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# Biotechnology:

# North America



In the quarter of a century since biotechnology first became a commercial proposition, the industry has gone through a continuous ferment of change and reinvention. Having started in the late 1970s with fewer than a handful of companies, the North American biotech business has grown to a behemoth that consists of more than 1,280 companies, with market capitalization exceeding \$200 billion. Last year's sales of \$13.4 billion and revenues of \$18.6 billion more than doubled the industry's figures for 1993, according to consulting firm Ernst & Young. At the beginning of this year, the industry employed more than 153,000 people in the United States. Last year, American biotechnology companies spent \$9.9 billion on research and development (R&D).

Those efforts have started to produce results. In 1998, the latest year for which figures are available from the U.S. Patent and Trademark Office, the industry received more than 9,000 U.S. patents. In more practical terms, the U.S. Food and Drug Administration has already approved more than 90 drug products and vaccines based on biotechnology. The industry has also produced hundreds of medical diagnostic tests, a variety of agricultural and environmental products and, in DNA fingerprinting, a remarkable and effective aid to forensic science.

Personal Portraits of an Evolving Industry **Biotechnology: North America** 

Prominent industry leaders outline their personal views on the ways in which commercial biotechnology has grown and developed over the past two decades.



by Peter Gwynne and Guy Page

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Industry Executive: DAVID V. GOEDDEL, co-founder and CEO, Tularik Inc.

David Goeddel is a true veteran of the biotechnology industry. In 1978, with a Ph.D. in biochemistry from the University of Colorado and experience in postdoctoral research at the Stanford Research Institute, he became the first scientist hired by Genentech, Inc., the second member of the biotechnology industry. His work on gene cloning and the expression of human proteins led to five therapeutics reaching the market.



In 1991, Goeddel co-founded Tularik, a company devoted to the discovery and development of a broad range of orally available drugs based on gene regulation. "We want to associate a gene with a disease," he explains. "We work completely on small molecules, which are orally active pills that can turn genes on and off to treat human disease. These drugs are very different from the protein drugs on which I worked at Genentech."

Tularik has three compounds in the early stages of clinical testing. All of them are cancer drug candidates. "We are not anticipating marketing them until 2004," says Goeddel.

The company plans to market its drugs, once approved, both independently and through collaborations with partners in the pharmaceutical business. "We have several partnerships with pharmaceutical companies that fund the majority of our internal research," Goeddel says. "We've also sold part of the company to the public. That equity financing funds our development work and clinical trials. That's how we intend to keep moving ahead until we have our own revenue stream from product sales." Industry Executive: JAMES L. VINCENT, chairman and CEO, Biogen, Inc.

Vincent joined Biogen 15 years ago, after a career in telecommunications, the semiconductor industry, and biomedicine. Prior to his arrival at Biogen, he served as president of Texas Instruments – Asia; as founding president of Abbott Diagnostics, a part of Abbott Laboratories; and as president of Allied/Signal Corporation's Allied Health & Scientific Products Company.

Created in 1978 as the world's third biotechnology company, Biogen has largely reached a target sought by all the original biotechnology firms. "We want to develop an integrated, operating pharmaceutical company," explains Vincent. "We have basically achieved that goal on a global basis. We are manufacturing, marketing, and selling a drug in 50-60 countries. The lion's share is being sold by our own organization. We will soon be a \$1 billion company, one of the largest biopharmas."

Biogen already boasts significant human resources and research facilities. Two of its founders, Walter Gilbert and Phillip Sharp, have won the Nobel prize for physiology or medicine. The company employs more than 1,000 people worldwide. Its headquarters in Cambridge, Massachusetts, includes a \$40 million research building. The company introduced its first proprietary product,



AVONEXr, in 1996.

Vincent expects more. "It is our plan to retain our independence," he asserts. "We're trying to do an encore. We want to do the same thing with more drugs and become a much larger pharmaceutical company over the next few years. It is our stated mission by the year 2010 to be the largest pharmaceutical company started in the world since 1953, as measured by market value."

Nevertheless, most observers believe that biotech's best years are yet to come, particularly in the pharmaceutical trade. At present, more than 350 biotechnology-based drugs—designed to treat AIDS, Alzheimer's disease, diabetes, heart disease, multiple sclerosis, and obesity, among other conditions—have started human clinical trials. Hundreds more are in early clinical development. Pharmaceutical companies large and small are linking up with biotechnology firms, via acquisitions or joint ventures, to help fill their drug discovery pipelines. Drugs facilitated by biotechnology will replace medications due to face competition from generic drugs in the next five years as patents run out.

Successful as it has proved, the biotechnology industry in North America has taken on a very different coloration from that anticipated by the biotech pioneers of the 1970s. Those early industrialists envisioned that each of their start-ups would eventually become a fully integrated pharmaceutical company, fully prepared to compete with the giant pharmas. Using the principle "clone a gene, make a million," they anticipated that biopharmaceuticals would provide their bread and butter, and more than a little jam. They expected the traditional venture capital community to support them. And they successfully quelled early skepticism about their industry by the general public.

Much has changed since then. The business model of the fully integrated pharmaceutical company soon disappeared as biotechnologists realized how difficult, time-consuming, and laborintensive a job it is to produce a stream of commercially successful drugs. The core science and technology at the industry's foundation has diversified at an astonishing pace, giving biotech companies the option to specialize in small-molecule drugs, gene therapy, cell therapy, tissue replacement, drug delivery, diagnostics, and other markets. As the venture capital industry has drifted off in pursuit of the dot.coms, pharmaceutical companies have moved rapidly to provide biotechnology firms with the funds they need to pursue promising avenues of research. And a general public that had grown to accept biotechnology as just another industry has once more started to express suspicion, stimulated by recent European concerns over genetically engineered foods and the unfortunate death of a patient in a gene therapy experiment in Philadelphia.

A glance at the titles of symposia planned for next week's BIO 2000 meeting in Boston, which has been organized by the Biotechnology Industry Organization, indicates how much the industry has changed. "What Does It Mean To Be a Genomics Company In a Post-Genomics Era?" "Drug Discovery and Development: Partnering with a Multinational Biotech Company." "Establishing a Successful Profit Sharing Deal." "Managing the University/Industry Interface, A Perspective From Both Sides." "Consolidation Has Arrived! What Does the New Biotech World Look Like?" All these issues bear witness to the rapid evolution of the American biotechnology business.

Throughout all the changes, the biotechnology industry has continued to expand successfully. In this article, we trace its evolution via a specific and informed set of viewpoints. We look at the maturing industry through the eyes of industry leaders who have many years of experience in biotechnology and related businesses. In a series of telephone interviews, the editors of this supplement asked six

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Industry Executive: **HENRI A. TERMEER**, chairman and CEO, Genzyme Corporation Henri Termeer entered the biotechnology industry in its formative stages. Having spent 10 years in the biomedical business at Baxter Travenol, he joined Genzyme in 1983 when it was a small entrepreneurial venture. Since then, he has helped Genzyme to become one of the world's most significant biotechnology firms.

"Genzyme is a very diversified company," explains Termeer. "There are in fact five Genzyme companies, all of which are traded on Nasdaq. Those companies combined have more than 4.000 employees."



Genzyme General, the largest, develops and markets novel therapeutic products for welldefined patient populations. It focuses on treatments for rare genetic disorders. "Unless we can make a significant difference in terms of the disease, we won't set up a program," says Termeer. "We go after unorthodox solutions using three basic technologies: protein therapies, cellular therapies, and gene therapies. Genzyme Tissue Repair develops biological products for treating cartilage damage and severe burns. It has two cell-therapy products on the market. Genzyme Surgical Products is a specialty surgical products business. Genzyme plans to combine these two with Biomatrix, a producer of an injected arthritis treatment. Genzyme agreed to acquire Biomatrix early this month. The combined companies would form a new division, to be named Genzyme Biosurgery.

Genzyme Molecular Oncology, meanwhile, uses genomics, gene therapy, genetic diagnostics, small-molecule drug discovery, and protein therapeutic efforts to unearth molecular approaches to diagnosing and treating cancer. The final company, Genzyme Transgenics Corporation, a publicly traded subsidiary of Genzyme, is developing new medical treatments based on proteins produced in the milk of animals.

"We have chosen particular paths to build businesses and technologies simultaneously," says Termeer. "We did not get involved in many corporate partnerships, although we did make small acquisitions from time to time. Not many companies followed our highly diversified approach. More traditionally, companies focus on a specific piece of technology and one or two partnerships."

top executives in biotechnology firms to take personal looks at the industry's past, present, and future and to pinpoint the issues that have affected — and will continue to affect — its evolution.

#### Reorganizing the Business Model

Commercial biotechnology started with high hopes. "There's no question that, as happens with any new emerging industry, the entrepreneurs who began biotechnology businesses had very broad, grand ideas and big visions," says Jim Vincent, chairman and CEO of Biogen, Inc. Chief among those visions was speeding up the process that traditionally produced pharmaceutical drugs. "Some of the scientists who founded biotechnology companies thought that all it took would be to make a few discoveries and get a billion-dollar drug," adds Dave Goeddel, CEO of Tularik, Inc. What caused such confidence? "There was a general attitude that biotechnology, with its cutting-edge science, would be able to practice outside the general rules of the pharmaceutical industry," says Barry Quart, president of Agouron Research and Development.

At the beginning, it seemed almost too easy. "In the early days, the biotechnology companies aimed for 'low-hanging fruit' — molecules such as human growth hormone, insulin, alpha interferon, and erythropoietin whose activities had been known for many years before the biotechnology industry started," recalls Vincent. "The primary mission was to make those molecules synthetically because you can't derive a human source in any other way. Next, we moved into the 'banana-picking days.' You pick bananas when they are green, and you've got to make forecasts about when they'll ripen. That became more difficult. You needed an understanding of human

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pathophysiology rather than an understanding of the manufacturing process alone."

At that point, the young biotech industry started to face some sobering facts. "It became apparent that the road to becoming a fully integrated pharmaceutical company was very long and expensive," says Vincent. "You'd better be prepared to spend 10 years, if you're fortunate, and \$500-700 million cumulatively until you start marketing your first drug. You can raise only half of that amount from public markets. That's a serious amount of money for no return over 10 years." In many cases, the odds were stacked heavily against even that fast a success. "In the pharmaceutical industry we always realized that we'd be lucky to have 10 percent of good-looking compounds get to market," says Quart. "I've killed off many more products than I've passed."

The early biotech industry had some successes. Amgen, for example, came up with Epogen, and Neupogen, two successful products whose earnings permitted the company to pursue R&D on more products. But that was a rare event. Most biotechnology firms that have been created since the early days of the industry have focused on narrower goals. The royalty income model, which undertakes basic research and licenses promising finds, and the toolbox company, which develops technologies and techniques rather than specific drugs, have become the preferred approaches to financial success and corporate stability. "As the



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#### Industry Executive: GAIL K. NAUGHTON,

co-founder, president, and COO, Advanced Tissue Sciences, Inc.

"We were fortunate in being one of the first groups in tissue engineering," says Gail Naughton, a Ph.D. in basic medical sciences with postdoctoral experience in dermatology who co-founded Advanced Tissue Sciences in 1988. Using proprietary technology, the company has developed human-based bioengineered skin substitutes for treating burns and skin ulcers. It also has a tissue-engineered cartilage product that is moving toward human clinical trials. Cardio-



vascular products are in development, with an angiogenesis promoter heading toward human trials this year.

A co-inventor of the company's core technology, Naughton holds 57 issued and five allowed patents in tissue culture technology and related fields. Patents form a major part of Advanced Tissue Sciences' corporate strategy. "We have very strong patents that we defend," says Naughton. "Getting the patents was always among the first three issues on which we spent a lot of time and talent. We

kept abreast of all the new inventions at universities and licensed them. We licensed technology developed by Bob Langer and Joseph Vacanti at M.I.T. and Children's Hospital of Boston in 1992, before the public even heard of tissue engineering."

So confident did Advanced Tissue Sciences feel about its core technology that it moved rapidly to a public offering. "In the mid-1980s tissue engineering had no source of federal funds," says Naughton. "Government funds for university scientists working in this area started only four years ago. So our step to the market was a large one. We went right from the concept to the public markets."

The company has also taken a different approach to licensing. "When we looked at our product pipeline, traditional licenses were not appealing to us," says Naughton. "We needed a technological partner who could bring these novel products to the market in a way that addressed healthcare concerns relevant to managed care and reimbursement." For its first two partnerships, Advanced Tissue Sciences set up 50-50 joint ventures on orthopedics and wound care with U.K.- based Smith and Nephew. "They bring in their knowledge of arthroscopic development while we bring our knowledge of the tissue," explains Naughton. "They have been value added in launching our wound care products in the United States and international markets and in helping to bring our orthopedic cartilage products into clinical trials this year."

industry grew up, ancillary businesses grew to provide tools like high-throughput screening," says Lewis Gruber, president and CEO of Hyseq, Inc. "Pharmaceutical companies began to see biotechnology as a source of tools."

#### In Pursuit of Partners

The need for funding has forced many biotechnology companies to go the collaborative route. Indeed, of the original group of biotechnology corporations, only Amgen, Biogen, and Genzyme have remained independent.

Even when it is not aimed at servicing a fullservice pharmaceutical company, R&D in biotechnology has become an extraordinarily expensive affair. For a few years in the early 1990s, biotechnology was sufficiently compelling to attract money from investment angels, private investors, venture capitalists, and Wall Street. But as those investors learned about the slow pace of getting drugs to market, their enthusiasm started to wane. The emergence of Internet start-ups late in the 1990s completed the picture, using the prospect of fast profits to attract investors already distressed at the slow pace of biotechnology.

Enter the large pharmas. With many of their key patents due to run out in the first five years of the 21st century, they needed a way to fill

their drug discovery pipeline quickly. The R&D lab was the obvious source. But, as Vincent explains, "the large pharmas found it more difficult to develop biological sciences than they had expected 10 to 15 years ago." The fit between biotechnology companies desperate for long-term financing and pharmas urgently seeking lead compounds looked like a win-win situation.

"The partnerships are important for a couple of reasons," points out Goeddel. "They give validation to the technology of the biotechnology companies. And they're the best way for biotechnology companies to become educated in the drug development process. You have a scientific platform that can move the drugs along. But it's the pharma that moves the drugs to market. Being able to participate in that process is very important to biotechnology companies. So is the money that pharmas bring. When they're done right, partnerships are a big plus for both sides."

The idea of such tight collaboration was not always greeted enthusiastically. Between 1991 and 1995, Genentech slowly morphed into a division of pharmaceuticals company Roche. The arrangement gave Genentech the benefit of Roche's sales force. "But it was highly criticized," recalls Gail Naughton, president and COO of Advanced Tissue Sciences. "People thought that Genentech would lose its special flavor." The critics proved wrong. "It has been a highly successful story," continues Naughton. "Genentech has had the resources to fund a very successful product pipeline and the ability to bring products to market in a highly efficient way. And they haven't had to focus their energies on fund-raising."

For founders of biotechnology companies, the quid pro quo for support by pharmas is a loss of at least some autonomy. "You have to give away part of the product," says Goeddel. "If you're going to be a one- or two-product company, you should think before selling it off."

In the past couple of years, pharmas have not only worked hard to acquire biotechnology companies and licenses, they have also indulged in a rush of mega-mergers among themselves. That, says Henri Termeer, chairman and CEO of Genzyme Corp., may take some of the oxygen from biotechnology companies seeking support from pharmas. "From a management point of view, the giant mergers will make the pharmaceutical companies more inward-looking as far as making outside investments is concerned," says Termeer.

#### The Impact of New Technologies

A critical factor in making the biotech sector attractive to large pharmas has been the diversity of new technologies springing from R&D laboratories. As the Human Genome Project most

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#### advertising supplement

Industry Executive: **BARRY D. QUART**, president. Agouron Research and Development "At Agouron we've maintained the idea of designing, developing, and commercializing our own products," says Barry Quart, a Pharm D. in clinical pharmacy who joined the firm in 1993 after 10 years in the pharmaceutical industry with Bristol Myers Squibb Company. "We have some licensing to help the product portfolio, but we believe in bringing our own products to market."

Established in 1984, Agouron aimed from the start to develop a fresh approach to discovering new drugs for treating cancer, AIDS, and other serious diseases. The initial approach, protein structure-based drug design, was based



on the molecular structures of target proteins known to play significant roles in human diseases. Since then, says Quart, "we have expanded our horizon in terms of how to identify lead compounds. We have more methods beyond structure-based drug design. We're staying on the forefront of identifying and developing new compounds."

In its early years, the company set up some joint R&D arrangements. For example, it is working with the pharmaceutical division of

Japan Tobacco to develop VIRACEPT (nelfinavir mesylate), a protease inhibitor for treating HIV, that was brought to the market in just over three years after chemists designed it based on the three-dimensional structure of the HIV protease enzyme. It has become the largest selling drug in the U.S. market. Agouron retained exclusive commercial rights to VIRACEPT from the collaboration with Japan Tobacco in the United States and Canada, subject to sharing profits with Japan Tobacco.

Strategically, Agouron has maintained close links between its scientists and marketing personnel. "We have demonstrated the success of having a commercial organization tied very closely to the R&D group," says Quart. "That helped us to launch VIRACEPT."

Warner Lambert purchased Agouron for \$2.1 billion last year. However Agouron remains an independent division. "Even with our first drug selling more than anyone would have projected, we still did not have enough earnings to adequately fund the discovery and development pipeline," says Quart. "We decided to merge with a large pharma that would provide additional resources, but allows us to keep our name and maintain our small biotech culture."

#### Industry Executive: LEWIS S. GRUBER, president and CEO, Hyseq, Inc.

Lewis Gruber gained his first insight into the biotechnology industry as a patent counsel and strategy consultant with the Chicago law firm of Marshall, O'Toole, Gerstein, Murray & Borun. His clients there included such pioneering biotechnology companies as Amgen, Chiron, and Genentech, permitting him to put to good use his master's degree in cell biology and genetics. He prosecuted and obtained several biotechnology patents, including the SBH patent that formed the basis for Hyseq.

Hyseq aims to develop biopharmaceuticals using its proprietary rare genes as its foundation. Rare genes and the proteins they express, Hyseq argues, have strong commercial value because they may regulate normal and disease physiology. The company plans to generate strategic biopharmaceutical products for cardiovascular, hematopoietic, and immunological diseases. During 1998 and early 1999, for example, Hyseq announced several promising therapeutic candidates. They included two potential anti-inflammatories, a possible vaccine-producing reagent, and members of a family of products with potential anti-clotting ability.

Hyseq also intends to establish collaborations that will help partners develop and commercialize likely candidates for pharmaceutical and diagnostic



products. It processed 5 million samples in a collaboration with Chiron, thus enabling Chiron to focus on 31 products associated with metastases of breast, prostate, and colon cancers.

Gruber has high hopes that the company will fulfill one of the dreams of the original biotechnology entrepreneurs. "Like Amgen and Genentech, we're seeing a new generation of pharmaceutical companies coming up," he says. "Hyseq has the potential to become its own pharma." ■

recently illustrates, the pursuit of biotechnology involves a continuous series of leaps in understanding and manipulative ability that benefit both pure and applied researchers.

"The technology explosion has opened up opportunities for companies focused on providing technologies to other companies," says Quart. "Large pharmas need a constant flow of new products; the bigger they are, the more new products they need to sustain them. So they continually need to bring in new technologies to find new compounds faster. Biotechnology companies based on new forms of genetics, screening, and other technologies have been able to fill an important niche."

In Vincent's view, biotechnology research remains clearly a work in progress. "We're still in the scientific phase of the industry," he says. "To make the Human Genome Project productive from a healthcare, pharmaceutical, or diagnostic point of view, you have to have an enormous amount of science that will separate the wheat from the chaff."

To do so most effectively, biotechnology companies must learn to be nimble. "In the pharmaceuticals industry, you're forced to think ahead 10 years," says Gruber. "But you have to be opportunistic. Genomics has stimulated enough interest for people to spend hundreds of millions of dollars on it. So you must be ready to move quickly. You need a combination of long-term and short-term thinking."

One short-term aspect of such thinking involves smoothing the path from fundamental academic research to industrial application. "It's very important that largely academic discoveries get incorporated into the industry and scaled up very efficiently, with infrastructures put into place to make the process efficient," points out Goeddel. "Being able to access all the information and technology available is important, particularly for companies that have the ambition to become pharmas."

#### **Public Perceptions**

When the biotechnology industry was in its infancy in the early 1970s, its plans to alter genes drew strong criticism from some vocal academics, environmentalists, and concerned citizens. The scientific community addressed those fears in 1974 by convening the Asilomar conference. Attendees hammered out rules for scientific oversight designed to ensure the safety of genetic experimentation. Since then, biotechnology's critics have been largely silent. However, one incident in the early 1980s illustrated the power of public protest. Members of Germany's Green Party protestors in Cologne, succeeded in stopping an effort to create artificial petunias. "That effectively shut down biotechnology in Germany," recalls Termeer.

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"Now, they're feverishly trying to catch up."

Plainly, the biotechnology industry cannot ignore the echoes of public discontent about genetically engineered foods that swept across Western Europe last year or the fallout from the death, late last year, of a youth in a gene therapy experiment run by the University of Pennsylvania.

Such protests are likely to be restricted to biotechnology's impact on narrow fields of activity. "I can't imagine that there will be any kind of backlash in terms of biotechnology's role in providing pharmaceutical products," says Quart. "But I think there will be a fair amount of reluctance for some time to get back into gene therapy aggressively." Gruber points out that attitudes can change rapidly. "A public that worried about the safety of automobiles now accepts hundreds of deaths per year," he says.

Nevertheless, warns Termeer, the industry must prepare to answer its critics. "The discussion taking place on genetically engineered foods is highly appropriate and extremely necessary to make the transition work," he says. "Scientific or technological arrogance would be badly punished by the marketplace. Discussions on genetically engineered foods must take place. So must discussion of issues dealing with privacy in light of the work on genomics. We in the industry must set up discussions, not in a defensive way but in a manner that will inform. I think the discussion phase has just begun."

#### What Next?

What awaits the biotechnology industry? Undoubtedly change. "If you have a biotechnology business plan that lasts more than three months without tweaking, you're in trouble," says Naughton. But what direction will the change take? Here, every individual has a unique crystal ball.

According to Termeer, the arrival of an increasing number of biotechnology products on the market has already given some biotechnology companies sufficient revenue to sustain themselves independently. "I see 20-30 new names emerging as self-sustaining companies," says Termeer. "So on the one hand you have the shrinking of the larger biotechnology companies and their infrastructures, and on the other hand the emergence of larger companies starting to catch up with the traditional pharmas."

Quart suggests another niche for biotechnology companies: developing interesting-looking compounds on a no-risk basis for large pharmas. "There will be tens of thousands of compounds that look interesting and that will greatly exceed the ability of large pharmas to develop," he predicts. "Biotech companies could take compounds in early development through Phase 1 and Phase 2 of trials. If the product looks promising enough to obtain a huge market, the pharma will take it back and pay a healthy premium. If it's potentially good but not good enough for huge sales that the large pharmas will be looking for, the biotechnology company would keep it." Vincent bases his forecast on analogies between the biotechnology business and the semiconductor industry. "There will be a lot more mergers and acquisitions by pharmas," he predicts. "There's going to be consolidation. And all the permutations and combinations possible for an industry that is consolidating will occur with an increasing rate of change." Adds Goeddel: "With so many ways to make drugs, from proteins to small molecules, you've got to look at competition from many different perspectives. Competition is good at stimulating creativity."

Peter Gwynne is a freelance science writer based in Cape Cod, Massachusetts, USA. Guy Page is managing director of Ferguson Forth Page, a consulting firm in Madison, Wisconsin, USA.

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#### **Behavioral Neuropharmacologist**

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LIGAND Pharmaceuticals Inc. is the biotechnology industry leader in drug discovery based on both Intracellular Receptors and Signal Transducers and Activators of Transcription (STATs). We use our proprietary gene transcription technology to discover and develop small molecule drugs. Our mission is to create products that address critical unmet medical needs of patients in the areas of cancer, skin diseases, and men's and women's hormone-related diseases, as well as osteoporosis, metabolic disorders and cardiovascular and inflammatory diseases. We employ state-of-the-art drug discovery techniques, modern pharmacology and cutting-edge molecular and cell biology in an integrated approach to drug discovery. Located in the Torrey Pines area of San Diego, LIGAND is adjacent to the University of California, San Diego campus, and to other intellectual centers of the city's world-class health sciences endeavors. Currently, we seek outstanding individuals for the following positions to join our seasoned team of scientists.

#### Pharmacology SENIOR RESEARCH SCIENTIST/ RESEARCH INVESTIGATOR

Working in our Pharmacology Department, you will develop, validate and implement models for steroid/androgenic actions in peripheral tissues and the central nervous system to evaluate new pharmaceutical candidates. You must have a PhD, MD, DVM or equivalent with training and expertise in integrative biology, endocrinology, pharmacology, and animal models of disease. Familiarity with nuclear receptors, other signaling pathways, statistical, analytical, biochemical and pharmacological techniques is required as are 4-10 years' experience in research, preferably in the pharmaceutical/biotech industry. Proven independence and ability to direct teams of direct reports and peers towards well-defined goals within established timelines are essential. Strong presentation skills and ability to interact well with internal and external clients in a team environment required. **Dept. 7400-OHV** 

#### Endocrine Research RESEARCH SCIENTIST/ SENIOR RESEARCH SCIENTIST

You will utilize the latest in molecular, immunological, biochemical and cell culture-based techniques to carry out research into the molecular mechanisms of steroid receptor action. A key area of effort for this position will be the application of recent advances in coactivator and corepressor-mediated transcriptional regulation. Insights gained through this work will be translated into novel assays capable of detecting and characterizing small molecule modulators of steroid receptor function. You must have a PhD and at least 2 years' relevant post-doctoral experience in biochemistry and molecular biology. Demonstrated expertise in the molecular and cellular aspects of steroid receptor biology is required. The successful candidate will be highly motivated, with solid communication skills and have a high level of interest in innovative approaches and interdisciplinary teamwork. **Dept. 7450-JMS** 

#### Drug Safety and Disposition SENIOR RESEARCH SCIENTIST/ RESEARCH INVESTIGATOR

Your responsibilities will be to design, implement, conduct and report pharmacokinetic evaluations of clinical development compounds, work with analytical laboratories and clinical research sites to ensure proper conduct and analysis of PK studies, and to prepare and present PK summaries to clinical investigators and regulatory agencies. In addition, you will provide PK support to pre-clinical and clinical research as well as regulatory groups. You must have a PhD in pharmacokinetics or a PharmD with clinical PK specialization and 4-10 years' industry experience. Knowledge and experience with PK analysis methods are mandatory. Experience in the development of oncology agents and oversight of analytical labs is beneficial. Experience with advanced modeling, including NONMEM, is valuable. **Dept. 7700-GLS** 

#### SENIOR RESEARCH SCIENTIST

You will conduct experimentation studying the pharmacokinetics and metabolism of drugs in vivo and in vitro by obtaining assessments of drug absorption, clearance, metabolism and excretion. This position requires hands on laboratory work as you design and conduct ADME studies necessary for IND and NDA submissions. In this position you will supervise one or more associates. You must have a PhD in Pharmacology, Toxicology or related field and 4+ years' experience in ADME experimentation. Excellent written and oral communication skills are required. **Dept. 7700-EU** 

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#### Nuclear Receptor Discovery RESEARCH SCIENTIST/SENIOR RESEARCH SCIENTIST

You will perform research focused on the molecular understanding of transcriptional regulation by nuclear receptors and develop novel assays capable of identifying and characterizing small molecule modulators of nuclear receptor activity. There will be an emphasis on the molecular dissection of signal transduction processes governed by nuclear receptors in order to help identify compounds with unique properties (e.g., receptor and tissue specificity). You must have a PhD and 2-7 years' relevant postdoctoral experience in biochemistry and molecular biology. Expertise in the field of nuclear receptors in the retinoid and steroid receptor superfamily is strongly desired. **Dept. 7500-MSS** 

**RESEARCH SCIENTIST/SENIOR RESEARCH SCIENTIST** You will join our interdisciplinary Oncology Team and be responsible for evaluating the activity of new pharmaceutical candidates in a variety of oncology models. Your responsibilities will include setting up and evaluating cellular and molecular based assays in a variety of solid tissue tumor models to monitor the action of modulators of intracellular receptor function. In addition you will be responsible for preparing and presenting summaries of your data and integrating this material with the work of other team members. You must have a PhD or equivalent with emphasis in cell/molecular biology; oncology research experience is desired. The position requires 4-7 years' experience in a research or industrial setting. This individual will be highly motivated with excellent oral and written communication skills. Expertise in immunohistochemistry is a plus; supervisory experience is also preferred. **Dept. 7500-BLS2** 

#### SCIENTIST/RESEARCH SCIENTIST

As part of the Oncology team in the Nuclear Receptor Discovery Department, you will perform research focused on the molecular understanding of transcriptional regulation by nuclear receptors, with an emphasis on the mechanisms and gene targets of nuclear receptors in various models. You will design, set up and implement novel assays to dissect the signal transduction processes regulated by nuclear receptors to identify new drug candidates with unique properties. You must have a PhD and 2-5 years' relevant experience in molecular and cell biology. Expertise in the field of nuclear receptors in the retinoid and steroid receptor superfamily is preferred. Familiarity with state-of the art PCR and gene array technology is an asset. **Dept. 7500-RBS** 

#### SCIENTIST/RESEARCH SCIENTIST

In this position you will be involved in the set up, performance and characterization of oncology models used in the evaluation of new pharmaceutical candidates. You will also be responsible for the accumulation and analysis of data and preparing data slides for presentation. You must have a MS or PhD in biology or related field and 4-6 years' experience in a research or industrial setting. Experience with oral gavage, immunohistochemistry and tissue culture is preferred; supervisory experience a plus. **Dept. 7500-BLS** 

LIGAND offers an attractive salary and benefits package, including stock options. Please submit your resume by only one of these routes: mail to: LIGAND Pharmaceuticals, Dept. \_\_\_\_, 10275 Science Center Drive, San Diego, CA 92121; Fax to: (858) 550-5649; or email to: jobs@ligand.com. We are an Equal Opportunity Employer.



### Aventis Pharmaceuticals



Our challenge is life.

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Aventis Pharmaceuticals is dedicated to extending and enhancing human life through the discovery, development, manufacture and sale of pharmaceutical products. Aventis Pharmaceuticals offers the power of global forces in pharmaceutical products and services, an excellent financial standing and a vision for the future that is unmatched in the industry. These positions are the result of the merger that formed Aventis Pharmaceuticals and represent an exciting expansion to our **Biotechnology Group** in Bridgewater, NJ.

#### PROTEOMICS SECTION

Staff Scientist, Protein Expression: Candidate will be responsible for recombinant heterologous protein expression in insect cell and mammalian cell culture systems and high-level expression of proteins in a bacterial system as part of a high throughput protein production effort. Will also handle the maintenance of cell culture for both mammalian and insect cells and some protein purification on a small scale. BS/MS with 2+ years experience with the baculovirus expression system and/or bacterial expression experience is required, as well as knowledge of technologies such as Western blot, SDS-PAGE, PCR, Southern and Northern blot. Strong molecular biology skills are desirable. Industry experience within the dimensions of the job is preferred.

Staff Scientist, Protein Purification: Candidate will be responsible for protein purification and characterization to support HTS, DGs, Structural Biology, purification of recombinant proteins and column

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chromatography (FPLC), SDS-PAGE, Western blot, 2-DE analysis. Small capacity for cell culture for bacteria, mammalian and insect cells. BS/MS with at least 1 year experience is required, as well as experience in protein purification. Sufficient working knowledge of molecular biology is desirable. Industry experience within the dimensions of the job is preferred.

Staff Scientist, Protein Purification: Candidate will be responsible for protein purification and characterization to support HTS, DGs, Structural Biology, purification of recombinant proteins from many sources such as, mammalian cells, insect cells (baculovirus), E.coli and yeast, and chromatography (anion and cation exchange, hydrophobic interaction, immobilized metal affinity chromatography, operation of FPLC). Will also handle recombinant and native protein techniques (soluble, insoluble, refolding, membrane associated, truncated, full length, chimeras, tagged, etc.) required to attain the necessary quantity and quality of protein and protein characterization techniques such as, SDS-PAGE, Western blot, 2-DE analysis. Small capacity for cell culture for bacteria, mammalian and insect cells. MS in Biochemistry or Chemistry with at least 3 years pharma experience in recombinant protein protein purification of tagged and non-tagged recombinant proteins. Industry experience within the dimensions of the job and excellent communication and organizational skills are also required. Sufficient working knowledge of molecular biology is desirable.

Senior Scientist, Proteomics: Candidate will be responsible for wet lab section of proteomics to conduct differential (qualitative and quantitative) protein analysis to support target identification, protein functional analysis/target validation, pathway elucidation, MOA studies and the identification of surrogate markers in collaboration with the Disease Groups. Will also handle sample preparation (protein extractions, sub-cellular fractionation, etc.) for proteomics projects, protein separations (currently mostly 2DE, HPLC, protein complex purifications, etc.), and data analysis, such as image analysis of 2DE, for the identification of relevant proteins of interest. Will oversee the operations of the wet lab proteomics section and supervision of scientific staff, identification, evaluation and implementation of new technologies for proteomics, and the proper coordination with protein mass spectrometry section. Will remain current in scientific literature and be responsible for written and verbal communication on projects within section. Ph.D. in Biochemistry with 1-2 years Postdoctoral pharma experience including experience in protein separations, particularly 2DE is required, as well as excellent communication, organization, and interpersonal skills, and expertise in protein separations techniques (particular expertise and real understanding of 2DE) and proteomics.

**Staff Scientist, Proteomics:** Candidate will be responsible for wet lab section of proteomics to conduct differential protein analysis to support target identification, protein functional analysis/target validation, pathway elucidation, MOA studies and the identification of surrogate markers. Will also handle sample preparation, protein separations including 2DE, HPLC, immunoprecipitation and data analysis such as image analysis for 2DE, for the identification of relevant proteins of interest. Must remain current in scientific literature. BS/MS with at least 1 year protein biochemistry experience is required. Experience in protein separations is desired. Experience in protein sand 2DE is preferred.

Staff Scientist, Protein Characterization: Candidate will be responsible for chemical characterization of purified protein reagents to support Protein Sciences (including proteomics activities), HTS and DGs; Edman micro-sequencing of proteins and peptides (Procise cLC); routine amino acid analysis and amino acid sequencing (N- and C-terminal sequencing); and preparation of proteins from PVDF membrane and acrylamide gels for mass spectrometry and peptide sequencing. Additional responsibilities include MALDI-TOF analysis of intact recombinant proteins and peptide map interpretation; HPLC analysis of proteins; light scattering analysis of recombinant proteins; and column chromatography (FPLC), SDS-PAGE, Western blot, 2-DE analysis. Working in a team environment with the protein production and proteomics group, you will utilize cutting edge technologies in protein analytical techniques and provide HTS, [SB] and/or DG with characterized recombinant protein to support discovery. BS/MS with at least 5 years industry experience within the dimensions of the job is required, as well as a strong background in protein chemistry and extensive experience in the operation and maintenance of HPLC systems and Procise cLC Edman sequencer. Must be familiar with the operation and knowledgeable in MALDI-TOF MS and possess good communication and organizational skills. Experience in protein protein protein is a plus (FPLC, HPLC).

Become part of the most exciting growth company in the pharmaceutical industry. Please send a resume and cover letter indicating your full career details and reference ad code: 2000BW0017 to: Aventis Pharmaceuticals, B103H, P.O. Box 6800, Bridgewater, NJ USA 08807-0800. email: jobs@aventis.com

Visit our website for further information: www.aventispharma-us.com



The Chemical Industry Institute of Toxicology (CIIT) invites applications for the following Postdoctoral Fellow positions. Areas of research and the hiring scientist for each are:

#### **Postdoctoral Fellows**

#### CANCER BIOLOGY

**Research Project:** Measure the bioactivation kinetics and cytolethality of the nongenotoxic carcinogens furan and chloroform in isolated human hepatocytes from adults and children in vitro. Integrate data into quantitative models of tissue dose and toxicity. Requires Ph.D. in biochemistry or related field. Experience with cell cultures and in vitro techniques. Experience with enzyme kinetics, pharmacokinetics, quantitative modeling desirable. **Contact:** Dr. Greg. Kedderis, (919) 558-1303.

**Research Project:** Study the mechanisms of mouse liver tumor induction by diverse genotoxic and nongenotoxic chemicals using a combination of microarrays and laser capture microdissection. Bioinformatics tools will be used to cluster the data to determine relatedness of the tumor gene expression profiles. Data will be used to more completely understand the significance of this common endpoint in the mouse bioassay in evaluating human risk assessment. Requires excellent organizational skills, basic molecular biology skills, and a keen interest in functional genomics and chemical carcinogenesis. **Contact:** Dr. Chris Corton (919) 558-1262.

**Research Project:** Chemical carcinogenesis studies in key genetically susceptible mouse models. Constructs include the NQ01-null and mEH-null mice. Genomic, cellular and toxic response pathways associated with benzene metabolism and lymphoma and leukemia development will be studied. Rodent vs. human responses will be contrasted. Requires Ph.D. in genetics, toxicology, biochemistry or related areas. Experience with molecular biology methods, tumor biology and expertise with leukemia and lymphoma in rodents or humans is desirable. **Contact:** Dr. Les. Recio (919) 558-1329 or Dr. Byron Butterworth (919) 558-1235.

