http://www.utexas.edu/pharmacy/divisions/pharmtox/faculty/index.html.**

POSTDOCTORAL POSITIONS are available immediately to study leukocyte biology with regard to inflammation, cardiovascular biology, and atherosclerosis. The multidisciplinary program of the Specialized Center of Research in Molecular Medicine and Atherosclerosis offers comprehensive research opportunities involving analysis of leukocyte receptors, regulation of gene expression, and signaling pathways. Positions are open to individuals with strong interests in cell/molecular biology and cardiovascular science. Send curriculum vitae and names of three references to: **Dr. Oswald Quehenberger, University of California, San Diego, 1080 BSB, 9500 Gilman Drive, La Jolla, CA 92093-0682. E-mail: oquehenberger@ucsd.edu.** *NIH guidelines require U.S. citizenship or permanent residency. Equal Opportunity Employer.*

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@accom.yu.edu.** *Equal Opportunity Employer.*

POSTDOCTORAL FELLOW is needed to assist in an aging model research program on dauer larva formation genes in free-living and parasitic nematodes. The candidate will also be required to participate in clinical projects dealing with geriatric patients. Experience is required in molecular biology (RNAi and SAGE will be a plus). Send curriculum vitae with names of three references to: **Afzal Siddiqui, Ph.D.** or **Steven Berk, M.D., Texas Tech University Health Sciences Center, 1400 Wallace Boulevard, Amarillo, TX 79106. FAX: 806-354-5791.** E-mail curriculum vitae to **e-mail: siddiqui@ama.ttuhsc.edu** or **berk@ama.ttuhsc.edu.**

RESEARCH POSITIONS in molecular biology. A Research position is available at Department of Obstetrics/Gynocology at Stony Brook University. We are interested in the biologic activities of lefty, which has significant role in embryogenesis, implantation, and carcinogenesis. Candidate should have Ph.D. degree and experience in molecular biology. Send résumé to **e-mail: tabibzadeh@bioscience.org; Telephone: 516-484-2831; website: http://www.bioscience.org/services/availabl/position.htm.**

POSITIONS OPEN

POSTDOCTORAL POSITIONS
Chromatin and Cancer
The Wistar Institute

Two NIH-funded positions for Postdoctoral trainees are available. Research involves understanding the biochemical mechanisms that underlie aberrant transcriptional regulation in human cancer. Specifically, our group studies the functional interaction between transcriptional activators important in human cancer (MYC, E2F, and p53) and a set of recently described chromatin modifying complexes (histone acetyltransferases). Applicants should have a Ph.D. and experience in molecular biology and/or biochemistry. Highly competitive salary and benefits package. Forward curriculum vitae to: **Steven McMahon, Ph.D., Gene expression and Regulation Program, The Wistar Institute, 3601 Spruce Street, Philadelphia, PA 19104. E-mail: smcmahon@wistar.upenn.edu; website: http://www.wistar.upenn.edu/mcmahon.** *Equal Opportunity Employer/Affirmative Action/Minorities/Females/Disabled/Veterans.*

POSTDOCTORAL/RESEARCH ASSOCIATE POSITION in molecular viral oncogenesis and new pathogen discovery. Position available starting July 2002. Ongoing studies involve viral regulation of cMYC, pRB, apoptotic, and interferon-signaling pathways by Kaposi's sarcoma-associated herpesvirus (*Science* **266**:1865, 1994; *PNAS* **93**:1487, 1996) and use of molecular techniques to find unidentified pathogens. Experience in virology, transcriptional regulation, or genomics preferred. The laboratory is located in the University of Pittsburgh Hillman Cancer Center, a newly built, free-standing 350,000-square-foot cancer research and treatment facility. Send curriculum vitae and three references by FAX or mail to: **Patrick S. Moore, M.D., M.P.H.** and **Yuan Chang, M.D., Molecular Virology Program, University of Pittsburgh Cancer Institute, Research Pavillion, 5117 Centre Avenue, Suite 1.4, Pittsburgh, PA 15213-1863. Website: http://www.upci.upmc.edu/internet/molvirology/kshviab.html.**

