

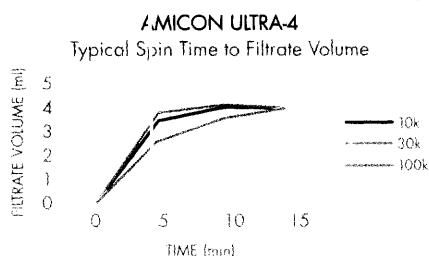


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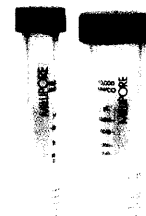
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# NEW PRODUCTS

## A/G BLAST Apple Computer

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programs to perform similarity searches of sequences in various biological databases, such as GenBank. These include programs specialized for analysis of protein sequences (BLASTp) and nucleotide sequences (BLASTn). Standard BLAST searches of sequence databases can be performed via browser access from many Web sites or directly from BLAST programs written for personal computers.

This software was jointly developed by Apple's Advanced Computation Group and Genentech. A/G BLAST includes the features of BLASTn. A/G BLAST's primary claim to fame is the tremendous increase in speed realized by the its use of the "Velocity Engine" components of the G4 processor. The Velocity Engine, unlike traditional processors, can perform multiple calculations and data comparisons simultaneously, enabling A/G BLAST to more efficiently process database searches.

A sequence similarity search made using an 11-nucleotide string with A/G BLAST was performed almost five times faster than the same search with the use of a standard version of BLAST on the same machine. The speed increase appeared to be independent of length of search sequence. It should be noted that the speed gained by A/G BLAST is only applicable to sequence searches performed when the program is used to access remote databases directly from a G4-equipped Macintosh computer. A/G BLAST does not affect searches done when BLAST is run from a Web interface or other versions of BLAST.

A/G BLAST can be downloaded free of charge from Apple's Web site as source code or in an executable form. The source code installation occupied almost 46 MB of hard disk space. The executable version is for users who have a local version of the National Center for Biotechnology Information's NCBI-BLAST already installed. Installation and compilation instructions are quite easy to follow.

Due to their intuitive and consistent interface, Macintosh computers have long been a favorite of scientists. Bioinformaticists are sure to find this initial release of A/G BLAST a promising development. The advantages of writing sequence analysis routines for the Velocity Engine are apparent. Similar optimization of BLASTp, the part of BLAST that is most commonly used by researchers, will be welcome.

—Satyam Priyadarshy

The author is at 11918 Winterthur Lane, Suite 105, Reston, VA 20191, USA. E-mail: [satyam@priyadarshy.com](mailto:satyam@priyadarshy.com).

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## FASTEST GUN

Apple/Genentech BLAST (A/G BLAST) is a new software tool for the rapid analysis of nucleotide sequences on G4-equipped Macintosh computers running OS X. The basic BLAST (Basic Local Alignment Search Tool) package is a set of pro-

grams to perform similarity searches of sequences in various biological databases, such as GenBank. These include programs specialized for analysis of protein sequences (BLASTp) and nucleotide sequences (BLASTn). Standard BLAST searches of sequence databases can be performed via browser access from many Web sites or directly from BLAST programs written for personal computers.

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including the ABI sequence detection systems and the LightCycler and iCycler systems. HotStarTaq DNA Polymerase in both kits prevents formation of primer-dimers and nonspecific amplification products during reaction setup and the first denaturation step. This eliminates inaccurate quantification due to low PCR specificity often associated with SYBR Green, which binds to any double-stranded DNA molecules present, including nonspecific products and primer-dimers.

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CONTINUED ON PAGE 562

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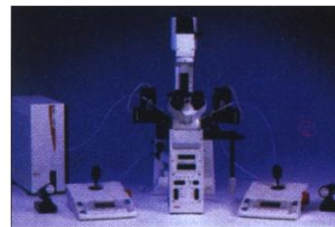
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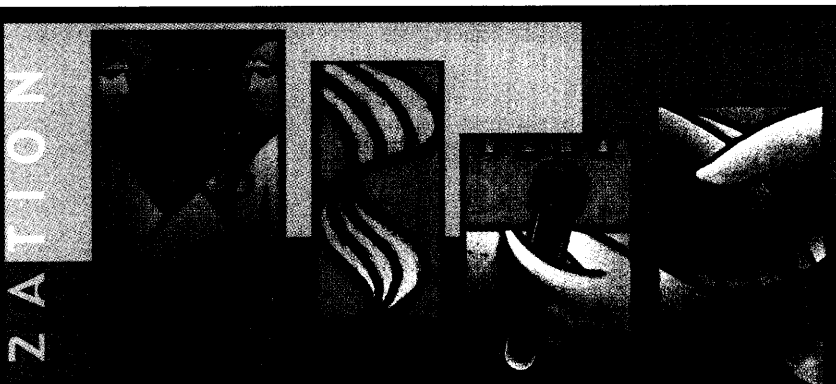
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# Careers and Events in Drug Discovery

## INTEGRATIVE SCIENCE

Modern drug discovery is an integrative process that involves subjects as diverse as target identification, animal modeling, and the etiology of diseases. Discovery teams need life scientists with a variety of individual skills and the flexibility to function well in multidisciplinary situations. BY PETER GWYNNE

**T**he days in which drug discovery teams did little more than identify compounds with healing promise and pass them on to development groups have long gone. Today drug discovery and development are morphing into each other. Individual scientists from development frequently join discovery teams early in the process, and discovery scientists stay with compounds during their development.

The result: Researchers in drug discovery must have flexibility and a breadth of scientific interests. In particular they must be prepared for frequent changes in the nature of the work they perform. Scientists must also communicate effectively in order to explain their contributions to individuals trained in different disciplines.

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**Wyeth**

Drug discovery groups value chemists of all types, particularly those trained in synthetic organic and medicinal chemistry. Cell biologists, molecular biologists, and biochemists are also in demand. Some recruiters often look for evidence of skills in such areas as high throughput screening and liquid chromatography-mass spectrometry. Others expect simply solid scientific backgrounds, in the belief that they can impart the necessary skills through training.

One area that has extremely high value is animal modeling. Drug development teams increasingly demand scientists of that persuasion. But universities graduate relatively few of them.

Life scientists with other backgrounds should know that a rash of mergers and acquisitions in the pharmaceutical business has created a temporary shortage in available jobs. Finding the right positions has become more competitive than it used to be.

Here, we talk to representatives of seven companies about the opportunities that they offer to job-seeking applicants. We also outline the details of a major meeting that will focus on drug discovery for all interested parties ranging from science undergraduates to senior managers with long ties to the industry.

# Careers and Events in Drug Discovery



FRED VINICK

**CAMBRIDGE, Massachusetts:** From his position as senior vice president for drug discovery at Genzyme Corporation, Fred Vinick surveys a field that has room for scientists with a vast range of backgrounds and skills. "Synthetic organic chemistry is still very valuable," he says. "People who can do high throughput screening, whatever their backgrounds, are important. So is training in cell biology, molecular biology, and biochemistry."

Vinick sees a change in the essential nature of drug discovery. "Early stage development activities are becoming a much more valuable aspect of discovery," he points out. "We're starting to see a great emphasis on analytical chemists who can do liquid chromatography-mass spectrometry. People who are good at *in vivo* pharmacology are the engines that drive activities. We need scientists who are good on the database management side or computer chemistry; no matter what your approach, you'll need people who can find their way around databases. We also need people who specialize in specific biologies such as tumor biology and immunology. They give us the necessary breadth and depth. We want flexible generalists who still know something about specialist subjects."

Genzyme's laboratories contain roughly twice as many non-Ph.D.s as Ph.D.s. The company doesn't require applicants with Ph.D.s to have undertaken postdoctoral fellowships. "More important," says Vinick, "is where they are in their professional development. Our hires are academically very contemporary. We want to bring in fresh blood so that we have new techniques coming into the company."

For those and other scientists, Vinick argues, drug discovery has an aura of excitement to rival that of academic research. "This work can be fascinating and gratifying," he explains. "It's very multidisciplinary. That means that it's good for somebody with broad scientific tastes and for individuals who like to be independent."

What about specific requirements for new recruits? "You want a strong science background as an undergraduate," Vinick advises. "If you're a chemist it's useful to learn about biology. An interest in medicine doesn't hurt either. It's good to be a well-rounded person here. I really want people who are highly intelligent critical thinkers who can move in and out of different domains." And how do you know if you're ready for the world of drug discovery? "Ask yourself how much you're into solving problems and puzzles," he advises. "Ask if you have curiosity and if you enjoy being part of a team. And remember that any experience you can get in industry is relevant."

**PHILADELPHIA, Pennsylvania:** "We're working in major therapeutic areas – women's health, neurosciences, oncology, infectious diseases, musculoskeletal conditions, and now asthma and metabolic disease," says Bob Ruffolo, head of R&D for pharmaceutical company Wyeth. "So almost everything is fair game. There is probably no area in which you can get a Ph.D. in biomedical sciences and not have some sort of career here. We are focused, but we'll follow opportunities that may not fit within the normal bounds."

Not surprisingly, the pharma casts a wide net in seeking recruits for its drug discovery. "I particularly look for people with the broadest back-



BOB RUFFOLO

grounds," Ruffolo says. "We need scientists who can function in teams and are flexible. I emphasize that graduates should do more courses." Why? "It's likely that the field you're working in will change in three or four years. I look for breadth as well as depth."

The company recruits scientists with all levels of training from Bachelors' degrees to postdoctoral experience. However, says Ruffolo, "My personal focus is always on the Ph.D.-level staff. To run a lab here, getting the ideas and starting new research, you have to have a Ph.D. and one or two postdoctoral fellowships as well." Wyeth can insist on the experience that a second postdoc provides because recent mergers in the pharmaceutical industry have reduced the number of jobs in research. "We're in position to get the best people," he explains. "Many people can't find a job after one postdoc. Two is not a requirement for us. But it's almost impossible to get in the door without one."

What nonscientific skills does Wyeth expect of applicants for research posts? "First and foremost we look for scientific excellence," Ruffolo says. "However, I would put communication at the very top of the list after that. It doesn't matter how good your science is. If you can't communicate, you won't get funded. Effective communication is one way to drive home the importance of the innovation in your ideas. The most effective people have excellent scientific skills and can also network, using their communication abilities."

Ruffolo warns young scientists not to view industry jobs through rose-colored spectacles. "I want to know why they want to work in industry," he says. "If they want to discover drugs, that's great. But if they think that industrial work will be easier than in academic research or that they'll be paid more money, they'll be disappointed. They shouldn't go into industry to avoid competition for National Institutes of Health grants; they have to compete here for projects."



BRAD BROWN

**MORRISVILLE, North Carolina:** PPD, Inc. provides discovery and development services for the pharmaceutical and biotechnology industries. "We bring the two together," says Brad Brown, vice president of research at PPD Discovery, PPD's drug discovery technology subsidiary. Thus the company recruits scientists who can play roles throughout the entire drug pipeline from fundamental research to regulatory work with the Food and Drug

Administration and other regulatory authorities.

"In the discovery area, computer technology involving computational software development, database searches, and predictive software is a core subdiscipline to chemistry and preclinical science," says Brown. "In those areas we mostly recruit individuals with a scientific background who can write code. We see a need for more intranet and web based code that will offer database access for all scientific disciplines as well as provide processes to get the science accomplished."

What type of scientific backgrounds does the company seek for these tasks? "In addition to those with pure science backgrounds such as combinatorial chemistry we hire some software people who have taken sci-



Array BioPharma is a drug discovery company inventing new small molecule drugs through the integration of chemistry, biology and informatics. Our experienced scientists use the Array Discovery Platform, our integrated set of drug discovery technologies, to invent novel small molecule drugs in collaboration with leading pharmaceutical and biotechnology companies and to build our own pipeline of proprietary drug candidates. We are located in state-of-the-art facilities in Boulder and Longmont, CO, a gateway community to the Rocky Mountains, providing a high quality of life.



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#### **GROUP LEADERS IN CELL BIOLOGY / Drug Metabolism / Molecular Biology**

We seek dedicated scientists to fill key leadership roles in our rapidly expanding Biology Department. These group leaders will have significant industrial small molecule discovery experience in their area of expertise and a broad familiarity with other technologies, sciences, and therapeutic areas. Responsibilities include managing day-to-day laboratory operations, recruiting, identifying/evaluating new target and technology opportunities, and taking a leadership role in the creation of intellectual property. Participation in business development, strategic decisions, and design of facilities will be required on occasion. These 'hands-on' positions require strong interpersonal and organizational skills.

- The Cell Biology Group is responsible for the design and execution of cell-based/functional assays, mechanism of action studies, validation of targets, *ex vivo* experiments and identification of new target proteins. Expertise in oncology and/or inflammation is required and experience with 'reverse pharmacology' and animal studies is also desired. (Job Code - BIO-Cell/GL)

- The Drug Metabolism Group is responsible for the design and execution of *in vitro* and *in vivo* PK assays, metabolite profiling, and cytotoxicity screening. This multi-disciplinary group consists of analytical chemists, biochemists, cell biologists and HTS scientists and will be expanding to include pharmacologists. A thorough knowledge of the techniques and principles of all these areas is required. (Job Code - BIO-DM/GL)

- The Molecular Biology Group is responsible for the design and expression of target and related proteins for screening, x-ray crystallography and mechanism of action studies. A broad and deep understanding of recombinant expression systems is required and experience with genomic and proteomic programs is a plus. Additional familiarity with cell-based efficacy, toxicology, and gene expression profiling will also be expected. (Job Code - BIO-M/GL)

#### **PROTEIN CHEMISTS (Job Code - BIO-PRO)**

We seek outstanding scientists with extensive experience in purification and characterization of recombinant proteins expressed by E.coli, insect, and mammalian cells to join our Protein Chemistry group. The group is responsible for providing high quality proteins for use in crystallography and high throughput screening, and identifying new project opportunities. Experience in purifying non-tagged proteins, refolding proteins, and developing novel purification techniques is desired. This "hands-on" laboratory position requires excellent communication skills, scientific excellence, and the desire to be part of a dynamic team. These positions require a Ph.D. with 2+ years experience or a B.S./ M.S. with 10+ years experience.