#### ENDOCRINE / REPRODUCTION / DEVELOPMENTAL BIOLOGY

Research Project: Investigations to explore the mechanism of phthalate-ester induced effects on reproductive development from the whole animal to the molecular level of changes in gene expression. Certain phthalate esters are examples of chemicals that induce endocrine disturbances in reproductive development via nonreceptor mechanisms. The project will involve an understanding of changes in key developmental events at the cellular and molecular level that result in the adult in the production of reproductive deficits and testicular neoplasia following exposure during pregnancy. Requires skills and/or interests in reproductive and developmental toxicology (or the biology underlying normal reproduction and development), molecular endocrinology. Contact: Dr. Paul Foster, (919) 558-1274.

**Research Project**: Investigations to explore the mechanism of antiandrogen action on reproductive development from the whole animal to the molecular level of changes in gene expression. Study various agents with different antiandrogenic actions (e.g., receptor antagonism, steroid biosynthesis inhibition) to determine common events in the production of reproductive deficits following exposure during pregnancy. Requires skills and/or interests in reproductive and developmental toxicology (or the biology underlying normal reproduction and development), molecular endocrinology. **Contact**: Dr. Paul Foster, (919) 558-1274.

**Research Project:** Research on mechanisms of chemical-caused alternations in steroid hormone-dependent development. Specific research areas may include developmental regulations of: (1) the male reproductive tract, (2) the mammary gland, or (3) steroid metabolizing enzymes. Requires recent Ph.D. in physiology, pharmacology, or toxicology, with experience in molecular biology techniques. Strong interest in the prospective research areas. **Contact:** Dr. Li You, (919) 558-1387.

**Research Project**: Characterize the cellular and molecular mechanisms of action of endocrine active chemicals on the developing reproductive system. Requires cellular and molecular biology, experience with whole animals and cell culture. **Contact**: Dr. Kevin Gaido, (919) 558-1236.

Research Project: Pharmacokinetics and estronegic pharmacodynamicas of the phytoestrogen genistein. Research project involves pregnant and lactating rats that consume a diet with various levels of genistein. Some of the concentrations will be sufficiently high that manifestations of estrogenic effects in offspring may be anticipated. Project will correlate the concentrations of the phytoestrogen in male and female offspring target tissues of the developing reproductive tract (tissue dosimetry) and correlate the biological effects with maternal and conceptus kinetics of the chemical. These correlations will be established during late fetogenesis and in mid lacatation. Requires experience in endocrine physiology, developmental biology or toxicology or receptor biology. Previous involvement in experimental studies with laboratory rodents preferred. Handling of pregnant rats and dissection of conceptus tissues are an integral part of the research. Previous experience with analytical approaches via HPLC or LC/MS preferred. Contact: Dr. Frank Welsch (919) 558-311.

#### NEUROTOXICOLOGY

**Research Project**: Assist in the planning and conduct of developmental neurotoxicity studies involving cholinesterase-inhibiting pesticides. This research project will be funded through the development of a new STOTS research proposal. Requires four areas of technical competence: neurobehavioral toxicology; neurochemistry with specific needs in cholinergic receptor biology; pharmacokinetics with ability to conduct placental and lactational transfer studies; or neuropathology. Two positions available. **Contact**: Dr. David Dorman, (919) 558-1350.

Interested applicants should submit a curriculum vita with the names of five references. Preference will be given to candidates with a demonstrated record of success in obtaining external funding for their research. An application for employment should also be completed. It can be obtained from CIIT's web site at www.ciit.org. or by calling (919) 558-1401. Please refer to the specific position in which you are interested. Applications and curriculum vitae should be directed to the HR Director, 6 Davis Drive, P.O. Box 12137, RTP, NC 27709-2137. The deadline for applications is July 1, 2000. CIIT offers an excellent salary and benefits package including a 401K savings plan. CIIT is an Equal Employment Opportunity employer.

# Life Made Better

The members of the Bristol-Myers Squibb Pharmaceutical Research Institute share one goal—to discover and develop best-in-class, cost-effective medicines that enhance and extend human life.

#### Macromolecular Structure & Biopharmaceuticals Princeton, NJ

Molecular Biologist, B.S./M.S. with 2-5 years experience in recombinant gene expression from prokaryotic and eukaryotic expression systems Skills in basic molecular and cell biology techniques are required. Familianity with the bacolovrus expression system is desired. A knowledge of basic protein chemistry and protein partication methods is essential. Code: PRMSXXXRD

Molecular Biologist, Ph.D. in Biochemistry or related discipline and a minimum of 2 years postdoctoral experience, preferably in a pharmaceutical research setting to employ molecular biology techniques in the design, engineering and production of proteins for structural characterization by X-ray crystallography, NMR, Demonstrated handson expertise in molecular biology techniques is essential, as well as an understanding of protein structure and protein chemistry Code: PRMS168JS1

Protein Biochemist: Ph.D. in Biochemistry or related discipline and a minimum of 10 years experience in biotechnology or pharmaceutical research setting. Provide scientric feadership in the purification and characterization of recombinant proteins for a variety of applications including assay development, structural characterization by NMR and X-ray crystallography and clinical evaluation. Expertise in the application of protein chemistry, biochemistry, enzymology and biophysical tools to purfy and formulate proteins and protein-ligand complexes. Hands-on experience in the pre-clinical activities for producing biopharmaceuticals is preferred. Code: PRMS168JS2 Enzymologist: Ph D. in Biochemistry, Biophysical Chemistry with postdoctural experience in a group specializing in reaction mechanisms with 1-3 years applied experience specifically supporting drug discovery Experience in Michaelis Menten kinetics, detailed mechanistic enzymology, including investigations of isotope effects, single turnover or pre-steady state kinetics and the control of enzymatic activity or protein-ligand bineting by prosthetic groups, post-translational modification, cetactors, metails, etc. Code: PRMS168JS3

#### Applied Genomics Princeton, NJ

Drosophila Genticist: M.A./B.S./B.A. in Biology, Biological Sciences with a minimum of 2 years experience to conduct genetic screens, design/analyze fly crosses and maintain Drosophila cultures. Extensive experience with Drosophila biology and genetic analysis, along with familiarity with Flybase resources and bioinformatics, is desired. Code: PRMS168PC

Electrophoresis: M.S./B.S in Biology or Biochemistry with 3 years experience in laboratory operation, fissue subure and subcellular organelle fractionation, to run large-format, 2-dimensional get electrophoresis and image/quantfy protein bands. Excellent analytical skills required. Code: PRMS168SH

Molecular Geneticist: M.S./B.S. in Molecular Genetics with 3+ years experience to organize various mutation and polymorphism screening projects: General knowledge of molecular biology, human genetics, cDNA synthesis and RT PCR desired. Code: PRMS168ZT

Molecular Biologist: M.S./B.S. in Molecular Biology with 4-5 years of experience in Molecular Biology/Genetics, DNA/RNA work, PCB techniques, cell culture experience, tissue/biopsy to conduct molecular biology experiments in high-throughput manner. Knowledge in databases/relational database, complex UNIX-based software required Experience in Genomics/Pharmacogenomics is required, familiarity with RACE, Exon trapping, Genetrapper, cDNA libraries, SNP, and expression profiling with microarrays. Experience working with BITAQMAN system is a plus. Code: PRMS168LA Target Validation: Ph.D. or B.S./M.S. with significant experience to provide mammalian cell functional validation of novel genes identified from MDA studies in model organisms, transcriptional profiling experiments, proteomic experiments, bioinformatics, and human genetics. Substantial experience in mammalian cell systems, multiple cell types, phenotype analysis, multiple gene transfer techniques and reporter gene techniques is required. Extensive experience of functional assay of genes mammalian cells, genetic manipulation and regulation of gene expression. Code: PRMS168MC

#### Informatics Wallingford, CT

Project Manager: Manage institute wide computing projects in the areas of Compound Management Compound Information Systems and High Throughput Screening Informatics. Create project plans including budget plans. Milestones and timelines, Excellent communications and negotiations skills essential. Strong tachnical knowledge required, including hands for experience with 3 or more of the following. Java C, C++, ODBC, JDBC, SGL, Oracle 7, Oracle 8, JavaScript, and UNIX Shell Scripting. Operating system experience in Windows NT and Solaris UNIX a plus. Code: PRJM168CM

For positions in Princeton, NJ, send reseme to: Bristol-Myers Squibb Company Pharmaceutical Research Institute P.O. Box 4000 Princeton, NJ 08543-4000 Fax: (609) 581-4481

For positions in Wellingford, CT, send resume to Bristol-Myers Squibb Company Pharmaceutical Research Institute P.O. Box 5101, 5 Research Parkway Wallingford, CT 06492-7661 Fax: (203) 677-7762

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# **PROGRESSIVE** ACTION.

Today's challenging health care industry demands innovation. Improving lives by advancing products and services is the foundation of our existence. And with a staff of more than 5,000 pioneering scientists, we're setting new standards in health care for the new millennium. At **Abbott Laboratories**, **MediSense Products**, you'll find a work environment that is conducive to your success and professional advancement. As a Fortune 100 technology leader in the field of self-testing systems for people with diabetes, our innovative ways open the door to many exciting opportunities for individuals who are ready to make a difference. Join us as we seek the following professionals:

#### Scientist II

We currently have 2 positions available. As a member of the research team involved in the development of biosensors, you will be responsible for design, execution and implementation of research concepts to prototypes and eventually to develop consumer products. The candidate is expected to plan and perform laboratory experiments, analyze results and report on progress, and participate in developing laboratory procedures. Qualifications include a BS degree with 5 years of experience, or an MS degree with 2 years of experience in Chemistry or Biochemistry. Experience in the area of biosensors or electrochemistry is a plus. Good written/verbal communications skills required. (AD CODE: 00-MK1110)

#### Scientist III

We currently have 3 positions available. The successful candidate will conduct research and development of electrochemical biosensors, and will work closely with larger research team to design and develop prototypes from concepts. Qualifications include an MS degree with 5 years experience, or a Ph.D. with 2+ years of experience in electrochemistry, preferably in bioelectrochemistry. Experience in thin and thick film technology is a plus. Excellent analytical ability and solid communication skills are desired. **(AD CODE: 00-MK1111)** 

#### Scientist IV - Senior Scientist

We currently have 3 positions available. As a leading scientist, the successful candidate will conduct research and development of biosensors for diabetes monitoring. This individual is expected to develop concepts, plan and design the project to develop prototypes from concepts. Qualifications include an MS degree with 5+ years of experience, or a Ph.D. degree with 3+ years of experience in biosensors or closely related area. The ability to take an idea from initial concept phase through research phase and, if successful, transfer project to develop ment team for validation, manufacturing scale-up or implementation, as well as develop, perform and complete project on schedule. Excellent analytical ability and solid communication skills are desired. (AD CODE: 00-MK1112)

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# PHARMACEUTICals

DIRECTORS SNP Pharmacogenomics Ligand Identification

ASSOCIATE DIRECTORS Medicinal Chemistry

SENIOR SCIENTISTS In Vitro Metabolism Pharmacokinetics In Vivo Pharmacology Drug Metabolism

SCIENTISTS Inflammation/Coagulation Assay Development GPCR Lead Optimization RESEARCH INVESTIGATOR

Vascular Surgery

Millennium has a new vision for the future of medicine. That drug development be perfectly precise. That all patient therapies be totally individualized. That every disease be targeted at its core. We will succeed in realizing this vision for one thousand reasons—our people. Expertise, insight, synergy and above all passion unite us in creating a better way to cure disease and allow us to have fun in the process. Further, our recent merger with LeukoSite, Inc.—which brings commercialization expertise and a rich pipeline of potential products—leapfrogs Millennium toward our vision of building the pharmaceutical company of tomorrow. The face of the future never looked brighter.

#### Visit us at the BIO 2000 Job Fair on March 26.

Join us in building the biopharmaceutical company of the future at our Cambridge facilities. Please respond by sending only one resume using only one of the following methods, indicating the positions you are interested in. Mail your resume to: Millennium Pharmaceuticals, Resume Processing Center, Source Code SC32400, PO Box 798, Burlington, MA 01803. Email: millennium@webhire.com. Fax: (800) 370-6925. A source code must be included with all submissions. We are an equal opportunity employer committed to discovering the individual in everyone.

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breakthrough medicines for everyday living. Be part of our Research & Development Team in one of the following openings at our **U.S. Corporate Headquarters** in **Research Triangle Park, NC:** 

#### CONSULTANT/SENIOR CONSULTANT Job #9828

Selected candidate will work closely with research scientists to develop software tools to visualize and manipulate data generated in polymorphism detection and physical mapping efforts. Duties include: conducting data analysis, quality control, sequence curation and physical mapping data; identifying pharmacogenetic factors within populations; identifying biological targets; assisting with the integration of application design/implementation to software development frameworks; and coordinating development and data analysis efforts with international counterparts.

A Ph.D. in Genetics, Computational Biology, Molecular Biology or similar discipline with a minimum of 2-4 years experience in software development is required. A strong understanding of polymorphism data and its use for disease gene discovery along with a strong knowledge of user interfaces, data visualization, UNIX, Java, C/C++ and one or more scripting languages (Bourne, Korn shell, Perl, HTML/CGI/Javascript) is essential. Candidates must be self-starters with excellent oral/written communication, team leadership, customer service and problem-solving skills. Experience working in an industrial environment is preferred. Experience with biological databases, laboratory information systems, relational databases (Oracle/SQL), CORBA, automation systems and/or scientific instrumentation is highly desired.

#### TARGET ANALYST/SENIOR TARGET ANALYST

Job #9893

Selected candidate will design/implement strategies using genomics technologies for database development/mining for novel target identification, validation and integration while developing object-oriented applications for querying sequence, expression and pathway information.

A Ph.D. in Biological Sciences or similar discipline with a minimum of 1 year related experience to include a strong background in genetics and genomics is required. Candidates must possess substantial experience with DNA/protein sequence analysis and online genomic information resources. The ability to work independently within a team environment along with excellent oral/written communication skills is essential. Experience in object-oriented design/development, user interfaces, UNIX, Java and relational databases (Oracle/SQL) is highly desired.

Glaxo Wellcome offers competitive salaries and a comprehensive benefits package. In addition, our location in Research Triangle Park, NC, the world's largest planned research center, offers access to three major universities, outstanding cultural activities and a superb quality of life. As a member of the Glaxo Wellcome family, you will enjoy exceptional challenge and the chance to make a difference in the lives of millions of people around the world. For more information and to apply online, please visit our web site at **www.glaxowellcome.com**. Search for the **Job ID#** under **Employment Opportunities**. If you do not have Internet access, or if you experience technical difficulties, call 1-888-825-5249, **Monday thru Friday 8:00am-8:00pm ET**. No agency referrals, please. An Equal Opportunity Employer M/F/D/V



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Imagine the possibilities. At Motorola BioChip Systems, we are enabling new paradigms in human healthcare, agriculture and environmental management. Motorola BioChip Systems is applying the latest microfabrication electronics and information technologies to the cutting edge of biotechnology. Here is your opportunity to work within multidisciplinary teams of scientists and engineers in a fast growing, startup environment built upon Motorola's solid reputation in research, engineering and six sigma manufacturing.

We are seeking creative and energetic candidates for the following disciplines in our **Phoenix and Chicago** area facilities:

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   BioInformatics 
   Bioinformatic Software Engineering
- Business Development · Expression Analysis · FDA Regulatory Compliance
- Gene Expression Analysis Scientist · Genetic Diagnostic Assay Development Engineering
- Genomics Instrumentation and Equipment Development Industrial Design
- Polymer Chemistry Polymorphism Genotyping Population Genetics
- Product and Packaging Engineering 
   IE/Manufacturing Process Engineering
- Marketing 
   Mechanical Engineering 
   Microarray Technology
- Microfluidics Design and Development Engineer/Scientist 
   Microfluidics 
   Molecular Biology
- Organic Chemistry Process Chemistry Production Engineering
- Robotics/Lab Automation Systems Development 
   Software Development (VB, C++)

Motorola BioChip Systems offers highly competitive compensation and significant opportunities for professional growth and recognition, as well as attractive locations in both the Phoenix and Chicago areas. Please apply online at: **www.MotorolaCareers.com (please reference Science).** For more information visit **www.motorola.com/biochipsystems**. Motorola is an Equal Opportunity/ Affirmative Action Employer. We welcome and encourage diversity in our work force.



## **POSTDOCTORAL OPPORTUNITIES**

Mount Sinai School of Medicine is a leader in medical education and research. To enable us to maintain our high standards, we are seeking individuals for the following postdoctoral opportunities:

#### **MOLECULAR MECHANISM OF ACTION- SEROTONERGIC HALLUCINOGENS**

Excellent opportunity to join a multi-year, federally-funded program project studying the molecular mechanism of action of serotonergic hallucinogens in knock-out and receptor mutant knock-in mice. Gene expression in cortex in response to specific agonists will be studied using gene chips developed in the laboratory and in situ hybridization. The significance of the transcriptional modulation monitored will be evaluated in the context of an interdisciplinary program encompassing serotonin receptor structure-function studies, computational modeling and *in vivo* behavioral studies. Proficiency with neuroanatomy, microscopy and *in situ* hybridization required. Send C.V. and three references to: Stuart C. Sealfon, M.D., Estelle and Daniel Maggin Department of Neurology, Box 1137 at the address below; e-mail sealfs01@doc.mssm.edu; or fax (212) 348-1310.

#### **MOLECULAR MECHANISMS OF DOPAMINE RECEPTOR-MEDIATED NEUROPROTECTION**

This postdoctoral position offers the opportunity to study the molecular mechanisms of dopamine receptor-mediated neuroprotection. This multi-year federally-funded project focuses on the intersection of the apoptosis signaling pathways and receptor signal transduction mediators. Approaches to be utilized include custom designed gene chips and confocal microscopy. The applicant should have experience with the cell and molecular biology of apoptosis, preferably in neuronal systems. Send C.V. and three references to: Dr. Stuart C. Sealfon, Estelle and Daniel Maggin Department of Neurology, Box 1137 at the address below; e-mail sealfs01@doc.mssm.edu; or fax (212) 348-1310.

#### **GENE THERAPY**

A postdoctoral position is available at the Institute for Gene Therapy and Molecular Medicine. Our main focus is the development of non-immunogenic persistent viral vectors for *in vivo* gene delivery. We recently reported the development of two systems that allowed generating and producing of fully deleted ("gutless") adenovirus vector, which were free of the helper virus. Further studies should be directed toward identification and testing of *cis* and *trans* elements that may improve the efficacy of vector production and persistence of such vectors *in vivo*. These findings will also be applied for the development of novel fully deleted vectors based on non-human adenoviruses. The successful candidate will work in a well-funded and state-of-the-art lab equipped with the most advance technology. We are looking for a highly enthusiastic and creative individual with demonstrated experience in molecular and cell biology of eukaryotes. Expertise in recombinant DNA technology is required. Computer skills and ability to work with DNA databases and DNA analysis software is desirable. Experience in virology and cell culture and/or protein-protein and protein-DNA interaction will be an advantage but not required. Please send C.V. to: Dr. Valeri A. Krougliak, Assistant Professor, Institute for Gene Therapy, Box 1496 at the address below.

#### **DEVELOPMENTAL NEUROBIOLOGY**

Applications are invited for a postdoctoral position in the laboratory of Dr. Andrew Bergemann. Our laboratory's current interests include the mechanistic understanding of the interaction of axon guidance molecules with their receptors, and the ontogeny of the circumventricular organs. Interested candidates should possess a Ph.D. or M.D., and have prior molecular biology experience. Please forward your C.V. and the names and adresses of three references to: Dr. Andrew Bergemann, Dept. of Pathology, Box 1194 at the address below.

#### **MOLECULAR NEUROSCIENCE**

Two funded postdoctoral positions are available in the Laboratory of Molecular Neuropsychiatry headed by Joseph D. Buxbaum, Ph.D., Departments of Psychiatry and Neurobiology at the Mount Sinai School of Medicine. The laboratory studies the molecular basis of Alzheimer's disease and of autism. In Alzheimer's disease, the laboratory focuses on APP and the presenilins. In autism, the laboratory carries out linkage analysis and studies the transcription regulator MeCP2, the gene disrupted in Rett's syndrome. Applicants with interest in either Alzheimer's or autism research that have a Ph.D. or M.D. degree may apply. Fluency in English is required. Please forward a C.V. along with three letters of recommendation to: Edmire Saint-Pierre, Assistant Psychologist Supervisor, Department of Psychiatry, Box 1230 at the address below. E-mail applications will not be considered.

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We are pleased to announce our sponsorship of the GPCR Symposium to be held Oct. 30/31, 2000

For more information, please see our announcement ad in this issue of Science.

#### Screening Technology Scientist

BS/MS level scientist will assist in early drug discovery including the development of in vitro and cell-based assays for high throughput screening, robotics, fluorescence detection methods, computer assisted data analysis, radioisotopes, and cell culture techniques. 1-3 years of experience in a biology and/or chemistry environment is required. Job Code: 9931404SC3

## Clone/Expression/Screen Development Scientists

Multiple positions open for BS/MS scientists to develop protein and cell-based assays for GPCR drug discovery. These openings require experience in gene cloning, mammalian cell culture, gene/protein expression analysis, characterization of protein-ligand interactions and development of signal transduction assays. Job Code: 9931405SC3

#### Protein Biochemists

Join a multidisciplinary team to develop cutting edge, protein-based and cell-based assay systems for drug discovery. Work to include recombinant DNA, cell culture, protein expression, purification and characterization (HPLC, FPLC and fluorescent spectroscopy, etc.). BS/MS with 2-5 years of experience in biochemistry/molecular biology is required. Job Code: 9900122SC3

#### Bioinformatics Scientist

Design a computational pipeline of bioinformatics tools to classify and predict the molecular/cellular functions of novel genes, and curate and manage a database of target protein families. BS/MS, database experience, C, Java, or Perl, and 2+ years of bioinformatics programming on UNIX machines required. **Job Code: 0011111SC3** 

#### • Research Scientist -Computational Biology

Discover connections between protein sequence, 3D structure, and ligand-binding function for families of therapeutic targets. Ph.D., 3+ years in bioinformatics and computational biology, and knowledge of C, Java, or Perl are required; experience with protein structural modeling, G protein-coupled receptors, and computational chemistry is desired. Job Code: 9931401SC3

#### Senior Facilities Technician -Robotics/Automation

This team member will support our robotic compound screening equipment and will oversee all daily operations including FAT/SAT, equipment installation and upgrades, commissioning/validation of protocols, mechanical assembly/disassembly of subsystems and support systems. Requires 8-10 years of robotic experience including knowledge of PLCs, DDCs, ADEPT, lasers, bar code readers, troubleshooting and programming skills and computerized building automation and maintenance management systems. Job Code: FACTECHSC3

#### Manager/Director - Discovery Informatics

Experienced IT leader with a strong scientific background is needed to manage all information technology aspects of the DTC site. Nurture and develop unique strategies that integrate the science innovation of the facility with a level of technology that enables our aggressive scientific mission. Advanced degrees in a scientific discipline and/or Computer Science along with at least 5 years of experience in a R&D environment required. Job Code: 9921600SC3

#### Research Applications Developer

Leveraging skills in both bioinformatics and information technology, design, build and deliver innovative computer solutions that address a range of scientific needs in the molecular biology discipline. Requirements include an advanced biology-oriented degree and depth of experience with applications development using preferably Java, C++, Perl or other current development environment. Job Code: 9903162SC3

#### Research Applications/Robotics Developer

Develop and support laboratory automation software and solutions in support of high throughput scientific screening instrumentation. Refine user requirements and ensure that the solutions meet the quality needs of the scientific community. Degree in Computer Science and/or degree in a scientific discipline with applicable experience required; experience with the Aurora or Evotec automation technologies preferred. Job Code: 0099999SC3

For more information on these opportunities and to apply online, please visit us at **www.pfizerdtc.com** 

E-mail resumes, indicating Job Code

in "Subject" line, to: openings@cambridge.pfizer.com

Or fax resumes to (617) 551-3111

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Aurora Biosciences Corporation is industrializing drug discovery through its proven cutting-edge, proprietary high technology and biotechnology. We have placed technologies, assays and discovery systems with the world's leading pharmaceutical companies to assist them in developing the next generation of drugs. Aurora combines discovery services, intellectual property licenses, know-how, and world-class science to serve a large rapidly growing drug discovery market. Aurora has attracted a superior customer list including Bristol-Myers Squibb Company, Eli Lilly & Co., Merck & Co., Inc., Pfizer, Inc., and Warner-Lambert, along with leading biotechnology companies and research foundations.

We are expanding in genomic biology and are looking for individuals who want to join our exciting, high energy, fast-paced, team-oriented, results-driven, "can do" culture. We currently have the following opportunities available at our location in SAN DIEGO, CA:

### – Sr. Scientist –

The ideal candidate will develop advanced cell-based assays for G-protein coupled receptors (GPCR) using Aurora biosensor technologies and screening systems. Primary responsibilities will include using state-of-the-art informatics and molecular methods to clone and express receptors and to assess receptor signaling properties in a variety of cell backgrounds.

Requires a Ph.D. or equivalent experience in a biomedical science field and a minimum 3 years post-doctoral level experience. Expertise with G-protein coupled receptors as well as strong knowledge and hands-on experience with current methods of molecular biology a must. Experience with cell biology, intracelluar signal transduction pathways, orphan GPCRs and transcriptional assays is desirable.

### Scientist I/II -

The successful candidate will be responsible for industrializing our methods of cell production for ultra high through-put screens. The candidate will work with automated instrumentation and informatics teams to develop novel processes to handle and track Aurora's biosensor cell lines. Additional responsibilities will include database management and supporting screening efforts.

Requires a Ph.D. or equivalent experience with 1-3 or more years of post-doctoral level experience including training in cell biology, genetics or immunology. Familiarity with signal transduction, automated cell culture experience, excellent communication skills, outstanding team skills, and customer orientation are required.

### Flow Cytometry Operator

We currently have an excellent opportunity for a flow cytometry operator supporting a dynamic range of research through the use of novel proprietary fluorescent dyes and assays. The successful candidate will perform a pivotal role in the screen development process by performing daily sterile sorting of pools and single cell clones, maintaining quality control of two multi-laser FACSVantage SE Turbo cell sorters, and analyzing/ interpreting data and recommending sorting strategies to researchers. Most sorting will be based on functional responses such as gene expression, calcium flux, and membrane potential in addition to conventional flow cytometric applications such as cell cycle, apoptosis and immunophenotyping.

Requires a BS or equivalent experience and 2-5 years experience with multi-laser flow cytometers and some sorting experience. A strong understanding of flow cytometry theory and principle is important. Must have excellent communication, interpersonal and organizational skills, plus the ability to optimize experimental procedures, interpret data and modify methods and protocols.

Aurora offers a competitive salary, benefits, and equity participation including an ISO and Stock Purchase Program. For more information on Aurora, please refer to http://www.aurorabio.com. For consideration, please send your



resume (indicating position of interest) and cover letter to: Human Resources, Aurora Biosciences Corporation, 11010 Torreyana Rd., San Diego, CA 92121, Fax: (858) 404-6720 or E-mail: SylvesterK@aurorabio.com EOE.



Hyseq Inc. is a biopharmaceutical company developing product candidates for the treatment of acute and chronic conditions in the immunology, hematopoietic, and cardiovascular areas. The company uses its highthroughput proprietary technology for discovering and developing therapeutic product candidates and for pharmacogenomic and polymorphism analysis. The company is expanding in the Functional Genomics area and is looking for outstanding candidates for the following positions.

### Functional Genomics Department

Director, Job Code: Sci-Dir16

**Responsibilities:** Manage research and preclinical studies. Work directly with project scientists to select, plan and execute experiments. Interact with upper management to develop research programs. Coordination of interdepartmental projects.

**Qualifications:** Ph.D. in Immunology or related field. Proven track record in cytokine or soluble factor biology. 3-5 years experience in project management. Demonstrated ability to manage multiple projects at various stages of progress. Excellent communication skills required.

Protein Bioinformatic Scientist, Job Code: Sci-Bioinfo 16

**Responsibilities**: Use commercial and develop software to identify novel human proteins to be developed into protein therapeutics or targets for small molecule pharmaceuticals. Will work with Functional Genomics and Bioinformatics Departments to develop approaches to exploit Hyseq's human sequence database.

**Qualifications:** Ph.D. in Biochemistry with 5-10 years experience in protein structure function analysis. Area of expertise in ligand/ receptor interactions. Must have proven track record in this area.

Senior Scientist, Job Code: Sci-Srsci16

**Responsibilities:** Set up high throughput cellular assay screens for novel potential biopharmaceutical products. Work closely with the immunology and other research groups to develop and carry out high throughput screens. Supervise research associates in carrying out screens. Interdepartmental project participation.

Qualifications: Ph.D. in Immunology or related field with 3 years experience in various cellular assays. Extensive tissue culture experience required. Knowledge of cellular immunology and cytokine biology or cardiovascular disease areas. Industry experience important.

Resumes should be mailed to: Hyseq, Inc., 670 Almanor Avenue, Sunnyvale, CA 94086, Attn: Human Resources. Fax: (408) 524-8129. E-mail: hr@sbh.com. Please visit our website at www.Hyseq.com.

Hyseq, Inc. is an equal opportunity employer. We take pride in our diverse community and recognize the ability of each individual for development and personal growth.

	Building a Winning Team		
	Pharmacia & Upjohn, a global pharmaceutical company, is determined to become one of the best-managed and strongest scientific companies in the industry. Our research philosophy values creativity, scientific rigor, teamwork, and personal as well as professional satisfaction. In anticipation of continued industry success, we are actively recruiting across many disciplines for all levels of professionals. We invite you to be an integral member of our scientific team. The following opportunities are contract positions, working through Quantum Resources, a third-party employer. Selected candidates will work on-site at Pharmacia & Upjohn's Kalamazoo, MI facility, under the supervision of a Pharmacia & Upjohn scientist.		
	ELECTROPHYSIOLOGIST     • Position #QR20001     The incumbent will work with a team of electrophysiologists on drug discovery research programs focused on treatment of psychiatric disorders. The position     requires a strong background in electrophysiological techniques, data acquisition and analysis. A good understanding of synaptic neurotransmission and     neuropharmacology is desired. Candidate will perform electrophysiological recordings at system and cellular levels, including in vivo simultaneous single-unit     and EEG recordings, and in vitro electrophysiology in brain slice preparations. Requires Ph.D. in Neuroscience or closely related discipline.		
Focus on	MEDICINAL CHEMISTRY • Position #QR20002 There are two industrial postdoctoral positions available in our Infectious Diseases area. A highly motivated individual with a strong synthetic organic chemistry background is sought to work within a multidisciplinary team on the design and synthesis of biologically important molecules. A Ph.D. in organic/medicinal chemistry is required, and the ability to function independently is essential.		
the Discovery and	FUNGAL CELL WALL BIOSYNTHESIS  • Position #QR20003  A position is available to study mechanisms and enzymes involved in the assembly and re-arrangement of the fungal cell wall. Important aspects of the project are expression of glycan modifying enzymes and evaluation of their potential as targets for drug discovery. Qualifications include a Ph.D. in biochemistry, cell or molecular biology, or related field. The ideal candidate should also have a background in glycobiology and/or enzymology. Previous experience with glycosyltransferases and/or other glycan modifying enzymes is helpful.		
Development	NMR SPECTROSCOPY OF FUNCTIONAL GENOMICS TARGETS		
of new	• Position #QR20004 An individual is sought to develop and implement a functional genomics compound library to screen against proteins of unknown function using flow-injection NMR techniques. The position will also involve automating flow-injection NMR techniques (from data collection to analysis) and applying other NMR methods to determine the bound conformation of identified lead chemical templates for proteins of unknown function. Qualifications include a Ph.D. in Biochemistry, Biophysics or Structural Chemistry. Experience in NMR spectroscopy and computer programming is highly preferred.		
and innovative	CNS Signal Transduction		
therapeutic	• Position #QR20005 Postdoctoral position is available in the Cell and Molecular Biology department to study the regulation of Trk receptors via phosphorylation/dephosphorylation mechanisms. Studies will involve in vitro systems using purified proteins as well as the use of transfected cell lines as model systems. Candidates should have a Ph.D with training in cell biology and protein biochemistry. Experience in protein purification, enzyme assays, and cell culture techniques is required.		
agents.	<ul> <li>Drug Metabolism Research</li> <li>Position #QR20006</li> <li>The primary focus of the position will be the investigation of the role of glucuronidation in xenobiotic biotransformation, including characterization of species differences in amine conjugation and the responsible UGT isoforms. Additional projects in human CYP450 structure/function analysis are also possible depending on experience and interest. The department offers a collaborative environment and state-of-the-art instrumentation. Qualifications include a Ph.D. in a biochemistry discipline and experience with enzymology and/or analytical aspects of drug metabolism.</li> </ul>		
	Structure-Based Drug Discovery and Bioinformatics		
	• Position #QR20007 Study the application of molecular similarity to small molecules and proteins in structure-based drug discovery and bioinformatics. In the former, molecular shape and electronic features will be used to align molecules in ways that elucidate the underlying structural features that contribute to bioactivity. In the latter, alignment of structurally similar proteins will be used to identify functional associations among proteins, to characterize the topographical features of these proteins, and to investigate the relationship of structural alignments to their corresponding sequence alignments. In addition, some methodology development will also be undertaken. It is expected that the successful candidate will have a solid background in structural chemistry with significant computational and programming experience. The work will be carried out within the Computer-Aided Drug Discovery Unit, a large multi-disciplinary research group with expertise in molecular modeling, cheminformatics, and bioinformatics.		
	Ion Channel Pharmacology		
	• Position #QR20008 A postdoctoral position is available to study the molecular pharmacology of ion channels. Qualifications include a Ph.D. in Physiology or related field and a strong background in ion channel function and/or pharmacology. The ideal candidate will be proficient in molecular biology and either electrophysiology or fluorescent imaging techniques. Good communication skills and a high level of motivation are essential.		
	Cellular Neurobiology     • Position #QR20009     This Postdoctoral Scientist position requires a broad understanding of cellular neurobiology. The successful candidate will have a general knowledge of the cytoskeleton and intracellular organelle organization, as well as a desire to understand the fundamental similarities and differences between differentiated cells (i.e. neurons) and dividing cells. The student will characterize the cell biological mechanisms which lead to the formation of ubiquitinated protein inclusions and uncover the signals which underlie the accompanying cytoskeletal abnormalities. These inclusions are the diagnostic hallmark of neurodegenerative disease, and research from this project will be extremely useful for both publication and therapeutic development.		
	If you can meet our high expectations, you can make a real difference with Pharmacia & Upjohn. For confidential consideration, please send your resume, <i>including job posting #</i> , to: Frank Vroegop, Quantum Resources, 8191 Moorsbridge Road, Suite G, Kalamazoo, MI 49024. E-mail: fvroegop@quantum-res.com An equal opportunity employer, we value a diverse combination of ideas, perspectives, and cultures.		
	Pharmacia&Upjohn		
	Each Person Matters. 🛛 🛱 Each Patient Matters.		

Novartis Agricultural Discovery Institute Inc. (NADII), is one of the largest single fully funded research endeavors dedicated to agricultural genomics. We apply cutting-edge biotechnology to match genes with traits and provide advanced technologies that can be used widely in agribusiness research for the development of gene-based products. We currently seek the following exceptional individuals to join NADII's growing team:

### STAFF SCIENTIST

Gene Expression Profiling Bioinformatics

The incumbent will design, maintain and upscale the gene expression databases, and provide bioinformatics support to the users. Successful candidate should have an advanced degree in computer sciences or related area. Work experience in Oracle/SQL, Perl, Java, CGI, HTML, MS Windows and UNIX operating systems is required. Knowledge of C/C++ and Visual Basic is a plus. Biological background is preferred. Strong communication and organization skills, and the ability to work in a team environment are essential. Job Code: SS/GZ-SCI

### POSTDOCTORAL ASSOCIATE

Gene Expression Data Analysis

Two positions are immediately available to archive and analyze gene expression data generated by microarray technology. Additional responsibilities include conduct gene discovery research using transcription profiling combined with reverse genetics approach and maintain collaborative links with other laboratories. Candidates should have a recent Ph.D. degree in plant molecular biology, genetics or related field and a demonstrated knowledge in molecular biology and genetics of signal transduction and transcriptional control. Strong communication and organization skills and the ability to work in a team environment are essential. Practical experience of using bioinformatics tools and knowledge of statistics to mine genomics databases is particularly desirable. Creative thinking and scientific publication are strongly encouraged. Job Code: PA/TZ-SCI

### **RESEARCH ASSOCIATE**

Gene Expression Microarray Technology

One position is available to conduct gene expression analysis using transcriptional profiling technologies. A B.S. or M.S. degree in life science with emphasis and significant experience in molecular biology, genetics, or biochemistry is required. Practical experience with RNA manipulation, highthroughput PCR, fluorescence detection, and robotics, as well as computer skills is highly preferred. Additional experience in expression analysis using microarray technology is helpful. Strong technical, communication and organization skills and the ability to work in a team environment are essential. Job Code: RA/TZ-SCI

### **ASSOCIATE SCIENTIST**

Gene Expression Profiling Technology

Incumbent will develop novel technology to profile the global gene expression pattern and conduct experiments to dissect gene regulation pathways in plants. A Ph.D. or M.S. degree with emphasis in molecular biology and significant experience in mRNA and cDNA manipulation and fluorescence probing is required. Direct experience with DNA fingerprinting, differential display, or microarray is highly desirable. Familiar with data analysis tools is a plus. This position also requires strong communication and organizational skills and the ability to work in a team environment. Job Code: AS/LS-SCI

NADII offers excellent compensation and a great benefits package, including 401(k). For immediate and confidential consideration, please send cover letter indicating position of interest with corresponding Job Code, and resume including salary history and expectations to: Novartis Agricultural Discovery Institute, Inc., HR Dept./(Job Code), 3115 Merryfield Row, Suite 100, San Diego, CA 92121-1102. Fax: (858) 812-1096. EOE

### **U** NOVARTIS

### **Cortical Function**

The Department of Neurosurgery at Upstate Medical University is seeking a scientist with interests in human and animal cortical mechanisms relating to sensory, motor, or higher cognitive functions. Facilities include a new human performance center and an MR machine dedicated to research endeavors. There is excellent departmental support for this position. This is a tenure track position at the Assistant or Associate Professor level. The successful candidate will have a significant publication history and a demonstrated ability to generate outside funding. Upstate Medical University is an equal opportunity employer. Women and minorities are encouraged to apply.