CAREER IN OPTOMETRY, OPTOMETRIC RESEARCH, OR TEACHING

The New England College of Optometry offers a unique program for those with a Doctorate in the sciences: biology, chemistry, physics, psychology, etc. Candidates have the opportunity to obtain the Doctor of Optometry (O.D.) degree in 27 months. The Program begins annually in March. Employment opportunities exist in clinical practice, industry, optometric faculty positions, and research. Contact: **Admissions Office, Department S, 424 Beacon Street, Boston, MA 02115. Telephone: 1-800-824-5526; e-mail: admissio@ne-optometry.edu; website: http://www.ne-optometry.edu.** Application deadline: February 1, 2003.

POSTDOCTORAL POSITION to study cell signaling mechanisms regulating contractile protein phosphorylation in different types of muscles using biochemical, physiological, and genetic (transgenes and knockouts) techniques. Ph.D. or M.D. with experience in molecular approaches and interest in animal models for muscle performance and disease issues strongly preferred. Send curriculum vitae and names of two references to: **Dr. James Stull, Department of Physiology, University of Texas Southwestern Medical Center, Dallas, TX 75390-9040. E-mail: james.stull@utsouthwestern.edu.** *Equal Opportunity Employer.*

A **POSTDOCTORAL RESEARCH ASSOCIATE** position is available at Yale Child Health Research Center to study organogenesis. Qualifications include a Ph.D. or equivalent degrees with a strong background in developmental biology and molecular biology. Please send curriculum vitae and names and contact information for three references to: **Dr. Scott Rivkees** or **Dr. Zhiyong Zhao, YCHRC, 464 Congress Avenue, Yale University School of Medicine, New Haven, CT 06520. E-mail: scott.rivkees@yale.edu; zhiyong.zhao@yale.edu.**

POSITIONS OPEN

POSTDOCTORAL POSITION
ECOLOGICAL GENETICS
Grinnell College Biology Department

The Department of Biology at Grinnell College invites applications for a two-year Postdoctoral position beginning in January 2003. The successful applicant will participate in research on the ecological genetics of plant mating systems and teach in a liberal arts college environment under the guidance of a faculty mentor. The candidate should anticipate teachng or coteaching one course per semester. A recent Ph.D. in plant ecology, population genetics, ecological genetics, or related field is required as is an interest in teaching and supervising the research of undergraduates. For additional details on research projects, contact: **Dr. Vincent M. Eckhart; e-mail: eckhart@grinnell.edu; website: http://web.grinnell.edu/individuals/eckhart.** Send curriculum vitae, three letters of recommendation, and copies of all transcripts to: **Mellon Postdoctoral Search Committee, Department of Biology, Grinnell College, Grinnell, IA 50112-1690.** In their letters of application, candidates should address their interest in developing as a teacher and scholar in an undergraduate liberal arts environment that values diversity and emphasizes close faculty-student interaction. To be assured of full consideration, complete applications should be received by October 11, 2002. For further information about Grinnell College, please see **website: http://www.grinnell.edu.** *Grinnell College is an Equal Opportunity/Affirmative Action Employer committed to attracting and retaining highly qualified individuals who collectively reflect the diversity of the nation. No applicant shall be discriminated against on the basis of race, national or ethnic origin, age, gender, sexual orientation, marital status, religion, creed, or disability.*

POSTDOCTORAL POSITION
Queen's University, Kingston, Canada

A Postdoctoral Research Fellow is being sought to conduct studies on the regulation of cellular adaptations to changes in the microenvironment with focus on the effects of hypoxia on certain phenotypes of placental trophoblast and cancer cells such as invasiveness and resistance to therapy. The selected individual should have a recent Ph.D.; will work independently as part of a team; and should possess expertise in molecular and cellular biology techniques including protein, RNA and DNA analysis, gene transfection, cloning, and tissue culture. Salary will be paid in accordance to guidelines established by the Canadian Institutes of Health Research. For information on Kingston and Queen's University, please visit the following **website: http://www.queensu.ca/.**

If interested, please send curriculum vitae and two to three letters of reference to: **Dr. C. H. Graham, Department of Anatomy and Cell Biology, Botterell Hall Room 859, Queen's University, Kingston, ON K7L 3N6 Canada. FAX: 613-533-2566** by October 31, 2002.