#### **CELL BIOLOGISTS (Job Code - BIO-Cell/Sci)**

We seek extraordinary scientists with experience in mammalian cell culture, transient and stable cell transfections, and cell-based assays such as cell proliferation, ELISAs, Western analysis, reporter-gene assays and apoptosis assays. The Cell Biology group is responsible for the design and execution of cell-based/functional assays, mechanism of action studies, validation of targets, *ex vivo* experiments and identification of new target proteins. A background in oncology, inflammation and/or immunology as well as experience in an industrial drug discovery environment is a plus.

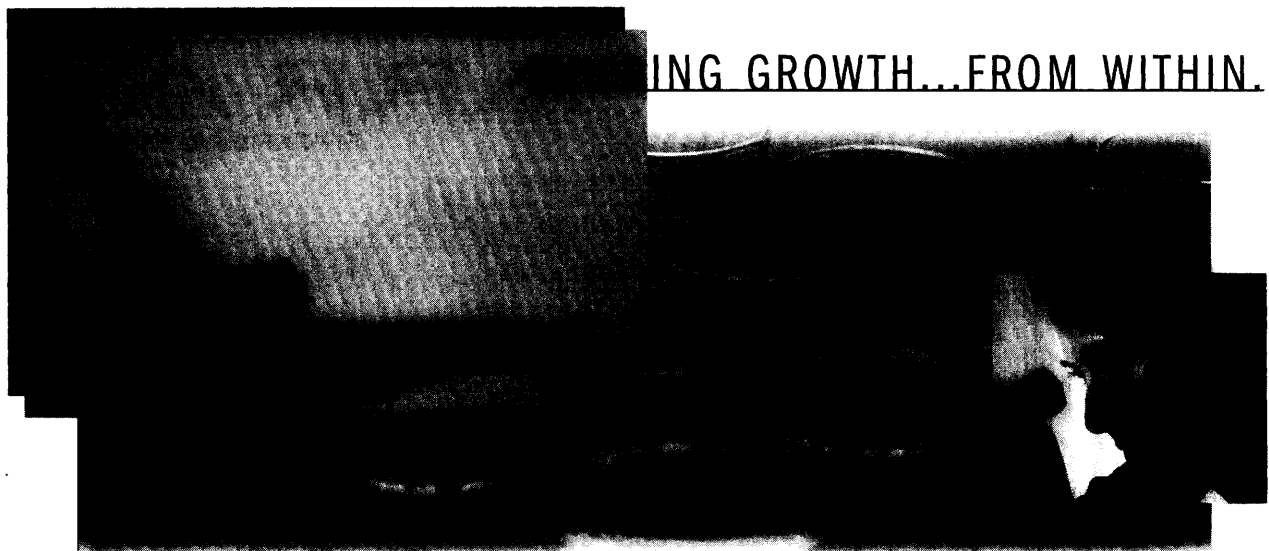
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#### **SCIENTIST/RESEARCH SCIENTIST**

##### **Cell Culture Process Development**

You will be responsible for developing optimal conditions for growth and productivity of cell lines in small- and medium-scale bioreactors, evaluating different production strategies and developing strategies for inoculum development. Working with a cell culture team of 15 or more, you will explore alternate approaches for harvesting conditioned media and develop strategies for transfer of bioreactor operating conditions into pilot plant facilities.

Scientist requires an MS and 2–3 years of experience or a BS and 5+ years of experience. The ideal candidate will have a background in biochemistry, cell biology or microbial physiology with hands-on experience with mammalian cell culture and sterile technique. **Req# 015375**

**Research Scientist** requires an MS or PhD and the commensurate amount of experience. Experience with recombinant protein production is essential and you must be familiar with current methods of primary product recovery and downstream purification. **Req# 015384**

#### **RESEARCH SCIENTIST**

##### **Downstream Processing**

You will develop and standardize purification technology for monoclonal antibodies and related mammalian product candidates and evaluate new purification technologies and strategies, including affinity, ion exchange, and expanded bed adsorption. Additionally, you will develop strategies for viral inactivation, demonstrate viral clearance and perform characterization of process performance and control strategy, including identification of critical process parameters. Requires a PhD with 1–3 years of industry or postdoc experience. The ideal candidate will have a solid background in biochemistry and analytical biochemistry with an emphasis on downstream processing and purification of monoclonal antibodies. **Req# 015376**

#### **SCIENTIST**

##### **Cell Culture**

You will work to develop optimal conditions for the growth and productivity of cell lines in instrumented bioreactors, using small- and medium-scale reactors as models. You will focus on developing robust strategies for inoculum development with the goal of developing protocols that can be transferred into pilot production facilities. Requires a BS/MS and 3+ years of applicable experience. You should have a solid background in biochemistry, cell biology or cell physiology and extensive experience with mammalian cell culture and sterile techniques. **Req# 016459**

#### **SENIOR SCIENTIST**


##### **Viral/Prion Validation**

You will help develop and implement viral and prion clearance and validation studies in support of the manufacture of Active Pharmaceutical Ingredients (APIs) derived from animal or mammalian cell sources. Leading a lab focused on viral and prion clearance technology as well as process scale-down for validation, you will work closely with multiple groups, particularly the downstream process group. Requires a PhD in Biology, Biochemistry or related area and at least 5+ years of directly applicable industry experience. Experience in basic protein purification methods, protein characterization and various analysis techniques is required. **Req# 016263**

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a career in science

## Careers and Events in Drug Discovery

### *Drug Discovery from Soup to Nuts*

Drug Discovery Technology 2002 will provide an overview of the complete drug discovery process – a soup-to-nuts meal that will take registrants from the initial identification of lead compounds through preclinical development of the most promising molecules. Taking place from August 4 to August 9 at Boston's Hynes Convention Center, the conference and exposition will focus on the latest techniques and applications in drug discovery.

IBC USA, the company that organizes the annual event, has designed this year's version to appeal to a broad range of industry scientists and other professionals. "It will be geared to chief science officers, drug discovery scientists, academic and government researchers, and people who want to understand what is happening in the industry," says Michael Keenan of IBC. "This is a meeting you can attend to learn about cutting edge scientific research and all of the new technologies in drug discovery."

The meeting has the theme of integrative and interdisciplinary approaches to drug discovery. "We'll be looking at what academe, government, and industry are bringing to the table and how these groups work together to discover new drugs and improve human health," Keenan explains.

Under the umbrella of that broad theme the event will feature three tiers of activity intended to demonstrate how pharmaceutical and biotechnology companies can best use science to accelerate their drug discovery processes. They are:

Cutting edge science. Here, representatives of pharmas will discuss drug discovery research projects. They will examine such issues as new tools and techniques that worked and didn't work, and how companies changed their strategies in response to events.

IT. This event, new at this year's meeting, will comprise a one-day forum on information technology for drug discovery and the life sciences. It stems from the recognition that pharmas and biotechnology firms do not usually have the infrastructures they need to handle all the information that their drug discovery processes generate. Speakers from pharmas and such information technology companies as Hewlett-Packard, IBM, and Sun Microsystems will outline how the industry is addressing the convergence of information technologies and life science.

The business of drug discovery. Another one-day forum will focus on such issues as creative deal-making and partnering in drug discovery. "This will bring together the deal-making gurus and the pharmaceutical industry," says Keenan, noting that last year's version of the event sold out. "Speakers from both sides of deals will talk about the process. They will discuss how they decided on their deals, what the sticking points were, and how they negotiated their way through them."

A pair of other presentations should attract large audiences. The National Cancer Institute (NCI) will host a panel discussion on the theme of partnering with the government. This

will highlight NCI's resources and activities in drug discovery. Another session, Drug Discovery 101, will provide a primer on the basic trends, terminology, and challenges of the field.

Two half-day events will focus on start-ups. A showcase will give small emerging and early stage drug discovery companies the opportunity to impress potential investors. "Each firm will have 15 minutes to give an overview of the company and talk about its technology, business goals, and plans for investor funding and partnerships," explains Keenan. "We will have short networking sessions after each five presentations." Conference organizers have reserved 40 spots for the presentations; at press time more than twice that number had applied for the places. Another session on negotiating and valuing drug discovery and technology deals will provide representatives of small companies with ways to find out what their technology is worth. Instructors will emphasize role playing to hash out deals. "If you're from a big pharma they make you play a small biotech firm and vice versa," says Keenan. "It's a great learning experience."

The conference's exhibit hall will yield insights into the latest products, services, and technologies from more than 350 companies. "You can come in and get a quick snapshot in a few hours of the latest and greatest in drug discovery," Keenan says. "There will be lots of product demonstrations on the floor and two cocktail events for anyone with a free exhibit hall pass."

Ambitious scientists will also have opportunities to show off their stuff and to seek advancement. The event's poster session will feature more than 200 posters. And the Career Fair hosted by *Science* will provide opportunities for active job seekers.

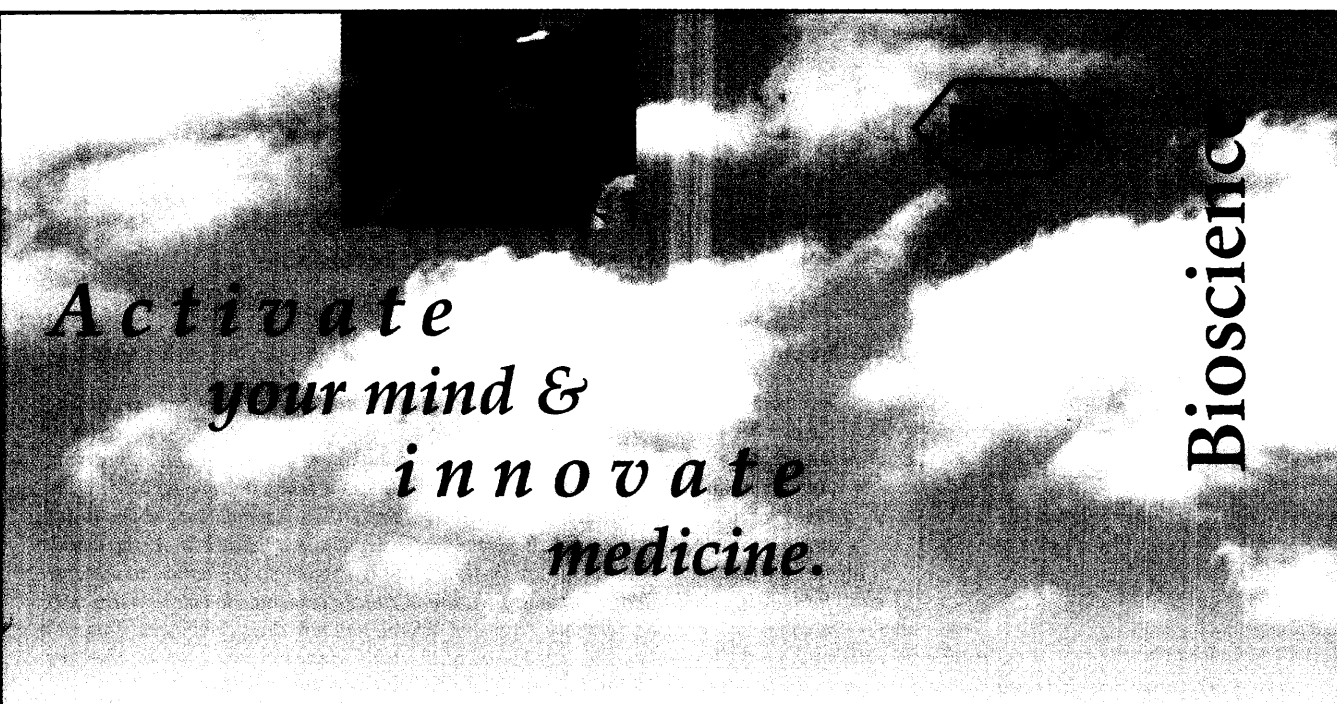
You can obtain more information about the event on its website: [www.drugdisc.com](http://www.drugdisc.com). Alternatively you can contact Michael Keenan at IBC USA Conferences, 1 Research Drive, Suite 400A, P.O. Box 5195, Westborough, MA 01581, telephone 508-616-5550 extension 288.

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Recent clinical data suggests that eliminating B cells in rheumatoid arthritis patients is of therapeutic benefit. Using *in vivo* models of arthritis, you will help elucidate the precise role of B cells in disease progression by using knockouts, neutralizing antibodies and other tools to assess the contribution of various aspects of B cell function to disease. Requires a PhD or equivalent with 0-3 years of postdoc experience and a strong background in *in vivo* pharmacology with an emphasis on immunology or inflammation. Job Code: 2527-SCI

## Postdoctoral Research Fellow — GU Biochemistry

You will study the effect of neuropeptides and neurotransmitters on proliferation and differentiation of the prostate with an emphasis on receptor induced signal transduction cascade(s) that modulate stromal and epithelial growth and/or differentiation leading to symptoms of benign prostatic hyperplasia. Requires a PhD in Pharmacology, Cell Biology, Biology, Biochemistry or Neuroscience and 0-3 years of postdoc experience with specialized coursework in urology and molecular pharmacology. Job Code: 1494-SCI

## Postdoctoral Research Fellow — HCV Biology

You will investigate the pathways whereby interferon-alpha (IFN-alpha) clears hepatitis C virus (HCV) RNA and the molecular mechanisms HCV uses to generate resistance to IFN-alpha therapy using the cellular HCV replicon system. Requires a PhD in Molecular or Cellular Biology, 0-3 years of postdoc experience and specialized coursework in interferon biology, molecular virology or virus-cell interactions. Job Code: 2529-SCI

## Research Scientist I/II, Enzymology — Viral Biochemistry

Apply your knowledge in enzymology and protein characterization to drug discovery research in virology. Using a full range of biochemistry concepts and approaches you will provide leadership for the analysis of protein-inhibitor interactions in a multidisciplinary environment. Requires a PhD in Biochemistry, Enzymology or equivalent and 2-5 years of postdoc experience. Significant experience in enzymatic assay design and development, analysis of enzyme substrate interactions, and protein-substrate-compound interactions is also required. Job Code: 2472-SCI