### Experimental Neuro-oncology

The Department of Neurosurgery at the Upstate Medical University is offering a position for a scientist interested in the cellular mechanisms related to central nervous system neoplasia. This is a named (The Robert and Molly King Neuroscientist) position with excellent departmental support and will be an integral part of the academic efforts of the department. The successful candidate will have a proven publication and funding record and will qualify at least for an Associate Professor rank. Upstate Medical University is an equal opportunity employer. Women and minorities are encouraged to apply.

Qualified applicants interested in either position should contact:

Charles J. Hodge, M.D. **Department of Neurosurgery** Upstate Medical University 750 East Adams Street Syracuse, New York 13210 (315) 464-5510 e-mail: hodgec@upstate.edu



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#### Director **TOGA** Technology

The Director will manage the operation of DGT's TOGA<sup>TM</sup> gene expression technology. In this role, the individual will direct the activities of teams of molecular biologists and robotics specialists to deliver gene expression data for corporate, academic, and in-house projects. The individual will work closely with senior management to evaluate operations, review scientific data, and develop plans for technology innovation. Experience with genomic technologies and instrumentation is essential, including DNA sequencing (ABI377 and 3700), cDNA library construction, and PCR. We are seeking a highly motivated scientist with a Ph.D. in life sciences and 8+ yrs experience in industry. Strong management experience with a proven track record in molecular biology is required.

#### **Project Managers**

We are seeking doctoral-level biologists with expertise in inflammatory disorders and central nervous system diseases to manage project data for ongoing collaborations at DGT. These individuals will be responsible for data review. evaluation, and reporting to collaborators and will work with senior management to provide project summaries and track progress across multiple scientific teams. Candidates must possess excellent oral and written communication skills and be able to work in a team-oriented environment. The successful candidates will have an M.D. or a Ph.D. in the life sciences and 2-3 years of postdoctoral experience within the disease areas and demonstrated experience with molecular biology.

Compensation will meet your qualifications and includes equity participation in an exciting growth Company. For consideration, please send or fax your resume/CV, letters of reference and salary history to: DIGITAL GENE TECH-NOLOGIES, INC., 11149 North Torrey Pines Road, La Jolla, California 92037, e-mail: job-info@dgt.com, fax: (858) 552-8625, www.dgt.com, EOE



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### Our challenge is life.

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### TRANSGENIC CORE SECTION

The Aventis Transgenic Core Group develops both overexpression and KO models for gene validation in genomics programs and model development for disease group applications. A state-of-the-art animal facility and recently built laboratory provides an ideal environment for the production of transgenics. The following positions have been added to the core staff to enhance the production of models and to apply novel technologies for gene targeting and conditional gene expression.

### **Research Associate**

As part of a collaborative transgenic core team this position will be responsible for the design and development of transgenic animal models. Duties will include design and assembly of transgene and knockout constructs, analysis of gene expression in cell lines and tissues including Northerns, Southerns, Westerns, and immunoprecipitation. Additionally, the selected candidate will participate in the development of novel transgenesis and knockout technologies. Must have extensive experience with all aspects of transgenic animal production, including hormone priming, mating, embryo harvest, injections, embryo transfers, and animal tracking. ES cell culture experience is highly desirable with demonstrated skills in preparation, maintenance, electroporation, and selection of specific ES cell colone. Preference is given to highly organized candidates with transgenics production facility experience and/or research experience in genetics or developmental biology; a BS/MS or Ph.D. in a relevant scientific discipline is required.

### **Microinjectionist**

Must have extensive experience with all aspects of transgenic animal production, including hormone priming, mating, embryo harvest, injections, embryo transfers, and animal tracking. Additionally experience in basic ES cell culture and monolayer cell culture plus demonstrated skills in maintaining the breeding, expansion, and analysis of transgenic models off-site at contract facilities. Preference is given to highly organized candidates with transgenics production facility experience.

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PHARMACEUTICAL RESEARCH INSTITUTE

### Postdoctoral Fellow — Molecular Pharmacology

In this position, you will work in a new, exciting and rapidly evolving area of drug discovery using molecular biology approaches to investigate the mechanisms of selective estrogen receptor modulator tissue specificity. Opportunities for collaboration within the company and with academic laboratories are available. We provide an interactive and enthusiastic environment for interested scientists.

To qualify, candidates must have a Ph.D. in Biology, Molecular Biology or a related discipline with a strong background in mammalian cell culture techniques. Expertise in mRNA preparation from cells and tissues, cDNA library generation, subcloning, Northern blotting and transient transfection is essential. Experience with nuclear receptor biology, yeast two-hybrid assays and GST pull-down experiments would also be an asset. Strong written/verbal communication skills and the ability to work independently are a must.

As a valued team member, you'll receive a competitive salary and great benefits including medical/dental, a 401(k), a pension plan and a comprehensive wellness program. Please apply directly on-line at our web site www.jnj.com or forward a scannable resume, noting operating company as The R.W. Johnson Pharmaceutical Research Institute and Req. Code 000602SCI, to: Johnson & Johnson Recruiting, P.O. Box 16597, New Brunswick, NJ 08906-6597. Please note, resumes received electronically via jnj.com are reviewed within 24 hours. Mailed resumes are reviewed within 3 business days after receipt. We are an equal opportunity employer totally committed to diversity.

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We are seeking outstanding individuals for challenging positions in a variety of areas. Some specific positions are listed below. Please see www.illumina.com for additional openings and information. Resumes should be sent to jobs@illumina.com or faxed to 858-587-4297.

#### Associate Director, Expression Profiling, MC005

Hands-on R&D management of mRNA and protein expression profiling projects, including assay development, design of functional genomics applications, high-throughput screening implementation and scale-up establishment & interactions with outside collaborators. Qualifications: Ph.D. in biological/Chemical/physical sciences with 8+ years molecular biology experience and 3+ years experience in quantitative RNA and/or protein profiling with microarray technologies. Detailed knowledge of technology, applications, and bioinformatics associated with microarray experimentation are required, as are excellent problem-solving, analytical, organizational and communications skills. Proven project management and industrial functional genomics experience highly desirable.

#### Scientist, Protein Profiling, MC008

You will develop novel, highly parallel methods for quantitative protein profiling, based on Illumina's BeadArray platform. **Qualifications:** Ph.D. in Immunology, Protein Chemistry, Biochemistry or related field, with 3+ years postdoctoral experience in development of quantitative assays for binding of macromolecules. You must be innovative, analytical, quantitative, and have good problem-solving and communications skills. Experience in nucleic acid hybridization, mRNA quantitation, and array technologies is an advantage.

#### Scientist, Molecular Biology, MC010

You will develop novel, highly parallel methods for genome analysis, utilizing Illumina's bead-based array technology platform. **Qualifications:** Ph.D. in Molecular Biology, Biochemistry or related field, with 3+ years postdoctoral experience in molecular biology and nucleic acid hybridization. You must be innovative, analytical, quantitative, and have good problem-solving and communications skills, and enjoy working as part of a multidisciplinary team. Proven experience with microarray technologies for mRNA quantitation and genome analysis is an advantage.

#### Scientist, Bioinformatics, MC011

Design, implement and maintain databases for storing, tracking & analyzing array-based experiments, including selecting and processing data from external databases, integration with data collection software and data analysis tools, and integration with corporate intranet & manufacturing systems. **Qualifications:** Ph.D. in Bioinformatics or related field with 3+ years experience in database design and implementation, or similar qualifications. Expertise with Oracle or Microsoft SQL Server required, and experience with web-based browser interface design and Java programming are desired. You should have excellent analytical and organizational skills, with proven experience in designing, building, and managing complex databases of biological sequence information. Expertise in array-based data sets and analysis are strong pluses.

#### Scientist/Engineer, Genomics Automation, MC012

Develop and implement a high-throughput sample processing laboratory system and methods to interface with highly parallel microarray analysis. **Qualifications:** Engineering or Molecular Biology background with a minimum of 5 years experience in industrial-scale genomics automation and operations. Proven expertise in designing, scaling, and troubleshooting methods for industrial-scale nucleic acid sample purification and processing. Detailed knowledge of microtiter-related robotics, solid-liquid phase separations, and data management systems are essential, as are excellent problemsolving, analytical, organizational, and communications skills. Experience with microarray technologies an advantage.

**Illumina, Inc.** offers a highly rewarding work environment with great potential for personal and career growth. We offer competitive salaries, stock option packages, and great benefits.

Illumina is an Equal Opportunity Employer.

### **U** NOVARTIS

At Novartis Agribusiness Biotechnology Research, Inc., located in Research Triangle Park, North Carolina, our mission is to make discoveries that enable the creation of novel seeds and new methods of protecting crops.

### **Molecular Plant Physiologist**

Our Metabolic Pathway Engineering Group has an opening for a Ph.D. level plant scientist to develop an integrated approach for the improvement of abiotic stress tolerance in crop plants. You will be involved in the development of longterm strategies for interfacing physiological and biochemical methods with advancements in functional genomics. Requirements for this position include a sound understanding of plant physiology and metabolism with extensive experience in molecular genetics. The ideal candidate will have a demonstrated ability using genomics technology to identify genes involved in plant metabolism, and can clearly present the results of technical objectives.

Novartis offers a competitive salary, a comprehensive benefits package, and an environment conducive to professional development. Qualified candidates, please email your cover letter and resume to: biotech.jobs@nabri.novartis.com. Please enter Job Code MPP in the subject area of the email. An Equal Opportunity Employer.

For more information about Novartis, please see these websites: Novartis: www.novartis.com Novatis Crop Protection: www.cp.us.novartis.com Novartis Seeds: www.nk.com



### Assistant, Associate and Full Professor Positions University of Alabama at Birmingham

The UAB Department of Environmental Health Sciences, School of Public Health, invites applications for two tenure-track positions and both positions may be a senior rank. The department, under new leadership, is developing programs in **signal transduction, cell and molecular biology and/or molecular toxicology** in coordination with the UAB School of Medicine, the Center for Free Radical Biology and the Comprehensive Cancer Center. Successful applicants will be offered spacious new laboratories with significant startup support and an outstanding collaborative environment. Applications should include curriculum vita, names and contact numbers of three references, description of research interests, and a brief description of how your teaching interests and research goals can impact environmental health and toxicology.

> Henry Jay Forman, Ph.D. Professor and Chairman Department of Environmental Health Sciences School of Public Health University of Alabama at Birmingham RPHB 317 1530 3<sup>rd</sup> Ave S Birmingham, AL 35294-0022 elderr@lab.soph.uab.edu

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At Celera, we are unlocking the down to the mysteries of life. Combining leading-edge technology and software tools with proneering research, our roal is to become the ocfinitive source. of genomic and medical information that will enable scientists to develop breaktioningly therapeutics and diagnostics. It is an undertaking so complex and broad in score.

### extraordinary minds have joined us in this revolutionary endeavor.

Now it's your turn! We invite our to consider the convolution of earlier opportunities in the following areas and be there as it happens:

 Bioinformatics
 Computational Biology Laboratory Support
 Information Technology Software Development
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For nove information about our catery opportunities, please visite

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In makie to respond online, please direct your resume for Celera, Ann: HR/SJM/032600, 45 West Gude Drive. Rockville, MD 20850 or Fax: (240) 453-3511, Celera is committeed to austrig-tree work environment, EOE, M/E/D/V.

Lilly is a premier biotechnology company and a world tion of therapeutic proteins. Our division of Research Technologies and Proteins is leading the way in the race targets and develop therapeutic protein

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### **BS/MS** Biochemists

D CAREER

We are seeking highly motivated and dedicated scientists to join a dynamic group of investigators involved in addressing issues pertaining to thephysiochemical properties of potential protein therapeutic agents through the use of biophysical techniques. Qualified candidates must have a Bachelors or Masters degree in Chemistry. Biochemistry or Biophysics, and a minimum of two years of laboratory experience in biophysical methods including spectroscopic techniques (e.g. Circular Dichroism and Fluorescence), and analytical chromatography. Experience in calorimetry, light-scattering, analytical ultracentrifugation, or plasmon resonance techniques is also preferable. Excellent communication (verbal and written), organization, and problem-solving skills are required. Source Code: ADSCMRT04.

### Mammalian Cell/Fermentation Scientist

We are seeking scientists with a BS/MS or Ph.D. in Biochemical Engineering, Chemical Engineering, Biotechnology, or a related discipline. The individual will have 1-5 years of industrial experience and preferably has 3-5 years of experience in mammalian cell culture. This individual will work as part of an interdisciplinary team charged with the responsibility for developing cell culture based processes for the production of human therapeutics for use in clinical studies. Development work includes adaptation of cell lines to serum free media, design and development of bioreactor processes and the scale up of the process in a pilot manufacturing facility. The successful candidate will have experience operating benchscale bioreactors producting product from mammalian cell culture. The candidate will also have an appreciation for issues such as scale up/scale down modeling, engineering constraints in scale up, transfer of technology into a pilot plant or manufacturing facility to communicate both in written form as well as orally. The individual should have a proven ability to communicate both in written form as well as orally. The individual should have the ability to work well in teams and to supervise the work of other technicians and assource. Source Code: ADSCMRTO5. in teams and to supervise the work of other technicians and associates. Source Code: ADSCMRT05.

For confidential consid please submit your re piedos subritir your resumentatiogn our website at www.lilly.com or send your resume to Eli Lilly and Company US Recruiting and Staffing Lilly Corporate Center, DC 1818 Indianapolis, IN 46285 We are an equal opportunity employer making a difference through our commitment to diversity.

R INFLUENCE ON



leader in the producto identify novel drug solutions. Currently, our group has several openings in the



following areas:

### Creating A Paradigm For World Innovation.

Paradigm Genetics, Inc. is a rapidly growing and dynamic agricultural Biotech Company positioned to become the worldwide leader in agricultural functional genomics. Paradigm has begun to develop unique and powerful computer capabilities to aid in the process of analyzing genetic information. This marriage of computers and genomics is known as bioinformatics and Paradigm is rapidly becoming a leader in agricultural bioinformatics as well.

Paradigm has attracted the majority of the world's largest life sciences companies as partners and potential partners. These partners are working with the Company in such areas as: discovering better and safer compounds to protect crops against weeds, diseases, and insect pests; developing more efficacious and environmentally-friendly plant nutrition products; improving the quality of seed germplasm through the development of more efficient breeding tools and the discovery of new and valuable genes; and discovering novel antimicrobial compounds for human use.

Paradigm offers you the opportunity to put science to work for the benefit of the environment and for humanity in a way that's never been done before. Our entrepreneurial environment gives you the chance to make a contribution from the first day, working along side the top scientists in the field. We are located in the progressive Research Triangle Park, situated between Raleigh, Durham and Chapel Hill in North Carolina. This unique location provides unparalleled access to worked-class educational resources, diverse and rich cultural opportunities, excellent medical care, and a high standard of living. In addition, the Triangle is just a few hours drive from North Carolina's beautiful beaches and majestic mountains.

### **Automation Specialist**

The automation specialist should have proficiency in operating various robotics instruments such as liquid handlers and analytical and robotic arms, as well as in programming such as, Visual Basic, C++, to code devices and control robotic movements. Duties include programming existing instruments, evaluating commercially available robotics systems, documenting software, and validating software and instruments and providing user support. The candidate should have a BS/MS in Biology, Chemistry, or Computer Science and several years work experience in robotics/automation. Job # BIO/MAR/SCI/140A

### **Automation Design Engineer**

The automation design engineer should have a BS/MS in mechanical or electrical engineering and several years of experience in robotics/automation. The successful candidate will have experience in designing/developing automation systems in scientific laboratory settings. Specific experience in transporting samples, automated weigh systems, and interfacing with commercially available automation equipment as well as laboratory instrumentation is required. This position will also work closely with third party manufacturing companies, the automation specialist position, and LIMS personnel for full integration of designed systems. Job # BIO/MAR/SCI/I40B

### Group Leader, Mode of Action Studies

Responsibilities will include conducting chemical mode of action studies and supervising Masters and B.S. level personnel. A Ph.D. in Plant Physiology. Molecular Biology or Biochemistry is required with relevant postdoctoral experience. Prior experience with transcriptional profiling and data mining is an advantage. Excellent written and oral communication skills are essential. Job # PPHY/MAR/SCU269P

### Group Leader, Metabolic Profiling

The metabolic profiling group is developing an industrialized platform for high throughput analysis of small molecules in various plant and fungal tissue. We are seeking a highly motivated senior individual with considerable industry experience with both "hands-on" and project management experience. Significant working knowledge of LC/MS and GC/MS with specific emphasis on separation methods is required as well as a broad background in general analytical chemistry methods. Additional experience with various data analysis software and reporting programs is desired. Excellent supervisory and communication skills are a must. This is a senior and critical position within our company and therefore requires a high level of competence, enthusiasm, ambition, and a "do it" attitude. A Ph.D. in Chemistry, Biochemistry or a related field with a minimum of 10 years of industrial experience is required. Job # BIO/MAR/SCI/267P

### Marketing Communications Manager

The primary focus of this position is to ensure that our position, strengths, and messages are disseminated as widely as possible throughout all target communities. The secondary focus is to act as the focal point for internal communication, information collection, and information dissemination. The candidate must have excellent organizational and logistics skills, must be able to write for marketing and some technical writing. The candidate should have a minimum of an undergraduate degree, preferably in marketing or communications and have 3 years experience in marketing management in high-tech, high-value industry, preferably biotechnology or agriculture or 5 years experience in advertising agency or PR firm as account supervisor. Job # SCI/MAR/MKT-270P

### Biostatistician

The Bioinformatics Group at Paradigm Genetics seeks a Ph.D. Biostatistician with 2-3 years of experience in the statistical analysis of biological sequences, gene expression profiles, or similar areas, to play an integral role in our functional genomics efforts. Familiarity with a SAS is desired, as is some programming ability. Good communications skills are required. Job # SCI/MAR/254P

### Upcoming Job Opportunities

Scientists are needed in the Assay Development, BC Profiling, Gene Expression Profiling, DNA Sequencing, Mutant Generation, Plant Growth & Maintenace, Plant Physiology, Plant Transformation and Plant Technology Development. We will also have openings in our Informatics and Bioinformatics department for an Algorithms Group Leader, LIMS Programmers (one for our DNA Technology group and one for the Biochemistry group).

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## The leader in diagnostic imaging is becoming quite clear.

Bracco Research USA, the U.S. Research & Development labs of Bracco S.p.A., a world leader in contrast media for in vivo diagnostics, has an opening for an entry level biologist in our Princeton, NJ laboratories.

### Associate Research Investigator – Biology

The successful candidate will play a leadership role in the isolation, purification and characterization of receptors and proteins associated with disease-related targets and in the development and performance of target appropriate biological assays to evaluate the potential of new chemical entities to bind to these targets for use in Nuclear Medicine and Ultrasound Imaging applications.

The qualified candidate must have a Ph.D. in Molecular, Cellular, Vascular or other closely related Biology discipline plus 1-3 years of relevant postdoctoral experience. Expertise in the areas of angiogenesis, tumor biology, cardiovascular pathology, or inflammation is preferred. Experience in the biotechnology or pharmaceutical industry is desirable. We are looking for strong written and oral communication skills and the candidate must be willing to handle radioisotopes, as some screening of potential nuclear medicine-based compounds will be required.

Bracco Research USA offers excellent salary opportunities and a competitive benefits program, which includes a tax sheltered income program, life insurance, major medical and dental coverage, and educational assistance. For consideration, please submit your resume with salary requirements and a cover letter to:

> Bracco Research USA, Inc. Attn: Catherine Berle 305 College Road East Princeton, NJ 08540 Fax: (609) 514-2446

> Equal Opportunity Employer.



will be offered an excellent salary and benefits package including a stock option program and the opportunity to lead the research of a globally recog-nized genomics company. For consideration, submit a resume and cover letter to **Human** Resources, Paradigm Genetics, Inc., P.O. Box 14528, RTP, NC 27709; or E-mail: resumes@paragen.com (MS Word or RTF only)

Successful

candidates

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No faxed resumes will be accepted. No phone calls please. Principals only. EOE



### Aventis Pharmaceuticals

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Hoechst Marion Roussel and Rhone-Poulenc Rorer have adopted the name Aventis Pharmaceuticals to create:

A new world class leader in the pharmaceutical industry.

Aventis Pharmaceuticals is dedicated to extending and enhancing human life through the discovery, development, manufacture, and sale of pharmaceutical products. Aventis offers the power of global forces in pharmaceutical products and services, an excellent financial standing and a vision for the future that is unmatched in the industry. We currently have the following opportunity in the **Systems Biochemistry Department** of our **CNS Disease Group** at our Bridgewater, NJ location.

### Associate Research Scientist

The selected candidate will perform studies to define biochemical aspects of drug action which are dependent on anatomical integrity or on the interaction of multiple cell types in the nervous system; develop biochemical surrogates of drug interaction with CNS molecular targets; and establish the dose range and kinetics of the mechanism-specific actions of candidate molecules using biochemical readouts. BS/MS or equivalent degree in

surrogates of drug interaction with CNS molecular targets; and establish the dose range and kinetics of the amount of the molecular targets; and establish the dose range and kinetics of the biology, biochemistry or related discipline is required, as well as experience in animal handling, dosing, tissue isolation, and wet lab biochemistry. Direct experience in rapidly establishing a wide variety of in vivo/ex vivo biochemical assays for the characterisation of drugs is necessary. Three or more years of successful industrial research experience in the in vivo biochemical characterisation of drugs desirable.

Become part of the most exciting growth company in the pharmaceutical industry. Please send a resume and cover letter indicating your full career details and reference ad code: 2000BW0019 to: Aventis Pharmaceuticals, B103H, P.O. Box 6800, Bridgewater, NJ USA 08807-0800. email: jobs@aventis.com

Visit our website for further information: www.aventispharma-us.com

Aventis Pharmaceuticals is proud to be an equal opportunity employer committed to a diverse workforce.

### **CLINICAL DIRECTOR**

### National Center for Complementary and Alternative Medicine National Institutes of Health

The National Center for Complementary and Alternative Medicine (NCCAM), NIH, is seeking exceptional candidates for the position of Clinical Director, Intramural Research Program, NCCAM. Incumbent directs and oversees multifaceted intramural clinical research involving the safety, efficacy and mechanisms underlying diverse complementary and alternative medicine (CAM) modalities. Incumbent serves in a senior advisory capacity to the Director, NCCAM, and other NCCAM staff on the design and conduct of clinical trials.

This position offers a unique opportunity to create and direct the NCCAM Intramural Research Program and to make important contributions to NCCAM's extramural research portfolio. The duties and responsibilities include: directing and overseeing clinical and translational research programs with; a) responsibility for formulating a vision for clinical investigation to include relevant preclinical and basic research; b) overseeing resource allocations, scientific review, and recruitment of personnel; d) reviewing all clinical research protocols for design, standards, and relevance to mission; e) reviewing all matters pertaining to the provision of patient care in research protocols; f) serving as executive representative of the NCCAM clinical research program at all NIH levels; and (g) assuring adherence to the highest ethical and regulatory standards governing clinical research.

Candidates need to have an established record in the design, conduct and analysis of a clinical research program preferably in areas relevant to and/or incorporating CAM modalities. This experience must include managing a senior-level research program that is recognized nationally. Candidates must have a medical license in at least one state or the equivalent licensure and credentials to practice clinical medicine from their home country. Salary and resources will be commensurate with the qualifications and experience of the candidate. To apply for this position, submit curriculum vitae, bibliography and the names, addresses and telephone numbers of four professional references to: Dr. Peter Lipsky c/o National Center for Complementary and Alternative Medicine:

National Institutes of Health Building 31, Room 5B37 31 Center Drive, MSC 2182 Bethesda, MD 20892-2182

APPLICATIONS MUST BE POSTMARKED BY MAY 8, 2000 NIH IS AN EQUAL OPPORTUNITY EMPLOYER





### **TEMPLE UNIVERSITY**

### VICE PROVOST FOR RESEARCH

Temple University invites nominations and applications for the position of Vice Provost for Research. The vice provost reports directly to the provost and serves as a member of the provost's senior staff. His or her primary responsibility is to provide leadership for and foster excellence in Temple's sponsored research programs, including \$85 million in sponsored activities.

Temple is a Carnegie Research I University enrolling 30,000 students on five campuses in the Philadelphia area. In addition, it has the oldest and largest American university campus in Tokyo, Japan, and a branch of the Tyler School of Art in Rome, Italy. The University includes schools of medicine, dentistry, pharmacy, and podiatry, and six hospitals. There are 5,400 full-time graduate students and 900 graduate faculty members in 50 doctoral and 90 master's degree programs. Over 15 centers and institutes conduct research in specialized areas including disabilities, public policy, survey research, neurovirology, cancer and molecular biology, thrombosis, bioengineering, biotechnology, small business development, and global management. Major sources of funding include NIH, NSF, the Department of Energy, the Department of Education, and the Commonwealth of Pennsylvania. For more information about Temple University, candidates are encouraged to visit the website at www.temple.edu.

Temple seeks an energetic, creative candidate with a strong record of leadership and research/ scholarship to direct the effort to significantly increase the University's research activity and support. The position requires understanding of a broad range of research, scholarly, and creative activities; familiarity with a wide variety of funding opportunities; and the ability to work effectively with faculty investigators and with University administrators. Compensation will be highly competitive.

We are being assisted in this search by Dr. Jean Dowdall and her associate, Elizabeth Moseley, A.T.Kearney Executive Search, 333 John Carlyle Street, Alexandria VA 22314. You may contact them at (703) 739-4761, jean\_dowdall@atkearney.com, or elizabeth\_moseley@atkearney.com to request additional information or to offer a nomination. Candidates should provide a letter of interest, a resume and the names and phone numbers of five references. Candidates will be notified before references are contacted. All candidate materials will be treated as confidential. Review of candidates will begin on April 24; for fullest consideration, materials should be received by that date. The Temple University community is highly diverse; women and people of color are strongly encouraged to apply.

Supervisory Research Hydrologist or Research Hydrologist/USDA Forest Service/ Fort Collins, Colorado or Laramie, Wyoming. The Rocky Mountain Research Station seeks qualified candidates to fill either of two challenging positions within the Research Work Unit working on sustaining watershed components of aquatic and riparian ecosystems in the Central Rocky Mountains and Northern Great Plains, with field work centered at the Fraser Experimental Forest, Fraser, Colorado. The successful candidate will have the professional stature and recognition to serve as a technical advisor within the Agency on issues of regional and national importance, and to serve as an expert witness in related litigation. Only one of these two positions will be filled, depending on the relative qualifications of the candidates, so you may apply for both. The appointment is permanent (career-conditional), full-time, 40 hours per week.

The successful applicant for the Research Hydrologist position will have an established research record, a demonstrated ability to successfully compete for grants and other research funds, and national/international recognition, all demonstrating the knowledge and ability to conduct state-of-the-art hydrologic research in the study of step-pool, first- and second-order high-elevation drainages. The candidate's research may be in one or more of the following areas: (1) understanding the deposition, redistribution, and vaporization processes of the subalpine snowpack as affected by the presence, absence, and variation in density of vegetation, (2) defining major processes associated with the transport of melt water through the plant-soil environment to the stream channel, (3) conceiving, developing, and refining two- and three-dimensional mathematical models that simulate hydrologic processes from precipitation, deposition, melt, and movement of water through the soil to stream flow with/without ecological interactions. The candidate must be able to form collaborations with other scientists in such fields as plant physiology, biogeochemistry, fisheries, and aquatic habitat to answer complex multidisciplinary research questions.

The successful candidate for Supervisory Research Hydrologist will have the above qualifications, plus the ability to (4) plan a program of multidisciplinary research to identify and address critical issues involving the interaction between hydrologic and biogeochemical response, nutrient allocation, channel morphology, and aquatic habitat and selected fisheries, and how this association is impacted or influenced by land and water management processes, and (5) exercise a full range of leadership, supervisory, managerial, and administrative competencies for a Research Work Unit consisting of eight research scientists, ten professional, technical, and clerical support personnel, as well as numerous term and temporary employees.

The Research Hydrologist position may be filled at either the GS-13 or GS-14 level in the federal civil service depending on the qualifications of the individual Salary grade level is determined through review by a Research Grade Evaluation Panel. GS-13 salary ranges from \$55,837 to \$72,586. The Supervisory Research Hydrologist is a GS-14 position with a base salary range of \$65,983 through \$85,774.

For a detailed vacancy announcement, including specific qualification requirements, application requirements, and procedures/materials, please see our Web site: http://www.usajobs.opm.gov/wfjic/jobs/ TF0914.HTM and .../TF0915.HTM. If you have any questions, please contact Assistant Director for Research Dr. James Saveland, Tel: 970 295-5944. The application period is March 4, through May 5, 2000. The USDA Forest Service is an equal opportunity employer. Applicants must be U.S. Citizens.

### Solutions for Genomic Research

Incyte Pharmaceuticals is a leading provider of an integrated platform of genomic technologies designed to aid in the understanding of the molecular basis of disease. Our platform includes database

products, genomic data management software, microarray-based gene expression services, and related reagents and services—information management tools critical to the pharmaceutical and biotechnology industries for drug discovery and development. The employees of Incyte provide the tremendous energy, talent and expertise that will help us revolutionize the world of healthcare. We're looking for individuals who share our vision and want to play a role in defining a new industry as we build our global organization.

### DIRECTOR, RESEARCH BIOINFORMATICS

As our Director, you will plan and direct the Best View of the Genome Research Initiative, exploring ways we can maximally benefit from the emerging human genome by making use of all available public and proprietary Incyte information. You will guide this process and ensure that appropriate algorithms, viewing tools and databases are applied and developed as appropriate. An important component of the job is publication in peer-reviewed journals and the development of practical methods to exploit the resulting analysis. Requires a PhD in Bioinformatics or related subject and 8+ years management experience. You must also have extensive experience in the analysis of eukaryotic (preferably human) genomic sequences, together with a proven publication track record.

You'll find we offer competitive salaries, an outstanding benefits package and significant opportunities for professional growth. For the straightest line to a career in genomics, go directly to our website at www.incyte.com. Or send your resume to: Incyte Pharmaceuticals, Inc., 3174 Porter Dr., REF: SD3966GM, Palo Alto, CA 94304, fax 650/845-4176, email employ@incyte.com. Incyte is proud to be an equal opportunity employer, and recognizes the talent of its diverse workforce.





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we're doing it at our Kenilworth. NI state-of-the-art research campus where you can enjoy the benefits and prestige of working for a global leader. Join us now At Schering-Plough Research Institute, our scientists are discovering innovative therapeutic agents that chaltenge humankind's most debilitating diseases. And

### SND/AD

BS/MS Research Associate - Electrophysiology BS/MS in Pharmacology, Physiology or related field with 2+ years' experience in particip clamp procedures and a background in ion channel electrophysiology particip clamp procedures and a background in ion channel electrophysiology targeted mutagenesis of orphan GPCRs and focus on analysis of several MD/Ph.D. candidate to study the biological role of viral chemokines, perform

lob Code: XHXDD911

### BS/MS Pharmacology

BS/MS in Biology, Biocheristry or related field with 3-6 years in vivo pharma-cology experience. Molecular biology skills a plus. Job Code: XHXDD9111

### INFECTIOUS DISEASE RESERRCH

responses. In vivo models experience desired. Job Code: XHXD9982 Ph.D. in Microbiology, Immunology or Molecular Biology with 2+ years' postdoctoral experience to focus on microbial pathogenesis and host Ph.D. Scientist - Microbiology/Immunology

### Ph.D. Scientist - Assay Development

OD CODe: XHXDD00RP Ph.D. in Biology or Chemistry with 2-5 years' postdoctoral or industry experience to conceive and develop biochemical assays for primary, high-throughput screening and for detailed characterization of leads.

### For additional information or to apply online visit our web site at www.sp-research.com

are an equal opportunity employer We regret we are unable to respond to each resume. Only those selected for an interview will be contacted. Competitive benefits include: group insurance and retirement programs, flexible work arrangements, education assistance, and health and wellness programs. For prompt, confidential consideration, we invite you to forward your resume which MUST include the Job Code for your position of interest to: E-mail: sprace/stance, and nealther you to forward your resume which MUST include the Job Code for your position of interest to: E-mail: sprace/stance, nealther you to forward your resume which MUST include the Job Code for your position of interest to: E-mail: sprace/stance, confidential consideration, we invite you to forward your resume which include the Job Code for your position of interest to: E-mail: sprace/stance/ We offer an excellent compensation package that includes a competitive salary, a cash incentive bonus program, comprehensive benefits, profit sharing and 401(k).



Using Science for Human Advantage

BS/MS Research Associate MICROBIAL GENETICS

**BS/MS Research Associate** 

Postdoctoral Fellow

ΙΜΜυνοίοςΥ

Весертов Рнавмасогост

Sarcoma (JEM 191:445-454; 2000). Job Code: XHXTM0016

team involved in Actinomycete molecular biology and production of secondary metabolites. Job Code: XHXDD001H

microbial genetics, molecular biology and biochemical techniques to join BS/MS in Molecular Biology or related field with 2+ years' experience in

binding, western blotting and fluorescence assays. In viw experience a plus. Job Code: XHXDD9107

and 2+ years lab experience with cell and tissue assays such as radioligand

BS/MS in Biochemistry, Neuroscience, Molecular Biology or related field

transgenic models, including the recently described model for Kaposi's



### Assistant Director, **Technology Evaluation**



mithKline Beecham, an international producer of pharmaceuticals and consumer healthcare products is seeking an individual with a background in technology evaluation in a pharmaceutical R&D environment to serve as Assistant Director, Technology Evaluation, at its research and development facility in King of Prussia, PA. Principal duties include identifying technology gaps or needs within R&D segment and directing broad technology searches and analyses to fill identified gaps or meet perceived needs; screening and evaluating novel technologies identified or offered to the company and negotiate access to such technologies; supervising a staff of managerial and administrative support personnel.

Minimum requirements are a Ph.D. degree in Biological and Chemical Science and at least 3 years experience in the job offered or 3 years experience in pharmaceutical technology evaluation in a pharmaceutical R&D environment which shall include experience in evaluating opportunities in (i) human genetics including human genetics linkage, DNA sequencing and genotyping technologies; (ii) genomics including gene expression analysis technologies; (iii) medicinal chemistry including combinatorial chemistry technologies; (iv) gene and protein drug targets; (v) bioinformatics including sequence databases and analysis tools; and (vi) gene, protein and drug delivery technologies. Must also have two (2) years of experience in establishing technical objectives and milestones for technology access agreements and in valuing technology based on the competitive advantage provided through intellectual property protection.

SmithKline Beecham offers a competitive compensation/ benefits package. For confidential consideration please forward resume and salary requirements to SmithKline Beecham, c/o National Resume Processing, Ad Code: IFMADT , Mail Code: UW2214, P.O. Box 1070, Burlington, MA 01803. Indicating Ad Code is essential. For a full listing of current opportunities, or to submit a resume online, visit our website at www.sb.com/careers

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> SmithKline Beecham Pharmaceuticals

www.ucalgary.ca



### Aventis Pharmaceuticals

Our challenge is life.

Hoechst Marion Roussel and Rhone-Poulenc Rorer have adopted the name Aventis Pharmaceuticals to create: *A new world class leader in the pharmaceutical industry.* 

Aventis Pharmaceuticals is dedicated to extending and enhancing human life through the discovery, development, manufacture, and sale of pharmaceutical products. Aventis offers the power of global forces in pharmaceutical products and services, an excellent financial standing and a vision for the future that is unmatched in the industry.

At our North American Strategic Research Center in Bridgewater, New Jersey we have combined the excellence and dedication of our former respiratory research areas to form the **Aventis Respiratory and Rheumatoid Arthritis Disease Group.** 

### Associate Research Scientist, Molecular Biology

Aventis has an active research program in the discovery of novel therapeutic agents for the treatment of rheumatoid arthritis and respiratory diseases such as asthma. An opportunity exists for a highly motivated laboratory scientist to join a dynamic group working on the production of recombinant proteins and designer cell lines. The successful candidate will conduct general cloning, protein expression and purification, protein characterization and construction of reporter gene or similar assays in mammalian cells. You will be an active team player and will be expected to interact with colleagues in other groups within the company (e.g. assay development, core protein production, structural biology etc.) to ensure efficient progression of drug discovery projects into screening and beyond.