POSTDOCTORAL FELLOW/ RESEARCH ASSOCIATE
Molecular Neurobiology
Cornell University

Position available to explore functions of ion channel genes in a small neural network by manipulation of expression in single neurons. Position requires Ph.D. or equivalent expertise in molecular biology; knowledge of electrophysiology desirable. See **website: http://www.nbb.cornell.edu/neurobio/harris-warrick/lab/index.htm.** Send curriculum vitae and contact information for three references to: **Dr. Ronald Harris-Warrick, Department of Neurobiology and Behavior, Cornell University, Mudd Hall, Ithaca, NY 14853. E-mail: rmh4@cornell.edu.**

A **POSTDOCTORAL POSITION** in human immunology, Vanderbilt University, Nashville, Tennessee, is available immediately in a well-funded research laboratory for highly motivated individual to study molecular basis of human immune responses to viruses. Applicant must have Ph.D. and/or M.D. and a strong background in immunology/virology. Send curriculum vitae and names/telephone numbers of three references to: **Dr. James Crowe; e-mail: james.crowe@vanderbilt.edu.**

POSITIONS OPEN

POSTDOCTORAL RESEARCH ASSOCIATE position is available in the Molecular Genetics Division of our Musculoskeletal Disease Center (MDC) for work on identification of candidate genes involved in peak bone density and bone formation response to mechanical force. Our Scientists use state-of-the-art equipment in the collaborative environment of our molecular genetics and gene therapy laboratories. This position requires a Ph.D. in molecular biology or molecular genetics. Salary and benefits are competitive with the possibility of a long-term position. Send curriculum vitae with cover letter, salary requirements, and names/e-mail addresses of three references to: **Carol Farrell, Human Resources Manager, LLVARE, P.O. Box 11238, San Bernardino, CA 92423-1238. E-mail: hrm@llvare.org.** *Equal Employment Opportunity/Affirmative Action Plan Employer.*

NIH-funded **POSTDOCTORAL RESEARCH POSITION** is available immediately to study the molecular regulation of hepatic signal transduction pathways. Strong background in molecular biology and/or protein biochemistry is desirable. Candidate should have excellent writing and verbal skills. The laboratory is located in downtown Washington, D.C., with its unique recreational, social, cultural, and educational activities. Send curriculum vitae and names of three references to: **Dr. Bernard Bouscarel, Department of Medicine and of Biochemistry and Molecular Biology, the George Washington University, 2300 Eye Street, N.W., Ross Hall Number 523, Washington, DC 20037. E-mail: dombeb@gwumc.edu.** *An Equal Opportunity/Affirmative Action Employer.*

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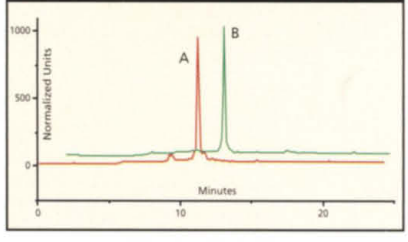

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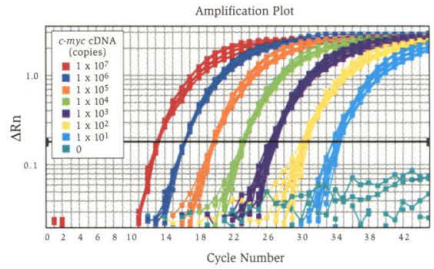

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