## Research Scientist I/II — HIV Biology

You will be responsible for developing state-of-the-art HIV antiviral testing methodologies. Using a full range of tissue culture and viral replication concepts and approaches, you will supervise a staff to accomplish goals/objectives. Requires a PhD in human infectious diseases biology or equivalent and 2-5 years postdoc experience. Significant experience in tissue culture systems, viral replication and reporter gene assays is also required. Experience working under containment level 3 is desired. Job Code: HIV-SCI

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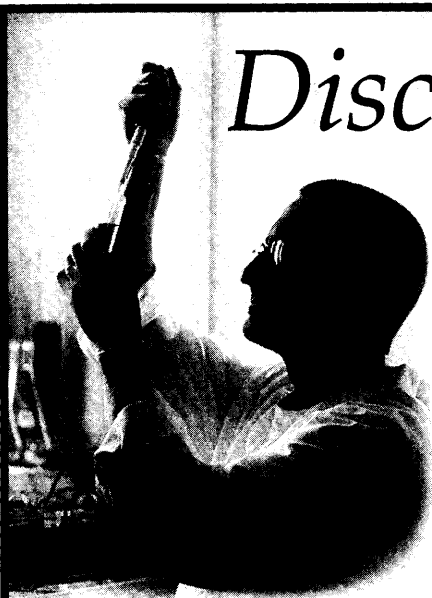
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*require the collaboration of Chemists and Biologists, linked to Incyte's treasure trove. We are therefore seeking innovative Scientists both from the pharmaceutical industry and directly from graduate and postdoctoral studies.*

## **Senior/Principal Research Scientist**

As a key member of the *in vivo* biology group you will be involved in drug discovery in the area of cancer therapeutics. You will have specific expertise in syngeneic and xenograft models of tumor growth and metastasis. Your responsibilities will include establishing animal models of human cancers, developing an understanding of the role of novel genes in the progression and metastasis of human cancers using animal models, and evaluating test compounds with regard to their pharmacodynamics and efficacy in cancer models. The individual will work closely with the discovery biology, pharmacokinetics and core technology team members in the identification and validation of novel cancer therapeutic targets using genomic-based target identification approaches. Prospective applicants will have an advanced degree (PhD or MD) and a record of scientific accomplishment in the areas of animal modeling of human cancers with a particular emphasis on breast, ovarian, prostate and/or lung cancer models. Expertise/understanding of DNA microarrays, proteomics, *in situ* expression, or gene transfer is desirable. Job Code: CG6020KV

## **Senior/Principal Research Scientist**

As a key member of the *in vivo* biology group you will be involved in the development of novel target validation technologies in animal models of human diseases. You will have expertise in transgenic and knockout methodologies, gene delivery using adenoviral vector systems, antisense methodologies and microarray gene expression profiling. Your primary responsibility is to create model systems to evaluate the functions of novel genes in the pathophysiology of human diseases and work closely with external collaborators to drive the selection of therapeutic targets for drug discovery. You will work closely with discovery biology, core technology and target validation groups in supporting the overall drug discovery effort. Prospective applicants will have an advanced degree (PhD or MD) and a record of scientific accomplishment in the area of analysis of gene function in whole animal setting. Job Code: CG6021KV

## **Staff/Senior Staff/Research Scientists**

As key members of the *in vivo* biology group you will be supporting the drug discovery and *in vivo* target validation effort in a variety of animal model-based systems. You will have strong hands-on skills in animal procedures such as drug administration, blood and tissue collection and basic surgical skills, as well as basic molecular and cell biology methodologies. You will have strong interest in the scientific aspects of various *in vivo* procedures and will be expected to interact with team members of discovery biology, core technology, pharmacokinetics/drug metabolism groups at a scientific level. Prospective applicants will have a BS or MS degree with several years of experience in a pharmaceutical industry/academic setting. Job Code: CG6022KV

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## Careers and Events in Drug Discovery

ence courses," Brown says. "Others who work with computer databases involving chemistry and biology need a good background in those fields. For example, we look for chemists and biologists who have grown up with HTML and other computer technologies and have moved into computing because they did not want to do wet chemistry."

Other parts of PPD Discovery's work are more traditional. "Our job is to identify compounds and put them into a screen. That hasn't changed for 30 years," says Brown. "There's an upswing in the number of medicinal and organic chemists required."

Other fields have become important as drug discovery and drug development drift into each other. "Biology is important as you move from genetics to assay development to crystallography and then pre-clinical work such as ADME [absorption, distribution, metabolism, and excretion]. Here we see more M.D.s and Ph.D.s," Brown explains. "Our client work on late discovery has convinced us that we have to bring in experts in certain disciplines to assist clients in designing preclinical studies in light of what the regulatory agencies will look at."

Brown looks for communication and leadership skills in recruits. "As we expand, the most difficult task going to the next level will be growing middle management internally," he says. "Communication skills and the ability to understand the bigger picture become very important. I've seen that most scientists are not trained for that." Brown also advises young scientists to gain industrial exposure. "The hands-on experience," he says, "is always a big plus."



MARTHA HAUSER

**PALO ALTO, California:** As the biotechnology discovery research arm of pharmaceutical company Schering-Plough Corporation, DNAX covers two major therapeutic areas: oncology and immunology. "We have strong expertise in therapeutic antibodies and biologics," says Emma Lees, the firm's director of oncology. "We also have a significant small molecule effort, mainly focused on oncology."

The company has four main foci for new recruits. "For novel target discovery and validation we really need Ph.D.-level people with understanding of the basic biology and human disease," says Lees. "In assay development we're looking for people who are technically excellent and who can do accurate data collection. For protein and antibody engineering, a good understanding of protein biochemistry and molecular biology is a must. In the preclinical area we face the challenge of coming up with good and predictive animal models, and we need people with experience in pharmacology and pharmacokinetics."

Understanding of animals models is a critical skill today. "Earlier and earlier animal modeling is becoming state of the art in drug discovery," Lees notes. "People with those skills are very much in demand, both at the Ph.D./M.D. and non-Ph.D. levels. It's very easy to cure cancer in mice. It's much harder in humans. So we're trying to build better, more predic-



EMMA LEES

tive models of human cancer and other diseases."

DNAX looks for strong scientific credentials. "We have seen a trend of Ph.D.s moving directly into scientist positions," says director of human resources manager Martha Hauser. "However, DNAX continues to seek Ph.D.s who have completed at least one postdoctoral fellowship, often with additional industry experience for scientific leadership roles."

The company also focuses on nontechnical skills. "The environment in a biotechnology company is much more goal-driven and structured than in basic research," Lees explains. "We need people who can respond to a more rigorous process. There's a good opportunity for non-Ph.D.s to advance because the goal-driven environment and the technical requirements of some positions allow scientists to perform more equally."

DNAX recognizes that selecting scientists who embrace the company's mission for drug discovery, fit well into the company culture, and meet high scientific standards requires intensive interviewing. Whether or not they have Ph.D.s, applicants face a rigorous selection process. "We're known for our grueling day-long interviews," says Hauser. "They include an extended lunch – and often dinner – interview with the applicants' peers. We look not only for technical abilities but also for their scientific passions, career goals, and attitude toward the work place."

What should life scientists interested in drug discovery do? "Send us their CVs," quips Lees. "We're always looking for good people." Beyond that, she adds, "People get over-worried that they need to have relevant industrial experience. A really good basic grounding in science and techniques and the right attitude are what we really look for in our entry level recruits."



ROGER TUNG

**CAMBRIDGE, Massachusetts:** "Because drug discovery is such a broad area, we're targeting quite a broad group of scientists," says Roger Tung, founding scientist and vice president of drug discovery at biotechnology firm Vertex Pharmaceuticals. "We'll be looking for people with expertise in chemistry, pharmacology, and pharmacokinetics. We'll also want to shore up our computational abilities, particularly in computational chemistry, and to add to our abilities in fundamental biology. We'll probably do some hiring in engineering areas. And in future we'll look at structural biology."

Vertex expanded its scope last year by acquiring Aurora Biosciences in San Diego. "That provided us with a tremendous toolset," says Tung. "We're integrating what we do – create pharmaceutical agents – with what Aurora has."

The company has started a particular focus on ion channels, a class of proteins involved in neural transmission. "Of immediate interest to us are treatment of neuropathic pain and areas of neurological deficit, such as epilepsy," Tung says. "We also have work on genetic diseases such as cystic fibrosis, which combines a genetic basis with being an ion channel disorder in the cellular balance of the chloride ions."

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The ideal candidate will have a Ph.D. in chemical engineering or in a related biological science discipline with 5+ years of experience managing projects in the area of developing large-scale cell culture processes (~10-100 liters) for the production of biologics. Candidate should also possess supervisory experience, strong troubleshooting and project management skills, and a high degree of motivation and creativity. Knowledge of GLP and GMP regulations is highly desirable.

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## Careers and Events in Drug Discovery

The company seeks recruits with a broad spectrum of training. "As we're building up a new drug discovery group from the ground up, we'll be hiring across the board," Tung says. "We'll hire people with Bachelor's, Master's, and Ph.D. degrees all the way up to managers with 5 to 10 years of experience. At the San Diego site we'll probably be hiring double digit numbers of scientists."

What makes the perfect scientific recruit? "Somebody who has the whole package – scientific expertise, understanding across all areas including business, great communication skills, leadership skills, and great creativity," says Tung. "You tend not to find many of those. But we're aware that what a team requires is great technical expertise and a mix of those other skills. We're looking for people adept in one or more of those areas as well as being experts in their fields. They should also have confidence in their own abilities and the mindset to listen to other people and to change their minds based on what the data say."

Equally important to Tung is what the company does for individual recruits. "It should give them places to work that provide career paths," he explains. "We try to help individuals focus on their abilities and to bring them up to a higher level in areas in which they might not be strong. We've been pretty successful in that. A number of our associate scientists are now leading groups that include Ph.D.s"



DAVID GLASS

**TARRYTOWN, New York:** Regeneron Pharmaceuticals seeks research assistants and post-doctoral fellows to help its efforts in drug discovery and to start moving the results of those efforts along the drug pipeline. The company already has therapeutic candidates in clinical trials for the potential treatment of obesity, rheumatoid arthritis, and cancer. It also has preclinical programs in asthma, allergies, and other diseases and disorders. And it has developed proprietary platform technologies that it has incorporated into a comprehensive discovery and development process.

"For research assistants we want energetic and interested B.A.s with some biology background and strong interest in extensive further training on-site as research assistants," says David Glass, the company's vice president for the muscle program and new technologies. "Applicants for our postdoctoral fellowships usually come from prestigious laboratories doing molecular and cellular biology, and possess strong publication records."

Glass's group works in three areas: determining the molecular mediators of skeletal muscle atrophy and hypertrophy; developing and improving technologies to speed the discovery process; and developing assays for product candidate discovery. "All applicants should have an interest in applying basic research to clinical problems," he says. "And for assay development, recruits should have previous experience in the development of product candidates."

Glass looks for more than scientific skills when he recruits scientists. "The most important traits are honesty, rigor, enthusiasm, and

collegiality," he says. "Communication skills are also important." As to the best way to prepare for work in drug discovery, he points to the importance of choosing the right laboratory for training. "You need to learn how to design an experiment, to choose appropriate negative and positive controls, to frame a question correctly, and to do those experiments that can validate a model and those that can prove a model to be inaccurate or incomplete," he says. "It's all about being a good scientist."



DANIEL WETTSTEIN

**SALT LAKE CITY, Utah:** Myriad Genetics uses genomic and proteomic technologies to create products for medical diagnosis and therapy. The company focuses on research in cancer, inflammation, diabetes, and cardiovascular diseases. "We are well known for our discovery of genes that confer susceptibility to cancer and for our cancer diagnostics service," says senior scientist Daniel Wettstein. "We have also established programs in

high throughput screening, protein interaction mapping, cell biology for validation, and development of pharmaceuticals. We are currently hiring in all those areas."

Myriad seeks scientists with backgrounds in several fields. "Our hot disciplines are cell biology and protein biochemistry," says Wettstein. "We are recruiting research scientists who specialize in cell biology, target validation, protein expression, and chemistry."

The company recruits across the spectrum of training. "We are looking for Ph.D.-level candidates with at least three years of postdoctoral experience," says employment manager Jenni Mason. "We are also recruiting research associates who specialize in target validation, molecular biology, biochemistry, chemistry, and cell biology. For those candidates we expect a B.S. or M.S. degree and at least two years of laboratory experience."

Beyond scientific credentials, the company expects candidates to demonstrate confidence and collegiality. "We like to hire people who are confident in their abilities, who are positive and considerate towards others, who work well in teams, and who have a good work ethic," says Wettstein.

For its high level applicants, including individuals with Ph.D.s, the company looks for a strong performance in interviews. "Candidates are required to present a one-hour seminar and to go through a very intense interview with about eight different people," says Mason. "General questions that we might ask include: What three things do you look for in a company? What have you done to prepare for this job? And what professional accomplishments are you most proud of, and why?"

What advice does Wettstein have for young scientists who wish to work in drug discovery? "Try to get hands-on training in the appropriate disciplines and subdisciplines while you are in college," he recommends. "And work hard for your degree." ■■■

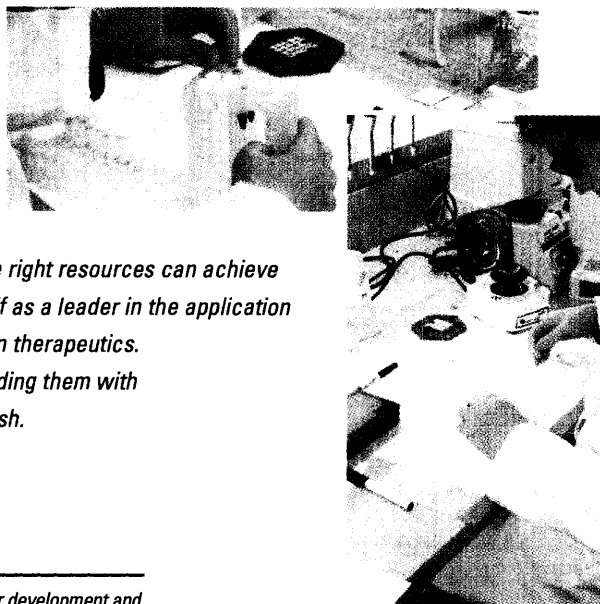
*A former science editor of Newsweek, Peter Gwynne writes about science and technology from his base on Cape Cod, Massachusetts, U.S.A.*

# REGENERON

## Pharmaceuticals, Inc.

MAKE THE DISCOVERY

Regeneron is a company founded on the belief that talented scientists with the right resources can achieve outstanding results. Located in Tarrytown, NY, Regeneron has established itself as a leader in the application of molecular and cell biology to the discovery and development of novel human therapeutics. We've dedicated our time to finding the most highly qualified people and providing them with a creative, energetic environment where new ideas and innovations can flourish.