To be considered for this position you should have a BS/MS degree and several years of hands-on laboratory experience or be a recently qualified Ph.D. with relevant experience. Expertise in the following is highly desirable: the use of multiple protein expression systems (E.coli, yeast, baculovirus, mammalian), protein refolding, or in the use of FPLC and HPLC systems. All candidates should have a strong background in molecular biology, protein biochemistry and tissue culture.

Become part of the most exciting growth company in the pharmaceutical industry. Please send a resume and cover letter indicating your full career details and reference ad code: 2000BW0022 to: Aventis Pharmaceuticals, B103H, P.O. Box 6800, Bridgewater, NJ USA 08807-0800. email: jobs@aventis.com

Visit our website for further information: **www.aventispharma-us.com** Aventis Pharmaceuticals is proud to be an equal opportunity employer committed to a diverse workforce.

### **Postdoctoral Opportunities**

Applications are invited for outstanding Post Doctoral Research Associates in physical sciences, social sciences and engineering within the NSF Science and Technology Center for Environmentally Responsible Solvents and Processes. The NSF STC is a 5-year, \$23 million multidisciplinary program designed to establish the scientific underpinnings of new technologies using  $CO_2$  to reduce organic and aqueous wastes in chemical and materials processing. Collaboration with industry is made possible through the Kenan Center for the Utilization of Carbon Dioxide in Manufacturing, an industrially funded consortium.



Several two-year postdoctoral positions are available for organic, polymer and physical chemists; physicists; chemical engineers; and material and surface scientists, preferably with expertise in high-pressure systems. Two social science postdoctoral positions are available— one focusing on technology enabled research collaboration, the other on innovation processes and technology transfer. Please send curriculum vitae and three letters of reference to the address below. Details and application form are available at www.unc.edu/depts/nsfstc. *Affiliated universities are affirmative action/equal opportunity employers*.

Apply to: Dr. Everett I. Baucom, Deputy Director NSF/STC, CB #3290 Venable & Kenan Laboratories, University of North Carolina at Chapel Hill, Chapel Hill, NC 27599



research and clinical programs have created the following new opportunities for talented and motivated scientists

### SENIOR SCIENTIST - Clinical Process Development

Ph.D. with 3 years industry experience in clinical process development, scale-up and adaptation to cGMPs. Experience in upstream & downstream processing and analysis of vaccines, antibodies and other biologicals. Demonstrated ability to manage internal staff and external collaborative and contract projects.

### SENIOR SCIENTIST - Immunology

Ph.D. with 5 years industry experience in viral and/or tumor immunology, with expertise in vaccine development. Proficient in animal models of cancer and/or viral infections and all current analyses of humoral and cellular immunity, including MHC tetramer assays, intracellular cytokine staining and ELISPOT.

For the above positions, experience working within a U.S. pharmaceutical company is preferred. We offer excellent benefits & generous stock programs. For immediate consideration, qualified candidates may send CV with salary requirements, indicating position desired to:

**Progenics, HR Dept,** P.O. Box 549, Tarrytown, NY 10591 Fax: 914-789-2863 E-mail: hr@progenics.com EQUAL OPPORTUNITY EMPLOYER Visit us at www.progenics.com





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901-495-2032, E-mail: steve.morris@stjude.org

### Chief. Life Sciences Division



NASA's Ames Research Center is soliciting letters of interest from qualified individuals who are interested in pursuing an Intergovernmental Personnel Act (IPA) position assigned to lead its Life Sciences Division in the planning, advocacy, and conduct of ground and spaceflight research development (See and technology http://lifesci.arc.nasa.gov). As Division Chief, leads a team of scientists, engineers, and flight operations personnel in advancing our knowledge of the role and influence of gravity on living systems. Both basic and applied biological and biomedical research is supported covering a wide spectrum of science disciplines including, physiology, neuroscience, cell and molecular biology and the emerging interdisciplinary field of astrobiology. The successful candidate will have a Ph.D. or MD degree with at least 10 years of research and leadership experience. Salary negotiable commensurate with experience. Submit a letter of interest and resume by April 17, 2000 to:

> **NASA Ames Research Center** Moffett Field, California 94035 Attn: Camilla Perez, MS241-6

### OSTDOCTORAL **OPPORTUNITIES**

### in Cancer Research at The Wistar Institute

The Wistar Institute, an independent research organization located on the University of Pennsylvania campus, has NIH Training Grant-supported postdoctoral positions available immediately in "Basic Cancer Research." Selected candidates will take interdisciplinary approaches to understand the cell and molecular basis of cancer including transcriptional regulation, cell growth and survival, structure/ function, and immune regulation of tumors.

Candidates must be US citizens or permanent residents with a maximum of three years of postdoctoral training. Minority applicants are strongly encouraged to apply.

If interested, please forward your C.V. and three letters of recommendation to the Human Resources Department, EP (indicating research of interest), The Wistar Institute, 3601 Spruce Street, Philadelphia, PA 19104. EOE/AA/M/F/D/V.



n edu



### Bioinformatics Career Opportunities

### Genetics Computer Group (GCG) Madison, Wisconsin, USA

### **Business Development Manager**

Builds partnerships and business relationships with other software and database vendors, academic groups working in bioinformatics, and hardware vendors to add value to GCG products and services, obtain rights to intellectual property, and increase the visibility of GCG in the marketplace.

Qualifications: MBA or equivalent experience; strong awareness of biotech, pharmaceutical, agrochemical industries especially related to software and information services; and 2-3 years experience developing strategic relationships.

### Wisconsin Package Product Manager

Ensures the success of the Wisconsin Package as the world's most comprehensive sequence analysis software by bringing extensive experience with sequence analysis and an understanding of customer needs.

Qualifications: PhD in molecular biology or related field; 5 years experience associated with sequencing projects and the active use of sequence analysis tools. Experience in biotech, pharmaceutical, or agrochemical industries desirable.

### Project Managers (3 openings)

Plan, direct, and coordinate activities of R&D projects to ensure that project goals are accomplished on time and within budget and ensure quality and consistency of GCG products and services.

Qualifications: BS in computer science; 10 years experience in the software industry managing software development teams; strong background in project management, object modeling and design, and human computer interaction. Experience in biotech, pharmaceutical, or agrochemical industries desirable.

### **Desktop Software Engineers** (several openings)

Design and implement user interfaces for the Macintosh or Microsoft Windows platform.

Qualifications: BS in computer science; 5 years of professional programming experience; 2 years experience developing graphical user interfaces in Macintosh or Microsoft Windows environments using C++ or Java; object modeling and design experience. Experience in biotech, pharmaceutical, or agrochemical industries desirable.

Please send CV or resume with references to:

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Pioneer employs more than 400 scientists, in an environment where individual achievements and team accomplishments come together to provide a rich and rewarding work experience. We strive to give each scientist the opportunity to make a difference...to be inventive and resourceful...to make a significant contribution.

Pioneer Hi-Bred is committed to competitive compensation and excellent annual reward systems plus a comprehensive benefits package including 401 (k), tuition reimbursement and relocation assistance. Des Moines is a prospering, growing city with diverse cultural, economic, industrial and consumer resources. It ranks well above the national average in quality of life including affordability and education (www.smartcareermove.com), For confidentual consideration, e-mail your resume and a cover letter, indicating job code to: (jobsresearch@phibred.com)

or send to: Human Resources, Pioneer Hi-Bred International, Inc. Research & Product Development 7300 N.W. 62nd Ave, PO Box 1004 Johnston, Jova 50131-1001 http://www.pioneer.com



Located near Des Moines, Iowa, Pioneer Hi-Bred's ninety-acre campus, including our recently completed laboratory expansion, offers a superb working environment. We currently have the following scientific opportunities available to suitably experienced, highly motivated individuals seeking to make an impact on the future of agriculture.

#### RESEARCH MANAGER Analytical Biochemistry Protein Assay Development and Validation (Job #063E)

Pioneer's Protein Analysis Group is seeking a qualified and motivated individual to manage the team responsible for protein assay development and validation. This group is responsible for developing, validating and transferring methods that are critical for the detection and quantification of transgenic proteins in plants. This individual will work closely with product development teams in Crop Protection, Agronomic Traits and Quality Traits resulting in the successful development of new biotechnology products. The successful candidate will also be expected to proactively identify and evaluate new technologies for immunoassay and transgenic protein analysis applications. We are seeking an individual with a Ph.D. or equivalent in biological sciences or biotechnology plus at least 5-7 years appropriate research/supervisory experience and state of the art knowledge of immunoassay (particularly ELISA) development and validation. Excellent communication skills are also required. Familiarity with emerging technologies for high throughput and multianalyte protein analysis is very important. Working knowledge of statistical QC, kit development and production, industrial experience and transgenic plant analysis will also be considered

**POST-DOCTORAL Research Associate, Protein Technologies** (Job #045E) We are looking for an individual with a strong protein biochemistry background with experience in physical biochemistry techniques such as absorption/fluorescence/CD spectroscopy, viscosity and protein stability measurements. The position will employ protein engineering approaches on soy and other plant proteins to create novel derivatives with value added functionality for foods. A Ph.D. in Biochemistry/Molecular Biology and a background in the application of protein engineering strategies for structure-function analysis of proteins is required. Strong computer skills desired in gene analysis software and standard office software. The candidate should also possess excellent communication and interpersonal skills.

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### Biochemist/Cell Biologist (Ph.D. level) High Throughput Screening (HiTS)

You will work in a multidisciplinary team to develop and implement high throughput screening assays for drug discovery in the areas of oncology, cardiovascular disease and inflammation. Responsibilities include collaboration with discovery biologists for the development of screening assays including enzymatic, ligand binding with an emphasis on whole cell formats. You will collaborate with discovery chemists for lead follow-up. Implementation of high throughput screens will require you to operate state-of-the-art, semi-automated and fully automated microplate workstations and robotics and to collect and analyze screening data. Expertise in high throughput screening and cell biology (especially in whole cell assay development) are required.

Ph.D. in biochemistry or cell biology with at least two years of postdoctoral experience or the equivalent and the ability to work in a team environment to reach common goals required. Preferred candidates will have strong computer skills including experience with Excel and data visualization tools and expertise in operating analytical instrumentation. Ad Code: 00-0432

### Biochemist/Cell Biologist (B.S./M.S. level) High Throughput Screening (HiTS)

You will work in a multidisciplinary team to develop and implement high throughput screening assays for drug discovery in the areas of oncology, cardiovascular disease and inflammation. Responsibilities include implementation of screening assays including enzymatic, ligand binding and whole cell formats. You will also collaborate with discovery chemists for lead follow-up. Implementation of high throughput screens will require you to operate state-of-the-art, semi-automated and fully automated microplate workstations and robotics and to collect and analyze screening data. Experience in biochemistry and/or cell biology, assay development and data analysis are required.

B.S./M.S. in biochemistry or cell biology and demonstrated ability to work in a team environment to reach common goals essential. Preferred candidates will have strong computer skills including experience with Excel and data visualization tools and have some experience operating analytical instrumentation. Ad Code: 00-0433

Searle is the pharmaceutical sector of the Monsanto Company. These positions are located in Chesterfield, MO. We offer a competitive salary and benefits package including tuition reimbursement and 401(k). Please direct resumes, with ad code (from above) on subject line and cover letter, to: Monsanto Company, 700 Chesterfield Parkway, Mail Zone BB5B, Chesterfield, MO 63198. For information on other vacancies, please visit our website at: www.searle-ican.com. EEO/AA Employer M/F/D/V.

6/238

New England Biolabs, a world leader in the manufacture and supply of reagents for Molecular and Cell Biology, has the following position available.



### Postdoctoral Fellow-Selenopeptide Phage Display

Position available for a recent Ph.D. to utilize a recently developed system (see J. Am. Chem. Soc. 122, 960-961 and Nucleic Acids Res. 28, 755-761) for in vitro selection of novel enzyme inhibitors, and for evolution of enzyme specificity. Experience in protein modification, enzymology, organic synthesis, phage display and/or basic molecular biology techniques would be helpful.

Send a resume and three references to: **Dr. Christopher Noren.** 

New England Biolabs, Inc. 32 Tozer Road Beverly, MA 01915

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are economically and environmentally sustainable. Candidates must have appropriate knowledge of soil science, environmental chemistry, agronomy, hydrology, geology, biology, ecology, and mathematics; ability to conduct research which characterizes and predicts the interaction among physical, chemical, and biological mechanisms of land, water, and plant management systems; and skill in developing such systems. U.S. citizenship is required. Salary commensurate with qualifications, \$70,457 to \$107,738 p/a. For information about the position contact Dr. Frank Greene at 215-233-6668 or at fgreene@naa.ars.usda.gov. For application, call Ms. Mary Ann Byrne at 215-233-6571. Visit the ARS Vacancy Web Site: www.ars.usda.gov/afm/hrd/ resjobs. Applications must be marked ARS-X0E-0160, completed and postmarked by May 1, 2000.

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- Protein biochemistry/enzymology
- Antibody engineering



AME seeks scientists who can independently apply problem-solving skills to achieve critical project goals. AME provides a high level of responsibility in a dynamic working environment with the opportunity to develop and implement leading-edge protein engineering technologies. Additionally, AME scientists receive excellent benefits and compensation, including equity participation and generous performance-linked incentives.

G

Send cover letter and resume to: HR Department, AME 3520 Dunhill Street, San Diego, CA 92121 careers@AMEvolution.com



### MAYO CLINIC POSTDOCTORAL POSITIONS

Positions available at the computer-aided molecular design (CAMD) lab for postodoctoral fellows to develop novel angiogenesis inhibitors and to study chromophores of green fluorescent proteins using ab initio/molecular mechanics calculations, spectroscopic analyses, and organic syntheses. Applicants must have strong total-synthesis experience and/or quantum mechanics and molecular mechanics background. Preference will be given to applicants with their own fellowships or with experience of Beowulf-class computer systems. The CAMD lab has records of developing biologically active molecules and novel methods for zinc protein molecular dynamics simulations and for virtual screen of chemical databases. It has state-ofthe-art synthetic equipment, a cluster of dedicated Origin 2000 and 200 servers (16xR10K, 8xR12K, 200Gb disk, and 3Gb memory), and four Octane graphics. Recent patents and publications by the CAMD lab are available from ftp.mayo.edu (name: anonymous, cd pub/camd). Applications including curriculum vitae, two relevant papers, and two recommendation letters should be sent to:

> Yuan-Ping Pang, Ph.D. Computer-Aided Molecular Design Mayo Clinic Guggenheim 711A 200 First Street SW Rochester, MN 55905 e-mail: pang@mayo.edu

Mayo Foundation is an affirmative action and equal opportunity employer and educator.

### **Postdoctoral Research Opportunities**

The Department of Cell Biology and Anatomy is seeking professionals to join a leading group of investigators working in the field of cardiac valvuloseptal morphogenesis and supported by an NIH Program Project Grant. Specific research interests of participating faculty include:

W. Scott Argraves, Ph.D. (argraves@musc.edu) Extracellular matrix regulation of morphogenic cell movements in the developing heart. Christopher J. Drake, Ph.D. (drake@musc.edu)

Vasculogenesis/angiogenesis in development and tumorigenesis. Steven Kubalak, Ph.D. (kubalaks@musc.edu) Role of retinoid receptors on endocardial cushion morphogenesis.

Charles D. Little, Ph.D. (littlech@musc.edu) Real time analysis of cardiovascular morphogenesis in vivo.

Roger R. Markwald, Ph.D. (markwald@musc.edu) Developmental basis for cardiovascular diseases.

**Corey H. Mjaatvedt, Ph.D.** (mjaatvch@musc.edu) Genetic regulation of cardiovascular morphogenesis and remodeling.

Andy Wessels, Ph.D. (wesselsa@musc.edu) Myocardialization and epicardialization of cushion tissues.

Applications are invited from candidates with a strong background in developmental, cell and molecular biology. For information about The Department of Cell Biology and Anatomy visit our website at http://www.musc.edu/CBA/. Candidates should send a CV and the names, addresses and phone numbers of 3 references to the faculty email address or mail to: Dept. of Cell Biology and Anatomy, Medical University of South Carolina, 171 Ashley Ave, Charleston, SC 29425.



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### SR. ASSOCIATE II, MOLECULAR BIOLOGY

You'll take a leadership role in designing and executing intricate laboratory research and development experiments to support genetic methods for enhancing mammalian cell productivity. Beyond performing complex laboratory procedures, you will act as a technical resource, document and present research findings, and assume staff training and supervision responsibilities. A PhD in a relevant scientific discipline is preferred. Two plus years postdoctoral laboratory experience or an equivalent combination of education and experience is required. Along with leadership skills, you'll need demonstrated ability to direct projects of intermediate complexity and interact with colleagues and institutions. As part of a collaborative team, you'll be expected to devote time as needed, including overtime, to completion of team goals. Job Code 60444

### SCIENTIST I, IMMUNOLOGY

Help us expand our commitment to and capabilities for R&D of novel compounds for neoplastic disease therapy. You'll play a lead role in developing and applying models for evaluating the therapeutic potential of new compounds of interest, investigate novel therapies for treating neoplastic disease, and design proof-of-concept studies using both *in vitro* and *in vivo* approaches. Additional duties include establishing academic alliances for product development and identifying licensing candidates; writing SBIR grants and publishing in peer-reviewed journals; and preparing departmental budgets and resources planning. A PhD and at least 2-3 years postdoctoral experience in tumor biology or cellular biology or experience in a related scientific field are required. A back-ground in experimental therapeutics with hands-on experience in developing and applying animal tumor models is a must. One to two years industrial experience, working knowledge of protein biochemistry, purification and characterization formulation, and supervisory skills are preferred. Job Code 60245

At IDEC Pharmaceuticals, you will find a highly stimulating environment with numerous opportunities to develop and expand your skills, along with a comprehensive, competitive benefits package. For immediate consideration, please send your resume and salary history, indicating Job Code, to IDEC Pharmaceuticals Corporation, 11011 Torreyana Rd., San Diego, CA 92121. Fax to (858) 431-8753. Email to hr\_infa@idecpharm.com. EOE. NASDAQ/IDPH.



## Portland, Oregon Chief of Research

Legacy Health System, a 1,500 bed, 4-hospital system in Portland, Oregon invites applicants for the position of Chief of Research. Candidates are expected to have achieved national & international recognition in biomedical or clinical research and to have experience in administration of federally and privately sponsored research programs. The successful candidate will have an M.D. degree and at least 15 years' experience, and will oversee a research program comprised of 90 principal investigators, 200 projects, and a 67,000 square foot modern research center that includes laboratory space, animal and surgical facilities and outpatient clinics. Please submit a curriculum vitae and names of three references to:

Keith I. Marton, M.D., Chief Medical Officer Sr. Vice President Chairman, Search Committee PO Box 3950, Portland, Oregon 97208 Fax: 503.413.5145, Email: jwoodward@lhs.org



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We have immediate openings for Scientists with a Ph.D. and 1-3 years postdoctoral/industrial experience and Research Associates with MS/BS training and 3-5 years industrial experience. We are seeking outstanding synthetic or medicinal chemists who are eager to work in an integrated, multi-disciplinary drug discovery environment. Qualified candidates will have experience in medicinal or combinatorial chemistry and a proven track record in multistep organic chemical transformations. Must have a strong background with modern separation and analytical techniques (HPLC, flash, NMR, MS). Ad Code: 00MC

#### Scientist-Cell Biology

We have an immediate opening for a Cell Biologist to work on our cancer and infectious disease teams. The ideal candidate will have a Ph.D. in biochemistry or cell biology with 1-3 years postdoctoral/ industrial experience. Applications from MS/BS candidates with 5-10 years industrial experience will also be accepted. Qualified candidates will have experience with mammalian tissue culture and molecular biology techniques. Good written and verbal communication skills, a record of accomplishment, and the ability to work within a team are required. Experience with signal transduction, apoptosis, or antibiotic mechanisms a plus. Ad Code: 00CB

We offer excellent compensation packages including a competitive salary, comprehensive benefits, and 401(k). For consideration, please submit your resume to: E-mail: HR@mail.lgbmi.com or send to: LG Biomedical Institute, Human Resources, 3252 Holiday Ct, Suite 101, La Jolla, CA 92037.

### BIOLOGICAL SCIENTIST

Argonne National Laboratory, one of the nation's premier energy research and development organizations, located 20 miles SW of Chicago, has an immediate opportunity for a qualified professional to join our Energy Systems Division. We'll rely on your expertise in molecular biology to supervise small multidisciplinary teams in the development, research and management of projects involving pathway engineering, enzymology, fermentation and biocatalyst design in support of our Biobased Chemicals Initiative.

Many projects will involve partnering with various university and industry contacts as well as interdivisional company collaboration regarding proposal development and project activities. This position requires considerable experience with enzyme modification, gene extraction (environmental source samples), pathway modification, structural biology and bioinformatics. Qualifications include a Ph.D. in biochemistry, microbiology or a related field with 6+ years' experience, or equivalent combination of education/ experience; solid communication and proposal writing skills; and significant supervisory experience involving multidisciplinary research teams.

Argonne provides an excellent compensation/benefits package. For consideration, please send a detailed resume to: Teri Rodriguez, Employment & Placement, Box ES-208882-43, Argonne National Laboratory, 9700 S. Cass Avenue, Argonne, IL 60439. Fax: 630-252-9388. TDD: 630-252-7722. Argonne is an equal opportunity/affirmative action employer.



For additional information or to submit your resume, please visit our website at http://www.hr.anl.gov/ employment.htm.

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Merck Research Laboratories, a world leader in biological and pharmaceutical research, currently has immediate opportunities at our San Diego, CA facility, located in the hub of the scientific community.

### DIRECTOR, DRUG METABOLISM AND PHARMACOKINETICS

We are seeking a Ph.D. chemist, biochemist or pharmacologist with at least 5 years' experience in drug metabolism and/or pharmacokinetic characterization of both early discovery leads and advanced drug candidates for various diseases of the nervous system. Proven ability to identify and implement state-of-the-art techniques in the field to contribute to rapid characterization of large numbers of lead compounds is essential, as is an in-depth appreciation of the importance of DMPK to the success of a drug discovery program. This individual must have excellent interpersonal and leadership skills in order to work with other support drug discovery teams.

### SENIOR RESEARCH CHEMISTS

### MEDICINAL CHEMISTRY AND HIGH-THROUGHPUT ORGANIC SYNTHESIS

These Ph.D. positions require the candidate to possess a distinguished academic record, excellent laboratory skills, a strong publication record, and excellent problem solving and interpersonal skills to work within an interactive drug discovery environment. Candidates from outstanding academic laboratories with up to 3 years' post-doctoral or industrial experience are encouraged to apply for these entry-level positions in a rapidly growing department.

### CHEMIST/STAFF CHEMISTS MEDICINAL CHEMISTRY

Several openings are available in our Medicinal and High Throughput Organic Synthesis Department. Successful candidates should have a BS/MS and must demonstrate proven skills as a synthetic organic chemist. Previous experience in a synthetic or medicinal chemistry research environment is essential.

### CHEMIST/STAFF CHEMISTS ANALYTICAL CHEMISTRY

We are also looking for candidates with 2-5 years' analytical chemistry experience working in a drug discovery environment supporting medicinal chemistry and/or pharmacokinetic research. You must be able to demonstrate expertise using modern separation and analytical tools, including LCMS. Experience with high-throughput analytical techniques is also desirable.

### BIOLOGIST/STAFF BIOLOGIST SAFETY PHARMACOLOGY

We are seeking a MS/BS level individual to support our safety assessment studies across a variety of research programs. The candidate will work within a multidisciplinary team to design and conduct studies, as well as analyze and report data. At least 3 years' experience in biology, pharmacology, toxicology, or a related discipline is desired along with demonstrated organization, analytical, and problem solving skills. Experience in behavioral testing is required.

We offer a comprehensive salary and benefits package. To be considered, please submit your resume, indicating salary requirements and position of interest, to: Attn: L. Alba, MRL – SD, 505 Coast Blvd. South, #300, La Jolla, CA 92037. E-mail: hynn\_alba@merck.com Fax: (858) 452-9279. Qualified candidates will be contacted. No phone calls please. We are an Equal Opportunity Employer, M/F/D/V.



### Research Scientists - Molecular Biology Sentigen Corporation

Sentigen Corporation is a newly founded biotechnology company located adjacent to Columbia University in New York City. We are using molecular biology and genomics to explore the molecular basis of olfaction in insect pests of agricultural and medical relevance. The goal of these efforts is to develop innovative, environmentally acceptable approaches to control deleterious insect species. Sentigen offers an intellectually stimulating scientific environment and stateof-the-art facilities, as well as competitive compensation, benefits package, and stock option plan.

#### Senior Molecular Biologists

Positions are available for creative PhDs to direct research projects to isolate and characterize genes mediating olfaction in selected insect pest species. Successful candidates will have extensive experience in molecular cloning, cDNA and genomic library construction and screening, and gene expression analysis. Individuals with bioinformatics and computing expertise are strongly preferred. Excellent communication skills and project management skills are required.

### Associate Molecular Biologists

Candidates for the position should possess a BS, MS or equivalent degree and have 3+ years of experience in molecular biology, gene cloning, tissue culture and/or gene expression analysis.

Sentigen offers excellent opportunities for career growth and professional development. Interested candidates should send a CV and names, phone numbers, and addresses for three references to:

Sentigen, Audubon Biomedical Center, 3960 Broadway, New York, NY 10032, FAX: 212-928-4441 email: klee@sentigen.com. Sentigen is an Equal Opportunity Employer.

### FACULTY POSITIONS IN CARDIOVASCULAR BIOLOGY UNIVERSITY OF MINNESOTA

The Stem Cell Research Institute and Division of Cardiology in the Department of Medicine at the University of Minnesota invite applications for Tenured or Tenure-Track positions. The Stem Cell Research Institute, recently established at the University of Minnesota Medical School, is dedicated to fundamental and translational research in Stem Cell Biology. To develop basic as well as translational research efforts in multipotent stem cells - such as ES, hematopoietic, neuronal, mesenchymal, hepatic, pancreas and others - the Institute will recruit investigators who examine the genetic and phenotypic characteristics as well as differentiation and maturation potential of stem cells. The cross-departmental Institute will foster interactions between investigators with different expertise/skills ranging from basic developmental biology, molecular biology, physiology, biochemistry, to biomedical engineering.

Successful candidates will be expected to develop a strong extramurally funded research program in the field of molecular cardiology or vascular biology. Areas of expertise include cardiomyocyte, smooth muscle or endothelial cell biology/physiology, functional genomics of cardiac or smooth muscle myocytes and endothelium. as well as research in targeted modification of the genome of cardiac or smooth muscle myocytes or endothelium. Salary and start up funds will be competitive and commensurate with education and experience. Applications are accepted at the Assistant Professor or from outstanding senior scientists at the Associate Professor or Professor level. Candidates must have a Ph.D. and/or M.D. degree and must be U.S. citizens or must be able to secure permanent residence status. Opportunities for joint appointments in other basic science departments, such as the Departments of Genetics, Cell Biology and Development, or Physiology exist.

Applications will be reviewed beginning April 28, 2000 and accepted until positions are filled. Applicants should send a current curriculum vitae, statement of research interests and intentions, and three letters of reference to:

Cardiovascular Biology Search Committee Catherine M. Verfaillie, M.D. Director, Stem Cell Institute University of Minnesota Box 806 Mayo 420 Delaware Street S.E. Minneapolis, MN 55455

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Clair M. Kelley, Ph.D. Department of Pathology St. Jude Children's Research Hospital 332 N. Lauderdale St. Memphis, TN 38105

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### NATIONAL VETERINARY SERVICES LABORATORIES

Consider a position in the Senior Executive Service as Director, National Veterinary Services Laboratories (NVSL), with the United States Department of Agriculture, Animal and Plant Health Inspection Service (APHIS), Veterinary Services (VS). Duty location for this position is Ames, Iowa.

This critical, executive-level position is responsible for planning, coordination and direction of resources, programs and facilities of the NVSL. The NVSL combine to make up the only Federal facility in the U.S. engaged in the diagnosis of both domestic and foreign animal diseases, employing innovative methods to accomplish its mission. The NVSL web site is www.aphis.usda.gov:80/vs/nvsl.

Vacancy announcement APHIS-SES-00-02, qualification requirements and application procedures are posted on: WWW.USAJOBS.OPM.GOV

The booklet, "Applying for a Federal Job (OF-510)," and Optional Application (OF-612) are available at www.opm.gov/forms/himl/of.htm. OR

Call Area Code 202-690-3014

Application Deadline: June 5, 2000

APHIS offers a competitive scientific environment, excellent benefits, and opportunity for advancement.

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The Chemical Industry Institute of Toxicology (CIIT) invites applications for the following positions: (1) Director of the Cancer Biology Program, and (2) Group Leader of Respiratory Biology.

### **Director, Cancer Biology**

CIIT seeks an individual with extensive experience to lead an interdisciplinary program investigating mechanisms of chemical carcinogenesis. The successful applicant should have an international reputation for contributions to understanding the molecular mechanisms of carcinogenesis and have broad knowledge of the field of cancer biology. A demonstrated record of obtaining competitively awarded research funds and managing multiple investigators, as well as multi-year projects, is highly desirable. Strong consideration will be given to individuals who have existing research funding that are transferable. This position will provide leadership for a multiinvestigator research program that spans from studies at the molecular and cellular level to whole animal investigations using transgenic and conventional animals, as well as the use of human cell lines. The major focus is on understanding the mechanisms by which chemicals induce cancer and is supported with chemical industry funding. It is expected that complementary research will be conducted with additional funding secured from other sources. The individual should have well-developed skills for communicating with scientific peers, technical individuals trained in other fields, and industry managers and executives.

### Group Leader, Respiratory Biology

CIIT seeks a respiratory biologist/toxicologist with senior scientific experience. The successful applicant will have an extensive and recognized publication record and documented evidence of an ability to lead, fund and manage a successful independent research program in respiratory tract biology. You should be capable of developing and leading a multidisciplinary team with research interests in the development of animal models of compromised individuals, inflammatory processes in the respiratory tract, the pulmonary pathobiology of particles, and the dosimetry of inhaled material. Working experience in the conduct and evaluation of both <u>in vitro</u> and <u>in vivo</u> studies investigating toxicant-induced respiratory disease and/or the effects of xenobiotics on the respiratory system, and familiarity with a wide array of current molecular and cellular techniques is required.

Interested applicants should submit a curriculum vita with the names of five references. Preference will be given to candidates with a demonstrated record of success in obtaining external funding for their research. An application for employment should also be completed. It can be obtained from CIIT's web site at www.ciit.org. or by calling (919) 558-1401. Please refer to the specific position in which you are interested. Applications and curriculum vitae should be directed to the HR Director, 6 Davis Drive, P.O. Box 12137, RTP, NC 27709-2137. The deadline for applications is July 1, 2000. CIIT offers an excellent salary and benefits package including a 401K savings plan. CIIT is an Equal Employment Opportunity employe

### Postdoctoral Position in Cell Adhesion and Morphogenesis

Position available for a recent Ph.D. recipient to study the role of cell adhesion and associated signaling processes in tissue morphogenesis. Potential areas of study include the molecular mechanisms underlying the regulation of cadherinmediated cell adhesion, the control of B-catenin signaling by cadherins and the APC tumor suppressor protein, and the roles of these processes in embryonic development and tissue morphogenesis.

The candidate should have a strong background in cell, molecular, developmental biology, or biochemistry.

Letters of application briefly describing your research interests, along with a CV and 2 or 3 letters of reference should be sent to: **Barry M. Gumbiner, Ph.D., Cellular** Biochemistry and Biophysics Program, Memorial Sloan-Kettering Cancer Center, Box 564, 1275 York Avenue, New York, NY 10021. EOE/AA



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At The National Academies, we bring about advances that positively impact human endeavor. This is not a solitary undertaking. It reflects a highly collaborative approach that brings together the talents, skills, and backgrounds of an exceptional group of professionals. We invite you to join our acclaimed team in **Washington**, **DC**.

### **EARTH SCIENTIST** Board on Earth Sciences & Resources

The Board on Earth Sciences and Resources is currently seeking an Earth Scientist with expertise in dynamic earth processes and natural hazards. In this position, you will be responsible for the development, administration, and execution of technical studies, including securing required funding, relative to the activities of the board, its Committee on Seismology and Geodynamics, and its US National Committee for Rock Mechanics.

The position requires a Ph.D. or equivalent and at least 4–5 years of related experience in technical writing, proposal development, fundraising, and project execution. For immediate consideration, please send resume with names, addresses, and contact information of 3 references to: **The National Academies, AdS/HA372, 2101 Constitution Avenue, NW, Washington, DC 20418. Fax: (202) 334-1746. E-mail: ohrresum@nas.edu** EOE, M/F/D/V.

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THE NATIONAL ACADEMIES



### MAYO CLINIC POSTDOCTORAL FELLOWSHIP IN STRUCTURAL BIOLOGY

An NIH-funded postdoctoral fellowship is available for an American Citizen or a permanent U.S. resident to perform structural studies of novel Sp1-like transcriptional repressor proteins. This position will be part of an intense collaborative effort among biochemists, molecular biologists, and structural biologists. Applicants should be a competent structural biologist. Experience in NMR, biochemical analysis of protein-DNA interactions, and/or protein crystallization are desirable. Send a curriculum vitae, a description of research experience, and three academic references to:

Raul Urrutia, MD/Franklyn Prendergast, Md, PhD Mayo Clinic Alfred 2-435 200 First Street SW Rochester, MN 55905 Fax: 507/255-6318 E-mail: urrutia.rauk@mayo.edu

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### POST-DOCTORAL RESEARCH OPPORTUNITIES IN MOLECULAR IMMUNOLOGY

Postdoctoral positions available at the Blood Research Institute to investigate: 1) Generating novel technologies to track antigen-specific CD8+ T cells *in vivo* and using them to study priming, activation, expansion and emigration of T cells from secondary lymphoidal organs to the site of graft rejection. 2) Studies related to host-derived RNA-binding proteins during viral infections in murine models. Interested applicants with excellent working knowledge in basic molecular biology and immunology should send a CV, a letter detailing specific training and research interests, and the names and addresses of three references to:

### Subramaniam Malarkannan, Ph.D. Blood Research Institute P.O. Box 2178 Milwaukee, WI 53201-2178 smalarkannan@bcsew.edu For further information, please see our web site at www.bloodctrwise.org.

The Blood Center is an Equal Opportunity/ Affirmative Action Employer Women and minorities are encouraged to apply



### NATIONAL OPTICAL ASTRONOMY OBSERVATORY

The Association of Universities for Research in Astronomy, Inc. (AURA) seeks a new Director of the National Optical Astronomy Observatory (NOAO). We are seeking an individual with an outstanding scientific background, with vision, and with demonstrated leadership and talent for administration in a complex and evolving environment. The Director is responsible for all of NOAO including operations and development. The Director will be expected to lead NOAO's renewal so that it provides the U.S. community with access to world-class facilities such as described in NOAO's Long Range Plan and the NAS/NRC Decadal Survey.

The Search Committee will begin evaluating applications on May 15, 2000. Applications will be accepted until the position is filled. Applications should include scientific and management experience, relevant accomplishments, a resume, a list of three references, and the individual's written view of the future role of NOAO in the U. S. and international astronomy communities. Applications will be kept confidential, and should be sent to:

Dr. John Huchra, Chair NOAO Director Search Committee c/o AURA, Suite 350 1200 New York Avenue N.W. Washington, DC 20005

AURA is an EOE/AA/F/D/V employer



### Materials Scientist:

We have a position open in the fields of optical and electrical biosensor development. The ideal candidate will have a strong scientific background, with a Ph.D. in chemistry or physics, and experience in the development of sensors for biological molecules. A strong capacity for original thought and the ability to turn ideas into products are requirements for this position.

### Microbiologist:

An experienced microbiologist is needed to direct in-house validation of pathogen detection assays. Experience working with pathogenic bacteria is essential and knowledge of immunoassay or FSIS testing protocols would be advantageous. The position requires a Ph.D. or M.S. in food microbiology or related field and the ability to interpret data for technical and non-technical audiences.

### **Microbiologist:**

An experienced microbiologist is needed to develop culture media for the selective enrichment of food-borne pathogens in a wide array of food matrices. Successful candidate should have Ph.D. in food microbiology or related field with post-doctoral or industrial experience.

For immediate and confidential consideration, forward or e-mail resumes to Molecular Circuitry, Inc., Attn: Human Resources, 3400 Horizon Drive, Suite 400, King of Prussia, PA 19406; fax: (610) 313-9604; e-mail: pmartin@molc.net. For more information about Molecular Circuitry, Inc., visit our website at www.molc.net. EOE.

### sociate Scientist/Scientist/Senior Scientist

SmithKline Beecham, a world class leader in Research and Development, continues to pioneer innovative pharmaceutical and healthcare products and services. We have the following opportunity available at our state-of-the-art suburban Philadelphia facility.

Working in the expanding U.S. Mechanistic Enzymology Group in the transnational Molecular Screening Technologies department you will characterize enzyme-substrate and enzymeinhibitor interactions using spectrophotometric, fluorimetric and radiometric methods. You will also run experiments designed to probe and understand both steady state kinetics and transient kinetics, and develop assays amenable to High Throughput Screening. We require a BS or MS with 2-6 years of experience in Enzymology, Biochemistry or Bio-Organic Chemistry, and experience with assay design and/or running enzyme kinetic experiments. Significant experience with working independently to develop assays and design and run enzyme kinetic experiments is essential.

SmithKline Beecham is dedicated to an innovative workplace and supports you with career long opportunities and learning. We offer a competitive benefits and compensation package. For confidential consideration, please forward your scannable resume to: SmithKline Beecham, Ad Code: 2K0197A, P.O. Box 40047, Philadelphia, PA 19106. Indicating Ad Code is essential. Principals only, no agencies, please. For a full listing of current opportunities, or to submit a resume online, visit our website at www.sb.com/careers

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ViroMed Biosafety Laboratories, a company engaged in GLP/cGMP contract testing for the medical device and biopharmaceutical industry, has an opening for a Director in its Analytical Services Department.

As Director, you will be responsible for the planning and implementation of the overall testing strategy as well as assay development and validation for the Analytical Services Department. In addition, you will manage the group's technical staff, serve as Study Director and interact with clients and regulatory authorities.

Qualified candidate will have a Ph.D. in the biological or chemical sciences, 5 or more years experience in working in and managing an analytical lab in a biopharmaceutical or contract testing environment and a strong background in GLP/cGMP guidelines. In addition, you should have a proven record of independent scientific leadership, effective management skills with an emphasis on team building and excellent communication skills.

ViroMed Biosafety is located in the Greater Philadelphia region - an area rich in scientific, cultural and recreational diversity. We offer excellent opportunities for professional growth, a competitive salary, relocation assistance, health benefits and

401(k) plan. Send c.v. and salary requirements to: ViroMed Biosafety Laboratories, ATTN-HR SCIASD300, 1667 Davis Street, Camden, NJ 08104. FAX: (856) 342-8078. E-mail: camdenhr@viromed.com EOE



# mayo

### **MAYO CLINIC**

### BASIC AND TRANSLATIONAL T LYMPHOCYTE BIOLOGY

We are seeking postdoctoral applicants with a strong interest in the immunological basis of disease to participate in projects linking intercellular signaling pathways with the biological role of T lymphocyte activation in organ transplantation as well as the design of mechanism-based therapeutic strategies. Mayo offers state-of-the-art research facilities in a highly interactive environment and interdisciplinary collaboration with basic and clinical scientists. Candidates should have experience in protein biochemistry, molecular biology, and/or the use of murine models of graft rejection and immune activation. Candidates must be eligible for NIH training grant support. Mayo Clinic offers very competitive salary and benefit packages. Send resume and three references to:

David McKean, PhD Chair, Department of Immunology Mayo Clinic 200 First St. SW 321 Guggenheim Building Rochester, MN 55905

Mayo Foundation is an affirmative action and equal opportunity employer and educator.

### WEST VIRGINIA UNIVERSITY SCHOOL OF MEDICINE

The Department of Physiology is seeking a Cardiovascular or Renal Physiologist for a tenure-track appointment at the Assistant/Associate Professor level. Preference will be given to vascular biologists using modern cellular/molecular techniques to study regulation or adaptation of the circulation. We seek outstanding candidates with a Ph.D. degree and postdoctoral experience who will establish and maintain a vigorous, externally funded research program, and who are enthusiastic about collaborating with existing faculty in Physiology and other departments. The successful applicant will join a department of 14 full-time faculty with expertise in cardiovascular, renal, endocrine, neural and pulmonary physiology, and will have access to modern core facilities for transgenic rodent production, recombinant DNA technology, cell/tissue culture, and image analysis. The appointee will also be expected to contribute to departmental missions, including active participation in teaching and graduate education. A competitive salary and start-up package is available. Interested individuals should submit a complete curriculum vitae, a brief description of research interests and career goals, and the names and addresses (including email) of three qualified references to: Matthew A. Boegehold, Search Committee Chairman, Department of Physiology, PO Box 9229, West Virginia University, Morgantown, WV 26505-9229. Review of applications will begin April 28, 2000, and will continue until position is filled. West Virginia University is an Affirmative Action/Equal Opportunity Employer. Women and minorities are encouraged to apply.

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Gilead Sciences is an independent biopharmaceutical company that seeks to provide accelerated solutions for patients and the people who care for them. The Company discovers, develops, manufactures and commercializes proprietary therapeutics for challenging infectious diseases (viral, fungal and bacterial infections) and cancer. We currently have the following position available in our Foster City, CA headquarters.

### **RESEARCH SCIENTIST**

As a member of Gilead's Research Virology team, you will be engaged in an independent research aimed at identifying, validating and characterizing novel targets for effective antiviral therapy. Responsibilities will also include designing and optimizing in vitro efficacy assays, as well as identifying and characterizing lead drug candidates in close collaboration with other research departments.

A Ph.D. in Life Sciences and 3+ years relevant postdoctoral experience with significant scientific achievements proven by a solid publication record are required. Broad expertise and knowledge of molecular biology and biochemistry techniques and concepts, including protein production/characterization, and assay development are essential. Strong planning, organizational, and record keeping skills along with excellent computer, verbal, and written communication skills are also essential. Research experience in virology, as well as industrial research is a plus.

Interested candidates should send a resume to: Human Resources, Job Code SCI-F147, Gilead Sciences, Inc., 333 Lakeside Drive, Foster City, CA 94404, fax (650) 522-5800, or email: careers-fostercity@gilead.com (please include all information in the body of the email). Visit our Web site: www.gilead.com. EOE

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### THE CLEVELAND CLINIC FOUNDATION

### **Pain Research**

Assistant Professor level position to lead our basic and/or clinical research program in pain. Prior experience in pain research, electrophysiology, and/or neuropharmacology is required. Doctoral degree (M.D. and/or Ph.D.) and postdoctoral training required. Primary focus on research, but clinical opportunities available. Join a growing research program in the Division of Anesthesiology and Critical Care Medicine utilizing in vivo, in vitro and molecular techniques to address fundamental research issues. Numerous collaborative opportunities in clinical departments and the Lerner Research Institute. Competitive salary and start-up funds. Candidates should send CV, Name and Fax number of 3 references, and a brief statement of research interests to: Dr. Paul A. Murray, Carl E. Wasmuth Endowed Chair and Director. Center for Anesthesiology Research - FF40, The Cleveland Clinic Foundation. 9500 Euclid Avenue, Cleveland, OH 44195. The Cleveland Clinic Foundation is an Affirmative Action/Equal Opportunity Employer.



The Biology Department of Bowdoin College seeks to fill a one year position in Developmental Biology beginning Fall 2001. Teaching responsibilities include one semester of Developmental biology, a nonmajors course in science and an advanced seminar course on a topic of your choosing. The successful applicant is expected to maintain a research program which includes undergraduates. Please send a CV, a letter of intent which includes a description of your research interests and teaching philosophy and have three references sent to:

### Carey Phillips, Chair Biology Department 6500 College Station Bowdoin College Brunswick, ME 04011-8465

Review of applications will begin April 14, 2000. Bowdoin College is committed to Equal Opportunity through Affirmative Action. Women and minorities are encouraged to apply. For further information about the department and the college, see our web site at www.bowdoin.edu

### Scientist/ Staff Scientist IMMUNOLOGY - BAY AREA -

Protein Design Labs' interdisciplinary approach to drug discovery integrates computer-based design with molecular biology, immunology and protein chemistry. We currently have a great opportunity in our state-of-the-art Fremont, CA facility for a dedicated researcher to join our growing R&D team.

This position is responsible for identifying & evaluating potential therapeutic targets utilizing rodent models of chronic/acute inflammatory disease. Requirements include a Ph.D. in Immunology or a related field and 2-5 years' postdoctoral/industry experience in the characterization of one or more animal models of autoimmune disease. Extensive experience with immunologic techniques, familiarity with histology and molecular biology, and a proven publication record are desired. Candidates must be able to manage a research team and contribute to a multidisciplinary drug discovery effort.

We offer competitive salaries/benefits & attractive stock options. Please send resume to: Protein Design Labs, Inc., HR Dept., Attn: Job# 632-SCI, 34801 Campus Dr, Fremont, CA 94555; Fax: (510) 574-1448; Email: hr@pdl.com. EOE m/t/d/v





### **Professor and Director**

### Center for Cardiovascular Sciences

Albany Medical College invites applications for a senior leadership position at the level of tenured Professor in the Center for Cardiovascular Sciences. The successful applicant will build a new cardiac research group and co-direct, with Dr. Harold A. Singer, the interdisciplinary research and graduate programs in the Center. He/she will have a PhD, MD, or MD/PhD and a nationally recognized and funded program in cardiac development, molecular genetics of heart failure, or a related area of cardiac research. Existing research programs in the Center include vascular cell signaling, vascular reactivity, smooth muscle cell proliferation, endothelial barrier function, inflammatory lung disease, nitric oxide biology/chemistry, and heart failure.

Formation and growth of the Center for Cardiovascular Sciences is part of the AMC Strategic Research Plan to develop outstanding interdisciplinary research and graduate training programs. Faculty in the Center have exciting opportunities for collaboration with clinician scientists in the new Heart and Vascular Institutes and with basic scientists at neighboring institutions, including the New York State Wadsworth Laboratories, Rensselaer Polytechnic Institute, SUNY Albany, and the Trudeau Institute.

Albany Medical College is located in a mid-sized city within the New York Capital Region, and offers diverse cultural and recreational attractions with easy access to Boston, New York City, and the Adirondack Mountains.

For further information about the Center and Albany Medical College, please visit www.amc.edu. Applicants should submit a current curriculum vitae and description of research interests by April 21 to:

Dr. Dennis W. Metzger Chair, CCS Director Search Committee Director, Center for Immunology and Microbial Disease Albany Medical College (MC151) 47 New Scotland Ave. Albany, New York 12208

An Equal Opportunity/Affirmative Action Employer. Women and Minorities are encouraged to apply.



The Jackson Laboratory is one of the world's foremost centers for mammalian genetics research. Located in

Bar Harbor, Maine, the lab is adjacent to Acadia National Park. Mountains, oceans, forests, lakes, and trails are all within walking distance. If you're looking for a more natural environment, this could be the opportunity you've been searching for.

### DATABASE CURATORS: BIOLOGISTS

Professional positions are available in the expanding BioInformatics Programs working with the Mouse Genome Database, Gene Expression Database and the new Mouse Sequence Database.

Successful candidates will be primarily responsible for data acquisition and analysis, evaluating and annotating data to be incorporated into the databases, integrating information from disparate sources, and interacting with research laboratories to facilitate electronic data contributions. In addition, they will participate in database and interface design work, through input into database content and display concepts. Applicants should be experienced in molecular biology or mammalian systems and versed in genetics, genomics, cellular or developmental biology. Other desirable attributes include excellent writing/communication skills. Ph.D. degree in Life Sciences or M.S. with appropriate experience required.

Qualified candidates should send resume to: Human Resources Office, The Jackson Laboratory, 600 Main Street, Bar Harbor, ME 04609 Fax: 207/288-6106 • jobs@jax.org AA/EOE

http://www.jax.org

### SENIOR LEVEL ADVISOR FOR PERFORMANCE ASSESSMENT (\$101,566-\$130,200)

The U.S. Nuclear Regulatory Commission is currently seeking a Senior Level Advisor for Performance Assessment to join our team. Responsibilities: provide authoritative technical assistance, consultation, and guidance to the Office of Nuclear Material Safety and Safeguards (NMSS) management and staff regarding performance and dose assessment methodologies; serve as a Commission-wide resource for major policy, program, or operational initiatives associated with performance assessment of waste repositories and decommissioned facilities; serve as the lead representative with external government agencies, industry organizations, university researchers, and professional sources with interest in NRC performance assessment activities; and participate as a recognized technical expert representative of the regulatory staff and chairs NRC, national, and international committees in the development of criteria, codes, and regulations concerning performance assessment.

**Requires:** at least 7-10 years of specialized experience, or an equivalent combination of education and experience. Specialized experience is experience in any one or combination of activities related to the duties of the position and which demonstrates that the applicant has sufficient knowledge of the activities related to the licensing of waste disposal systems, and of the principles, concepts, and methodologies of performance and assessments and their application to waste management and decommissioning. At least one year of this experience should be comparable in difficulty and responsibility to the kind of work normally assigned at the GG-15 level or equivalent.

### **How To Apply**

For more information and an application, contact our website at: **www.nrc.gov** (click on emplymt. opps. & then appropriate grade level for detailed listings), or call the NRC Smartline at **1-800-952-9678** and refer to Vacancy Announcement # SL00008. Please send your resume and salary history, SF-171, or OF-612, perfomance appraisal, and statement addressing rating factors, as soon as possible, **but no later than 04/28/00**, to: **U.S. Nuclear Regulatory Commission**, **Office of Human Resources**, **Dept. A-2010**, **Attn: J. Gallagher/A. Brydson-Harper, Mail Stop 0-3E 17A**, **Washington**, **DC 20555**.



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# ACADEMIC CONNECTIONS

Here are **just a few** of the schools with graduate programs currently listed:

- Albert Einstein College of Medicine
- Arizona State University
- Colorado State University
- Cornell University
- Duke University
- Emory University
- Johns Hopkins University
- Mt. Sinai Graduate School of Biological Science
- University of Texas at Austin
- University of Toronto
- Vanderbilt University
- Washington University

Drive traffic to your school's web site by including your graduate program on the leading scientific web site.

U.S.:	Bren Peters
Phone	202-326-6541
Fax	
E-mail	science_displayads@aaas.org

Europe:	Debbie Cummings
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Fax	+ 44 (0) 1223 326 532
E-mail european_ads@science-int.co.uk	



www.sciencecareers.org Click on Academic Connections



R&D Systems, Inc., a leading manufacturer of biological products, is looking for proven scientific professionals. We offer a competitive salary and a comprehensive benefits package.

### Manager

### **Protein Purification Development**

Duties include leading a group of approximately 10 Scientists and Research Associates in the Protein Purification Development group in the development of cost-effective, robust and scaleable processes for the purification of a large variety of recombinant proteins. Requires PhD in Biochemistry or related field with a minimum of 7+ years of relevant experience in the biotechnology or pharmaceutical industry, hands-on experience in recombinant protein purification including laboratory and process scale chromatography, ultrafiltration, centrifugation, etc. Knowledge of protein chemistry and protein characterization methods. Excellent laboratory, communication, problem solving and people skills are required. (Job Code M/90)

### Group Leader Cell Culture

Duties include leading an existing mammalian cell culture group responsible for developing medium to large scale cell culture processes for recombinant protein production. Requires PhD in Cell Biology or related field with 2-5 years experience in mammalian cell culture techniques, bioreactor systems, recombinant protein expression and media optimization. Excellent communication skills, lab management experience and knowledge of cGMP regulatory requirements are also desired. (Job Code M/75)

### Scientist

Duties include recombinant protein purification and refolding from bacterial, mammalian and insect cells. Requires PhD or BS/MS with 8+ years in protein chemistry or related field. Relevant experience in the biotechnology or pharmaceutical industry and familiarity with process scale chromatography are preferred. Excellent laboratory, communication, problem solving and people skills as well as knowledge of cGMP are required. (Job Code SCI/90)

Candidates wishing to be considered for these positions please submit your curriculum vitae or resume to:

R&D Systems, Inc. Human Resources 614 McKinley Place NE Minneapolis, MN 55413

hr@rndsystems.com No Agencies Please Equal Opportunity Employer

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Serono, a world-leading biotechnology company headquartered in Geneva, is committed to applying its proven expertise to new therapeutic fields: AIDS wasting, growth & metabolism, immunology, oncology and multiple sclerosis. And we're backing it up with \$200 million in R&D, ensuring a stable and successful future.

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For a closer look at Serono, please visit us at: www.seronousa.com

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### Molecular Geneticist Post-doctoral position

A postdoctoral position (GS-11) is available for development of DNA markers in hardwood trees and the applica-

tion of DNA markers and other molecular tools to hardwood tree breeding and genetics. The position will be part of an interdisciplinary team of six university and federal scientists and tree improvement specialists whose research and development projects focus on the improvement of hardwood tree species and hardwood forest regeneration issues. The team will work in the Hardwood Tree Improvement and Regeneration Center (HTRIC) at Purdue University, West Lafayette, IN. The HTIRC is a collaborative effort between the North Central Research Station (US Forest Service), the Purdue Department of Forestry and Natural Resources, the Indiana Department of Natural Resources Division of Forestry and the Indiana Forest Industry.

The HTIRC is located in 2500 sq. ft. of newly remodeled laboratory space within Purdue's new Agricultural Genomics Center. The Center includes a well-equipped genomics core facility and houses a group of four Purdue faculty members who specialize in computational genomics.

Candidates must be US citizens. We will begin reviewing applications March 15, 2000. Please send curriculum vitae, college transcripts, a brief description of research interests and contact information for three references to: Dr. Jeanne Romero-Severson, Purdue University, 206C WSLR, 1159 Forestry Bldg., West Lafayette, IN 47907-1159. E-mail: romeros@fnr.purdue.edu, FAX: 765-496-7255.



The New England College of Optometry is seeking applications for a full-time, tenure track, faculty position at the level of Assistant or Associate Professor. The College is a small but dynamic institution with a strong commitment to research, a successful Myopia Research Center, and a record of NEI funded research.

The successful candidate must have a strong record of independent, biologically based research in the eye or visual system, and will be expected to establish an externally funded program. Teaching assignments will be based upon the candidate's background and institutional needs, but preference will be given to those with interest in pharmacology

Applicants should submit a curriculum vitae a concise description of research interests and goals, and the names of three professional references to:

> Mark Zorn, Ph.D., O.D. **Chair, Department of Biosciences** New England College of Optometry 424 Beacon St. Boston, MA 02115

The New England College of Optometry is an Equal Opportunity Affirmative Action employer

### **Terry Fox Laboratory** Vancouver

The Terry Fox Laboratory is a multidisciplinary research group in the British Columbia Cancer Research Centre, supported by the BC Cancer Agency and affiliated with the University of British Columbia. Staff consists of 11 Senior Scientists, 50 graduate students and postdoctoral fellows, and 50 support personnel.

Junior and Senior Postdoctoral Positions are available with:

Gerald Krystal, PhD: Cytokine-induced signal transduction & the role of SHIP in hematopoiesis.

Keith Humphries, MD, PhD: Hox transcription factors in hematopoietic stem cell functions; gene therapy of Sickle Cell Disease; transgenic/gene targeted mouse and embryonic stem cell models.

Peter Lansdorp, MD, PhD: Genes involved in telomere length regulation in C. elegans, mice and man.

Connie Eaves, PhD: Hematopoietic stem cell proliferation and self-renewal control; CML leukemogenesis; gene therapy of Sickle Cell Disease.

Fumio Takei, PhD: Molecular analysis of natural killer cell receptors; studies on regulation of cell adhesion molecules.

Rob Kay, PhD: Molecular genetics of cell cycle regulation.

Pamela Hoodless, PhD: Signal transduction by TGF-B family members and their roles in embryonic patterning and cancer using transgenic/gene targeted mouse models.

Dixie Mager, PhD: Endogenous retroviruses; genetics of natural killer cell receptor genes; bioinformatics.

Heather Sutherland, MD, PhD: Assays of myeloma and AML stem cells; immunomagnetic purging for autologous BMT.

Donna Hogge, MD, PhD: Leukemic stem cell biology; targeted drug therapy for AML.

Allen Eaves, MD, PhD: Hematopoietic stem cell procedures (purging, separation, expansion, assays) for autologous BMT; CML stem cell biology.

Applicants should submit their CV, university transcripts and names of 3 references to the above senior scientists at the:



**Terry Fox Laboratory** 601 West 10<sup>th</sup> Avenue Vancouver, B.C. V5Z 1L3 Canada Tel: (604) 877-6070 Fax: (604) 877-0712 Email: jwoo@bccancer.bc.ca

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### Genetics Institute Cambridge & Andover, MA

At Genetics Institute, one of the largest developers of protein-based therapeutic products, our objective is to defend against the effects of debilitating diseases. From BeneFIX, a Hemophilia B blood coagulant, and Neumega, an agent that combats platelet deficiencies in cancer patients, to ReFacto, a recently approved therapy for Hemophilia A, we see our discoveries through the entire research and commercialization process, resulting in therapeutic treatments that improve the quality of life.

Ideal candidates have a BS, MS and/or Ph.D. Opportunities exist in **Cambridge and Andover**, **MA** in the following areas:

### <u>Scientific/Development/</u> Engineering

- GENOMICS & BIOINFORMATICS
- CELL & MOLECULAR BIOLOGY
- PROCESS ENGINEERING/ DEVELOPMENT
- PROTEIN PURIFICATION/ CHARACTERIZATION
- FORMULATIONS/ANALYTICAL METHODS DEVELOPMENT
- MEDICINAL/BIOLOGICAL
   CHEMISTRY



For more information on exciting job opportunities at Genetics Institute visit our website at: www.genetics.com

### Wyeth-Lederle Vaccines Pearl River, NY

We are the leader in new vaccine development, with campus-like facilities and cutting-edge technologies and equipment. Although well known for pediatric vaccines, the current pipeline of vaccines under Research and Development spans bacterial and viral diseases that affect people in all walks of life. Multiple technologies are being brought to bear, including genomics, delivery technology, conjugation and cutting edge immunological assays. WLV is composed of research and development personnel who have established a strong individual identiry within Wyeth-Ayerst.

Ideal candidates have a BS, MS, Ph.D. and/or M.D. in Molecular Biology, Immunology or Biochemistry. Opportunities exist in **Pearl River and Rochester**, NY; Marietta, PA; and Sanford, NC for Scientists in the following areas:

- CHEMISTRY
- GENE EXPRESSION & GENE DELIVERY
- BIOINFORMATICS

### Wyeth Pharmaceuticals Providence, RI

As a new manufacturing unit of Wyeth-Ayerst, we are equipped with state-of-the-art equipment and technology, including one of the world's largest cell culture facilities. The Rhode Island facility will be producing Enbrel<sup>®</sup>, a treatment for rheumatoid arthritis. With more than \$350 million in US sales last year and with the approval of Enbrel<sup>®</sup> in the European Union in February 2000, we're poised for rapid growth and immense success.

Candidates must have 8 years' related experience. Supervisors and Specialists are needed in these areas:

### **Quality Control**

- CELL-IMMUNOLOGY
- MICROBIOLOGY
- BIOCHEMISTRY/CHEMISTRY

#### **Production**

- PROCESS SERVICES
- CELL CULTURE
- PURIFICATION

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Please forward your resume to: Wyeth-Ayerst, Reference OPSCI, P.O. Box 7886, Philadelphia, PA 19101-7886. Fax in fine mode to: (610) 989-4854. Email: jobs@RAMAIL1.wyeth.com (ASCII format, no attachments, subject: resume).

Principals only. Equal Opportunity Employer, M/F/D/V.

### FACULTY POSITION IN BIOINFORMATICS/QUANTITATIVE BIOLOGY/GENOME ANALYSIS ASSISTANT, ASSOCIATE OR FULL PROFESSOR OF BIOPHARMACEUTICAL SCIENCES (TENURE TRACK) DEPARTMENT OF BIOPHARMACEUTICAL SCIENCES UNIVERSITY OF CALIFORNIA, SAN FRANCISCO

The Department of Biopharmaceutical Sciences, in conjunction with the Department of Biochemistry and Biophysics, invites applications for a tenure-track position at the Assistant, Associate or full Professor level in the field of bioinformatics/quantitative biology, beginning July 2000. We are seeking candidates with interests in genome analysis, structural genomics or bioinformatics, e.g., analysis of DNA and protein sequence information, who would participate in new initiatives at UCSF in genomics, pharmacogenomics, and quantitative biology.

Applicants should have a Ph.D., M.D. or other advanced degree with research experience and are expected to establish a dynamic research program. Applicants are also expected to actively participate in graduate training in Quantitative Biology and in professional school teaching. Applicants will be eligible for membership in the PIBS graduate training consortium.

Please send a curriculum vitae, three letters of reference, a summary of current research, and a concise outline of future research by June 15, 2000 to the address below. Electronic applications are welcome.

Quantitative Biology/Genome Analysis Search Committee Department of Biopharmaceutical Sciences, Box 0446 513 Parnassus, Room S-926 University of California, San Francisco San Francisco, CA 94143-0446 Eric Maxey (emaxey@itsa.ucsf.edu)

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

### **PSYCHOGENICS**

PsychoGenics, a dynamic biotechnology company located in the northeast U.S., employs functional genomics strategies to validate targets for and develop novel models of CNS disorders. PsychoGenics' goal is to integrate molecular biology and behavioral and neurobiological science in order to bring CNS drug discovery into the postgenomic era. PsychoGenics has several exciting opportunities.

### Director of Behavioral Pharmacology.

Will develop and supervise the use of existing and novel mouse models of CNS disorders. The successful candidate must be experienced in pharmacological research, as s/he will also be heavily involved in PsychoGenics' business development efforts and in consulting with PsychoGenics' pharmaceutical clients and partners. This is a critical and highly visible leadership position, reporting directly to the VP Research, and requires a record of scientific excellence as well as strong interpersonal and communication skills.

### Behavioral Research Associates.

Will apply state-of-the-art methods to study the behavioral and psychopharmacological characteristics of normal and genetically altered mice. Should have a minimum of 2-3 years relevant animal experience and be computer proficient.

At PsychoGenics you'll enjoy a competitive compensation package while working in an exciting environment that fosters scientific and personal development. Interested candidates should send or email their CV along with the names of three references to:

Berend Olivier, Ph.D., VP Research PsychoGenics, 4 Skyline Drive, Hawthorne, NY 10532 email berend.olivier@psychogenics.com



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### Solutions for Genomic Research

Incyte Pharmaceuticals is a leading provider of an integrated platform of genomic technologies designed to aid in the understanding of the molecular basis of disease. Our platform includes database products, genomic data management software, microarray-based gene expression services, and related reagents and services—information management tools critical to the pharmaceutical and biotechnology industries for drug discovery and development. The employees of Incyte provide the tremendous energy, talent and expertise that will help us revolutionize the world of healthcare. We're looking for individuals who share our vision and want to play a role in defining a new industry as we build our global organization.

Director, Research Bioinformatics Plan and direct the Best View of the Genome Research Initiative, exploring ways to maximally benefit from the emerging human genome by making use of all available public and proprietary Incyte information. Requires a PhD in Bioinformatics or related, 8+ years management experience, analysis of eukaryotic (preferably human) genomic sequences, and a publication track record. Req. 3966

#### Senior Research Associate/Scientist-Thoughput Expression Analysis

BS/MS or equivalent, 5+ years experience (or PhD with relevant experience), excellent communication skills and ability to work as a team member. Experience in gene expression monitoring technologies (precise application of quantitative PCR on large scale), good molecular biology skills, experience handling RNA and cDNA libraries, computer literacy, and experience with databases are required. Management experience desired. Reg. SD3690LS

### Scientist/Associate Scientist

Perform R&D of novel cDNA library methodologies and saturation cloning of pharmaceutically relevant gene families. Extensive experience in sophisticated molecular biology techniques, especially cloning, RNA/DNA purification and analysis, PCR, hybridization screening, genomics and cDNA library construction needed. PhD or MS or equivalent and 6+ years lab experience required. Background in functional genomics and/or model organisms is a plus; proficiency in database structure and strong computer skills desired. Req. SD3490AC

### Director, Research Programs

Assist the Sr. VP, Research, in formulating and implementing strategy across research initiatives. Requires an MS/PhD or equivalent in Biology/Bioinformatics, 8+ years management experience in a research setting, and excellent organizational, analytical and interpersonal skills. Clinical research experience a plus. Req. SD4060

#### Senior Bioinformatics Scientist/ Scientist, Sequence Analysis

Requires a PhD or equivalence rataysis bioinformatics, particularly sequence analysis, experience applying principal search algorithms to analyze genomic data coupled with programming experience in C and/or Perl. Two plus years in data analysis/data management in a bioinformatics environment is desired. Req. SD4014GM

Some positions may be located at our state-of-the-art microarray facility in Fremont. You'll find we offer competitive salaries, an outstanding benefits package and significant opportunities for professional growth. For more information, go directly to our website at www.incyte.com. Then send your resume to: Incyte Pharmaceuticals, Inc., 3174 Porter Dr., Req. \_\_\_\_\_ Palo Alto, CA 94304, fax 650/845-4176, email employ@incyte.com. Incyte is proud to be an equal opportunity employer, and recognizes the talent of its diverse workforce.

www.incyte.com

### Bioinformatics Scientist, Computational Biology

Participate in design/implementation/benchmarking of novel algorithms for problems in computational biology. Requires MS/PhD in Computer Science, Bioinformatics, Math or equivalent, strong analytical and computational skills and substantial programming experience with C, C++. Req. SD4015EG

### Senior Bioinformatics Scientist, Genomic Discovery

Perform data mining from cDNA and genomic databases; develop bioinformatics strategies for gene prioritization and enhancing value of sequence information. Requires a PhD or equivalent in Human Genetics, Genomics, Biology, or related field, strong computer skills and experience with sequence search tools. Req. SD3817ES

### Software Engineers

Requires a BS in Computer Science, Engineering or Biology (preferred) with some of the following skill sets: Visual Basic, C/VC++, Delphi; barcodes, 2D data matrix IDs; Java, Perl, Sybase, SQL. Req. 3747

#### Scientific Programmer

Automate and optimize complex programs in a production environment. BSCS/MSCS, superior knowledge of UNIX, Perl/C/C++ and Oracle Pro\*C programming are required. Req. 3737

#### Scientific Programmer

Support scale-up of contract sequencing product. BSCS/MSCS, UNIX, Perl/C/C++ programming, experience with sequence analysis programs, and knowledge of molecular biology are needed. Req. 3729

#### **Bioinformatics Associate**

Qualifications include a Bachelor's degree with SQL, Perl, and UNIX skills. Background in biology and genetics preferred. Req. 1248

### Therapeutic Area Directors

These Director roles will set the strategic direction of our leading-edge expression database products in one research area: CV Diseases, Metabolic Disorders, Oncology, Neurodegeneration, Allergy and Inflammation. Requires a PhD and postdoctoral training in a biological science with 7-10 years experience and a record of research in one of the therapeutic areas. Req. 3967



mayo

### Mayo Clinic Smith Fellowships in Neurologic Disease Research

Through the gift of a generous benefactor, basic and clinical research fellowships to study neurologic disease with an emphasis on Alzheimer's diseases, Parkinson's disease, frontal temporal dementia and stroke, are available at Mayo Clinic in Jacksonville, Fla. These fellowship awards (\$40-50,000/yr) are available to applicants with a Ph.D., M.D., M.D.-Ph.D. degree or equivalent, and are designed to enable recipients to pursue their research interests under the guidance of an established mentor. The fellowships are targeted towards mature individuals with sufficient training that they may soon become independent investigators. In addition to these Smith Fellowships, a number of traditional postdoctoral positions are also available.

More detailed information on the Smith Fellowships, other postdoctoral positions and the individual research programs is available at www.mayo.edu/res-jax/jax\_res.html. Interested applicants should supply an updated version of their curriculum vita with their first e-mail or written contact. To apply, contact Pat Joy by e-mail at joy.patricia@mayo.edu or by surface mail: Attention: Smith Fellowships, Pat Joy, Birdsall Medical Research Building, Mayo Clinic, 4500 San Pablo Road, Jacksonville, FL, 32224. *Mayo Clinic is an affirmative action equal opportunity educator and employer.* 

### **GLOBAL OPPORTUNITIES**

### Founding Director Remote Sensing & Geographic Information Systems Center

Sultan Qaboos University, the National University of the Sultanate of Oman, is pleased to announce the establishment of a Remote Sensing and Geographic Information Systems (RSGIS) Center. Applications are invited for the Founding Director of the Center. The Center is a University central facility serving the Colleges of Engineering, Science, Agriculture and Arts. The primary aims of the Center include:

- Teaching courses in Remote Sensing & GIS within the University.
- · Coordinating research activities within SQU.
- Providing training courses, workshops and seminars for Government employees.
- Promoting collaboration with ministries, industry and institutions outside the Sultanate.

The incumbent will provide leadership for the overall organization and administration of teaching, research and service activities of the Center. The incumbent will be responsible for training, assignment and evaluation of personnel; planning and budgeting for facilities and equipment; recommending the hiring, promotion, termination and discipline of staff; liaising with relevant departments in the University and government agencies and the private sector and seeking external funding for the Center.

Applicants should possess a Ph.D. from a reputable University. Proficiency in spoken and written English is required. In addition, some proficiency in spoken and written Arabic would be an asset. The incumbent should have sufficient experience to be able to hold an academic position, preferably at the Full Professor level, in one of the Colleges at SQU. The position will involve 50% administration and 50% teaching/research.

Apart from a very attractive tax free base salary, Sultan Qaboos University offers free furnished accommodation, end of service gratuity, annual leave with return air tickets, free medical treatment in Government Hospitals in the Sultanate.

Interested candidates are requested to submit a letter of application and full CV, quoting our Ref: ADV/ENG/02/2000, to: (Closing Date: 31st May, 2000)

The Director, Personnel Affairs Sultan Qaboos University P.O. Box 50, Al-Khod - 123, Sultanate of Oman Email: personel@squ.edu.om FREE weekly job notification!

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### SCIENTIFIC PROGRAM MANAGERS NIH RESEARCH ADMINISTRATION

The National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK) is seeking scientists (M.D., Ph.D. or equivalent) for four positions to develop programs to capitalize on recent research advances which offer opportunities for progress toward new understanding and treatments for diabetes. Each position involves close interaction with leading researchers, scientific administration of grants and contracts, program planning and development, and the opportunity to organize and attend scientific meetings. Successful candidates will have independent research experience, excellent interpersonal and written communication skills, the ability to identify research priorities and opportunities, and the ability to track and analyze the success of initiatives and programs.

Applications are invited for positions to manage expanding programs of diabetes research in the following four areas:

- · genetics, genomics, expression profiling, and bioinformatics
- immunology, autoimmunity, and virology
- metabolism of glucose, proteins, and lipids
- clinical research/clinical trial design and management in diabetes and endocrinology.

These positions are located in the Division of Diabetes, Endocrinology, and Metabolic Diseases. An overview of areas of science encompassed within the Division and current initiatives to expand research can be found at http://www.ep.niddk.nih.gov/divisions/dem/demhome.htm

Competitive salaries commensurate with experience are available for these positions. The vacancy announcements and related qualification information can be obtained by calling (301) 496-4231 or at http://ohrm.niddk.nih.gov/employment.html.

The deadline for applications is May 31, 2000. Submit a CV, bibliography, and supplemental qualifications statement to: Mr. Ronald Sleyo, Office of Human Resource Management, NIDDK, NIH, Building 31, Rm. 9A34, 31 Center Drive MSC 2560, Bethesda, MD 20892-2590. Email: sleyor@extra.niddk.nih.gov

> U.S. Citizenship is Required The NIH is an Equal Opportunity Employer Minority and Women Applicants are Encouraged to Apply

### Behavioral Genetics Department of Psychiatry The University of Chicago

A full-time faculty position at Assistant to Associate Professor level is available for an independent investigator interested in the genetic basis of rodent behavior. These behaviors might include (but need not be limited to) open field activity, cognitive traits, aggression, sexual and parental behaviors, acoustic startle and prepulse inhibition, as well as the behavioral actions of drugs subject to abuse, such as ethanol, nicotine, cocaine, and opiates, and of psychotropic agents used in treatment of mental disorders. The setting is a Department with extensive core facilities for high-throughput genotyping and sequencing, active laboratories studying linkage genetics and molecular biology of various psychiatric disorders, and biostatistical expertise and innovation. There is a strong interest in collaboration on positional cloning studies for genes linked to behavior.

Appropriate initial resources of laboratory and office space, animal facilities, and funding are offered by the Department. A consortium of Department chairs is interested in this recruitment, including Human Genetics (Dr. David Ledbetter), Neurobiology, Pharmacology, and Physiology (Dr. Sangram Sisodia), and Neurology (Dr. Raymond Roos). Joint appointment to one or more of these Departments is possible for the successful candidate. The successful candidate will also have teaching responsibilities.

Please send your curriculum vitae and up to three reprints to: Dr. Elliot S. Gershon, Professor and Chairman of Psychiatry, Professor of Human Genetics, University of Chicago, 5841 S. Maryland Ave. MC3077, Chicago, IL 60637. E-mail egershon@yoda.bsd.uchicago.edu. Telephone 773-834-2660, fax 773-834-3562. Please respond by April 30, 2000.

The University of Chicago is an affirmative action/equal opportunity employer. Women and minorities are encouraged to apply.



### EARTH SCIENCES/MARINE SCIENCES INSTRUCTOR IRVINE VALLEY COLLEGE

### MINIMUM QUALIFICATIONS

- The successful candidate must meet one of the following criteria: 1. Master's degree or higher in geology, geophysics, earth sciences, meteorology, oceanography, or paleontology; OR.
  - 2. Bachelor's degree in geology AND Master's in geography, physics, or geochemistry; OR,
  - 3. A combination of education and experience that is at least the equivalent of items 1 or 2 above (Candidates making application on the basis of equivalency **must** submit the Supplemental Application for Equivalency Determination form in addition to all other required materials.); **OR**,
  - Valid California credential that authorizes service as a community college instructor of Geological Sciences and/or Marine Sciences.

### **EXPERIENCE REQUIRED**

- 1. Minimum of one (1) year of successful experience teaching geological and/or marine sciences at the college level.
- 2. Evidence of a sensitivity to and understanding of the diverse academic, socioeconomic, cultural, disability, and ethnic backgrounds of community college students.
- 3. Demonstrated skill in communicating effectively with students and colleagues.