### **SECRETED PROTEINS/FUNCTIONAL GENOMICS**

We are seeking a **Scientist** and a **Research Associate** to participate in one or more of a variety of projects, including the discovery of receptors for novel ligands, as well as the molecular biology of Angiopoietins.

The qualified Scientist will have a PhD and 1-3 years of post-doctoral work with a strong background in molecular biology. Familiarity with expression cloning techniques is a plus, but not required. An avid interest in developing new molecular technologies is highly desirable.

The Research Associate will have a BS/MS with strong emphasis on molecular biology, and a minimum of 2-5 years of related lab experience (DNA & protein gels, Western Blot, plasmid constructs, PCR).

### **EYE ANGIOGENESIS**

This individual will join an eye research team working on ocular angiogenesis models in rats and mice. In this role, you will help to design and conduct eye research in the field of angiogenesis including corneal neovascularization.

Qualified applicants should have a BS or MS degree with 2 or more years of relevant experience in some or all of the following: surgical techniques for small animals, histopathology, biochemistry, molecular biology, and image analysis. Additional experience in embryology would be an advantage.

### **PRE-CLINICAL PROTEIN PURIFICATION**

We are seeking a motivated Research Associate to participate in the purification and characterization of recombinant proteins expressed in mammalian cells and to be involved in developing technology to investigate protein-protein interactions.

Qualified candidates should have a BS with 1-2 years of relevant experience in protein purification, electrophoresis and Western Blotting, or MS degree in biochemistry/chemistry. Those with HPLC experience will be given preference.

### **ASSOCIATE DIRECTOR, BIOREACTOR DEVELOPMENT**

In this role, you will be responsible for development and optimization of serum-free media formulations for expression of recombinant proteins in mammalian cells. You will also carry out high-cell density cell culture studies in small bioreactors to determine optimal conditions for cell growth and protein production. Additionally, you will interact closely with bioreactor scale-up and development staff who will implement process improvements in larger-scale bioreactors and, to a lesser degree, with manufacturing staff who will utilize improved media and conditions in Regeneron's clinical manufacturing programs.

Requires a PhD, preferably in biochemical engineering or cell biology. You must have a minimum of 5 years of industrial experience in mammalian cell culture with a demonstrated ability to employ a statistical design approach in carrying out experiments. In addition, candidates should have successful supervisory experience and a proven track record in developing processes for commercial biologic manufacturing. Experience in IND and/or BLA regulatory filings of new products and processes will be highly beneficial.

### **PROGRAM COORDINATOR, RESEARCH PROGRAM MANAGEMENT**

In this role, you will utilize your strong biotechnology background and exceptional communication, organizational and managerial skills in order to facilitate the efforts of several research programs. Regeneron's research programs are world leaders in the development of cutting-edge technologies and in the discovery and development of potential therapeutics for the treatment of important human diseases. Your role for these programs will include: acting as a liaison between our research, pre-clinical, clinical and intellectual property groups; interacting with corporate partners, academic collaborators, consultants and service providers; assessing technologies and competition; and creating, managing and coordinating project timelines.

Qualified candidates will have at least an MS degree in cellular or molecular biology and program management experience. Computer proficiency is required.

### **PRE-CLINICAL DEVELOPMENT/TOXICOLOGY**

In this role, you will assist in monitoring and coordinating contract lab and internal support activities for toxicity studies, as well as assist in reviewing and preparing reports and protocols.

The preferred candidate will have a PhD or ScD in a biological science, a DVM, or equivalent work experience. You must combine a strong scientific background with toxicology/pharmacology knowledge, or have comprehensive knowledge of Biology with the ability to work with and interpret large volumes of non-clinical drug safety data. In addition, you must also have excellent computer and written/verbal communication skills.

### **NEURAL, ENDOCRINE & OBESITY RESEARCH**

We are seeking a **Scientist** and a **Research Associate** to participate in one or more of a variety of projects, including those to evaluate altered endocrine function in genetically modified mice.

The qualified Scientist will have a PhD in Endocrinology, Physiology, Pharmacology or related discipline and 3+ years of relevant research experience. Substantial prior research experience in endocrinology is required, particularly studies of endocrine dysfunction in rodent models of disease. Preferred candidate will have a working knowledge of thyroid, adrenal and/or reproductive system disorders.

The Research Associate will have a BA/BS, with 3+ years of relevant laboratory experience. Ideal experience will be with methods commonly used in animal research, including animal handling, drug administration/injection, small animal surgery, as well as blood and tissue collection and preparation. Candidate should also have experience with one or more relevant analytic techniques (e.g. ELISA or RIA; Western Blots, RT-PCR, Immunohistochemistry, etc.).

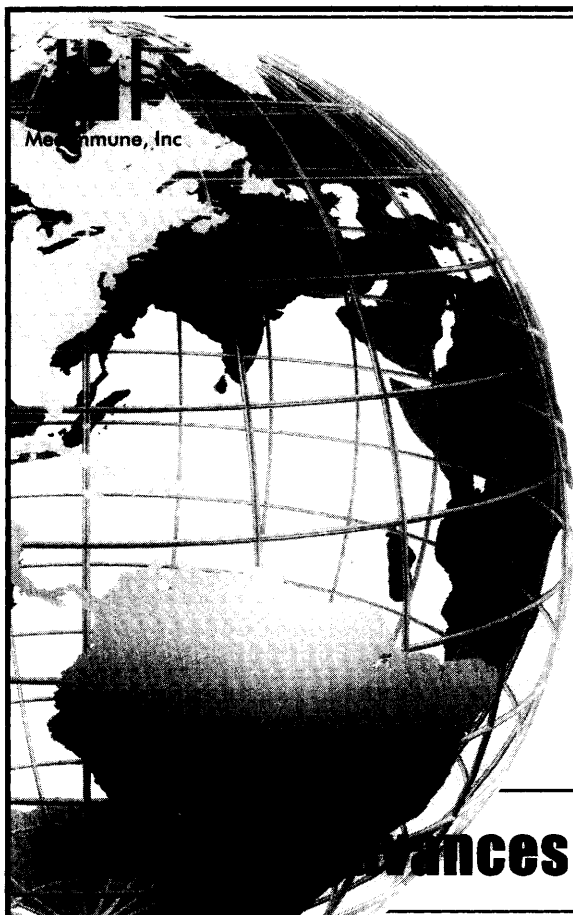
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Please send curriculum vitae and a description of the proposed research program to:

**Christopher T. Walsh, Ph.D.**  
Chair, Search Committee for Academic Director  
Molecular Target Laboratory  
LHRRB301, BCMP Dept.  
Harvard Medical School  
45 Shattuck Street  
Boston, MA 02115

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Applicants should send their curriculum vitae, list of 3 or more references, and a description of their experience and career objectives to: **Replidyne, Inc., Personnel Dept., 1450 Infinite Drive, Louisville, CO 80027**

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## STAFF SCIENTIST

Research involving the identification of therapeutically relevant targets, their cloning, expression, purification, characterization and assay development to setup high throughput screens for small molecule drug discovery efforts. Requires interfacing with teams for Biological Chemistry for large scale expression and purification efforts and with Chemists for analysis of hits obtained from HTS, SAR analysis, and synthesis of leads and subsequent characterization. Also involves development of secondary in vitro and cell based assays for the characterization of leads obtained from the HTS. Experience in studying signal transduction events in cells is essential.

Must have Ph.D. in chemistry or related field, three years of postdoctoral experience studying Signal Transduction pathways and relevant Chemistry experience.

To be considered for this position, please submit your resume to: Wyeth Research, Attn: TM, 35 Cambridge Park Dr., Cambridge, MA 02140. No phone calls please. **When applying, you must reference Source Code: OPSCI.**

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- *In Vivo* BIOLOGIST
- ASSAY DEVELOPMENT BIOCHEMIST
- HIGH THROUGHPUT SCREENING  
LEAD IDENTIFICATION

## RESEARCH ASSOCIATES

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- ANTIMICROBIAL DRUG DISCOVERY
- ANTIVIRAL DRUG DISCOVERY
- HIGH THROUGHPUT SCREENING  
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Staff Investigator

Associate Director Development Pharmacology

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### **Bioinformatics/Staff Scientists - Gene Expression Data Analysis**

Two positions are available to discover biomarkers for developing plant-based health care products using gene expression data generated by microarray technology. One position will conduct association studies by identifying biomarkers and potential targets from vast amount of gene expression data. Successful candidates will contribute to the team by providing human genetics expertise in drug discovery and development. This position requires a Ph.D. in Cell Biology, Physiology, or Genetics and a proven track record with emerging genetic technologies and novel analytical approaches to complex disease genetics. A background in diabetes disease, neuroscience or cancer would be beneficial. Communication skills are an essential requirement, as this position involves interaction with a variety of discovery teams.

The second position will analyze gene expression data to discover targets and biomarkers for plant-based product development. Additional responsibilities include maintaining and supporting academic collaborations. Candidates should have a Ph.D. 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 organizational skills and the ability to work in a team environment are essential. Both positions require an in-depth knowledge of statistics and practical experience in mining genomic databases. Basic knowledge in programming using C++, Java, Perl, SQL, UNIX and NT and developing web-based tools is highly desirable. Creative thinking and scientific publications are strongly encouraged.

**Job Code: SCI/TZHU-SCI**

### **Senior Research Associate/Associate Scientist - HTS Screening**

A position is available immediately to join our high-throughput screening team. The successful candidate will work as part of our team to develop automated assay platforms for drug discovery. Hands-on experience in automation and basic automation programming is essential. Knowledge in cell-based assay and drug screening is a plus. Minimum requirements include a BS/MS degree with emphasis in life science, 2 years' related experience and basic computer programming skills. Strong communication and organizational skills and ability to work in a team environment are required.

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Schrödinger, Inc., a rapidly growing New York-based technology firm which is quickly establishing a position of scientific leadership in the development of computational chemistry software and services for the pharmaceutical and biotechnology industries, is seeking a small number of extraordinarily gifted computational and synthetic chemists to join our efforts to fundamentally transform the process of drug discovery.

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Candidates should have world-class credentials in computational chemistry, biology, or physics, or in a relevant area of computer science or applied mathematics, and must have unusually strong research and/or software engineering skills, as evidenced by an exceptionally distinguished history of academic and/or industrial accomplishment.

Please send CV (including list of publications, thesis topic, and advisor, if applicable), along with GPAs and standardized test scores (SAT/GRE), to [careers@schrodinger.com](mailto:careers@schrodinger.com).

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**Rosetta Biosoftware** is the leading provider of bioinformatics solutions to aid in drug discovery and the development of pharmaceutical and agricultural products. Its enterprise software solutions, including the Rosetta Resolver® Gene Expression Data Analysis System, are designed to accelerate life science research using advanced genomic data analysis technology and we are seeking to add two key Data Analysts to our Applied Research team.

These positions, **Senior Data Analyst** and **Data Analyst** are responsible for research and development of algorithms for inclusion within our bioinformatics software products. The focus will be to research, develop, or prototype gene/protein-expression data-analysis algorithms and statistical models for our existing and new software products and our Professional Services business. Both positions will work cross functionally with other Rosetta Biosoft teams to ensure successful implementation of the algorithms during product development and testing cycles.

A Ph.D. degree in Statistics, Mathematics, Physics, Computer Science, or Engineering is required; three to five years of algorithm research and development experience in statistical data analysis/modeling, artificial intelligence, or signal processing are required, one to three years of experience in bioinformatics research and development are preferred, especially related to micro array, mass-spectrometry, 2D-PAGE, or other genomic and proteomic technologies. Must be proficient in Matlab or Java/C++. Background in S-Plus, SAS, CORBA, or relational database technologies is preferred.

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CUBIST

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Founded in 1992, Cubist is a global company, headquartered in Lexington, MA in the United States, with operations in Slough, UK. It is in this environment that we announce two new openings:

#### **Principal Research Scientist, Molecular Biology**

The Principal Research Scientist will make a major contribution to the initiation, planning, and execution of various projects to achieve Cubist's drug discovery goals. As part of a multidisciplinary drug discovery team, this person will be involved in validation of novel antibacterial targets, developing HTS assays, and characterization of drug leads. Successful candidates will have a Ph.D. in Molecular Biology or Genetics and at least 5 years of post-doctoral industry experience. An expertise in bacterial genetics and significant supervisory experience is required. A good understanding of biochemistry and enzymology is highly desirable.

#### **Research Scientist / Sr. Research Scientist in Functional Genomics**

The Research Scientist / Sr. Research Scientist, functional genomics will work in a multidisciplinary drug discovery team to expand functional genomics platforms at Cubist. His / her initial responsibility will be developing and implementing DNA microarray technology at Cubist, and applying transcription profiling to the characterization of anti-infective drug leads. Extensive hands-on experience in microarray technologies is required. Experience with bacterial transcription profiling and data analysis is highly desirable. Knowledge of bioinformatic tools and their applications to drug discovery is a major plus. A Ph.D. degree in biology or related field with minimum of two years post-doctoral experience is required.

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President & CEO

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After all, science is all about making connections. Each discovery builds on those that came before it, and every idea requires a body of knowledge built up over a lifetime. Life is like that, too. The connections you make with people and places are what make you feel part of something larger than yourself. And that's the feeling you get at Roche. Not only do you get to share ideas with some of the best minds in the world, you get to share your days with some of the best people in the world, and still have plenty of time left over for other things in your life that you enjoy.