### **DESIRABLE QUALIFICATIONS**

Preference will be given those candidates demonstrating a high level of professional expertise on the basis of:

- 1. Experience teaching Earth Science, Geology Field Studies, Marine Science and/or Marine Geology.
- Knowledge and ability to integrate computer technology in the classroom and be able to use such technology to offer curriculum and instruction through distance delivery modes, as appropriate.

### SUMMARY OF DUTIES AND RESPONSIBILITIES

Instruct a variety of lecture/laboratory division geological science courses including Introduction to Geology, Earth Science, Marine Science or other courses. Assist in the development and implementation of a comprehensive geology curriculum. Maintain an aggressive Field Studies Program. Work with technical staff to assure quality instruction. Assignments may include day, evening and weekend hours. Participate in general faculty functions related to the educational program, such as the Associated Geology Student Club, and staff development/flex calendar activities.

### CONDITIONS OF EMPLOYMENT

- 1. Contract: Full-time, tenure track faculty assignment beginning with the Fall 2000-2001 academic year. Current contract calls for 178 duty days per academic year.
- 2. Salary: \$33,814 to \$52,412 commensurate with education and prior experience.

### **APPLICATIONS AND INQUIRIES**

Office of Human Resources -**Opening #1466-2201** South Orange County Community College District 28000 Marguerite Parkway Mission Viejo, CA 92692

CLOSING DATE: April 10, 2000

SPECIAL NOTICE: Position Contingent on Funding for the 2000-2001 Academic Year.

SOCCCD IS AN EQUAL OPPORTUNITY, TITLE VII, ADA, AFFIRMATIVE ACTION EMPLOYER.

#### POSITIONS OPEN

**DIRECTOR, LABORATORY ANIMAL SER-VICES** (LAS). The Medical College of Georgia (MCG) invites applications for the position of Director of Laboratory Animal Services (LAS). The Director reports to the Vice President for Research and has potential opportunity for an appointment within one of the academic departments at MCG. Excellent opportunities will be extended to develop an independent research and/or teaching program.

Laboratory Animal Services supports a campuswide laboratory animal care program, including primate and transgenic facilities, with responsibility for compliance with all applicable laws, rules, regulations, and policies relating to the humane care and use of laboratory animals. The Director of LAS must have a Doctorate of Veterinary Medicine from an accredited institution and be licensed in at least one state. Board eligibility by ACLAM (American College of Laboratory Animal Medicine) is desirable.

The Director will be responsible for maintaining AAALAC accreditation standards, overseeing animal husbandry, and providing routine clinical veterinary animal care to all animals that have been approved for use by the Institutional Animal Care and Use Committee (IACUC). The Director, as attending veterinarian, will review animal protocols with the IACUC and will confer with Principal Investigators performing research activities and assist them when required. The Director will be responsible for providing training to all faculty, staff, and students that work with animals.

Letters of application with résumé and three letters of reference should be sent to: Dr. Ralph C. Kolbeck, Search Committee Chairman, Laboratory Animal Services (CB 1327), Medical College of Georgia, Augusta, GA 30912-4600. Applications received by April 30, 2000, are assured full consideration. For more information about LAS, see website: http://www.mcg.edu/research/animal/index. html. As a unit of the University System of Georgia, the Medical College of Georgia is committed to cultural, ethnic, racial, and gender diversity in the faulty, staff, and student body, supported by practices and programs that embody the ideas of an open, democratic, and global society. Equal Employment Opportunity/Affitmative Action Employer.

#### FACULTY POSITION IN NUTRITION

The Brooklyn College Department of Health and Nutrition Sciences invites applications for a tenure-track ASSISTANT PROFESSOR position in nutrition beginning fall 2000. Responsibilities include conducting research, teaching graduate and undergraduate nutrition courses, advising students, and participating in community service. A Doctorate is required. Research publications, familiarity with clinical nutrition, an American Dietetic Association didactic program in dietetics or approved preprofessional practice program and use of computers are expected. R.D. and history of external funding are preferred. Send a statement of qualification, curriculum vitae, three letters of recommendation, and two publications or papers to: Dr. Erika Friedmann, Chair, Department of Health and Nutrition Sciences, Brooklyn College, 2900 Bedford Avenue, Brooklyn, NY 11201-2889. E-mail: erikaf@brooklyn. cuny.edu. Applicant review begins May 15, 2000. Information about our programs is available at website: http://academic.brooklyn.cuny.edu/hns. Affirmative Action/Equal Employment Opportunity/Immigration Reform and Control Act/American Disability Act Employer.

#### BIOCHEMIST CARLETON COLLEGE

Applications are invited for a one-term faculty appointment (September through November 2000) in the Department of Biology. Teaching responsibilities include a majors' lecture and laboratory course in biochemistry. Ph.D. preferred; A.B.D. considered. Send application, curriculum vitae, graduate transcripts, a statement of teaching philosophy, a brief summary of research, and three letters of reference to: Mark McKone, Department of Biology, Carleton College, Northfield, MN 55057-4025. Application deadline is 1 May 2000. Carleton College is an Equal Opportunity/Affirmative Action Employer. Women and minority candidates are strongly encouraged to apply.

### POSITIONS OPEN



#### LABORATORY ASSISTANT DIRECTOR RICHMOND, VIRGINIA

The Virginia Division of Consolidated Laboratory Services (DCLS) is seeking a qualified applicant to serve as ASSISTANT DIRECTOR for the Bureau of Analytical Services. DCLS, one of the largest consolidated state laboratories, provides analytical support to local, state, and federal human and animal health, law enforcement, consumer protection, and environmental programs. This position will oversee subordinate group managers and laboratory professionals that perform diverse and complex scientific analyses. Responsibilities include personnel management, quality service delivery, and budget administration. Participates in strategic planning, training, and customer support activities; compliance with laboratory safety, quality assurance, and accreditation standards; and the coordination of grant writing and research and development initiatives. For a list of job requirements, please e-mail: swestfall@dgs.state. va.us or Telephone: 804-786-3055. Position # CL017. For consideration, download an application at website: www.dpt.state.va.us and submit to: DGS-HR, P.O. Box 644, Richmond, VA 23218-0644. FAX: 804-371-7841 by 5 p.m., April 21, 2000. Equal Opportunity Employer.

#### VICE PRESIDENT FOR RESEARCH ADMINISTRATION EMORY UNIVERSITY

Quick Leonard International, a retained search firm, is seeking to fill the position of Vice President for Research Administration at Emory University. This position serves as the chief administrative officer responsible for the effectiveness and efficiency of the infrastructure that supports the research mission of the University. The mission includes work carried out by faculty involved in original research throughout the University, including the humanities, social sciences, medicine, and the natural sciences.

The successful candidate will exhibit executive-level qualifications and skills needed to exercise leadership in an educational organization by providing direction and guidance to the policies, projects, and programs of the office. The individual should have a minimum of 10 years of experience demonstrating progressively increasing responsibility in one or more areas related to the research infrastructure. Sufficient knowledge of scientific matters is required, and experience in scientific writing and/or reviewing research proposals is a strong plus.

Interested and qualified candidates may contact: Debra Spangler, Executive Director of Quick Leonard International, 233 South Wacker Drive, Sears Tower, P.O. Box 06408, Chicago, IL 60606-0408. Telephone: 312-876-9261; FAX: 312-876-9264; e-mail: dspangler@qlisearch.com.

VISITING ASSISTANT PROFESSOR: Department of Marine and Coastal Sciences, Rutgers, The State University of New Jersey. The Institute of Marine and Coastal Sciences (New Brunswick) invites applications for a one-year sabbatical leave replacement position beginning fall 2000, with the possibility of renewal for a second year. Courses include: half of advanced chemical oceanography (fall), seven to eight lectures in a team-taught introductory marine sciences course (fall), and half of an undergraduate field and laboratory course in oceanographic methods and data analysis (spring). Postdoctoral experience and commitment to teaching undergraduates required. Opportunities for collaborative research available. Review of completed applications begins April 3, 2000. Send curriculum vitae, statement of teaching philosophy and experience, and the names of three references to: Chair, Department of Marine and Coastal Sciences, Rutgers, The State University of New Jersey, 71 Dudley Road, New Brunswick, NJ 08901-8521. Rutgers is an Equal Opportunity/Affirmative Action Employer.

### POSITIONS OPEN

#### CONSERVATION BIOLOGIST REMOTE SENSING SPECIALISTS Job titles (two positions): RESEARCH ASSOCI-ATE and RESEARCH ASSISTANT PROFESSOR.

ATE and RESEARCH ASSISTANT PROPESSOR. Job description: The Missouri Resource Assessment Partnership (MoRAP) within the University of Missouri has an immediate opening for individuals to coordinate remote sensing aspects of various projects for the Partnership. The successful candidates will work with colleagues and partners on projects such as land cover classification, land cover change detection, and ecoregion-based conservation inventory and assessment.

Qualifications: Candidates must have experience with ERDAS Imagine, ARC, ArcView or other image processing, and GIS software packages within a UNIX and/or Windows NT environment. Hands-on experience and a B.S. is required for the Research Associate, while a Ph.D. is required for the Research Assistant Professor position. A strong interest in conservation issues is essential. A history of winning grants is a plus. Candidates should be technically skilled and open to challenges. Applications must be received by April 28, 2000. Submit résumé, a copy of transcripts, a list of references, and daytime telephone number to: Dr. David Diamond, Missouri Resource Assessment Partnership (MoRAP), 4200 New Haven Road, Columbia, MO 65201. Website: www.cerc. usgs.gov/morap. No telephone calls, please. Affirmative Action/Equal Opportunity Employer.

#### FACULTY POSITION IN AQUATIC ECOLOGY

The Department of Biology at Western Carolina University invites applications for a tenure-track AS-SISTANT PROFESSOR position. The candidate should hold a Ph.D. with postdoctoral experience. Applicants should have a strong background in ecology with an emphasis in freshwater systems. Responsibilities will include teaching aquatic ecology and biostatistics. The candidate will be expected to maintain an externally funded research program involving undergraduates and Masters' students. Please send a curriculum vitae, a brief description of research interest and teaching philosophy, three letters of reference, and official transcripts of all undergraduate and graduate work to: Chair of the Search Committee, Department of Biology, Western Carolina University, Cullowhee, NC 28723. Review of applications will begin on April 21, 2000, and will continue until the position is filled. Western Carolina University is an Affirmative Action/Equal Opportunity Employer

POSTDOCTORAL FELLOW, INSTRUC-TOR, or RESEARCH ASSISTANT PROFES-SOR, Weis Center for Research: Multiple positions are available for highly motivated Ph.D. or M.D., Ph.D. holders to work on G protein-mediated signaling pathways that control cell growth and differentiation. These pathways will be studied in embryonic stem cell cultures and animal models. Level of appointment and salary will be commensurate with years of research experience. Special consideration will be given to applicants with experience in gene regulation, ribozyme, or gene "knockout" strategies; ES cell differentiation; and/or microarray analysis. The Weis Center for Research is located in a safe, family-oriented setting within a three hours' drive of Philadelphia, Baltimore, and New York. Send a description of your research interests, curriculum vitae, and three references to: Julie Brosius (jdr), Weis Center for Re-search, Position Number S-7065, The Pennsylvania State University, College of Medicine, Dan-ville, PA 17822-2600. Résumés accepted until positions are filled. Affirmative Action/Equal Opportunity Employer

TECHNICIAN experienced in molecular biology to participate in multiyear project on molecular correlates of Alzheimer's disease. Most of the work in volves isolating messenger RNA from small samples of brain tissue, with subsequent analysis using highthroughput array technology. Training in array technology is possible if needed. Contact: Paul D. Coleman, Ph.D.; e-mail: Paul\_Coleman@urmc. rochester.edu. Telephone: 716-275-2581; FAX: 716-273-1132.

### Prizes

### The Rhoda and Bernard Sarnat Prize 2000

### An International Award to Recognize Achievements in Mental Health

The Institute of Medicine (IOM) is accepting nominations for the International Rhoda and Bernard Sarnat Prize in Mental Health. The award, a medal and \$20,000, recognizes individuals, groups, or organizations for outstanding achievement in improving mental health. The award is provided by Rhoda and Bernard Sarnat as a commitment to improve the science base and delivery of mental health services. The purpose of the Sarnat Prize is to recognize:

- contributions to improve understanding of or treatment for mental disorders (basic biomedical or clinical research);
- innovations in mental health services (counseling, clinical care, prevention, amelioration of symptoms, or promotion of mental health); or
- public policy change that fosters science or improves mental health services.

To encourage a broad range of candidates, there are no constraints on the education, profession, or specific discipline of individuals or organizations. The award may honor work in psychiatry, psychology, social work, nursing, public health, neuroscience, advocacy, or another relevant activity or field. The award will be made without regard to nationality.

Any individual or organization may submit nominations. Nominations should be accompanied by a detailed written description of the accomplishments of the nominee, and an explanation of why those accomplishments merit the Sarnat Prize. Nominations should not exceed 4 pages in length. A select bibliography (up to 10 publications) or other documentation of accomplishments will greatly aid the selection process. Only written material will be considered. Letters of endorsement in addition to the nomination are not necessary, and will not be considered. Nominations should be postmarked no later than April 28, 2000 and sent to:

Linda V. Leonard Sarnat Award Nominations Institute of Medicine (FO-3020B) 2101 Constitution Avenue, NW Washington, DC 20418 Tel: 202/334-3387 Fax: 202/334-1317 Email: Ileonard@nas.edu

### **GLOBAL OPPORTUNITIES**



### Faculty Position Department of Physiology

Applications are invited for a faculty position in the Department of Physiology, Faculty of Medicine, National University of Singapore.

The successful applicant should possess an MD or PhD degree (or equivalent) and should have had at least two years of postdoctoral experience. He/she is expected to teach human physiology at both undergraduate and graduate levels, to conduct independent research, and to compete successfully for research funding from intramural and extramural sources. A medical background or research experience in molecular biology or cancer cell biology will be an advantage.

Remuneration will be commensurate with qualifications and experience.

Applicants should send their *curriculum vitae*, a brief description of research plans, and the names and addresses of three referees to:

### Head, Recruitment Committee Department of Physiology Faculty of Medicine National University of Singapore Singapore 119260

Visit our website at http://www.nus.edu.sg/NUSinfo/Appoint/med-phys.htm for links to information on the Department, the University, terms and conditions of service, and the application form.

Only shortlisted candidates will be notified.

Awards

### POSTDOCTORAL FELLOWSHIP AWARDS

### Molecular Toxicology and Environmental Medicine Program University of Rochester, School of Medicine

Positions are available in several laboratories. In the laboratory of **Dr. Deborah Cory-Slechta**, a position is available to study the role of dopamine and glutamate in mesolimbic systems in the mediation of cognitive behavior and attentional processes. Experience in operant behavior, small animal surgery, microinjections and/or in vivo autoradiography, microdialysis and in vivo electrochemistry is desirable. **Deborah\_Slechta@urmc.rochester.edu**.

In the laboratory of **Dr. Ned Ballatori** a position is available to characterize and clone novel plasma membrane transport proteins that are involved in multidrug resistance, xenobiotic elimination, and glutathione homeostasis (*JBC* 273:16184, 1998; *JBC* 273:33449, 1998). Experience with cDNA cloning, or with *S. cerevisiae* or *X. laevis* expression systems is desirable. Ned\_Ballatori@urmc.rochester.edu.

Two positions are available in the laboratory of **Dr. Tom Gasiewicz** to study structure-activity relationships and molecular mechanisms of Ah receptor antagonists, and to investigate the role of this receptor in regulating immune system responses at the cell and molecular levels (*Mol Pharmacol* 55:716, 1998; *J Immunol* 160:3844, 1998). **Tom\_Gasiewicz@urmc.rochester.edu**.

A position in the laboratory of **Dr. Günter Oberdörster** is available to characterize cardiorespiratory effects of inhaled environmental particles. Underlying cellular and molecular mechanisms of particle elicited lung inflammation and systemic effects are evaluated within the framework of an EPA sponsored Particulate Matter Center at Rochester, utilizing rodent models of compromised respiratory and cardiovascular systems and age as modulating factors. For more information, please visit www2.envmed.rochester.edu/envmed/PMC/ indexPMC.html. **Gunter\_Oberdorster@urmc.rochester.edu**.

Positions are available in the laboratory of **Dr. Barry Stripp** to use gene profiling and transgenic/knockout mouse modeling to define functional perturbations to airways of CCSP knockout mice (*Am J Physiol* 275:L348-L356, 1998) and to define stem cells and their differentiation potential in repairing/developing pulmonary epithelium (*Am J Pathol* 156:269-278, 2000; *Am J Physiol* May 2000 issue). A background in molecular biology with experience with gene profiling (subtractive cloning/microarray) and/or molecular morphologic approaches would be preferable. **Barry\_Stripp@urmc.rochester.edu**.

Please send curriculum vitae and names of three references to the appropriate individual: Box EHSC, University of Rochester School of Medicine, Rochester, NY 14642. Please visit www2.envmed.rochester.edu/envmed/. The University of Rochester is an equal opportunity employer.

#### POSITIONS OPEN

Biology Instructors: The Biology Department at the University of South Florida invites applications from broadly trained individuals for two full-time, nontenure-earning VISITING INSTRUCTORS (nine-month appointment) to begin fall of 2000. Appointments will be for an initial two-year period with the possibility of renewal. There is also potential for summer appointment. Applicants must have a Ph.D. in biology or one of its subdisciplines at the time of appointment. Each position will be responsible for teaching in at least two of the following subjects: human anatomy and physiology, cell biology, genetics, microbiology, or ecology. Duties will also include supervision of graduate teaching assistants in the introductory biology laboratories and revision of laboratory exercises. Minimum salary will be \$33,000. Interested candidates should send a letter of application, curriculum vitae, evidence of teaching effectiveness, and arrange to have three letters of reference sent to: Chair, Instructors Search Committee, Department of Biology, SCA 110, University of South Florida, 4202 East Fowler Avenue, Tampa, FL 33620-5200. E-mail: jwashing@chumal.cas. usf.edu. Applications must be received by April 20, 2000. University of South Florida is an Affirmative Action Equal Opportunity/Equal Access Institution. For disability accommodations, please Telephone: 813-974-3250. According to Florida law, applications and meetings regarding them are open to the public.

SECTION CHIEF OF HEMATOLOGY/ON-COLOGY and DIRECTOR OF CLINICAL AC-TIVITIES: Robert C. Byrd Health Sciences Center of West Virginia University, Department of Medicine, is seeking applications from excellent clinicians and teachers with a focused investigative interest for the position of Section Chief of Hematology/Oncology and Director of Clinical Activities in the Mary Babb Randolph Cancer Center at ASSOCIATE PRO-FESSOR/PROFESSOR level. The Cancer Center has excellent facilities and staff and is seeking to become an NCI comprehensive cancer center. Strong leadership qualities, administrative skills, and Board certification in hematology and/or oncology are re-quired. The Robert C. Byrd Health Sciences Center has a full complement of academic programs in the clinical and basic sciences and offers the advantage of a university setting in a beautiful small city. Applications will be reviewed until the position is filled. Ap-plicants should send a copy of curriculum vitae, a letter addressing their qualifications, and a list of three individuals who can provide references to: Jeffrey Neely, M.D., Chair, Search Committee, West Virginia University, Department of Medicine, P.O. Box 9160, Morgantown, WV 26506-9160. West Virginia University is an Affirmative Action/Equal Opportu-nity Employer. Women and minorities are encouraged to apply.

#### ASSISTANT PROFESSOR/MICROBIOLOGY DEPARTMENT OF BIOLOGICAL SCIENCE Southeastern Louisiana University

Southeastern Louisiana University is seeking applicants for the position of tenure-track Assistant Professor in the Department of Biological Sciences, available fall 2000 or spring 2001. Qualifications: Ph.D., postdoctoral training, and commitment to both research and teaching required. Preference given to individuals with research expertise in molecular techniques in environmental microbiology or microbial ecology. The successful candidate will maintain an active research program, direct undergraduate and graduate students (M.S. candidates), and participate in teaching at the undergraduate and graduate levels in microbiology. Salary is commensurate with experience and qualifications. To guarantee review, application materials must be received by June 1, 2000. Position will remain open until a qualified candidate is identified. Send letter of application, résumé, three current letters of reference, and a copy of ALL transcripts (originals required upon employment) to: Dr. Gary T. Howard, Chair, Search Committee, SLU 10736, Hammond, LA 70402. Southeastern Louisiana University is an Affirmative Action/Americans With Disabilities Act/Equal Employment Opportunity Employer.

### POSITIONS OPEN

### MARY BABB RANDOLPH CANCER CENTER ASSISTANT/ASSOCIATE/ FULL PROFESSOR TENURE-TRACK FACULTY POSITIONS Lung Cancer Program West Virginia University Robert C. Byrd Health Sciences Center

The Mary Babb Randolph Cancer Center of West Virginia University and the Sara Crile Allen and James Frederick Allen Comprehensive Lung Cancer Program invite applications for tenure-track positions in the area of lung cancer. We seek scientists pursuing innovative cellular and molecular approaches to problems in lung cancer biology and tumor formation in the lung. Candidates are expected to maintain a vigorous independent research program and participate in the teaching mission of the School of Medicine. The successful candidate will receive a generous start-up package, competitive salary commensurate with experience, and recently renovated laboratory space. Applicants should have a Ph.D. and/or M.D., two years (minimum) of postdoctoral training, and evidence of significant research accomplishments and scholarly promise consistent with level of appointment. Applicants should send curriculum vitae, a brief summary of their research plans, teaching interests, and the names and addresses of three references to; Dr. George Spratto, Ph.D., Search Committee Chair, Mary Babb Randolph Cancer Center, P.O. Box 9300, West Virginia University, Morgan-town, WV 26506-9300. Review of applicants will begin May 1, 2000, and will continue until the positions are filled.

West Virginia University is an Equal Opportunity/Affirmative Action Employer.

#### DEPARTMENT OF MEDICINE DIVISION OF INFECTIOUS DISEASE University of California, Irvine

The University of California, Irvine, College of Medicine, is seeking a **SENIOR MEDICAL ACA**-DEMICIAN as Chief of the Division of Infectious Disease in the Department of Medicine. This will be a tenured position. Qualified candidates must have either the M.D. or M.D./Ph.D. degree(s) and be internationally recognized for original research, with a solid track record of peer-reviewed funding. Responsibilities include development and oversight of quality educational, clinical practice, and research programs. Salary and rank are dependent upon experience. Interested candidates should send a copy of the curriculum vitae and a list of five references to: Alan G. Barbour, M.D., Professor, Department of Medicine, University of California, Irvine, College of Medicine, Medical Sciences L, B250, Irvine, CA 92697-4025. The University of California is an Equal Opportunity Employer committed to excellence through diversity.

#### POSTDOCTORAL POSITION TUMOR IMMUNOLOGY

An opportunity exists for a Ph.D. to study dendritic cell-based tumor vaccines in murine models and participate in cancer vaccine trials in patients. Submit letter of interest, curriculum vitae, and telephone numbers of three references to: Richard Barth, M.D., Associate Professor of Surgery, Darmouth-Hitchcock Medical Center, Lebanon, NH 03756. E-mail: Richard.J.Barth.Jr@Dartmouth.edu; FAX: 603-650-8030. Dartmouth is an Equal Opportunity/Affimative Action Employer.

### POSITIONS OPEN

**BIOCHEMISTRY: ASSISTANT PROFESSOR** The Department of Chemistry at the University of Texas at El Paso has a tenure-track opening in biochemistry at the Assistant Professor level effective fall 2000 or January 2001. A Ph.D. in chemistry or biochemistry is required, and postdoctoral experience is desired. The successful candidate must have a strong commitment to teaching at the undergraduate and graduate levels and is expected to develop an externally funded research program. Opportunities exist for collaborative research within the newly established Border Health Institute and with UTEP's Ph.D. programs in environmental science and engineering, materials science and engineering, pathobiology, and others. Candidates in all areas of biochemisry will be considered, but those with a strong background in structural biology, molecular biology, environmental health, or toxicology are especially encouraged. Candidates should send a letter of application, detailed curriculum vitae, a statement of teaching philosophy, a description of proposed research, and should arrange for three letters of reference to be separately sent to: Biochemistry, Assistant Professor Search Committee, Department of Chemistry, University of Texas at El Paso, El Paso, TX 79968-0513. More information about our Department can be found at the website: http://www.chemistry.utep. edu. The University of Texas at El Paso does not discriminate on the basis of race, color, national origin, sex, religion, age, disability, or sexual orientation in employment or the provision of services

#### FACULTY POSITION ENVIRONMENTAL HEALTH SCIENCES Joseph L. Mailman School of Public Health at Columbia University

The Division of Environmental Health Sciences (EHS) of the Joseph L. Mailman School of Public Health at Columbia University seeks to recruit one to two new faculty members at the rank of ASSIST-ANT, ASSOCIATE, or FULL PROFESSOR. The Division has considerable research expertise in chemical carcinogenesis, molecular epidemiology, metal toxicology, community-based research, and air quality and respiratory disorders. It is home to an NIEHS P30 Center, a Children's Environmental Health Center, and a Superfund Basic Research Program. The Division's strong teaching program offers M.P.H., Dr.P.H., and Ph.D. degrees and attracts outstanding applicants. While candidates in all areas of EHS will be considered, special consideration will be given to those with active laboratory-based research programs in the following areas: asthma, neurotoxicology/neurodegenerative disease, metal biochemistry, and exposure assessment. Applicants should send a letter describing research and teaching interests, full curriculum vitae, and the names of three references to: Joseph Graziano, Ph.D., Head, Division of EHS, 60 Haven Avenue (B-1), New York, NY 10032. Columbia University is an Équal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.

The Medical University of South Carolina seeks to fill the Jeffrey Gilliam Memorial Chair for the study of neurodevelopmental disorders. Rank will be at a level of **PROFESSOR**, and the candidate must have an M.D. with evidence of the ability to sustain an extramurally funded research program. Candidate must have research experience in the biological underpinnings of neurodevelopmental and will have a joint appointment in the Department of Physiology/Neuroscience. Candidate should send curriculum vitae, a list of three individuals to contact as references, and a letter containing a research summary to: Peter Kalvias, Ph.D., Gilliam Chair Search Committee, Department of Physiology and Neuroscience, Medical University of South Carolina, 650 Medical University of South Carolina Complex, Suite 607, Charleston, SC 29425. Telephone: 843-792-4424. **FELLOWSHIPS** 



The University of Tennessee, Knoxville–Oak Ridge National Laboratory

### Genome Science and Technology Graduate Program

### **Post-Doctoral Fellowships**

The University of Tennessee/Oak Ridge Graduate Program in Genome Science and Technology invites applications from outstanding candidates for two post-doctoral fellowships.

Project 1: An Integrated Computational and Experimental Analysis to Identify Proteins Involved in Meiosis

The project is a focused, genome data-driven effort to identify and study a subset of genes with a potential role in meiosis from the human, mouse, Drosophila and other genomes. The post-doctoral fellow will be expected to work at the interface of computational and experimental analysis of gene families believed to play roles in meiotic processes. Computational analysis will include indentifying and classifying genes and construction of molecular phylogenles. Experimental analysis will encompass techniques such as northern blotting and RT-PCR to study expression of the identified genes in germ cells of flies and mice. Phenotypic characterization of mutants may also be pursued.

Qualifications: Ph.D. with a background in molecular biology and familiarity with sequence analysis. Experience in computation and use of basic sequence tools such as GCG and Psi-BLAST is preferred.

Project 2: Microarray and Proteomics Analysis of Circulating Proteins in Mouse Blood

The project will focus on creating a microarray chip capable of evaluating the mRNA expression levels of serum proteins, developing 2-D gel electrophoresis and mass spectrometry methods for analyzing the amount of circulating serum proteins, and correlating the two different types of data by comparing mRNA expression from the genomics approaches with protein expression using the proteomics technologies. The post-doctoral fellow will focus on functional genomics that entails developing methods to link genes to function in the area of hematology.

Qualifications: Ph.D. with a background in protein biochemistry and molecular biology.

The fellowship award is \$40,000. Anticipated starting date in June 1, 2000. Applicants should submit a cover letter indicating the position applied for and outlining interest in the research project, curriculum vitae, three letters of reference and a brief description of research experience to: Gaynelle Russell, The University of Tennessee, Graduate Program in Genome Science and Technology, F337 Walters Life Sciences Building, Knoxville, TN 37996-0830.

UTK is an EEO/AA/Title VI/Title IX/Section 504/ADA/ADEA Employer.

### ANNOUNCEMENTS

### NATIONAL SPACE BIOMEDICAL RESEARCH INSTITUTE Research Announcement

The National Space Biomedical Research Institute (NSBRI) announces an opportunity to participate in the core research program of the NSBRI. The release date for this announcement is February 22, 2000.

NSBRI Research Announcement 00-01 An Opportunity to Participate in the Core Research Program of the National Space Biomedical Research Institute: Expansion of Current Research Teams

This announcement is available electronically via the Internet at http://www.nsbri.org

Letter of Intent Due: April 14, 2000 Proposals Due: June 16, 2000

Paper copies of this Announcement are available to those who do not have access to the Internet by calling 713-798-7412 or by writing to:

R. J. White NSBRI One Baylor Plaza, NA-425 Houston, TX 77030.


#### BIOLOGICAL SCIENCES SABBATICAL REPLACEMENTS The University of Montana

The Division of Biological Sciences at The University of Montana invites applications for two nonrenewable, one-year sabbatical replacement positions for the 2000–2001 academic year (start date: August 30, 2000). (1) FISHERIES BIOLOGIST/ECOL-OGIST: Teach fisheries biology/management, general ecology, and freshwater ecology. (2) CELL BIOL-OGIST/MICROBIOLOGIST: Teach cell and molecular biology, general microbiology, and molecular genetics (lecture and laboratory). Both positions require Doctoral degree, relevant background (coursework, research experience), teaching experience, and interest and ability to interact with students and faculty. Application materials, including documentation of background and teaching experience, statement of teaching philosophy, and three letters of recommendation, should be sent to: Sabbatical Search Committee, Division of Biological Sciences, The University of Montana, Missoula, MT 59812. Deadline for receipt of application is April 24, 2000. Affirmative Action/Equal Opportunity Employer.

#### DIRECTOR, MEDICAL AND SCIENCE GRANTS STEVEN AND MICHELE KIRSCH FOUNDATION

The Director will identify promising areas of medical and scientific research for potential Foundation grants; design, manage, and evaluate the grant-making program for science and medical research project grants; implement the Kirsch Fellowship Program; and represent the Foundation publicly. Candidates must have an M.D. or Ph.D., broad intellectual interests and capacity, demonstrated project management skills, and strong interpersonal skills. The ability to work with scientists in a staff role and as an integral part of the Foundation's team is critical. Program officer experience is preferred. Competitive salary and benefits package. Complete description is on website: www.kirschfoundation.org. Send a cover letter and current, complete résumé to: Kathleen Gwynn, President and CEO, at e-mail: kgwynn@ kirschfoundation.org. All qualified candidates are encouraved to apply.

MICROBIOLOGIST. The Biology Department of Hobart and William Smith Colleges invites applications for a one- or two-year position starting August 2000. Responsibilities include teaching a course in microbiology and an introductory course for majors on cellular and molecular biology. Preference will be given to candidates with a Ph.D. and teaching experience. Hobart College for men and William Smith College for women are coordinate residential liberal arts colleges that share a campus and faculty. Applicants should send curriculum vitae, a statement of teaching philosophy and interests, official transcripts for all degrees received, and three letters of reference to: Dr. Elizabeth Newell, Biology Department, Hobart and William Smith Colleges, Geneva, NY 14456. E-mail: newell@hws.edu; Telephone: 315-781-3590; FAX: 315-781-3860. Review of applications begins April 26, 2000, and will continue until the position is filled. Hobart and William Smith value diversity and especially encourage applications from women and people of color.

#### RESEARCH ASSOCIATE/ ASSISTANT PROFESSOR

A Research Scientist position is open at The International Bronchitis Research Program. The ideal candidate will have a Ph.D. or an M.D. and 10 years of experience in airway biochemistry or cell biology, demonstrated by publications. The selected individual will hold a nontenure-earning research track appointment in the Division of Pulmonary and Critical Care Medicine at the University of Miami. Interested individuals should send curriculum vitae and names of three references to: Dr. A. Wanner, Division of Pulmonary and Critical Care Medicine, R-47, P.O. Box 016960, Miami, FL 33101. POSITIONS OPEN

LECTURER IN MOLECULAR, CELL, AND DEVELOPMENTAL BIOLOGY

One-year Lectureship in molecular, cell, and devel-

opmental biology to begin fall 2000; 75% employ-

ment. Duties include teaching lecture/laboratory

course required for majors, plan and coordinate lab-

oratory activities for multiple sections of major

course, participate in ongoing course development,

supervise course teaching assistants, manage the ac-

quisition and maintenance of course materials, devel-

op computer applications for the classroom, supervise

student projects, maintain office hours, and partici-

pate in departmental and advisory committee meet-

ings. Qualifications require a Ph.D. degree in the bi-

ological sciences; demonstrated experience in under-

graduate teaching at the university level; and experi-

ence with design, development, and teaching of

laboratory instruction in molecular biology. Level of

appointment and salary commensurate with qualifica-

Send current curriculum vitae, including relevant

publications; written statement of teaching interests

and background; and the names, addresses, and tele

phone numbers of three references by May 1, 2000,

to: Molecular, Cell, and Developmental Biology

Lecturer Search, University of California, Box 951606, Los Angeles, CA 90095-1606. The Uni-

versity of California is an Equal Opportunity Employer committed to excellence through diversity.

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reporter assay systems, evaluating the role of regula-

tory regions in gene expression, and developing appli-

cable secondary biological assays. Relevant experience

would include a Ph.D. degree in molecular biology or

a related field and a strong background in transcrip-

tion regulation and protein:DNA interactions. Some

knowledge of functional genomics would be a plus.

We offer attractive compensation schemes, reloca-

tion, full medical benefits, and an exciting research

environment that recongizes and rewards achieve-

ment. To apply, please send your curriculum vitae to:

Genelabs, Human Resource Department (Attention: Job Number 2008S), 505 Penobscot Drive,

Redwood City, CA 94063. FAX: 650-363-6080; e-mail: hr@genelabs.com; website: www.genelabs.

PROGRAM DIRECTOR

INTERNATIONAL MEDICAL

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ting-edge organization headquartered in Washing-

ton, D.C. Ideal candidate will have a biology/chem-

istry/medical academic background, five years of pro-

ressively responsible experience, the ability to concep-

tualize and communicate complex technical subjects

orally and in writing, and the resourcefulness and organizational skills needed to initiate and see

through to completion multiple projects with multi-

ple deadlines. Advanced computer skills and one ma-

or Western European language a must. Starting salary

\$40,000; health insurance; three-week vacation. FAX résumés to: 202-785-9578.

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tions, experience, and duties.

Ph.D.-level scientist.

#### POSITIONS OPEN

#### MRI BIOMEDICAL ENGINEER

The Laboratory of Functional and Molecular Imaging in the National Institute of Neurological Disorders and Stroke develops state-of-the-art magnetic resonance imaging and spectroscopic techniques at high magnetic fields to assess brain function. The LFMI is seeking an MRI biomedical engineer to perform functional MRI and MRS experiments in rodents. The successful candidate will have a Ph.D. in biomedical engineering and more than three years of postdoctoral experience developing advanced functional MR techniques for use in small animals. Expe rience with the arterial spin-labeling technique for measuring perfusion and BOLD-based fMRI in rodents at high magnetic field strengths (9.4T and above) is required. Experience in pulse programming, constructing RF probes (including a two-coil system for measuring perfusion from the whole brain), and developing software for analysis of MR data is essential. This is a STAFF SCIENTIST POSITION with a salary range of \$55,000 to \$75,000 depending on experience. The full vacancy announcement, with application requirements and procedures, is available by FAX: 1-800-728-5627; request FAX i.d. #5012 or via the Internet (website: http://careerhere.nih. **gov**), referencing NINDS-00-0214. Applications are due by April 30, 2000. For questions, **Telephone: 301-435-5499.** *NIH is an Equal Opportunity Employer.* 

**PLANT GENOMICS/GERMPLASM PER-MANENT POSITION** with the Agricultural Re-search Service: GS-11/12/13, depending on experience; \$45,059 to \$83,481 plus benefits. To include research, application, and technology transfer of improved molecular markers for germplasm characterization and diversity determination; the study of genome structure of important germplasms; and contributing to improved connections between molecular data and germplasm databases. The position will collaborate with a larger group that includes molecular biologists and bioinformaticists. The exact background of candidates should come from a combination of the following: molecular biology, plant breeding utilizing molecular approaches, and molecular approaches to systematics and evolution. Experience with computer databases and UNIX systems a plus. For information, contact: Dr. Olin D. Anderson, Western Regional Research Center, Agricultural Research Service, U.S. Department of Agriculture, 800 Buchanan Street, Albany, CA 94710. Telephone: 510-559-5773; FAX: 510-559-5777; e-mail: oandersn@pw.usda.gov. Application information is available at website: http://www.ars. usda.gov under Announcement Number ARS-X0W-0224. The USDA is an Equal Opportunity Employment Employer. Candidates must be U.S. citizens. Minorities are encouraged to apply.

#### MACROMOLECULAR THERAPEUTICS UNIVERSITY OF UTAH

Research position (nontenure track) available June 1, 2000, in the laboratory of **Professor Jindrich Kopecek** (for further information, visit our **website**: **www.Kopecek.com**). The successful applicant will be in charge of the evaluation of the mechanism of action of macromolecular therapeutics *in vitro* and *in vivo*. Experience in cell culture, gene expression, cell signaling, quantitative RT-PCR, and *in vivo* cancer models necessary. Experience in confocal fluorescence microscopy is highly desirable. Appointment at **RESEARCH ASSOCIATE** or **RESEARCH AS-SISTANT PROFESSOR** rank. Send a cover letter, full curriculum vitae, and addresses of three references to:

Jindrich Kopecek, Ph.D. Professor and Chair Department of Pharmaceutics and Pharmaceutical Chemistry University of Utah 30 South 2000 East Room 301 Salt Lake City, UT 84112 E-mail: Jindrich.Kopecek@m.cc.utah.edu Affirmative Action/Equal Opportunity Employer.

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#### FERTILITY ACOUSTICS, INC

Fertility Acoustics, Inc. is a dynamic new company that specializes in the development of technology for enhancing women's health. A recent strategic partnership has allowed us to expand our efforts in the prediction of ovulation. We have immediate openings for highly motivated candidates in the following areas:

#### CTO/Director R&D

Responsibilities include overall scientific direction, identification of new growth areas, and supervision of R&D staff. Experience in medical device and assay development, FDA submissions and approvals, is highly desirable. PhD + 10 years industrial experience required.

#### **Research** Scientist

BS/MS in biological sciences with 3+ years experience in antibody production, modern biochemical techniques, and assay development.

#### Mechanical Engineer

BS/MS Mechanical Engineering, 5+ years experience in design and fabrication of medical devices. Familiarity with mechanical drawing, vendor specification, and design control regulations is highly desirable.

#### **Plastics Engineer**

BS/MS in Mechanical Engineering or allied field with 5+ years experience in design and fabrication of plastic parts. Familiarity with mechanical drawings, vendor specifications, and design control regulations is highly desirable.

FAI is an equal opportunity employer and offers an attractive salary and benefits plan with equity participation. Please send a resume along with the names of three references to:

> Fertility Acoustics, Inc. 836 Main Street Buffalo, NY 14202



# King Faisal International Prize



The 2001 King Faisal International Prize FOR MEDICINE Topic: Organ Transplantation

and the 2001 King Faisal International Prize FOR SCIENCE Topic: Physics

#### **Invitation to Nominate**

The General Secretariat of the King Faisal International Prize is pleased to invite universities, scientific societies and other academic institutions throughout the world to nominate candidates for the year 2001 King Faisal International Prizes in Medicine and in Science.

The King Faisal Foundation is a major international philanthropic organization which was established in 1976 to perpetuate the humanitarian goals which King Faisal ibn Abd Al Aziz (1906-1975) had pursued throughout the life. One of the Foundation major activities is the King Faisal International Prize, which is awarded annually in tecognition of outstanding contributions in second areas of human endeavour, including Medicine and Source

In 2001 the King Faisal International Prize for Med cine will be awared for work in the area of "Organ Transplantation", while the King Faial Science Prize tone is "Physics". Provious winners of the King Faisal International Prize in cognate areas of Medicine include Dr. Melvyn Greaves, Dr. Gregory Winter, Dr. Mark Dryis, and Dr. Tat Mak, and in Physics, Dr. Gerd Banig, Dr. Heinrich Rohrer, Dr. Anneed Zewail and Dr. Steven Chin.

Nomination Conditions

- Nominated works must be: publisher, represent a contribution of the highest distinction, cenefit mankind and advance scientific knowledge.
- Nominations must be submitted by official nominating bodies and not by individuals
- Nominations must include
  - a) An official letter of nomination detailing the scientific contributions of each nominee;
  - b) A CV detailing the nominee's academic background and experience, and listing all the nominee's published works;
  - c) Six copies of each nominated work;
  - d) Three recent colour photos on matt card 4"x6"
- Nominations must be received **not later than 30th April 2000** Winners will be announced in January 2001 and will be honoured at an Official Ceremony later in the year in Riyadh. *The Prize consists of*
- A certificate written in Diwani calligraphy and presented in a leather folder describing the work for which the winner is awarded the Prize
- A Commemorative 24-carat, 200 gram gold medallion
- SR 750,000 (US\$200,000). Joint winners share the cash prize

Please send nominations by airmail to: The General Secretariat, Al Khairia Building, King Fahad Road PO Box 22476, Riyadh 11495, Saudi Arabia Tel. +9661-465-2255, Fax. +9661-465-8685 E-mail: kfipinfo@kff.com

#### POSTDOCTORAL POSITION CHAO FAMILY COMPREHENSIVE CANCER CENTER Department of Medicine University of California, Irvine

A Postdoctoral position is available to study the role of the WNT signal transduction pathway in human malignancies. Opportunities for purely basic and also translational research exist through a collaborative research program in the Division of Hematology/Oncology, Department of Molecular Genetics, and Department of Developmental and Cell Biology. Ph.D. applicants should submit a cover letter indicating research interests and expertise, curriculum vitae, and names of three references to:

Randall F. Holcombe, M.D. Chief, Division of Hematology/Oncology UCI Medical Center 101 The City Drive Building 23, RT 81, Room # 244 Orange, CA 92868 E-mail: Rholcomb@uci.edu

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

POSTDOCTORAL RESEARCH ASSOCIATE (GS-11, \$39,178) position in biological control of exotic invasive rangeland weeds. Priority will be on search for and selection and characterization of soilborne plant pathogens or deleterious rhizobacteria of Russian knapweed (Acroptilon repens). Study of the rhizosphere ecology of other knapweed (Centaurea) species will be another priority. Experience in methods and techniques of plant pathology, microbiology, and microbial ecology is required, and knowledge of entomology and rangeland plant ecology is desirable. To apply, send a description of your current research and curriculum vitae and the names, addresses, and telephone numbers of three references to: Dr. Anthony Caesar, U.S. Department of Agriculture, Agricultural Research Service Pest Management Research Unit, 1500 North Central Avenue, Sidney, MT 59270. USDA/ARS is an Affirmative Action/ Equal Opportunity Employer.

Positions are available for COMPUTATIONAL CHEMISTS or PHYSICISTS to develop methods for protein model refinement and for the analysis of protein-protein and protein-DNA interactions. Strong background in macromolecular modeling and/or computational genomics is required. Send résumé, statement of research experience, and names of three references to: Dr. Sandor Vajda (e-mail: vajda@bu.edu) or Dr. Charles DeLisi (e-mail: delisi@bu.edu), Department of Biomedical Engineering, Boston University, 44 Cummington Street, Boston, MA 02215. Website: http:// engpubl.bu.edu/bioinfo/MERL/. Boston University is an Equal Opportunity Employer.

#### POSTDOCTORAL POSITIONS CENTER FOR CARDIOVASCULAR RESEARCH

Washington University School of Medicine

Positions available in molecular cell biology laboratory to study mechanisms of fatty-acid and cholesterol trafficking in mammalian cells. Send curriculum vitae and names of two references (with e-mail/FAX) to: Dr. J. Schaffer, Washington University School of Medicine, 660 South Euclid Avenue, Box 8086, St. Louis, MO 63110. E-mail: jschaff@imgate. wustl.edu. FAX: 314-362-0186.

**POSTDOCTORAL POSITION** in molecular cell biology is available to study the regulation of the ubiquitin system of protein degradation and endocytosis of cell surface receptors. Experience in cell biology, biochemistry, molecular biology preferred. Send curriculum vitae to: Alan L. Schwartz, Ph.D., M.D., Box 8116, Washington University School of Medicine, St. Louis, MO 63110. E-mail: schwartz@kids.wstl.edu. Washington University is an Equal Opportunity/Affirmative Action Employer.

#### POSITIONS OPEN

#### RESEARCH SCIENTIST VIRGINIA TECH BLACKSBURG, VIRGINIA

A senior **POSTDOCTORAL POSITION** is available immediately to participate in research on genetic modification of tobacco for bioproduction of human therapeutic proteins and vaccines. Virginia Tech has emerged as a center for transgenics research, using both plants and animals as bioproduction systems. Within the Fralin Biotechnology Center at Virginia Tech, researchers have established a strong program targeting transgene expression strategies and human protein trafficking and posttranslational processing in tobacco. The successful applicant would also participate in existing programs studying the use of transgenic plants for production and oral delivery of human and livestock vaccines. Innovative, independent, and highly motivated candidates are sought, with significant experience in state-of-the-art technologies in several of the following areas: protein purification/characterization, proteomics, protein glyco-sylation/processing, cell biology, plant physiology/ pathology, protein expression/transgenics, and fermentation or bioproduction technologies. Requirements include a Ph.D. and postdoctoral experience in a relevant area of molecular/cell biology, plant sciences, biochemistry, medical sciences, or immunology The initial appointment is for one year with annual renewal possible based on performance. Starting salary will be based on experience and qualifications. Interested candidates should send a résumé, statement of interest, and names and addresses of four references to: Dr. Carole L. Cramer, Department of Plant Pathology/Physiology, Fralin Biotechnology Center, MC 0346, Blacksburg, VA 24061. E-mail: ccramer@vt.edu by April 30, 2000. Virginia Tech has a strong commitment to the principle of diversity and, in that spirit, seeks a broad spectrum of candidates including women, people of color, and people with disabilities

#### **RESEARCH ASSOCIATE**

Research Associate holding Ph.D. or M.D. degree is sought in Department of Medicine at Stanford University Medical Center in area of developmental biology of cardiovascular systems. Specific focus of laboratory is role of cellular signaling in vascular development. Models utilized include in vitro tissue culture and whole embryo culture models. Candidate should have in-depth knowledge of cell and molecular techniques; experience in working with adenoviral expression vectors desirable. Responsibilities include carrying out their own research studies and guiding research assistants and postdoctorates on other research projects. Qualified applicants should submit curriculum vitae and names of three references to: Judith L. Swain, M.D., Chair, Department of Medicine, Attention: Pat Schade, Stanford University Medical Center. FAX: 650-498-6741; e-mail: pschade@ leland.stanford.edu.

#### POSTDOCTORAL POSITION

An NIH-funded Postdoctoral position is available immediately to study a nuclear component of the exosome complex involved in RNA processing in yeast. The candidate will participate in studies designed to characterize Rrp6p, a nuclear riboexonuclease involved in processing mRNAs, rRNAs, and snRNAs (**Burkard and Butler**, *Mol. Cell. Biol.* **20**: 604, 2000). Present and future studies focus on the role of interacting proteins identified by genetic and biochemical techniques. Send curriculum vitae and the names of three references to: **Dr. Scott Butler**, **Box 672, 601 Elmwood Avenue, Rochester, NY 14642. E-mail: btlr@uhura.cc.rochester.edu**.

POSTDOCTORAL POSITION available immediately in computational molecular biophysics. Candidates must have a Ph.D. and experience in a related field. The research will involve close interaction with parallel experimental work. Please send curriculum vitae, two representative publications, and the names of three references to: Dr. Alexander Vologodskii, Department of Chemistry, New York University, 31 Washington Place, New York, NY 10003-6630. E-mail: alex.vologodskii@nyu.edu.

#### POSITIONS OPEN

BASIC SCIENCE RESEARCH NOVEL THERAPIES FOR PARKINSON'S DISEASE

We need outstanding candidates, one **POSTDOC-TORAL** (Ph.D. or M.D.) and one **SENIOR RE-SEARCH LABORATORY MANAGER**, to apply for attractive research positions at the new NIH-awarded Morris K. Udall Parkinson's Disease Research Center of Excellence at Harvard Medical School/McLean Hospital. Please send résumé and references to:

Director: Dr. Ole Isacson Neuroregeneration Laboratories McLean Hospital/Harvard Medical School 115 Mill Street Belmont, MA 02478 U.S.A. E-mail: pohlmans@mclean.harvard.edu

Full-time research position for a POSTDOC-TORAL PHYSICIAN or Ph.D. SCIENTIST in the Division of Immunology and Rheumatology, Department of Internal Medicine, University of Missouri, Columbia. Responsibilities will include participation in ongoing federally funded research program in human autoimmunity. Individuals sought with experience and interests in laboratory-based research in the area of autoimmunity, which includes such research approaches as PCR, DNA sequencing, cloning, and human cellular immunology. Address inquiries and curriculum vitae to: Dr. Robert W. Hoffman, Director, Division of Immunology and Rheumatology, MA427 Medical Science Building, Colum-bia, MO 65211. Telephone: 573-443-2511; email: hoffmanr@health.missouri.edu. University of Missouri is an Affirmative Action/Equal Opportunity Employer. Females and minorities are encouraged to apply.

Major national patent law firm located in New York City seeks highly qualified **PH.D. SCIENTISTS** in computer science, electrical engineering, chemistry, and biomedical and molecular biology fields interested in second-career opportunities in intellectual property law. Demonstrated technical writing skills essential. Competitive salaries and benefits and opportunities for challenging assignments. Send résumé to:

> Box 88 Science 1200 New York Avenue, N.W.

Washington, D.C. 20005

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

Parkinson's disease research: Positions available immediately for a **POSTDOCTORAL RESEARCH ASSISTANT** and **RESEARCH TECHNICIAN** with backgrounds in neuroscience to study mechanisms of cell death and neuroprotective/neurorestorative therapies in Parkinson's disease models. The candidates should have experience with primary cell cultures and expertise in cell/molecular biology, his tology, and small animal surgery. *Qualified U.S. citizens* or current visa holders should send curriculum vitae and three letters of reference to: **Dr. J. S. Schneider, Department of Pathology, Anatomy, and Cell Biology, Thomas Jefferson University, 1020 Locust Street, 521 JAH, Philadelphia, PA 19107. E-mail: jay.schneider@mail.tju.edu.** 

**POSTDOCTORAL POSITION** is available to study B cell development and activation, especially as it relates to human autoimmune diseases. Possible projects include analysis of newly isolated interleukin-4 induced genes: Fig1 enzyme or E4BP4 transcription factor. Candidates must have a Ph.D. or M.D. with a strong background in immunology, cell biology, or biochemistry. Molecular biology skills are required. Please send cover letter and curriculum vitae to: Dr. Charles C. Chu, North Shore University Hospital/New York University School of Medicine, Department of Medicine, 350 Community Drive, Manhasset, NY 11030. FAX: 516-562-1683; e-mail: cchu@nshs.edu. Equal Opportunity Employer.

#### IRRI International Rice Research Institute

#### Position Announcement for Plant Virologist

IRRI's Entomology and Plant Pathology Division is seeking a plant virologist to work on the application of conventional and modern approaches for understanding the genetics of virus resistance, virus-vector relationships, and management of virus diseases in rice.

IRRI, one of 16 members of the Consultative Group on International Agricultural Research (CGIAR), is a nonprofit, autonomous organization engaged in research and training on rice-related technology. IRRI's scientists work in partnership with agricultural research institutions in major rice-growing countries. More information can be found on the Internet at http://www.cgiar.org/irri.

#### Responsibilities

Major responsibilities are to:

- using conventional and modern tools, conduct research on rice virus including study of virus variations in relation to varietal resistance and potential new virus problems under intensive rice production;
- evaluate germplasm to identify sources of resistance and collaborate with plant breeders to develop improved virus-resistant germplasm;
- collaborate with plant breeders and other plant pathologists and entomologists at IRRI, national agricultural research systems (NARS), and advanced research organizations to study the genetics of virus resistance and virus-vector interactions, and to understand resistance mechanisms in transgenic rice;
- work closely with NARS scientists to accomplish efficient management and control of virus diseases.

#### Qualifications

Candidates should have 1) a PhD in plant pathology or related disciplines with specialization in virology, 2) at least two years of post-PhD experience, 3) a demonstrated record of achievement in plant virus research. Experience in applying molecular approaches to plant virus research is desirable. Candidates should have good communication skills to work in interdisciplinary and multicultural environments.

#### Perquisites

Salary and perquisites are competitive with those of similar international organizations. These include support for education, car, housing, annual leave, and medical and retirement benefits. Based at IRRI headquarters in Los Baños, Laguna, Philippines, the position requires travel to rice-growing countries in Asia. IRRI provides a gendersensitive work environment and welcomes women applicants.

#### Applications

Send (preferably via e-mail) a comprehensive curriculum vitae and names, addresses, fax numbers, and e-mail addresses of three referees to:

> Dr. D.S. Brar Chair, Selection Committee IRRI MCPO Box 3127 Makati City 1271 Philippines E-mail: d.brar@cgiar.org

Applications will be received up to 15 April 2000, or until a suitable candidate has been found. Please refer to code IRY2K-PV-02.

# Help Us Achieve R&D



Fueled by new product introductions and high acceptance of products like NUFLOR, our broadspectrum, multi-species antibiotic, Schering-Plough Animal Health has catapulted into the Top 5 animal health businesses worldwide.

#### Research Program Manager -Animal Health Drug Discovery North Central, New Jersey

In this role, you will partner with a team of drug discovery, development, clinical, regulatory and business development professionals as you design and complete target animal efficacy, safety and pharmacokinetics studies to support the rapid transition of compounds from discovery to development.

To qualify, you will need a degree in veterinary medicine (D.V.M. or equivalent) and a Ph.D. or MS in pharmacology, biochemistry or physiology. Experience designing and critically evaluating scientific data is essential. The ability to identify and develop animal models is a must. Board certification in a veterinary discipline is helpful. Clinical practical experience is a plus. Industry experience is desired, but candidates from academia will be considered.

We offer a competitive salary, 1st day medical/dental eligibility, profit sharing, 401(k), 13 paid holidays and educational assistance. For consideration, please forward your resume to: **Schering-Plough Animal Health, Human Resource, 1095 Morris Avenue, Union, NJ 07083; Fax: (908) 629-3033; E-mail: animalhealth@emailcm.com.** Visit our web site at: www.sp-animalhealth.com EOE



#### EUROPEAN OPPORTUNITIES

Medical Faculty of the University of Würzburg

The Department of Immunology in collaboration with the Departments of Virology, Neurology and Surgery

invites applications for

## Head of a Junior Research Group (BAT Ia)

on Development and Characterization of Genetically Modified Rat Strains for Research in Basic Immunology and Models of Transplantation and Autoimmunity

to be established under the Volkswagen Foundation's Programme "Junior Research Groups at German Universities". This programme provides young and excellent scientists with the opportunity to carry out independent research work at an early stage in their career (see also http://www.volkswagen-stiftung.de). A funding period of 5 years is envisaged. In addition to the position of the group leader, funding will be provided for 1 postdoc, one PhD student and one technical assistant, as well as for equipment and consumables.

The rat model provides unique opportunities for experimental medical research in basic and applied immunology. The above institutions at the University of Würzburg have established model systems in the rat for lymphocyte differentiation and function, autoimmune neurologic disease and allogeneic transplantation, and have extensive experience in the establishment and analysis of genetic modifications in mice. It will be the task of the Junior Research Group to establish and further develop rat transgenic technology at the Medical Faculty, pursuing own independent projects and collaborating with existing research groups studying the rat immune system. One aim of the unit should be to contribute to the establishment of gene targeting in rats.

Applicants should have either an MD or a PhD degree. They should have a very good scientific background in immunology and experience in rodent transgenic technology and/or in rat immunogenetics.

In case of family commitments part-time occupation with a corresponding extension of the overall funding period may be possible. The University of Würzburg is an equal opportunity employer. In case of equal qualification, handicapped applicants will be considered with preference. Applicants should send their c.v., list of publications, an outline of current and proposed research activities and names of three referees by **May 1st, 2000** to

Prof. Dr. Thomas Hünig Institute for Virology and Immunobiology University of Würzburg Versbacher Str. 7 97078 Würzburg Germany. For further inquiries, e-mail huenig@vim.uni-wuerzburg.de

#### PHYSICIAN/SCIENTIST POSITIONS UNIVERSITY OF ILLINOIS AT CHICAGO

The Department of Medicine at the University of Illinois Medical Center in Chicago (UIC) is seeking to recruit faculty to fill three tenure-track positions in its growing Section of Infectious Diseases. The UIC College of Medicine is in one of the largest medical complexes in the United States and contains a complete spectrum of basic science departments. The Section of Infectious Diseases has active basic science and clinical research programs in the areas of molecular and cellular biology, virology, mycology, cellular immune defenses, and molecular epidemiology. The successful faculty candidate will maintain an active independent research program in an environment supported by a generous start-up package, state-ofthe-art equipment, ample opportunities for collaboration in the Section and several basic science departments, and the majority of time protected for research. The ideal candidate will have an M.D./Ph.D or an M.D. with a proven track record in basic science research. Special consideration will be given to applicants with funded research in the areas of microbial pathogenesis or host defense. For fullest consideration, please send an application, including curriculum vitae, a brief statement of future research plans, and a list of three references by April 15, 2000, to: Search Committee, Section of Infectious Diseases (MC 735), Department of Medicine, University of Illinois at Chicago, 808 South Wood Street, Chicago, IL 60612. The University of Illinois is an Affirmative Action/Equal Opportunity Employer.

#### SENIOR INTERNATIONAL DEVELOPMENT

As part of a search for up to three new Senior positions in International Development, Harvard's Kennedy School of Government is searching for candidates in the field of sustainable development. The successful candidate is expected to be appointed to a position of FULL PROFESSOR and to play a leadership role in shaping the Universitywide program in sustainable development, based in Harvard's Center for International Development. The search will concentrate in the policy-defined subfield of agriculture/ food security/living resources/ecosystems. Candidates will be sought from both the natural sciences and social sciences, with a strong policy interest in the problems of developing countries being a requirement in both cases. Candidates might be drawn from distinguished scholars and policy analysts initially trained as agricultural economists, agronomists, forestry and fisheries experts, resource economists, biotechnology experts, ecologists, wildlife managers, and the like. Natural scientists would be expected to be familiar with ecosystem management issues, and social scientists would be expected to be familiar with the relevant biological sciences. All candidates should have a demonstrated interest in working in a crossdisciplinary setting. Inquiries and nominations should be sent to: Search Coordinator, Allison Hughes; e-mail: allison\_hughes@harvard.edu at the Center for International Development by March 31, 2000.

Harvard University is an Affirmative Action/Equal Opportunity Employer.

#### X-RAY FACILITY MANAGER UNIVERSITY OF COLORADO HEALTH SCIENCES CENTER

The University of Colorado Health Sciences Center Molecular Structure Program invites applications for an X-Ray Facility Manager. This individual will manage and maintain a newly established biomolecular X-ray facility. Applicants must have a M.Sc. or Ph.D., experience in macromolecular X-ray crystallographic theory and practice and experience in X-ray equipment maintenance, with experience in NT and UNIX-based computer system administration preferred. Submit curriculum vitae and names of three references to: Chair, X-Ray Search Committee, Box C236, 4200 East Ninth Avenue, Denver, CO 80262. University of Colorado is an Equal Opportunity/ Affirmative Action Employer.

#### POSITIONS OPEN

South Orange County Community College District, Department of Math, Science, and Engineering, has an opening for a full-time, nontenure MARINE SCIENCE/OCEANOGRAPH INSTRUCTOR at Saddleback College for the 2000-2001 academic year. Position is a one-year, temporary sabbatical leave replacement. Duties and responsibilities will be to instruct a variety of lecture/laboratory-division marine science/oceanography science courses, including introduction to oceanography, physical and chemical oceanography, and marine science; to assist in the development and implementation of a comprehensive oceanography/marine science curriculum; and to participate in general faulty functions related to the education program, in-service and professional development. Minimum qualifications: (1) Master's degree or higher in physical or chemical oceanography; OR (2) Bachelor's degree in any physical or marine science AND a Master's degree in physics, chemistry, or oceanography; OR (3) a combination of education and experience that is at least the equivalent of Items (1) or (2) above (candidates who apply on the basis of equivalency must submit the Supplemental Application for Equivalency Determination form in addition to all other required materials); OR (4) a valid California credential that authorizes service as a full-time community college instructor of marine sciences and oceanography. Preference will be given those candidates who demonstrate a high level of professional expertise on the basis of college teaching experience in oceanography and related areas. Current contract calls for 178 duty days per academic year. Salary: \$33,814 to \$52,412 commensurate with education and prior experience. Closing date: April 5, 2000. For an application, please contact: South Orange County Community College District, 28000 Mar-guerite Parkway, Mission Viejo, CA 92692. Job Line Telephone: 949-582-4850; FAX: 949-365-1748; website: www.socccd.cc.ca.us. Opening: #1711-2191.

#### DIRECTOR OF PROTEIN SERVICES UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

Direct and develop the operations of the Protein Sciences facility by providing research services to faculty and students on campus and nationwide. Responsibilities include peptide synthesis using two types of fully automated peptide synthesizers and peptide purification using various types of analytical and preparative high-performance liquid chromatography instruments. Perform peptide analysis by electrospray and MALDI mass spectrometry, protein sequence analysis (by Nterminal Edman chemistry and by mass spectrometry), and protein analysis by mass spectrometry. Run 1D and 2D gel electrophoresis of proteins and develop scientific methodology and service for proteome analysis (proteomics). Train and supervise staff. Participate in collaborative research projects with faculty. Forty hours per week; 8 a.m.-5 p.m. Salary: \$51,000 per year.

Ph.D. in biochemistry. One year of postdoctoral research associate experience including synthesis, purification and analysis of difficult peptides, solutionphase peptide synthesis, and Edman sequencing of proteins. Please provide a résumé and names of three references who can confirm ability to carry out these duties. Apply to: Dr. Harris Lewin, Biotechnology Center, University of Illinois, 103 Observatory, 901 South Mathews, Urbana, IL 61801.

The University of Illinois is an Áffirmative Action/Equal Opportunity Employer. Minorities, women, and other designated class members are encouraged to apply.

**POSTDOCTORAL POSITION** in gene therapy. Development of novel adenovirus vectors and gene transfer to the retina (see *Hum. Mol. Genet.* 7:1893, 1998 and 5:913, 1996). Submit applications and arrange for three letters of recommendation to be sent to: **Rajendra Kumar-Singh**, **Ph.D.**, **Eccles Institute of Human Genetics**, **University of Utah**, **15N 2030E**, **Room 3240B**, **Salt Lake City**, **UT 84112-5330**. *Equal Opportunity Employer/Affirmative Action Employer*.

#### POSITIONS OPEN

#### VETERINARY PATHOLOGIST HARVARD MEDICAL SCHOOL New England Regional Primate Research Center

The New England Regional Primate Research Center, Harvard Medical School, has an opening for a Veterinary Pathologist in the Division of Comparative Pathology at the INSTRUCTOR or ASSISTANT **PROFESSOR** level. Minimum qualifications include a D.V.M. or equivalent degree and ACVP Board certification or eligibility, with Board certification and prior experience with nonhuman primates preferred. Primary responsibilities include participating in the diagnostic service of the Division of Comparative Pathology, teaching postdoctoral fellows in the discipline of pathology, and collaborating with Primate Center and affiliated scientists on the design implementation and interpretation of diverse biomedical research projects. The Division of Comparative Pathology has an excellent infrastructure to support collaborative and independent research and has established interests in the pathogenesis of infectious diseases, particularly the simian immunodeficiency virus/ macaque model of AIDS and associated opportunistic infections.

To apply, send a letter indicating your research interests and experience, curriculum vitae, and the names of three individuals who may be contacted for references to: Andrew A. Lackner, D.V.M., Ph.D., Associate Professor of Pathology, Chairman, Division of Comparative Pathology, New England Regional Primate Research Center, Harvard Medical School, One Pine Hill Drive, P.O. Box 9102, Southborough, MA 01772-9102.

Harvard University is an Affirmative Action/Equal Opportunity Educator and Employer. Women and individuals from underrepresented minorities are strongly encouraged to apply.

BIOLOGIST. The Biology Department of Hobart and William Smith Colleges invites applications for a one- or two-year position starting August 2000. Responsibilities include teaching the laboratories for an introductory course for majors on organismal and population biology, teaching a course in the candidate's area of specialty, and contributing to the Colleges' Environmental Studies program. Preference will be given to candidates with a Ph.D. and teaching experience. Hobart College for men and William Smith College for women are coordinate residential colleges that share a campus and faculty. The Colleges own a 65-foot research vessel on Seneca Lake and a nearby preserve. Applicants should send curriculum vitae, a statement of teaching philosophy and inter-ests, official transcripts for all degrees received, and three letters of reference to: Dr. Elizabeth Newell, Biology Department, Hobart and William Smith Colleges, Geneva, NY 14456. E-mail: newell@ hws.edu; Telephone: 315-781-3590; FAX: 315-781-3860. Review of applications begins April 26, 2000, and will continue until the position is filled. Hobart and William Smith value diversity and especially encourage applications from women and people of color.

#### SCIENTIFIC CURATORS PROTEOME INC.

Proteome is a rapidly growing company at the forefront of the bioinformation revolution that provides comprehensively curated protein databases to the pharmaceutical industry and to academia. We have many openings for Scientific Curators, who collect and integrate protein information for our multispecies databases. Candidates must have training in mammalian or model systems, a wide knowledge of cell or molecular biology or related fields, excellent writing skills, and a Ph.D. Curators may work full- or parttime, on-site or remotely, which offers maximum personal flexibility. For consideration, please send a cover letter and curriculum vitae to: Human Resources, Proteome Inc., 100 Cummings Center, Suite 435M, Beverly, MA 01915. E-mail: hr@ proteome.com; FAX: 978-922-3971. See website: http://www.proteome.com for more information. An Equal Opportunity Employer.

### Functional Genomics: Research Scientist/Post-doc



The scientists of deCODE genetics are interested in teaming up with other highly capable researchers to work on post gene-discovery research. The primary areas of research are disease-gene functioning and the impact of disease genes on other genes and proteins. Specific research areas include protein-protein interaction, studies of promoter regions, gene expression and the development of antibodies against disease gene products.

Requirements include a Ph.D. degree in molecular biology, biochemistry or related fields, as well as strong experience in DNA cloning and protein research.

The position is located in Reykjavik, Iceland. Opportunities for post-doctoral positions as well as permanent positions are available.

deCODE genetics offers an attractive compensation package, stock-options, relocation assistance and, most importantly, a unique opportunity to participate in genetic research at the cutting edge.

For more information, please contact: Dr. Asta Bjarnadottir, Director of Human Resources, deCODE genetics, Lynghals 1, IS-110 Reykjavik, Iceland (asta@decode.is) or visit our website (www.decode.is). Applications should include a statement of purpose, a Curriculum Vitae, a list of publications and three references. Applications will be reviewed as they arrive up until July 1st, 2000.

Based in Reykjavik, Iceland, deCODE genetics is a population-based genomics company conducting research into the inherited causes of common diseases. deCODE genetics operates one of the most technologically advanced, high-throughput genotyping laboratories in the world. Together with pharmaceutical companies and other healthcare institutions, deCODE genetics aims to utilize its research to develop new methods for identifying, treating and preventing diseases.



The Faculties of Sciences of the Universities of Geneva and Lausanne, Switzerland,



ERSITÉ DE GENÈVE

invite applications for two positions of:

## **Professor of Plant Biology**

Both positions are full-time, beginning October 1st, 2000, and require a Ph.D. or equivalent. Evidence of effective teaching experience and direction of research programs is required. The successful applicant will give courses in French; a grace period can be granted for language acquisition. Both institutions offer excellent research opportunities in multidisciplinary environments.

#### Professeur ordinaire ou adjoint Université de Genève

au Département de botanique et biologie végétale Full Professor or Associate Professor in the Department of Plant Biology

Candidates will be expected to direct cutting edge research in the areas of plant molecular and cellular biology.

#### Université de Lausanne

#### Professeur associé

à l'Institut d'écologie

Associate Professor in the Plant Biology Laboratory of the Institute of Ecology

Candidates should have a publication record in plant cell biology. Preference will be given to specialists in structure-function relationships. Applications, including a curriculum vitae, a statement of proposed research, three examples of publications and names and addresses

of referees, should be submitted before May 1<sup>st</sup> 2000 to:

For Geneva: Secrétariat de la Faculté des Sciences, Université de Genève, 30 Quai Ernest-Ansermet, CH-1211 Genève 4, Switzerland, where inquiries can be made (Tel. +41-22-702-6652). For further information: E-mail: jean-david.rochaix@molbio.unige.ch.

For Lausanne: the Décanat of the Faculty of Science, Collège Propédeutique, CH-1015 Lausanne, Switzerland. For further information on infrastructure, responsibilities and conditions see http://www.unil.ch/ibpv

Candidates are encouraged to apply for both positions but if applying for one position must state which one in their applications. The Universities encourage applications from women.

#### **RESEARCH SCIENTIST POSITION**

D-Squared BioTechnologies Incorporated seeks an outstanding Master's-level Scientist to work on genetic transformation of sugar beet. The scientist must have prior experience in sugar beet transformation using agrobacterium and biolistics. Other required experiences needed are advanced knowledge in PCR technology, Southern and Northern blot analysis, plant tissue culture, and bioinformatics. The salary range is from \$22,000 to \$30,000. Interested candidates should submit curriculum vitae with cover letter and the names of three references, either via the website: http://www.d2biotech.com with the subject as "Human Resources" or to: D-Squared BioTechnologies, Human Resources, P.O. Box 78843, Atlanta, GA 30357 U.S.A.

#### POSTDOCTORAL POSITION ROLE OF PP2A IN CELL CYCLE CONTROL

A position is available immediately to study the role of PP2A in the initiation of chromosomal DNA replication. Individuals with a Ph.D. degree are encouraged to apply. Experience in biochemistry and molecular and cellular biology is required. Interested candidates should send a statement of research accomplishments and future plans and the names, addresses, and telephone numbers of three references to: Dr. Gernot Walter, Program in Molecular Pathology, Department of Pathology, University of California San Diego, 9500 Gilman Drive, La Jolla, CA 92093-0612. FAX: 858-534-8942; e-mail: gwalter@ucsd.edu.

#### POSTDOCTORAL FELLOW

To work on regulation of brain thrombosis in stroke models in mice. Previous experience in stroke modeling and basic molecular techniques required. Neuroprotective, antiinflammatory, and antithrombotic effects of novel, naturally occurring anticoagulant proteins will be studied in different knockout models for coagulation factors in relation to expression of hemostasis-related genes, development of secondary thrombosis, and blood flow. Salary commensurate with experience. Contact: Brenda Kavanaugh; e-mail: Brenda\_Kavanaugh@urmc.rochester.edu; FAX: 716-273-1132.

**POSTDOCTORAL POSITION** available immediately to study the cellular mechanisms underlying the effects of cocaine and amphetamine on neurons of the rat septal area. Techniques to be used include sterotaxic injection of retrograde tracers and patch clamp recordings from brain slices using infrared videomicroscopy. Experience in patch clamp or brain slice physiology is desirable. Send curriculum vitae and names of three references to: Meenakshi Alreja, Ph.D., Department of Psychiatry, CMHC 335A, Yale University School of Medicine, 34 Park Street, New Haven, CT 06508. E-mail curriculum vitae to: Meenakshi.alreja@yale.edu.

POSTDOCTORAL POSITION available in a laboratory studying a recently discovered endogenous inhibitor of the inositol 1,4,5-trisphosphate receptor (Watras et al., Biochemistry, April 2000). Previous experience with patch clamping and the measurement of intracellular calcium using fluorescent dyes is highly desirable. Please send letter of interest, curriculum vitae, and the names of three references to: Dr. James Watras, Department of Physiology, University of Connecticut Health Center, 263 Farmington Avenue, Farmington, CT 06030-3505. FAX: 860-679-1269. E-mail: watras@sun.uchc.edu. An Affirmative Action/Equal Opportunity Employer; Minorities/Females/Persons With Disabilities/Veterans.

POSTDOCTORAL POSITION in immunology available immediately to study dendritic cells in mice and swine. Requires Ph.D. and experience in molecular biology and immunology. Send résumé and names and e-mail addresses of three references to: Dr. Harm HogenEsch, Department of Veterinary Pathobiology, Purdue University, 1243 VPTH, West Lafayette, IN 47907-1243. E-mail: harm@ vet.purdue.edu; FAX: 765-494-9830.

#### POSITIONS OPEN

The Biology Department at Loyola College is seeking a VISITING ASSISTANT PROFESSOR for the 2000-2001 academic year. Teaching responsibilities include three courses per semester. Courses may include introductory organismal biology courses, introductory-level laboratory courses, and sophomore/ junior-appropriate upper-level courses (or seminars) in the applicant's area of expertise. The successful applicant will also assist in mentoring undergraduate student researchers. A Ph.D. in biology or related discipline and undergraduate teaching experience are required. Applicants with expertise in invertebrate biology will receive special consideration. Send (or FAX: 410-617-2646) résumé, the names of three references, and a list of courses that you would be interested in teaching to: Dr. Andrew Schoeffield, Biology Department, Loyola College, 4501 North Charles Street, Baltimore, MD 21210 by April 14, 2000.

Loyola College is a Jesuit Catholic university which welcomes applicants from all backgrounds who can contribute to our unique educational mission. Loyola is an Affirmative Action/Equal Opportunity Employer that seeks applications from women and members of minority groups.

Three NIH-funded POSTDOCTORAL POSI-**TIONS** in developmental genetics and biophysics available immediately. (1) Two positions in zebrafish genetics using transposon-mediated transgenesis, enhancer-trap screens, and chemical mutagenesis to identify molecular pathways regulating eye development. Experience in genetics, embryology, molecular biology, or biochemistry desirable. (2) Position in chemical senses, patch clamp studies of brain insulin receptor kinase and ion channel neuromodulation, using site-directed mutagenesis and transgenic mouse models as applied to olfaction. This position requires published expertise with patch clamp recording, protein biochemistry, or signal transduction. Please send curriculum vitae and names of three references to: Dr. James M. Fadool (genetics; e-mail: jfadool@bio. fsu.edu) or Dr. Debra Ann Fadool (biophysics; e-mail: dfadool@bio.fsu.edu), Biomedical Research Facility, Florida State University, Tallahassee, FL 32306-4340.