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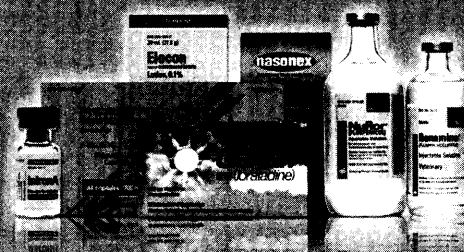


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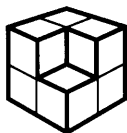
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Rosetta Inpharmatics, a wholly owned subsidiary of Merck & Co. Inc., develops and implements genomic technologies that will improve the way drugs are discovered. The company's leading-edge genomic research and data analysis focus on how pharmaceutical compounds affect biology, enabling more accurate selection of drug targets, faster drug development and better drugs. We're looking for three key individuals who want to make a difference in science, technology, and the quality of human life.

Our **Guided Solutions** team is seeking to appoint two key **Program Lead Scientists** specializing in **Basic Research** and **Pre-Clinical Drug Safety/Drug Metabolism**. Each will oversee projects between Rosetta and Merck Research Labs (MRL). These positions will be responsible for coordinating team activities, designing experiments, analyzing data, and publishing technical reports, peer-reviewed papers and patents. Requirements include a Ph.D. in the biological or biochemical sciences and 3-5 years of post-doctoral experience. Familiarity with microarray technology and genomics is highly desired.

Our **Informatics** team is seeking a **Data Analyst** to be responsible for gene expression data mining and related mathematical modeling. This position will independently carry out data analysis for Rosetta and MRL research projects. The ideal candidate will develop and evaluate alternative algorithmic approaches and modes of display. Extensive statistical data analysis experience is required to develop Matlab tools for identifying gene expression patterns and reporters for specific diseases or drugs. PhD in Molecular Biology, Biophysics, Bioinformatics or a related field is required, must be Matlab and C++ proficient, and familiarity with Splus, SAS, PERL, is preferred.

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# Deltagen

## Research Laboratories

### Exciting Research & Drug Discovery Opportunities in San Diego

Deltagen Research Laboratories (DRL), located in San Diego, CA, is a subsidiary of Deltagen, Inc., a biopharmaceutical company headquartered in the SF Bay area. DRL occupies a 77,000 sq. ft. research facility dedicated to the discovery of small molecule therapeutics addressing targets identified through Deltagen's *in vivo* validation strategy. Insights gained from Deltagen's approach are leading to a proprietary understanding of the function and disease relevance of mammalian genes that represent novel small molecule drug targets, thereby providing Deltagen a competitive advantage in the development of new genomics-based medicines.

DRL is building its Discovery Biology Department to complement its world-class chemistry capabilities. Join this exciting effort and become part of a cutting-edge team pursuing small molecule drug discovery. We are currently seeking individuals with expertise in HTS, ion channels and G protein-coupled receptors.

#### LEAD DISCOVERY / HIGH-THROUGHPUT SCREENING

**Principal Research Scientist / Associate Director:** Individual will be responsible for oversight and direction of high-throughput drug discovery operations. Duties include screening, support of lead optimization efforts, management/quality control of screening data, assay development/validation and identification/implementation of new technologies. The successful candidate will integrate informatics and automation solutions to carry out HTS activities. Position requires a Ph.D. with 4+ years of drug discovery experience (or a B.S./M.S. with 8+ years), supervisory experience and a record of scientific achievement. Strongly desired: experience with database/informatics tools (e.g., ActivityBase); ability to implement high-throughput cellular and biochemical assays; expertise in the areas of GPCRs and ion channels.

**Research Scientist / Senior Research Scientist - Ion Channels and GPCRs:** Individual will play a key role in HTS operations. Duties include assay development, management/quality control of screening data and implementation of new technologies. The successful candidate will carry out screening in both biochemical and cell-based formats (e.g., ligand binding, reporter gene, membrane potential, calcium flux and protein-protein interaction assays). Position requires a Ph.D. with 2+ years of drug discovery experience (or a B.S./M.S. with 5+ years), significant experience with laboratory automation (programming, validation, QC and maintenance of liquid handlers and plate readers) and database tools. Strongly desired: hands-on experience developing GPCR and ion channel screens.

#### BIOCHEMISTRY, MOLECULAR & CELLULAR BIOLOGY

**Senior Research Scientist / Principal Research Scientist - Ion Channels and GPCRs:** Individual will play an integral role in a drug discovery effort addressing GPCR or ion channel targets and be responsible for applying innovative molecular, biochemical and cellular approaches. This position requires a Ph.D. in a relevant field with 3+ years of relevant post-doctoral work and a demonstrated record of scientific achievement in the area of GPCRs or ion channels. Protein expression (e.g., bacterial, baculoviral) and purification expertise a plus.

#### MEDICINAL CHEMISTRY

Positions at several levels are open in medicinal chemistry.

*All positions require the following:*

- High level of self-motivation
- Ability to thrive in a goal- and team-oriented setting
- Strong oral and written communication skills

Deltagen Research Laboratories offers a comprehensive benefit package, competitive salary and great working environment. If qualified, please forward your resume to: **Deltagen Research Laboratories, 4570 Executive Drive, Suite 400, San Diego, CA 92121. Fax: (858) 625-6479. E-mail: [drlrecruiting@deltagen.com](mailto:drlrecruiting@deltagen.com).** Learn more about us at [www.deltagen.com](http://www.deltagen.com).

## ANNOUNCEMENTS



Medicines for Malaria Venture

### Medicines for Malaria Venture (MMV) Call for Letters of Interest

#### FUNDING OPPORTUNITIES

1. **Malaria Drug Discovery Research Proposals**
2. **Malaria Drug Development Proposals**
3. **Malaria Drug Natural Products R&D Proposals**

MMV is an independent foundation committed to the sustainable discovery and development of affordable antimalarial chemotherapies. It is based on a partnership between public sector agencies, philanthropic organisations and the pharmaceutical industry. The venture operates under the umbrella of the World Health Organization Roll Back Malaria Project.

MMV has currently a portfolio of 11 discovery and development projects that will be funded up to a level of \$15 million in 2002. MMV intends to expand its R&D portfolio in order to deliver a consistent stream of novel antimalarial agents over the next decade. Generous donations from several agencies now enable MMV to initiate a third round of portfolio projects for the year 2002. Three project categories are defined for this year's proposals.

1. **Malaria drug discovery projects** that are directed toward the identification of a candidate compound(s) for entry into preclinical development
  - Projects may be at an early or late stage of the discovery process.
  - Most successful projects in the previous years were based on a partnership between an academic centre and a pharmaceutical company. However, applications from single institutions (Academic or Biotech or Pharma) are welcome. The key determinant for funding will be the perceived chance of project success.
2. **Malaria drug development projects** where a single molecule or combination has been identified with demonstrably acceptable preclinical properties and a potential for clinical development.
  - The molecule (or combination) may be at either preclinical or clinical stage of development.
3. **Malaria natural product projects** are also solicited. They are more likely to succeed if applicants have a well established infrastructure for a natural product programme, and can demonstrate one or more of the following characteristics:
  - Activity of the extracts, or identified compounds, against *P. falciparum* *in vitro* and in animal models, or evidence of efficacy in humans.
  - Methodology for the identification and optimisation of active agent(s). Projects that have already identified active agent(s) are strongly encouraged to apply.

**Application for funding is initially requested through submission of a 3 page letter of interest, in hard copy, to reach MMV Offices (see below) by September 30th, 2002.**

**Details of the desired content of the letter of interest for the three project categories, as well as the project selection process can be obtained from the MMV web site ([www.mmv.org](http://www.mmv.org)) or by directing inquiries to the MMV offices, to the attention of:**

Dr. Solomon Nwaka,  
Medicines for Malaria Venture,  
P.O. Box 1826, CH-1215 Geneva 15,  
Switzerland.  
Fax: +41 22 799 4061, E-mail: [applications@mmv.org](mailto:applications@mmv.org)

MMV gratefully acknowledges the funding and support it has received from: Bill and Melinda Gates Foundation, Global Forum for Health Research, International Federation of Pharmaceutical Manufacturers Associations, Rockefeller Foundation, Roll Back Malaria Partnership, Swiss Agency for Development and Cooperation, The Netherlands Minister for Development Cooperation, United Kingdom Department for International Development, World Bank, World Health Organization, ExxonMobil Foundation, WHO/TDR.

[www.mmv.org](http://www.mmv.org)

## DRUG DISCOVERY

At Abgenix (Nasdaq: ABGX), we're not just another biopharmaceutical company. We're leading the way in the development and commercialization of several antibody therapeutic products for the treatment of a variety of disease conditions. With four antibody product candidates in human clinical trials and collaborations with several pharmaceutical, biotech, and genomics companies, we're in the midst of dynamic growth. So don't miss out on this once-in-a-lifetime chance to join an established industry leader. We have exciting opportunities in the following areas:

### Research

#### • Scientists & Research Associates

- Assay Development
- Molecular Biology
- Preclinical Biology
- Antibody Technology

#### • Associate Scientist/Scientist

- Collaborations

### Process Science

- Scientists
- Engineers
- Process Development Associates

For more details on these and other opportunities, please visit our web site at:

**www.abgenix.com**

Come join Abgenix, where it's more than competitive salaries, excellent benefits, and stock options. Work where your contributions will have an immediate impact on the growth and success of the company. For consideration, please e-mail your cover letter & resume to: [jobs@abgenix.com](mailto:jobs@abgenix.com), or mail/fax us at: **Abgenix, Inc., 6701 Kaiser Drive, Fremont, CA 94555; FAX: (510) 608-6511.**

**Abgenix**

*Building a Biotech Powerhouse*

EOE

## DRUG DISCOVERY



**INDUSTRIAL MACROMOLECULAR  
CRYSTALLOGRAPHY ASSOCIATION**

### Synchrotron Beamline Director

The Industrial Macromolecular Crystallography Association (IMCA) is an association of research-driven companies with active protein crystallography groups who have pooled their resources to build beamlines 17 ID and 17 BM at the Advanced Photon Source. Crystallographers from member companies routinely collect data to support their drug discovery projects, and the facility also administers a vigorous independent user program open to academic scientists. IMCA is now seeking a director to work full time at the Advanced Photon Source to manage this facility, which is currently staffed by a team of beamline scientists. Responsibilities of the beamline director will include:

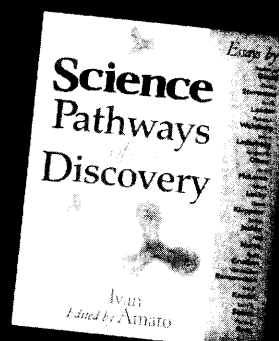
- Development of an outstanding support environment for protein crystallography
- Supervision, recruitment, and development of beamline staff
- Administration of an independent user program
- Oversight of a complex computing environment
- Beamline maintenance and development
- Oversight and upgrade of the diffraction instrumentation and data collection automation

The director will report directly to the chairman of IMCA, and indirectly to its Supervisory Board. A background in protein crystallography is highly desirable. Opportunities for research will be available, but the development of an independent research program is not a requirement. Interested applicants should submit a CV, cover letter with statement of interest, salary expectations, and summary of previous experience in the above areas. As appropriate, please also provide the names and contact information for individuals who are qualified to comment on your suitability for this position. Applications and preliminary inquiries should be sent by email to the **IMCA Beamline Director Search Committee c/o: William.C.Stallings@Pharmacia.com**

The Advanced Photon Source is located at Argonne National Laboratory near Chicago, a culturally rich metropolis enhanced by the beauty of Lake Michigan.

Just  
published!

## Pathways of Discovery



In *Science Pathways of Discovery*, some of the sharpest scientific minds of our time reveal what science has in store by examining the histories of a dozen crucial areas of scientific inquiry. Originally published as a year-long series in *Science*, this awe-inspiring compendium features brilliant and provocative contributions from:

- **Stephen Jay Gould** on the "science wars"
- **David J. Stevenson** on planetary science
- **Eric S. Lander** and **Robert A. Weinberg** on genomics
- **Joshua Lederberg** on the history of infectious disease
- **Gregory B. Olson** on materials science
- **Anne McLaren** on cloning
- **Robert Lucky** on science communication
- **Daniel Kleppner** and **Roman Jackiw** on quantum physics
- **Paul Nurse** on biological cell theory
- **Paul J. Crutzen** and **Veerabhadran Ramanathan** on atmospheric sciences
- **Eric R. Kandel** and **Larry R. Squire** on neuroscience
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and receive a 25% discount

### **Biacore, Inc.**

Biacore, Inc. (<http://www.biacore.com>), the global leader in the development, manufacture and marketing of unique and innovative products to detect and monitor biomolecular binding, is building its team. We are currently looking for the following dedicated professionals. Biacore, Inc. is Growing and Looking for...

**Application Scientists - New Jersey, Boston, San Diego:** Provides consultation and problem-solving for leading scientists in academia, pharmaceutical and biotechnology industries. Development and execution of training courses, product demonstrations and seminars, and the development of new applications for biomolecular characterization. B.S. to Ph.D., minimum 5 years laboratory experience in Biochemistry, Biophysics, Protein Characterization, and/or Assay Development. Strong written and verbal skills required along with a keen scientific interest and desire to work with people in a multidisciplinary setting. Instrument background and knowledge of kinetics would be a plus. Positions to be placed in **New Jersey (code A2-NJ)**, **Boston (code A2-MA)** and **San Diego (A2-CA)**. Travel required 30-40%; relocation is available.

**Application and Product Development Scientist - SPR Systems:** Develops expertise in new products through collaborations aimed at evaluating new product concepts and their utility in the intended market segment. Designs and executes activities that yield real-world application information to use in application notes, publications and presentations. Develops training programs for new products. Provides feedback during product development and assists Sales Account and Application Scientists in sales process. Requirements include B.S. to Ph.D. in Chemistry, Biochemistry, Biology or related Life Science discipline including laboratory experience in Protein Characterization, Assay Development and/or Drug Discovery, minimum 3 years in a technical or customer support position including training or teaching experience, superior verbal and written communication skills. A keen scientific interest, desire to work with people in a multidisciplinary setting and knowledge of SPR-based instrumentation is a plus. Position to be based in **New Jersey (code APD-2)**. Travel required 40%; relocation is available.