**POSTDOCTORAL POSITION** is available at the National Cancer Institute in a laboratory that focuses on oncogenes and tumor suppressors involved in myeloid leukemia and differentiation. A current focus in the laboratory is on the application of microarray technology to determine genes regulated by oncogenic transcription factors. Another emphasis is on the development of new leukemia models based on transgenic mice. A strong background in molecular biology and cell biology is essential. Send curriculum vitae and names of three references to; Dr. Linda Wolff, Head, Leukemogenesis Section, NCI, Building 37, Room 2D11, 37 Convent Drive MSC 4255, Bethesda, MD 20892-4255. E-mail: lwolff@helix.nih.gov. NIH is an Equal Opportunity Employer.

POSTDOCTORAL POSITION available immediately to study calcium signal transduction mechanisms (*Science* 287:1604–1605; 1647–1651; *Cell* 98:487–499). Expertise in cellular physiology and/ or molecular techniques for protein expression/analysis. Send résumé and three reference letters to: Dr. Donald L. Gill, Department of Biochemistry and Molecular Biology, University of Maryland School of Medicine, 108 North Greene Street, Baltimore, MD 21201. E-mail: dgill@umaryland. edu.

**POSTDOCTORAL**: Immediate opening; prefer experiences in immunohistochemistry, *in situ* hybridization, electrophoresis, DNA analysis, cell culture, cytogenetic analysis. Research in carcinogenesis, gene damage, and AIDS-related project. Send curriculum vitae with a cover letter summarizing expertise, career goal, and references to: Jiang Gu, M.D., Ph.D., Professor, Department of Biomedical Sciences, UCOM 6000, University of South Alabama, Mobile, AL 36688 U.S.A. E-mail: jgu@usamail. usouthal.edu.

#### POSITIONS OPEN

A POSTDOCTORAL RESEARCH FELLOW-SHIP position is available in the Division of Hematology//Oncology at the University of Rochester Medical Center for a Ph.D. or M.D. with appropriate laboratory experience and interest in hematopoiesis and stem cell biology for work with investigators interested in normal and leukemic hematopoiesis. Current projects include signal transduction inhibition of hematopoiesis, progenitor cell adhesion and homing, and generation of dendritic cells from AML progenitors. Interested individuals may send a résumé or inquiries to:

> Directors, Stem Cell Transplantation and Apheresis Programs Box 610 601 Elmwood Avenue Rochester, NY 14642 FAX: 716-275-5590

#### ASSISTANT PROFESSOR ENVIRONMENTAL BIOLOGY

Applications are invited for a full-time, tenure-track position at the level of Assistant Professor in the Department of Biological Sciences. Qualifications are an earned Doctorate; one year of postdoctoral training; the ability to establish and/or maintain an extramurally funded research program that complements existing programs in environmental toxicology, population or community ecology, or physiological ecology; a strong record of scholarly achievement, including publications; commitment to teaching undergraduate and graduate students and prior successful teaching experience or potential for successful teaching; the ability to interact collegially with faculty, students, and diverse populations as evidenced by prior experience; and good communication (oral and written) skills. Applicants should send a letter outlining their specific research and teaching interests and qualifications for the position, curriculum vitae, and the addresses of three references. To ensure full consider-ation, applications should be received by April 21, 2000; position remains open until filled. Reply to:

Chairperson, Faculty Search Committee Department of Biological Sciences Wichita State University, 1845 Fairmount Wichita, KS, U.S.A. 67260-0026

Wichita State University is an Affirmative Action/Equal Opportunity Employer.

#### POSTDOCTORAL POSITION MOLECULAR GENETICS COLUMBIA UNIVERSITY

**POSTDOCTORAL RESEARCH FELLOW-SHIP** available July 2000. Obesity gene regulation: focus on transcriptional regulation of genes involved in pathogenesis of obesity and Type 2 diabetes in rodents and humans. Expertise in gene expression and transcriptional regulation required. Familiarity with relevant informatics tools desirable. Candidates should be self-motivated, meticulous, personable, independent, and creative. Submit curriculum vitae and the names and addresses of three references to; **mp250@columbia.edu** or mail to: **M. Prudden**, **Division of Molecular Genetics, Columbia University, 1150 St. Nicholas Avenue, New York, NY 10032. Columbia University takes Alfinnative Action toward Equal Employment Opportunity.** 

POSTDOCTORAL RESEARCH ASSOCI-ATE. Parkinson's disease drug development project at Department of Neurology, Scott and White Clinic and Memorial Hospital, affiliated with Texas A&M College of Medicine, requires a candidate with experience in stercotaxic small animal surgery and animal behavior. Send résumé to: bmanyam@swmail.sw. org or mail to: Bala V. Manyam, M.D., Professor and Director of Research, Department of Neurology, Scott and White Clinic, Texas A&M University College of Medicine, 2401 South 31st Street, Temple, TX 76508. Equal Opportunity Employer. Gesellschaft für Biotechnologische Forschung mbH Braunschweig



The Gesellschaft für Biotechnologische Forschung mbH – German Research Centre for Biotechnology – of the Helmholtz Society, which is supported by the Federal Government and the State of Lower Saxony invites applications for a

# Postdoctoral Position (vaccinology/immunology)

in the Vaccine Research Group of the Division of Microbiology, Dept. of Microbial Pathogenicity and Vaccine Research. The main research tasks would be the development and characterization of attenuated bacterial vaccine carriers and multicomponent live bacterial vaccines in the context of a EU-Project.

The successful candidate must hold a PhD or MD and experience in cellular/molecular immunology. Expertise in the fields of mucosal immunity, immune histochemistry and/or animal infection models will be considered as an advantage.

The Position is initially for two years starting immediately. The salary will be at the appropriate civil service level depending on candidate's qualifications and previous research experience.

Complete applications in English, including CV, list of publications and two references should be sent to **GBF**, **Personnel Department**, **Mascheroder Weg 1**, **D-38124 Braunschweig**, **Germany**. Please quote **vacancy no 15/2000**. Informal inquiries may be directed to Dr. Carlos A. Guzmán, Phone: +49-531-6181558, Fax: +49-531-6181411; e-mail: cag@gbf.de.

#### Technische Universität Berlin



#### Scientific Director at BESSY (Berlin)/ Full Professor (Professorship pay scale/ BesGr. C 4)

The Berliner Elektronenspeicherring-Gesellschaft für Synchrotronstrahlung m.b.H, BESSY, is a national synchrotron radiation facility which operates since the beginning of 1999 a 1.9 GeV 3<sup>rd</sup> generation storage ring, BESSY II, with an international user community. In the VUV and soft X-ray wavelength range BESSY II provides beams of highest brilliance. For applications in the hard X-ray regime a limited number of beam lines with photon energies up to 50 keV will be available. About 30 experimental stations are expected to be operational at the end of the year 2000. The total number of experimental stations available at BESSY II will amount to at least 60. The collaboration between BESSY and the Hahn-Meitner-Institut, Berlin, will be further developed.

BESSY invites applications for a Scientific Director of the facility for January 1<sup>st</sup>, 2001, who will also be a full Professor of Physics at the Technical University of Berlin. The candidate should be an internationally recognised scientist in synchrotron radiation research in the broadest sense with demonstrated leadership abilities. The successful applicant is expected to take a leading role in operating the user facility, in the development of novel instrumentation and in conducting a strong in-house research program at BESSY. She/ he will be a member of the board.

BESSY and the Technical University of Berlin (TUB) are equal opportunity employers and encourage all qualified applicants to apply. As BESSY and the TUB are striving to increase woman quota in fields where men dominate the faculty staff, it will give preference to qualified women.

Qualified candidates with disabilities will also be given preference.

Applications and suggestions of candidates should be sent before April 15<sup>th</sup>, 2000 to Der Praesident der Technischen Universitaet Berlin - Faculty of Physics / Fachbereich 4 - Physik - Sekr. PN 2-1, Hardenbergstrasse 36, D-10623 Berlin, Germany with the chiffre 4-45.

Further information about the position can be obtained from Prof. Dr. Jochen R. Schneider (e-mail: Jochen.Schneider@DESY.DE)

#### Philips Research Laboratories Marie Curie Host Fellowship Positions

Philips Research Laboratories in Aachen, Germany, are part of the International Philips Research Organization with 3000 employees in 6 countries.

We can offer 5 EU-sponsored Marie Curie Industry Host Fellowships (2-y-contracts) for Post-Docs resp. Post Graduates, who will be working together with our highly qualified, interdisciplinary research teams on challenging topics. These positions are to be filled in August 2000 at the latest.

Details about these fellowships such as prerequisites, terms and conditions, approx. salary are available at: http://improving-mcf.sti.jrc.it/project/.

One important prerequisite is that you are a citizen of an EU resp. EU-associated state resp. that you have been living there for the recent 5 years.

#### Post-Doc (No. 1) "Luminescence and Electron Emission"

- You will work on our research project "Carbon-based Electron Emitters for Display and Lamp Applications". You will be trained to operate our microwave plasma chemical vapor desposition equipment in order to grow diamond and other carbon films and be introduced to relevant characterisation techniques.
- Besides a Ph.D. in physics, surface science or materials science you should have experience in either of the following fields: vacuum technology, chemical vapor deposition, thin film technologies.

#### Post-Doc (No. 2) "Luminescence and Electron Emission"

- You will work on our research project "Ion-induced Secondary Electron Emission of Plasma Display Panel Coatings". Measuring the resp. emission coefficient (gamma coefficient) and in-depth surface characterisation (XPS, UPS, AFM, STM, Kelvin probe) will be part of your research activities.
- Besides a Ph.D. in physics, surface science or materials science you should have experience in plasma physics resp. vacuum technology.

#### Post-Doc (No. 3) "Luminescence and Electron Emission"

- You will work on our research project "Preparation and Characterisation of Down-Conversion Phosphors". The luminescent properties are to be studied and selected materials will be applied in test lamps and panels under applicationrelevant conditions.
- Besides a Ph.D. in physical chemistry you should have experience in spectroscopic methods (e.g. laser spectroscopy) resp. solid state chemistry.

# Post-Doc (No. 4) and Post-Graduate (No. 5) "Light Generation"

- You will work on our research project "Highly Efficient Light Sources". The research subject is in the area of discharge physics. The ultimate goal is to invent highly efficient light sources. The work covers both theoretical and experimental aspects up to making test lamps for characterisation.
- Besides a Ph.D. resp. University Degree in physics you should have experience in molecular or plasma physics.

Please send your hardcopy application to the following address:

Philips Research Laboratories Christiane Benicke Weisshausstr. 2, 52066 Aachen, Germany Telefon: +49/241/6003-477 Fax: +49/241/6003-611 Christiane.Benicke@philips.com www.philips.de

**POSTDOCTORAL POSITIONS** in genetics and molecular biology of aging. Studies include longevity genes in yeast, homologs in humans, and their molecular mechanisms (*Genetics* **15**2:179; *Trends Microbiol.* 7:247; *Mol. Biol. Cell* **10**:3125). Applicants with experience in genetics and/or molecular biology should send curriculum vitae and names of three references to: Dr. S. M. Jazwinski, Department of Biochemistry, Louisiana State University Medical Center, **1901** Perdido Street, New Orleans, LA 70112. E-mail: sjazwi@lsumc.edu. Louisiana State University Medical Center is an Affirmative Action/Equal Opportunity Employer.

A POSTDOCTORAL POSITION is available to continue studies of human cytomegalovirus glycoproteins that affect immune evasion (see Nature Med. 5:1039). The work involves the cell and molecular biology of antigen presentation pathways, efforts to evaluate *in vivo* effects, NK cells, and the use of the viral proteins as novel immunotherapeutic agents, e.g., in gene therapy. Please send résumé and names of three references to: David C. Johnson, Department of Microbiology and Immunology, Oregon Health Sciences University, Portland, OR 97201. FAX: 503-494-6862; e-mail: johnsoda@ohsu.edu.

**POSTDOCTORAL POSITIONS** available to study structure/function relationships in small heat shock proteins and membrane transporters, using site-directed spin-labeling. Candidates with a strong background in EPR or fluorescence spectroscopy and skills in protein biochemistry and molecular biology are desirable. Send curriculum vitae and three letters of reference to: Hassane Mchaourab, Department of Molecular Physiology and Biophysics, 702 Light Hall, Vanderbilt University, Nashville, TN 37232. E-mail: hassane.mchaourab@mcmail. vanderbilt.edu.

#### POSTDOCTORAL POSITION GERM LINE STEM CELLS

Studies include culture and transfection of male germ line stem cells (spermatogonia) and identification and isolation of genes active in stem cell selfrenewal and differentiation. Send curriculum vitae, names of three references, and a letter describing research experience to: Dr. R. L. Brinster, School of Veterinary Medicine, University of Pennsylvania, 3850 Baltimore Avenue, Philadelphia, PA 19104.

#### POSTDOCTORAL POSITION GENOMIC STUDIES

Available immediately for genome studies of *Cryptosporidium parvum* and *Streptococcus sanguis*. The successful candidate will have experience in molecular biology, bioinformatics, and automated DNA sequencing. Send curriculum vitae and three references to: **Gregory A. Buck, Nucleic Acids Research Facility, Box 980678**, Virginia Commonwealth University, Richmond, VA 23298. E-mail: buck@hsc.vcu.edu.

**POSTDOCTORAL POSITION** at the University of Illinois at Chicago to study membrane trafficking (JCB 144:507-518, 1999; PNAS 96:4095-4100, 1999) and dynamics of microtubules (*Nature Cell. Biol.* 1:399-403, 1999) in nerve processes (website: www. uic.edu/~spopov/). Experience in molecular/cell biology, video microscopy, or electrophysiology is desirable. Send résumé to: Dr. Sergey Popov; e-mail: spopov@uic.edu.

POSTDOCTORAL POSITION available immediately for a researcher interested in exploring molecular mechanisms underlying an animal model of obesity. Applicants with strong background in molecular biology and protein purification preferred. Send curriculum vitae and names of two references to: Dr. Margarethe Hoenig, Department of Physiology and Pharmacology, College of Veterinary Medicine, The University of Georgia, Athens, GA 30602. E-mail: mhoenig@calc.vet.uga.edu. The University of Georgia is an Equal Employment Opportunity/ Affirmative Action Institution.

#### POSITIONS OPEN

**POSTDOCTORAL POSITION** available to study defective excitation-contraction coupling in cardiac myocytes, using transgenic and pharmacologic models. Candidates must have a strong background in patch clamp techniques and analysis, preferably in cardiac muscle, with a good understanding of calcium regulatory mechanisms and ion channel biophysics. Additional experience with confocal and/or fluorescence imaging desirable. Send curriculum vitae/publications to: Dr. Joshua I. Goldhaber, UCLA School of Medicine, Division of Cardiology and Cardiovascular Research Laboratories, Room 47– 123 CHS, 10833 LeConte Avenue, Los Angeles is an Affirmative Ation/Equal Opportunity Employer.

POSTDOCTORAL POSITION: The University of Medicine and Dentistry of New Jersey, School of Osteopathic Medicine, has positions available to study the interaction of cell cycle regulatory elements with DNA repair proteins (for further details, visit website: http://www.3.umdnj.edu/mobioweb/cardonna. html). A strong background in molecular biology and protein biochemistry is required. Please send curriculum vitae and names of references to: Dr. Sal Cardonna, Department of Molecular Biology, University of Medicine and Dentistry of New Jersey, Two Medical Center Drive, Stratford, NJ 08084. E-mail: caradonn@umdnj.edu. Regrettably, we can respond only to those candidates chosen for an interview. The UMDNJ is an Affirmative Action/Equal Opportunity Employer, Minorities/Females/Disabled/Veterans, and a member of the University Health System of New Jersey.

POSTDOCTORAL OR RESEARCH FELLOW positions available immediately to study the role of transcription factors during the development of dorsal spinal cord, using novel genetic approaches (knockout/-in) in mice. We have identified a transcription factor, DRG-11, which plays an important role in the development of pain circuits. One of the projects is to analyze the phenotype of DRG-11 mutant phenotype. Candidates should have a strong background in molecular biology or neurobiology. Please send curriculum vitae and three letters of recommendation to: Dr. Zhou-Feng Chen, Department of Anesthesiology, Washington University School of Medicine, 660 South Euclid Avenue, St. Louis, MO 63110. Telephone: 314-747-5093; FAX: 314-362-8571; e-mail: chenz@morpheus.wustl.edu.

**POSTDOCTORAL/RESEARCH ASSOCIATE POSTIONS** will be available beginning July 1, 2000, to study the immune response and possible neuronal interactions following infection with intracellular pathogens such as *Salmonella* or murine gammaherpesvirus–68. Investigations into the hostpathogen interaction will be carried out using *in vivo* models of infection followed by cellular and molecular biological analyses. More detailed information about this position can be found at website: www. bioweb.uncc.edu/Faculty/Bost/index.htm. Send curriculum vitae and names of three references to: Dr. Kenneth L. Bost, Department of Biology, University of North Carolina at Charlotte, 9201 University City Boulevard, Charlotte, NC 28223-0001. E-mail: klbost@email.uncc.edu.

A POSTDOCTORAL POSITION in enamel biomineralization and tooth formation is available at the University of Southern California, Center for Craniofacial Molecular Biology. Currently funded projects include study of enamel phenotypes in transgenic animals. Knowledge of yeast hybrid systems desirable. Send curriculum vitae and three letters of reference to:

Dr. Michael Paine or Dr. Malcolm Snead University of Southern California School of Dentistry 2250 Alcazar Los Angeles, CA 90027

#### POSITIONS OPEN

#### POSTDOCTORAL POSITIONS IN BIOCHEMISTRY AND MOLECULAR BIOLOGY OF PLANT CELL WALL Metabolism and Host Pathogen Interactions Complex Carbohydrate Research Center University of Georgia

Two Postdoctoral positions in biochemistry/molecular biology are available: (1) to study the interactions of plant  $\beta$  1,3-glucanases and fungal  $\beta$ -glucanase inhibitor proteins in pathogenesis and (2) to study enzymes involved in the metabolism of xyloglucans in cell walls. Experience in protein isolation and purification and in molecular biology techniques are essential. Applications received by April 30, 2000, are assured of consideration. Salary negotiable. Applicants should send a letter of interest, curriculum vitae, and the names and addresses of four references to: Dr. Peter Albersheim or Dr. Alan Darvill, Directors, Complex Carbohydrate Research Center, University of Georgia, 220 Riverbend Road, Athens, GA 30602-4712 U.S.A. An Affimative Action/Equal Employment Opportunity Institution.

#### POSTDOCTORAL POSITION

Seeking candidates interested in the study of lung carcinogenesis with the application of molecular genetics to the diagnosis and treatment of patients with lung cancer. A Ph.D. in molecular genetics-related discipline required. Desired skills include gene cloning and mutational analysis, with five years of practical experience. Please forward curriculum vitae to: Charles A. Powell, M.D., Columbia University, College of Physicians and Surgeons, 630 West 168th Street, Box 91, New York, NY 10032.

Columbia University is an Equal Opportunity/Affirmative Action Employer.

**POSTDOCTORAL POSITION** to study the CFTR chloride channel that is defective in cystic fibrosis. Current projects focus on the regulation of CFTR activity by intermolecular and intranolecular interactions (e.g., *Science* **286**:544, 1999; *Nature* **390**: 302, 1997). Ph.D. and/or M.D. required. Expertise in biochemistry, molecular biology, or electrophysiology preferred. Contact: Kevin L. Kirk, Ph.D., Department of Physiology and Biophysics, University of Alabama at Birmingham, 738 MCLM, Birmingham, AL 35294-0005. E-mail: kirk@physiology.uab.edu. The University of Alabama at Birmingham is an Affirmative Action/Equal Opportunity Employer.

Three **POSTDOCTORAL POSITIONS** available to study molecular mechanisms of ovarian cancer metastasis. Projects focus on the role of adhesion molecules and proteolytic enzymes in tumor invasion and metastasis. Requires Ph.D. and experience in protein chemistry/enzymology, molecular biology, or cell biology. Two-year renewable contract. Send curriculum vitae and three letters of reference to: **David A. Fishman**, **M.D.**, **Northwestern University Medical School, Department of Obstetrics and Gynecology, Prentice Woman's Hospital, 333 East Superior Street, Suite 420, Chicago, IL 60611.** 

POSTDOCTORAL RESEARCH and TECH-NICIAN POSITION available immediately at Tufts University Medical School to investigate signaling mechanisms of HIV-induced neural injury and apoptosis, the role of chemokine receptors in CNS function, and the genetics of complex neurobehaviors. Please send curriculum vitae and names of three references to: Dr. Bradford Navia, Box 1007, 750 Washington Street, Boston, MA 02111. E-mail: BNavia@Lifespan.org.

**POSTDOCTORAL POSITION** in ion channel research is available to investigate ion permeation, structure, and function in voltage-gated sodium and BK(Ca) potassium channels. *Eligibility for neuropharma*cology training grant requires U.S. ditzens or permanent residents. Send application information to: Dr. Edward Moczydlowski, Department of Pharmacology, Yale University School of Medicine, 333 Cedar Street, New Haven, CT 06520-8066. E-mail: edward.moczydlowski@yale.edu. As a major European pharmaceutical company, our success depends upon the dynamism of our research directed towards the discovery of new drugs. For our Research Centre situated near Paris, we wish to recruit an :

# Electrophysiologist, Ph.D.

# specialised

in the Central Nervous System

Applicants should have a Ph.D. as well as relevant post-doctoral experience in central nervous system pharmacology. This position requires a strong background in *in-vivo* electrophysiology.

Working in our cerebral ageing department, the successful candidate will be responsible for initiating and developing *in-vivo* electrophysiology studies related to behavioural approaches and *in-vitro* electrophysiology.

You will also be in charge of the technical part of a small research team. Our material and technical facilities are excellent. You will join a high-level multidisciplinary team and evolve in a stimulating scientific environment.

MEDIASYSTEM

Please send your application (CV, hand-written letter and passport-sized photo), quoting reference J4964, to PRESS EMPLOI, BP 513, 75423 Paris Cedex 09, France.

#### **GROUP LEADER**

as a member of the CENTER OF EXCELLENCE SONDERFORSCHUNGSBEREICH (SFB 470) "GLYCOSTRUCTURES IN BIOLOGICAL SYSTEMS -SYNTHESIS AND FUNCTION"

The SFB 470 was awarded by the Deutsche Forschungsgemeinschaft (DFG) and commenced work at the University of Hamburg in 1997. The research is focused on molecules containing carbohydrate structures and glycoconjugates related to biological systems. Within this frame a young talented research group (Nachwuchsgruppe) will be established with guaranteed funding for five years. We are seeking a group leader (BAT la/b) to build up this research group which can consist of a postdoctoral position, a technician, two doctoral student positions as well as means for consumables and investments. The applicant is expected to have previously contributed scientifically to one of the research areas of the SFB 470 associated with synthesis, structure or biological function of glycoconjugates cf. http://www.chemie.uni-hamburg.de/sfb470.

Advantageous would be interdisciplinary research orientations such as combining chemoenzymatic synthesis with molecular biological approaches.

Required qualifications are Ph.D. in science and postdoctoral research or equivalent experience. Qualified individuals, aged 33 or younger should submit their applications including C.V., list of publications, copies of documents and a short outline of the intended research before May 1, 2000 to: *Prof. Dr. Joachim Thiem, Universität Hamburg, Institut für Organische Chemie, Martin-Luther-King-Platz* 6, 20146 Hamburg, Germany. Info Tel: +49 40 42838 2806.

# Deputy Director, GLOBAL Natural Sciences CHANGE

The International Geosphere-Biosphere Programme of the International Council for Science (ICSU) is seeking a Deputy Director for Natural Sciences. The IGBP has as its objective to describe and understand the interactive physical, chemical, and biological processes that regulate the total Earth system, the unique environment that it provides for life, the changes that are occurring in this system, and the manner in which they are influenced by human actions. Research is carried out by Core Projects, on the distinct sub-components of the Earth System, and at the programme-wide level. IGBP is launching a major new effort on Earth System Science, as well as contributing to three new cross-cutting activities on carbon, water and food/fibre, in collaboration with partner global environmental change programmes.

The duties of the Deputy Director, Natural Sciences, include (i) liaison with and support of IGBP research activities, particularly at the inter-project and programme-wide levels; (ii) scientific contributions to programme-wide activities; (iii) support of the IGBP Scientific Committee; (iv) advocacy and representation of IGBP at meetings and other international research activities; and (v) assisting the Executive Director in guiding the work of the IGBP Secretariat.

The successful candidate will (i) have a PhD in a relevant field of Earth System Science; (ii) have proven interest in global environmental change research; (iii) be well acquainted with IGBP and with international scientific collaboration in general; (iv) be fluent in written and spoken English (knowledge of other languages is an advantage).

The position is based in Stockholm, Sweden and reports to the Executive Director of IGBP. The initial contract period is three years. The salary is paid in SEK (Swedish Crowns) and is based on that of a senior scientist in Sweden.

Letters of application, a curriculum vitae, and the names of three referees should be sent no later than **21 April 2000** to the IGBP Secretariat, The Royal Swedish Academy of Sciences, Box 50005, S-104 05 Stockholm, Sweden. Tel (+46-8) 16 64 48, Fax: (+46-8) 16 64 05, E-mail: sec@igbp.kva.se Webpage: http://www.igbp.kva.se

#### POSTDOCTORAL POSITIONS ALBERT EINSTEIN COLLEGE OF MEDICINE, NEW YORK

Positions available immediately for a Ph.D. with exceptional molecular biology or genetics background. Dr. Laurie Ozelius: molecular neurogenetic studies of movement disorders using linkage for gene discovery. Dr. Bernice Morrow: studies to determine the mechanism of human chromosome rearrangements and basis of congenital anomaly disorders. Both programs include an emphasis of human molecular genetics and strong interest in generating mouse models for functional studies. Fluency in English required. Send statement of interests, curriculum vitae listing all publications, and addresses of three references to: Laurie Ozelius or Bernice Morrow, Department of Molecular Genetics, Albert Einstein College of Medicine, Jack and Pearl Resnick Campus, 1300 Morris Park Avenue, Bronx, NY 10461. Website: www.aecom.yu.edu. Equal Opportunity Employer.

Two ADVANCED POSTDOCTORAL POSI-TIONS are available to study the role of stress and/or potentially hazardous substances on human and animal models. Parameters to be examined include behavior, neurochemistry, neuroendocrine, neurophysiology, and cardiovascular/ANS. The successful candidate should have expertise in one of these areas and must have demonstrated scholarship. These federally funded positions pay over \$40,000 per year. Candidates may hold the M.D. or Ph.D. degrees. Applicants with an M.D. degree may not be more than two years postresidency or clinical subspecialty training. Ph.D.s must have received their degrees within four years of application. Send curriculum vitae and names and addresses of three references to: Dr. B. Natelson, Director, Environmental Hazards Research Center: e-mail: cfsasst@nbunj.ivnc.net; FAX: 973-395-7114. The Department of Veterans Affairs is an Equal **Opportunity** Employer

#### POSTDOCTORAL POSITION AT THE NIH

The Radiation Oncology Branch, Division of Clinical Sciences, National Cancer Institute, NIH, seeks candidates with credentials in molecular biology and biochemistry for a Postdoctoral position. Experience in molecular mechanisms involved in the radiosensitization of prostate cancer cells by nonsteroidal antiinflammatory agents and/or in NFkB biology is required. Candidates must have a Ph.D. in biology. If interested, please send a cover letter and your curriculum vitae to: Nancy Kesteven, Radiation Oncology Branch, NCI, Building 10, Room B3B69, 10 Center Drive MSC 1002, Bethesda, MD 20892-1002. Telephone: 301-496-5457; FAX: 301-480-5439. NIH is an Equal Opportunity Employer.

POSTDOCTORAL POSITION in cognitive neuroscience/attention: available in the Department of Physiology, University of Wisconsin, to study role of corticothalamic pathways and thalamic reticular nucleus in neural mechanisms of attention, using behavioral, c-fos, neurochemical (HPLC), and electrophysiological methods (see Neuroscience 76:1061– 1081, 1997; Neuroscience 91:805–817, 1999; and website: http://www.physiology.wisc.edu/www. montero/html for further details). Strong background in cognitive or systems neuroscience required. Send curriculum vitae and names of three references to: Dr. Vicente Montero, 621 Waisman Center, 1500 Highland Avenue, Madison, WI 53705. FAX: 608-265-4103; e-mail: montero@waisman.

**POSTDOCTORAL POSITION** available immediately. The successful applicant will design and study cell-type specific retroviral vectors *in vitro* and *in vitro* (hu-SCID mouse) for gene therapy of HIV-1 infection. Applicant should have a solid background in molecular biology (e.g., cloning, tissue culture). Please send résumé to: **Dr. Ralph Dornburg, Thomas Jefferson University, Division of Infectious Diseases, Jefferson Alumni Hall, 1020 Locust Street, Philadelphia, PA 19107.** 

#### POSITIONS OPEN

#### POSTDOCTORAL AND RESEARCH ASSISTANT PROFESSOR Positions in Molecular Pharmacology

The Department of Pharmacology, University of Illinois College of Medicine at Chicago, is accepting applications for several positions at the levels of Postdoctoral Research Associate and Research Assistant Professor. Openings are available in the following areas:

Asrar B. Malik: regulation of endothelial barrier function; redox regulation of endothelial adhesivity. Randal A. Skidgel: structure, function, and sorting of regulatory peptidases; regulation of nitric oxide production.

**Oscar Colamonici**: protein structure analysis of the cytoplasmic domain of cytokine receptors; functional genomics.

**Richard D. Ye**: G protein-coupled receptors and leukocyte activation.

More detailed descriptions of our research programs can be found at website: www.uic.edu/ depts/mcph. We offer state-of-the-art core facilities, cutting-edge research opportunities in an intellectually stimulating environment, and highly competitive salaries. M.D. or Ph.D. required. Positions to begin May 1, 2000, or until filled. For fullest consideration, interested candidates should send a cover letter identifying interest in particular laboratories, curriculum vitae, and the names of three references to:

Research Opportunities c/o Aileen Baker Department of Pharmacology College of Medicine, University of Illinois 835 South Wolcott Room E403 (M/C 868) Chicago, IL 60612

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

POSTDOCTORAL POSITIONS in X-ray crystallography. Two Postdoctoral positions are available immediately to apply X-ray crystallographic methods to project areas in association with the laboratories of Drs. Steven L. Roderick and John S. Blanchard. These areas include study of the enzymes involved in bacterial cofactor biosynthesis and of antibiotic inactivation. Crystals are currently available for one of these projects, and the applicants will benefit from strong biochemical support in their efforts to prepare crystals for additional projects. The crystallographic laboratories at the Albert Einstein College of Medicine are well equipped and will make use of the Brookhaven National Synchrotron Light Source (a 60 to 90-minute drive from campus). Please send curriculum vitae, summary of research experience and interests, and the names and contact information for three references by postal or e-mail to: Dr. Steven L. Roderick, Department of Biochemistry, Albert Einstein College of Medicine, Jack and Pearl Resnick Campus, 1300 Morris Park Avenue, Bronx, NY 10461; e-mail: roderick@aecom.yu. edu. Equal Opportunity Employer.

Neuroscience POSTDOCTORAL POSITION, University of California Irvine, to study cellular mechanisms of information processing and plasticity in sensory (auditory) neocortex. For ongoing projects and recent publications, see website: http://darwin.bio. uci.edu/neurobio/Faculty/Metherate/metherate. htm. We use intracellular recordings and IR-DIC optics in brain slices, including a novel auditory thalamocortical slice. Parallel intracellular in vivo studies involving sensory stimulation are possible. Starting salary is \$29,000 to \$32,000 plus benefits. Send cur riculum vitae, statement of research interests, and names of three references by May 15, 2000, to: Dr. Raju Metherate, Department of Neurobiology and Behavior, 2205 Biological Sciences II, Uni-versity of California, Irvine, CA 92697-4550. Email: rmethera@uci.edu. University of California Irvine is an Equal Opportunity Employer committed to excellence through diversity.

#### POSITIONS OPEN

#### POSTDOCTORAL POSITIONS AVAILABLE

Dr. Vivian Bellofatto: mechanism of trypanosome gene regulation using in vitro and in vitro RNA transcription systems (J. Biol. Chem. 274:31947, 1999). Email: bellofat@umdnj.edu. Dr. David Kaback: mechanism of meiotic chromosome pairing and segregation (Genetics 152:1475 and 153:1547, 1999). E-mail: kaback@umdnj.edu. Experience in molecular biology, genetics, and/or biochemistry required. Send or e-mail curriculum vitae, a summary of research interests, and the names and addresses of three references to either Dr. Bellofatto or Dr. Kaback at:

#### The Department of Microbiology and Molecular Genetics UMDNJ-New Jersey Medical School 185 South Orange Avenue Newark, NJ 07103

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#### POSTDOCTORAL POSITION IN NEUROBIOLOGY

Postdoctorate sought for a collaborative research team (Mel Robertson and Virginia Walker, Queen's University; and Jan-Marino Ramirez, University of Chicago) investigating mechanisms of thermotolerance of motor pattern generation. The project seeks to determine the role of heat shock proteins in protecting respiratory pattern generation in mouse brainstem slices and flight pattern generation in locust ganglia. The successful applicant will be based in Mel Robertson's laboratory but will undertake extended periods of research in the Ramirez laboratory. Available immediately for a maximum of three years. Most suitable for someone with patch clamp experience, although all excellent candidates will be considered. Send curriculum vitae and e-mail addresses of three references to: R. M. Robertson, Department of Biology, Queen's University, Kingston, ON K7L 3N6 Canada. E-mail: robertrm@biology. queensu.ca.

#### POSTDOCTORAL POSITIONS POPULATION DYNAMICS SALMON AND MARINE RESERVES

We seek two Ph.D.-level researchers with knowledge of marine population dynamics and ocean process to work on two modeling projects. One project involves the effects of climate change on California Current salmon, and the other project involves the impacts of establishing marine reserves along the U.S. West Coast. Project directors are Alan Hastings, Jim Wilen, and Lou Botsford. Send curriculum vitae and contact information for three references to: L. W. Botsford, Department of Wildlife, Fish, and Conservation Biology, University of California, Davis, CA 95616.

#### MARKETPLACE THIRD INTERNATIONAL MOUSE LUNG TUMORIGENESIS SYMPOSIUM

June 16-17, 2000; Eleanor N. Dana Conference Center at the Medical College of Ohio, Toledo, Ohio. Organizers: Ming You, Gary D. Stoner, Alvin M. Malkinson, Andre Castonguay, and Theodora Devereux. The objective of this conference is to summarize advances in the field of lung carcinogenesis in mouse models and humans. Keynote speakers include: Richard D. Klausner (invited), Tyler Jacks (confirmed), and Lee W. Wattenberg (confirmed). Invited speakers include: L. Anderson, M. Anderson, S. Belinsky, F. L. Chung, P. Demant, F. De Mayo, W. Gunning, H. Hiai, F. Iraqi, S. Jakowlew, G. Kelloff, G. H. Lee, R. Lubet, T. Massey, J. Minna, S. Reynolds, J. Ross, R. Ruch, R. Sills, J. Whitsett, H. Witschi, and C. S. Yang. Poster and short talk sessions are planned. Information for registration and abstract forms can be obtained from: Ms. Kathleen Deanda, the Medical College of Ohio, Toledo, Ohio; by mail: Department of Pathology, HEB 202, 3055 Arlington Avenue, Tole-do, OH 43614-5806; e-mail: kdeanda@mco.edu; Telephone: 419-383-4918; FAX: 419-383-3089. Abstract deadline is May 15, 2000.

POSTDOCTORAL POSITIONS AVAILABLE NIH-funded Postdoctoral positions are available to study the molecular pathogenesis of Alzheimer's disease. Ph.D. in molecular neurobiology or related area required. Experience in molecular or cell biology, especially cell imaging and culturing techniques, is helpful. Please submit curriculum vitae, summary of research experience, reprints, and the names and addresses of three references to: Dr. Frank LaFerla, University of California, Irvine, 1109 Gillespie Neuroscience Facility, Irvine, CA 92697-4545. Salary is commensurate with experience (\$26,000 to \$30,000), and candidates must be U.S. citizens, noncitizen nationals of the United States, or have been lawfully admitted for permanent residence at the time of the appointment. Closing date for applications is May 15, 2000. The University of California, Irvine, is an Equal Opportunity Employer committed to excellence through diversity.

#### FELLOWSHIPS

#### POSTDOCTORAL FELLOWSHIP IN MOLECULAR GENETICS OF DIABETES National Institutes of Health

The Clinical Diabetes and Nutrition Section of the National Institute of Diabetes and Digestive and Kidney Diseases, located in Phoenix, Arizona, is seeking a junior- or senior-level **POSTDOCTORAL SCIEN-TIST**. The two-year Fellowship is available in March 2000. Candidates must have either a Ph.D. or an M.D. with significant experience in molecular genetics and/or physiology. The recipient will work towards identifying novel genes that predispose Pima Indians to Type 2 diabetes. Please send curriculum vitae and statement of research interests to: Leslie Baier, Ph.D., NIDDK, NIH, 4212 North 16th Street, Phoenix, AZ 85016. FAX: 602-200-5225; e-mail: Lbaier@phx.niddk.nih.gov.



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