**Postdoctoral Research Associate:** Biacore, Inc. is seeking an energetic and creative individual to work in its newly emerging Research Consulting Services division. The key focus of the position will be to design, develop and execute research projects using Biacore technology and to compile detailed reports on the project results. In addition, the successful candidate will be part of a team dedicated to promoting and expanding the RCS division by developing projects and collaborations with customers in multidisciplinary areas of scientific research. Requirements include a Ph.D. in Biochemistry, Molecular Biology, Chemistry or related field with laboratory experience in protein analytical chemistry, protein purification, assay development or general immunochemistry. Strong verbal and written communication skills are essential; prior experience with SPR-based instrumentation is a plus. Position located in **Research Triangle Park, NC (code RCS-pd)**.

Biacore, Inc. offers a competitive salary and benefits. For a complete listing of career opportunities please visit [www.biacore.com](http://www.biacore.com). Please refer to position code when responding. Send resume with references and salary history by May 10, 2002 to: **Biacore, Inc., Attn: Human Resources, 200 Centennial Ave., Suite 100, Piscataway, NJ 08854; [jhansen@biacoreinc.com](mailto:jhansen@biacoreinc.com)**

*We are an Equal Opportunity Employer m/f/d/v*

## **DRUG DISCOVERY**

# Inquire Within



**Genentech's people share some pretty uncommon traits. Initiative, creativity, risk-taking – the stuff from which breakthrough medicines are created. Expect the extraordinary. Share your traits with us.**

### **Scientist—Development Pathology**

You will provide experimental pathology support for investigational, mechanistic and registrational studies being conducted to characterize therapeutic candidates. Using your expertise in routine pathology laboratory techniques, you will evaluate and incorporate new technologies and supervise the activities of research associates. Requires a PhD or equivalent, 3–5 years experience and a thorough understanding of the fundamentals of histological techniques, particularly immunohistochemistry. Expertise in fluorescence *in situ* hybridization, electron microscopy, cell culture, tissue microarray techniques and protein and nucleic acid isolation is necessary. Demonstrated experience in designing, developing and optimizing tissue-based assays is also required. **Job Code: 4861-SCI**

### **Development Pathologist—Safety Assessment Department**

Our group is expanding to support efforts to implement investigative and mechanistic capabilities for safety profiling of drug candidates to increase the effectiveness of drug development. Providing scientific leadership, you will participate in the drug development process starting at late-stage research for new molecules and product indications. You will work closely with other departments, including, Toxicology, Pharmacokinetics and Clinical Pharmacology, maintain close relationships with scientists, and participate in the design and review of GLP safety studies. Requires a PhD and a DVM/VMD with board certification in Veterinary Pathology. Expertise in the performance and interpretation of molecular pathology techniques is essential and industry experience is preferred. You should be organized and use your excellent communication and interpersonal skills to work in a team environment. **Job Code: 4862-SCI**

### **Scientist—Toxicology**

Using your expertise in cellular and molecular toxicology, you will investigate mechanisms of toxicity of protein-based therapeutics, and small molecule drug candidates in a non-GLP laboratory setting. You will apply and interpret molecular biology techniques in areas of pharmacology, toxicogenomics and proteomics to understand mechanisms of toxicity. Interacting with multidisciplinary project teams, you will develop and apply state-of-the-art technology to conduct investigations. Requires a PhD in Toxicology, Pharmacology, Cell/Molecular Biology or related field and 3–5 years of biotech/pharma industry or academic laboratory experience conducting cellular and molecular biology experiments. Excellent communication and interpersonal skills are essential and knowledge of GLP regulations and FDA guidelines for toxicity testing is desired. **Job Code: 4879-SCI**

*To apply for these positions, please email your resume, indicating the appropriate Job Code, to [mattnm@gene.com](mailto:mattnm@gene.com) or mail to Genentech, Inc., Attn: Human Resources, PO Box 1950, South San Francisco, CA 94083-1950. Genentech is an Equal Opportunity Employer.*

## **Genentech, Inc.**

*In Business for Life.*

## DRUG DISCOVERY

# Molecules that will BECOME MEDICINES

At **ARQULE**, our creative minds are developing the most advanced strategies for drug discovery by combining innovative ideas with state-of-the-art technology. ArQule's talented, interdisciplinary project teams embrace stimulating challenges and revolutionary concepts in an energized, dynamic work environment. If you want to be part of the drug discovery team that creates new solutions for lead generation and lead optimization, explore the career opportunities available at ArQule.

## CALLING ALL CHEMISTS!

We are currently seeking SCIENTISTS in the following functional areas:

### ORGANIC CHEMISTRY (BS/MS)

Job Code WHN#1097508

### ANALYTICAL CHEMISTRY (PhD)

Job Code WHN#1097495

### ORGANIC CHEMISTRY (PhD)

Job Code WHN#1093666

### COMPUTATIONAL CHEMISTRY (PhD)

Job Code WHN#1089999

### ANALYTICAL CHEMISTRY (BS/MS)

Job Code WHN#1093853

Please submit your resume in electronic format to [arqule@rpc.webhire.com](mailto:arqule@rpc.webhire.com).

Please put Job Code in the Subject box.

ArQule, Inc., 19 Presidential Way, Woburn, MA. EOE



For detailed descriptions and more information on our company, please visit:

[WWW.ARQULE.COM](http://WWW.ARQULE.COM)



STOWERS INSTITUTE  
FOR MEDICAL RESEARCH

## POSTDOCTORAL FELLOW APOPTOSIS

The Stowers Institute for Medical Research in Kansas City, Missouri seeks a Postdoctoral Fellow to study the signaling pathways of apoptosis in mammalian systems. Projects will use techniques of protein biochemistry and molecular biology to delineate the mechanism of function of Smac in normal and cancerous cells as well as to identify other novel biochemical pathways in apoptosis (see *Cell* 102:33-42). A strong background in biochemistry and molecular biology is desirable. Postdoctoral Fellows at the Stowers Institute work in state-of-the-art laboratories equipped with the most advanced technology and receive excellent salaries and benefits.

Interested individuals should send inquiries about this position to Dr. Channing Du, [cdu@stowersinstitute.org](mailto:cdu@stowersinstitute.org). For additional information about this position and how to submit your resume, please visit:

## DRUG DISCOVERY



Arena is a leading biopharmaceutical company located in San Diego, CA, focused principally on discovering and developing drugs that target G protein-coupled receptors. We are seeking candidates for the following positions:

### Postdoctoral fellow/Research Scientist - Ph.D.,

2-5 yrs. experience in mechanisms of insulin action. Requires expertise with *in vitro* assays, *in vivo* models of NIDDM and strong knowledge of signal transduction. Preference will be given to candidates with experience in expression and function of G protein-coupled receptors. Strong leadership skills and demonstrated ability to develop scientific concepts independently are essential. Job Code: MOLB032

**Cardiovascular Research Scientist - M.S./M.D./Ph.D.** in biology/physiology with specific training in cardiovascular anatomy and physiology. The successful candidate will have experience with small animal cardiovascular surgery as applied to models of heart failure. Microsurgical skills and ability to measure cardiac function in rodents is required. Job Code: CARD05

**Atherosclerosis Research Scientist** - to participate in target validation and drug discovery for atherosclerosis and heart disease. This individual should have expertise in the lipid and cellular aspects of atherosclerosis, including *in vitro* and *in vivo* models of the disease. In addition to a broad knowledge of cardiovascular disease, this individual should have experience in cellular, immunological and biochemical assay development. **Qualifications:** A Ph.D. with postdoctoral experience in biochemistry, pharmacology, molecular biology or a related discipline is required. A strong publication record and experience in pharmaceutical drug discovery would be desirable. Job Code: CARD06

**Research Scientist, Immunology** - Candidate must possess a Ph.D. plus 3 yrs. postdoctoral experience in immunology. The position requires both in-depth knowledge of immunology and animal models of inflammatory human diseases. The successful candidate must be able to work both independently and within a multidisciplinary team. Job Code: MOLB030

Arena offers an exciting work environment, competitive salary, excellent benefits package, including 401(k) and stock options. Email responses to: [jobs@arenapharm.com](mailto:jobs@arenapharm.com). Send or fax resumes to: 6166 Nancy Ridge Drive, San Diego, CA 92121 Fax: 858 453-7210. Please reference appropriate job code.

## BIOMEMS FACULTY POSITION

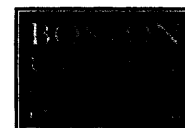
### Department of Manufacturing Engineering Boston University

Nominees and applicants are sought for a bioMEMS faculty position in the Department of Manufacturing Engineering at Boston University, in association with a \$14,000,000 Whitaker Leadership Award. Over the next five years, the Leadership Award will fund major expansions in the College of Engineering, including the addition of faculty at all ranks and new facilities for bioMEMS, imaging, and computational biology. Whitaker-associated faculty will collaborate with a large multidisciplinary team at Boston University engaged in research on cellular and subcellular bioengineering systems.

Candidates for the Whitaker-associated position should have expertise in bioMEMS development, preferably with a fundamental background in microsystems or micromechanics and applied experience in mechanical or fluidic manipulation of biological materials.

The successful candidate will conduct interdisciplinary research and will enjoy access to state-of-the-art facilities at Boston University and have access to the vast resources of the internationally acclaimed Fraunhofer Institute at Boston University to scale up his/her research into real working technologies for industry. The candidate will also be expected to teach undergraduate and graduate courses in the Department of Manufacturing Engineering. Applicants at all levels will be considered, and the eventual appointment will be at a level commensurate with the qualifications of the candidate. All candidates must have a Ph.D. degree, strong research credentials, and a commitment to teaching. Senior-level candidates must have a strong record of scholarly activities, a national reputation, and proven leadership ability.

Professor Andre Sharon  
Chair, Faculty Search Committee  
Department of Manufacturing Engineering  
Boston University  
15 St. Mary's Street  
Brookline, MA 02446  
<http://mfge.bu.edu>  
[aamfg@bu.edu](mailto:aamfg@bu.edu)



Boston University is an equal opportunity, affirmative action institution.



**Director, Division of Cancer Treatment and Diagnosis,  
National Cancer Institute, National Institutes of Health**

The National Cancer Institute (NCI) is seeking a highly energetic and creative individual for the position of Director, Division of Cancer Treatment and Diagnosis. The NCI is responsible for support of the major research programs leading to the prevention, management and cure of cancer. The Division of Cancer Treatment and Diagnosis (DCTD) is one of five extramural research divisions of the NCI. The DCTD employs approximately 630 personnel with a per annum budget of \$1 billion dollars in FY2001. The Director, DCTD serves as the primary NCI official with overall responsibility for planning, conducting, coordinating and evaluating a national and international research effort focused on discovering and conducting better ways to detect, diagnose, treat and cure cancer. The Director formulates the major overall scientific and operational policies of the Division related to a comprehensive and complex program of activities supported by grants, contracts, and cooperative agreements, as well as a series of strategically planned workshops and conferences. The Division consists of six major functional units: (1) the Developmental Therapeutics Program supports and funds resources, databases and research on preclinical drug discovery and development for the treatment of cancer and AIDS; (2) the Cancer Therapy Evaluation Program supports and funds the infrastructure, design, development and conduct of early to late phase clinical trials; (3) the Cancer Diagnosis Program supports and funds the molecular characterization of tumors and the development and access of technology, specimen resources, and information databases for cancer diagnostics; (4) the Radiation Research Program supports and funds radiation biology and development of technology for radiation planning and approaches for treatment; (5) the Biomedical Imaging Program supports and funds the discovery, design and development of molecular imaging agents and devices and the infrastructure and research for the conduct of clinical trials with imaging technology for detection, diagnosis and treatment; and (6) the Biometrics Research Branch provides the statistical methods for the development and clinical testing of diagnostics, imaging technologies and therapeutics.

The Division's program is located in Bethesda, Maryland. For more information, the DCTD website can be accessed at <http://www3.cancer.gov/dctd/>

**The Qualifications Required:** Candidates must possess a medical degree (MD) or its equivalent and have significant training and experience in an oncology subspecialty (medical, surgical, radiological or other related fields). Appointments are limited to U.S. citizens, resident aliens, or nonresident aliens with a valid employment-authorized VISA. Citizenship from countries treaty allied with the U.S. is not required.

The position requires a strong and visionary leader who is recognized for his/her expertise in the fields of clinical oncology. Experience should include program planning; program assessments and analysis of objectives; resolution of major operational problems and issues; management of financial and human resources; and significant interaction with diverse cancer research, diagnosis, treatment and advocacy groups.

**Evaluation Criteria:**

- Scientific and clinical knowledge and expertise to lead a multi-disciplinary research program of national and international scope in research activities in the diagnosis and treatment of cancer.
- Ability to provide leadership, administration, and broad vision to a large research program with extensive managerial and executive level responsibility (i.e. training, research resources, strategic planning, evaluation, budgeting and human resource management) in a diverse organization.
- Ability to serve with distinction as a major spokesperson on representing the NCI to the public, the research and academic community, pharmaceutical and biotechnology companies, other governmental agencies, and professional societies.

**Salary and Benefits:** The Director, DCTD will be appointed at a salary commensurate with his/her qualifications and experience. Full Federal benefits, including leave, health and life insurance, retirement and savings plan (401K equivalent) will be provided. Relocation expenses will be offered.

**How to Apply:** Applicants should send a letter expressing their interest in the position; a statement of research interests; a career synopsis and brief biography; curriculum vitae and bibliography; and the names and addresses of five individuals who can be contacted as references. Letters of reference should not be submitted by the applicant. This material should be sent to: **Ms. Lynnita Parrish, National Cancer Institute, Human Resources Management and Consulting Branch, 6120 Executive Boulevard (EPS), Suite 550, Rockville, Maryland 20852.** Application materials may also be faxed to (301) 402-9333 or sent via e-mail to [parrishl@mail.nih.gov](mailto:parrishl@mail.nih.gov).

If you need additional information, please call **Ms. Parrish, NCI Human Resources Management and Consulting Branch at (301) 402-0741.**

*The National Cancer Institute is an Equal Employment Opportunity and Affirmative Action employer that values and fosters diversity throughout the entire organization.*

**APPLICATIONS MUST BE RECEIVED BY THE JUNE 3, 2002 CLOSING DATE**

## POSITIONS OPEN



Applications are invited for a tenure-track faculty position in microbial physiology with a projected start date of September 2003. This appointment will be filled at the **ASSISTANT PROFESSOR** level.

Applicants should have strong research accomplishments; capability of establishing a vigorous, extramurally funded research program; and a serious commitment to education at the graduate and undergraduate levels. Candidates must have a Ph.D. plus at least two years of postdoctoral experience. Salary commensurate with qualifications and experience. Please provide curriculum vitae, a brief outline of research interests plus recent reprints, and arrange to have three letters of reference sent to: **Physiology Search Committee, Department of Microbiology, University of Massachusetts, Amherst, MA 01003-9298. E-mail: microbio-dept@microbio.umass.edu; website: <http://www.bio.umass.edu/micro>.**

Review of applications will begin on May 20, 2002, and continue until the position is filled. *The University of Massachusetts is an Equal Opportunity/Affirmative Action Employer. Women and minorities are especially encouraged to apply.*

## FACULTY POSITIONS

### Bioinformatics and Proteomics/Genomics

The Medical College of Ohio is currently recruiting one to two people to spearhead our new Bioinformatics and Proteomics/Genomics (BPG) program. This program is being developed as part of a consortium of public institutions in northwest Ohio that also includes the University of Toledo and Bowling Green State University. In the first round of hiring, we seek to fill tenure-track positions at the **ASSISTANT PROFESSOR** level with highly qualified applicants. On-campus support facilities include microarray and protein mass spectroscopy cores. We envision that the successful applicants will develop their own funded research program as well as supporting existing consortium faculty in one or more areas of BPG.

Applicants should submit curriculum vitae, a brief description of previous and proposed research, and up to three relevant reprints to: **Bioinformatics Search Committee, c/o Program in Bioinformatics and Proteomics/Genomics, Medical College of Ohio, 3055 Arlington Avenue, Toledo, OH 43614-5806. E-mail: [aturlay@mco.edu](mailto:aturlay@mco.edu).**

*The Medical College of Ohio is an Equal Opportunity Employer.*

**BOTANIST:** Tenure-track position in plant biology, **ASSISTANT** or **ASSOCIATE** level, to start fall semester 2002. The successful candidate is expected to develop a rigorous research program in plant biology involving undergraduates. We are open to a diversity of approaches involving the study of plants on the organismal level. Teaching responsibilities will include an intermediate-level course in plant biology, an upper-division specialty course or courses, regular participation in a senior seminar course, and participation in the College's core curriculum. For more information on the College, visit our website: <http://www.oxy.edu>. To apply, send curriculum vitae; statement of teaching and research interests; copies of significant publications; and have three letters of reference sent to: **Dr. Elizabeth Braker, Department of Biology, Occidental College, 1600 Campus Road, Los Angeles, CA 90041. E-mail: [bbraker@oxy.edu](mailto:bbraker@oxy.edu); Telephone: 323-259-2645; FAX: 323-341-4974.** Review of applications will begin immediately and continue until position is filled.

*Occidental is deeply committed to Affirmative Action and is nationally recognized for its broadly diverse student body and faculty. Women and minorities are particularly encouraged to apply.*

## POSITIONS OPEN

### DEPARTMENT HEAD Animal Science

The University of Tennessee at Knoxville invites applications and nominations for Head of the Department of Animal Science. This is a 12-month administrative appointment with the expectation that the successful candidate will continue to perform scholarly work within his or her area of expertise. The Faculty of the Department of Animal Science is composed of 30 Scientists holding teaching, research, and/or extension appointments. The undergraduate program consists of approximately 300 students in two majors. There are approximately 50 graduate students in Master's and Doctoral programs. The Department maintains an active interaction with alumni groups throughout the state and receives excellent support from state commodity groups.

Qualifications: The successful candidate must have the following qualifications: (1) demonstrated commitment to and appreciation for the threefold mission of the Department; (2) a Ph.D. in animal science or a closely related field; (3) nationally recognized accomplishments in teaching, research, and/or extension and an understanding of and interest in promoting all three areas; (4) experience in the land grant philosophy including research, service, and outreach; (5) experience necessary to administer fiscal and personnel management; (6) effective communication skills and evidence of progressive leadership with a vision for future trends in animal science and related disciplines; (7) a substantial record in acquiring extramural grants and contracts; and (8) a demonstrated commitment to and knowledge of *Equal Employment Opportunity and Affirmative Action*.

Salary: commensurate with qualifications and experience. Application and nomination: Applicants should provide a letter expressing their qualifications and interest in the position; a statement of their vision of the Department under their leadership; complete curriculum vitae; and addresses, telephone numbers, and e-mail addresses of five references. Review of applications will begin May 30, 2002, and will continue until a suitable candidate is identified. Submit inquiries and application to:

**Dr. Carl Jones, Chair  
Search/Advisory Committee  
2431 Center Drive  
205 Ellington Plant Sciences Building  
Knoxville, TN 37996-4560  
Telephone: 865-974-7135; FAX: 865-974-4744  
E-mail: [cjones17@utk.edu](mailto:cjones17@utk.edu)**

*The University of Tennessee is an Equal Employment Opportunity/Affirmative Action/Title VI/Title IX/Section 504/Americans With Disabilities Act/Age Discrimination in Employment Act Institution in the provision of its Education and Employment programs and services.*

## GENETICIST/BIOTECHNOLOGIST

The Department of Plant and Animal Sciences in the College of Biology and Agriculture at Brigham Young University is searching for a plant or animal Geneticist/Biotechnologist for a full-time, **TENURE-TRACK FACULTY POSITION** to begin August 26, 2002. The successful candidate will be expected to teach undergraduate and graduate courses in genetics and biotechnology, work in partnership with an existing plant and animal biotechnology group on the application of plant or animal biotechnology to subsistence agriculture in less-developed countries, and develop an externally funded research program. A Ph.D. degree (or equivalent) and postdoctoral experience in academics or industry in DNA analysis or bioinformatics are required. Send only letter of interest and one-page curriculum vitae at this time to: **Mikel Stevens, Department of Plant and Animal Sciences, Brigham Young University, Provo, UT 84602. E-mail: [mikel.stevens@byu.edu](mailto:mikel.stevens@byu.edu) before May 10, 2002.**

*BYU, an Equal Opportunity Employer, is sponsored by The Church of Jesus Christ of Latter-Day Saints and requires that all faculty members observe Church standards including strict grooming, moral, and health codes. Members of the sponsoring Church are encouraged to apply.*

## POSITIONS OPEN



### HEAD Department of Environmental and Radiological Health Sciences

The Department of Environmental and Radiological Health Sciences ([website: http://www.cvmbs.colostate.edu](http://www.cvmbs.colostate.edu)) offers an exciting opportunity for a dynamic and innovative individual to assume the leadership of a newly organized community of scholars. The Department is administratively organized into sections that affiliate scholarly efforts in the disciplines of epidemiology, toxicology, exposure and risk assessment, environmental hygiene and radiation safety, cancer biology and radiation oncology, and veterinary diagnostic imaging. All of these sections have their own internationally recognized research activities and academic programs in the promotion of human and animal health and well-being. Some of the Department's strengths are in its two University programs of research and scholarly excellence, Radiological Health Sciences and Cancer Research and the Center for Environmental Toxicology and Technology. The Department is also home to the NIOSH High Plains Intermountain Center for Agricultural Health and Safety and the Animal Population Health Institute. Key roles of the new Department Head will be academic and scientific leadership, management, and mentorship of faculty as this new department builds on existing strengths and identifies new areas of opportunity for growth.

Applicants must have a Ph.D., D.V.M., M.D., or equivalent degree; demonstrated excellence in scholarly activity and research; experience in teaching and mentoring students; and must meet the University requirements for appointment as a **FULL PROFESSOR**. Administrative experience is highly desirable. A letter of application, curriculum vitae, and list of three references who may be contacted when appropriate should be sent electronically or by post to the Chair of the Search Committee:

**Dr. Martin J. Fettman  
Office of the Dean  
College of Veterinary Medicine  
and Biomedical Sciences  
Colorado State University  
Fort Collins, CO 80523-1601  
E-mail: [martin.fettman@colostate.edu](mailto:martin.fettman@colostate.edu)**

Review of applications will begin 01 June 2002 and continue until a suitable candidate is found. *Colorado State University is an Equal Employment Opportunity/Affirmative Action Employer. Women and minority candidates are especially encouraged to apply.*

The Donald W. Reynolds Center on Aging is soliciting applications for a **FACULTY RESEARCHER** in Alzheimer's disease. Appointment will be in a non-tenure track with three years of salary support. Laboratory start-up funds and potential reassignment to tenure track are negotiable. Candidates must have a Ph.D. or M.D. and a demonstrated ability to conduct and publish independent research. The successful candidate will join a comprehensive geriatrics department dedicated to treatment, research, and education. Research strengths include a newly established NIH Alzheimer's Disease Clinical Center. As such, special consideration will be given to candidates who can bridge clinical and basic research strategies. Interest in neuroimmunology and/or genetics will also be valued highly. The Center is a component of the University of Arkansas for Medical Sciences. Other assets of the institution include an established VA GRECC, the Stephens Spine and Neurosciences Institute, and a graduate program dedicated to neurosciences. The University is convenient to urban Little Rock and outstanding outdoor recreation. Applications should include curriculum vitae and names of three references and should be sent to: **Inglewood Fellowship, c/o Dr. Sue T. Griffin, Reynolds Center on Aging, 629 South Elm Street, Little Rock, AR 72205. E-mail: [griffinsuet@uams.edu](mailto:griffinsuet@uams.edu).**



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OUR STRENGTH IS OUR PEOPLE.



## EXCITING CAREER OPPORTUNITIES IN **BIOMEDICAL RESEARCH ADMINISTRATION**



The Congressionally Directed Medical Research Programs (CDMRP) office in Frederick, Maryland is seeking qualified, energetic candidates for several biomedical research administration positions. The CDMRP is a subordinate research area within the United States Army Medical Research and Materiel Command responsible for administering targeted congressional appropriations. The Program office is currently managing approximately 4,150 grants and contracts representing a collective research portfolio of over \$2 billion spanning 16 separate programs.

For more information, check out CDMRP's web site at <http://cdmrp.army.mil> or fax your curriculum vitae to (301) 619-7796, Attn: Mr. Thomas Kuhn.

### **POSITIONS AVAILABLE**

**Health Science Program Manager.** Performs the duties of Program Manager for biomedical cancer and/or other health-related research programs. Entails the development and management of each year's program, beginning with an investment strategy through development of an awards list. Responsibilities include program management, applying scientific knowledge to the review and analysis of research proposals that are peer and programmatically reviewed by the CDMRP.

**Health Science Grants Manager.** Performs the duties of Grants Manager for CDMRP's research programs. This position involves the application of expert knowledge and understanding of scientific principles to management of the CDMRP funding research portfolio. Responsibilities include the negotiation and management of funded projects, to include reviewing and interpreting results with a view toward compliance with the statement of work, budgeting, safety, efficacy, and intellectual property.

## POSITIONS OPEN

### ASSISTANT/ASSOCIATE PROFESSOR TENURE TRACK Gastroenterology/Hepatology University of Minnesota Department of Medicine

The Division of Gastroenterology, Hepatology, and Nutrition in the Department of Medicine at the University of Minnesota is recruiting an individual to fill a research position. Research interests should be in molecular and/or cell biology and be relevant to gastroenterology and/or hepatology. The University of Minnesota provides an outstanding research environment with substantial intramural support. Academic rank and salary will be commensurate with the individual's experience. This faculty member will join an active program in basic science and translational research in the Molecular GI program of the Department of Medicine. The individual is expected to develop and maintain a high-quality, externally funded research program and to develop collaborative research with local Scientists and with Scientists at other institutions. It is also anticipated that the faculty member will be involved in the training of graduate students and Postdoctoral Fellows. State-of-the-art laboratory space and funding will be provided to develop a successful research program. Minimum qualifications: M.D. and/or Ph.D. degree with several years of postdoctoral experience as well as a record of productivity and peer-reviewed publications in English-language journals. Candidates with a track record of sustained federal funding in the United States or its equivalent abroad are particularly encouraged to apply. Excellent verbal and written skills and demonstrated teamwork are essential.

Interested applicants should submit a statement of research interests, curriculum vitae, bibliography, and a list of four references to: **Dr. Clifford Steer, Professor of Medicine and Cell Biology, Division of Gastroenterology, Hepatology, and Nutrition, University of Minnesota, MMC 36, 420 Delaware Street, S.E., Minneapolis, MN 55455. Telephone: 612-624-6648; FAX: 612-625-5620; e-mail: steer001@tc.umn.edu.**

Applications will be reviewed immediately and accepted until the position is filled. *The University of Minnesota is an Equal Opportunity Educator and Employer.*

### FACULTY POSITIONS

#### Microbiology, Virology, and Immunology University of Oklahoma Health Sciences Center

The Department of Microbiology and Immunology at The University of Oklahoma Health Sciences Center invites applications for two 12-month tenure-track positions. Position One is at the **ASSOCIATE PROFESSOR** level with emphasis in virology. Applicants for Position One are expected to have established an independent research program. Special consideration will be given to individuals with expertise in viral pathogenesis using nonhuman primates; however, outstanding Scientists in all areas of virology are encouraged to apply. Position Two is at the **ASSISTANT PROFESSOR** level. Outstanding Scientists in all areas of microbial pathogenesis, immunology, or virology are encouraged to apply. A Ph.D. or equivalent degree with at least two years of postdoctoral training are required for Position Two. The successful candidates will be expected to maintain an extramurally funded research program in their field of study and to participate in the team-taught graduate, medical, and dental curricula within the Department. The Department currently has 14 full-time tenured or tenure-track faculty with more than 40 extramural grants and contracts with a multimillion dollar yearly budget. For an overview of the Department, visit our **website: <http://w3.ouhsc.edu/mi>**. Submit curriculum vitae, a description of research interests and teaching experience, and the names and contact information (including e-mail) of three references to: **Chair of the Search Committee, Department of Microbiology and Immunology, BMSB-1053, 940 S. L. Young Boulevard, Oklahoma City, OK 73104.** Applications will be reviewed beginning July 1, 2002. *The University of Oklahoma is an Equal Opportunity/Affirmative Action Employer. Applications from women and ethnic minorities are strongly encouraged.*

## POSITIONS OPEN



### ASSISTANT/ASSOCIATE PROFESSOR POSITION

#### Department of Pharmacology University of Colorado School of Medicine

Applications are invited for a tenure-eligible faculty position in the Department of Pharmacology. The individual recruited would ideally complement some of the current research strengths of the Department in (cellular and subcellular) studies of signal transduction, protein trafficking, genomics, bioinformatics, neuropharmacology, substance abuse research, and macromolecular structure. We are particularly interested in individuals using or developing proteomic technology as part of a research program in neuroscience. Information about the Department may be obtained at the **website: <http://www2.uchsc.edu/pharm/>**. Applicants must have a Ph.D. or M.D. degree, the potential or already demonstrated ability to develop a vigorous research program with significant extramural funding, and a commitment to teaching medical and graduate students. The Department is anticipating the availability of newly built facilities in the summer of 2004 to further enhance its research capabilities. Submit curriculum vitae, the names of four references, and a statement of current and future research interests to: **Sue Brozowski, Administrative Assistant to the Chair of the Search Committee, Department of Pharmacology, University of Colorado Health Sciences Center, Box C236, 4200 East Ninth Avenue, Denver, CO 80262.** Review of applications will begin May 15, 2002, and will continue until the position is filled.

*The University of Colorado Health Sciences Center is committed to Equal Opportunity/Affirmative Action.*

### SOUTHERN ILLINOIS UNIVERSITY CARBONDALE

The Department of Plant Biology (**website: <http://www.science.siu.edu/plant-biology/>**) invites applications for a tenure-track **ASSISTANT PROFESSOR** position in the areas of biogeochemistry or landscape ecology. Candidates with research backgrounds in landscape pattern or ecosystem dynamics of wetlands are especially encouraged to apply. The successful candidate must have a Ph.D., a strong record of research accomplishments, and evidence of external grantsmanship. Postdoctoral experience is preferred. The successful candidate will be expected to develop an externally funded research program in his/her area of expertise. Teaching responsibilities include an introductory course in plant biology and development of graduate course(s) in his/her area of expertise. Please send curriculum vitae, a brief statement of current and future research, three representative reprints, and three letters of recommendation that consider both research and teaching potential to: **Dr. Philip A. Robertson, Department of Plant Biology, Southern Illinois University, Carbondale, Carbondale, IL 62901-6509. E-mail: [proberson@plant.siu.edu](mailto:proberson@plant.siu.edu).** Complete applications will be reviewed commencing June 15, 2002. Appointment will become effective January 2, 2003. *Southern Illinois University, Carbondale, is an Equal Opportunity/Affirmative Action Employer. Qualified women and minorities are encouraged to apply.*

**POSTDOCTORAL FELLOW or RESEARCH INVESTIGATOR** with expertise in endocrinology and experience with RIA and small animals to develop delivery systems for steroid contraceptives. Send curriculum vitae or direct your inquiries to: **Dr. David M. Phillips, Population Council, 1230 York Avenue, CBR, New York, NY 10021. Telephone: 212-327-8744; FAX: 212-327-7678; e-mail: [dphillips@popcouncil.org](mailto:dphillips@popcouncil.org); website: <http://www.popcouncil.org>.** *Affirmative Action/Equal Opportunity Employer; Minorities/Females.*

## FACULTY POSITION

### The Department of Pathobiology, University of Washington/Core Staff, Washington Regional Primate Research Center

Applications are invited for a tenure-track faculty position (**ASSISTANT or ASSOCIATE PROFESSOR**) in the Department of Pathobiology, School of Public Health and Community Medicine, at the University of Washington with a joint appointment as Core Staff at the Washington Regional Primate Research Center (WaRPRC). We are seeking an Investigator who is working on host/pathogen interactions with an emphasis on immune interactions. It is anticipated that the applicant will establish an independent, externally funded research program that will complement the existing research programs on bacterial, viral, and protozoan pathogens in the Department of Pathobiology and the WaRPRC. The research environment at UW is highly conducive to collaborative research in pathogenesis of infectious diseases. Applicants must have an M.D. or Ph.D. or equivalent in a laboratory discipline and a strong record of research accomplishments. It is expected that the successful applicant will be an active participant in graduate student training. The position is open immediately; closing date for applications is May 31, 2002.

Please send curriculum vitae, statement of proposed research program, and the names and contact information for four references:

**Kenneth Stuart  
Professor and Chair  
Department of Pathobiology  
Box 357238  
School of Public Health and  
Community Medicine  
University of Washington  
Seattle, WA 98195**

*The University of Washington is an Affirmative Action/Equal Opportunity Employer. The Department of Pathobiology is dedicated to building a culturally diverse faculty and strongly encourages applications from women, minorities, and individuals with disabilities.*

### ASSISTANT PROFESSOR Ball State University Muncie, Indiana

The Department of Biology invites applications for a full-time, nine-month Instructor/Coordinator position in a new biotechnology certification program (**website: <http://www.bsu.edu/web/biology/biotech/biotech.htm>**). The program is designed to prepare undergraduate and graduate students for careers as Research Associates or provide intensive laboratory experiences for individuals seeking applied graduate studies in cell/molecular biology. The successful candidate will take an active role in this program by providing instruction in several courses, aiding in the design of and implementation of new laboratory exercises, maintaining contacts with industry, establishing internships for students, and overseeing graduate teaching assistants.

Minimum qualifications: earned Doctorate in a biological science and written and oral communication skills. Preferred qualifications: demonstrated teaching ability and competency in current approaches used in the areas of cell and molecular biology (experience in recombinant DNA and RNA techniques, PCR technology, protein isolation and analysis, cell culture, and bioinformatics). Position begins August 16, 2002, but part-time salary could be available as soon as July 22, 2002. Starting salary including benefits is commensurate with experience.

Send letter of application, curriculum vitae, documentation of scholarly activity, and three letters of reference to: **Chair of Biotechnology Search Committee, Department of Biology, Ball State University, Muncie, IN 47306. FAX: 765-285-8804; e-mail: [evann@bsu.edu](mailto:evann@bsu.edu); website: <http://www.bsu.edu>.** Review of applications will begin May 10, 2002, and will continue until the position is filled. *Ball State University is an Equal Opportunity/Affirmative Action Employer and is strongly and actively committed to diversity within its community.*

## CLINICAL DIRECTOR

The National Institute of Dental and Craniofacial Research (NIDCR) is inviting applications for the position of Clinical Director. The incumbent is responsible for all patient related activities in the NIDCR intramural program, serves as a representative for NIDCR with the NIH Clinical Center, advises the Scientific Director and the Institute Director in the planning and development of a clinical research portfolio, and provides direction to all clinical intramural programs and activities (training and research). The Clinical Director provides leadership to the development and administration of NIDCR clinical training programs, oversees the Clinical Research Core Facility and administers quality assurance programs for all clinical research and patient-related activities. In addition, he/she acts as liaison to senior and junior clinical staff and the public.

This position may be filled in the competitive civil service as a GS-15 Dental Officer/Medical Officer or may be filled in the excepted service under a Title 42 appointment. A relocation bonus of up to 25 percent may be available to a permanent Federal employee who must relocate to accept this position in a different commuting area, subject to individual approval. A recruitment bonus of up to 25 percent of base pay may be available to a non-Federal selected candidate. Physicians may be eligible for a Physician's Comparability Allowance (PCA) up to \$20,000 per year.

Qualifications for this position include a DDS/DMD and/or MD degree. The successful candidate must have a national/international reputation as an exceptional clinical scientist and be prepared to establish an independent clinical research program within NIDCR. In addition, the candidate must have demonstrated administrative and mentoring skills.

Interested candidates should send a cover letter, curriculum vitae, bibliography and 3 letters of reference to: **Ms. Judy Dulovich, NIH/National Institute of Dental and Craniofacial Research, Human Resources Mgmt Branch, 31 Center Drive, Building 31, Room 2C39, MSC-2290, Bethesda, MD 20892-2290, telephone 301-496-6971.** Applications will be accepted through June 15, 2002. *The National Institutes of Health is an Equal Opportunity Employer.*

## Friedrich Miescher Institute for Biomedical Research



### Group Leader Position in Neurobiology

The Friedrich Miescher Institute invites applications for a position as research group leader in Neurobiology at senior or junior tenure-track level. Candidates should have a strong interest and demonstrated success in research on cellular and molecular mechanisms of nervous system development and plasticity. Reference should be made to the institute website ([www.fmi.ch](http://www.fmi.ch)) for information on the research interests of the six internationally established neurobiology groups currently working at the FMI.

The Friedrich Miescher Institute, part of the Novartis Research Foundation, is an international biomedical research centre with 280 members, including 180 postdoctoral fellows and graduate students, pursuing fundamental research in the areas of Neurobiology, Cell Growth and Signalling, and Epigenetics. Special emphasis is placed on providing frontline technology ranging from mass-spectrometry and DNA array analysis to live cell imaging and experimental mouse genetics. The FMI is situated in Basel, a city offering an outstanding scientific and cultural environment in the centre of Europe.

Formal application by CV, including the names and contact details of three referees and a concise description of research interests and future plans should be sent to our secretary Mrs. Erika Laschinger, Friedrich Miescher Institute, Maulbeerstrasse 66, 4058 Basel, Switzerland. Please mark applications with the reference "Group Leader in Neurobiology". The closing date for applications is 31st May 2002.



Juvenile  
Diabetes  
Research  
Foundation  
International

*dedicated to finding a cure*

# Senior Scientific Officer

The Juvenile Diabetes Research Foundation International (JDRF) — the world's leading nonprofit, non-governmental funder of diabetes research (up to \$100 million in current fiscal year) — is seeking an outstanding senior scientist to serve as Senior Scientific Officer (SSO). The SSO will provide scientific, programmatic and budgetary leadership for the implementation of several research initiatives, including clinical trials and academic-industrial collaborations. Other principal responsibilities include developing strategies and analytical measures for the evaluation of JDRF's research portfolio; and planning and implementation of information-management tools for tracking research developments. Additional responsibilities include identifying future research opportunities; working with industry, government, private and academic institutions to meet research needs and develop creative opportunities to leverage JDRF's research funds; and interfacing with the Foundation's volunteers and chapters to convey JDRF's research program and plans.

The position requires strong leadership and management skills; experience in the design, implementation, and management of focused multidisciplinary projects and clinical trials. Other attributes include the ability to develop strategies and analytical measures for program evaluation; familiarity with technology transfer and intellectual-property requirements for academic-industrial collaborations; and ability to work effectively across organizational boundaries and to foster teamwork. Outstanding interpersonal and communication skills are required to interact effectively with academia, government agencies, industry, other public and private research and health organizations, volunteers, and scientific and lay press.

Key Selection Criteria: M.D. and/or Ph.D. in a health-related research field, with knowledge and/or expertise in basic science relevant to type 1 diabetes (immunology, genetics, genomics, molecular biology, transplantation etc); at the Associate or Full Professor level or equivalent in government or industry. Experience in the management of large multidisciplinary projects and clinical trials is desired. Industry experience is welcome. Travel required.

*Please forward your resume and salary requirements to:*

**Juvenile Diabetes Foundation International**  
**120 Wall Street, 19th Floor, Attn: HR-SSO**  
**New York, NY 10005-4001**  
**Or Fax: 212-785-9595**

EOE M/F/D/V

## POSITIONS OPEN



Amylin Pharmaceuticals, Inc., is committed to improving the lives of people with diabetes and other metabolic disorders through the discovery, development, and commercialization of innovative, cost-effective medicines.

### DISCOVERY PHYSIOLOGIST Reference Number E288-02

Responsible for establishing and developing *in vivo* animal models for obesity, feeding disorder, diabetes and other metabolic disorders for drug discovery and studies of mechanism of action. Must play an active role in the drug discovery efforts of the company through dedicated teams and as Project Leader. Ph.D. in pharmacology, physiology, or neuroscience with strong experience in behavioral studies and preferably three to five years of experience in developing and establishing *in vivo* animal models. Prior industry experience an advantage.

Amylin offers competitive compensation, benefits, and stock options. Please forward résumé (including Reference Number) to: **Amylin Pharmaceuticals, Inc., 9373 Town Centre Drive, Suite 250, San Diego, CA 92121. FAX: 858-558-0153; e-mail: jobs@amylin.com.** Detailed descriptions at [website: http://www.amylin.com](http://www.amylin.com). Amylin maintains a drug- and alcohol-free workplace and all offers of employment are contingent upon satisfactory completion of a preemployment drug and alcohol test.

### GENOMICS FACULTY POSITION AVAILABLE

The General Clinical Research Center (GCRC) and the Institute for Genetic Medicine (IGM) at the University of Southern California Keck School of Medicine are seeking an exceptional Investigator with expertise in human genomics to help expand our multidisciplinary research program in the genetics of complex human diseases. The position will be in the tenure track at the **ASSISTANT or ASSOCIATE PROFESSOR** level. Candidates at the Assistant Professor level should have at least two years of postdoctoral experience and an exceptional publication record. Candidates for Associate Professor should have a demonstrated record of exceptional accomplishment and extramural funding. Research interest and experience in the genetics of human diabetes, obesity, and/or cardiovascular disease is preferred. The successful candidate will direct the GCRC Molecular Medicine Core laboratory, which provides genotyping and sequencing services for clinical Investigators using the GCRC to study genotype-phenotype relationships in large cohorts of human subjects. S/he will also develop an independent research program (including collaborations with GCRC Investigators) to complement the IGM's existing faculty interests in genetics and molecular genetics of cancer, cellular differentiation, mammalian development, and gene therapy. The appointment includes a competitive salary, a generous start-up package, and research space in the state-of-the-art interactive IGM Collaboratories. All applicants should forward their curriculum vitae and a brief statement of future research plans. Candidates for appointment at the Assistant Professor level should also provide three letters of recommendation and two or three representative research publications. Send all documents to: **GCRC/IGM Search Committee, 6602 GNH, 1200 North State Street, Los Angeles, CA 90089-9317. E-mail: dwalters@hsc.usc.edu.** The University of Southern California is an Equal Opportunity/Affirmative Action Employer.

### TENURE-TRACK ASSISTANT/ ASSOCIATE PROFESSOR Biochemistry and Molecular Biology Georgetown University School of Medicine Washington, D.C.

Eukaryotic gene expression, cell signaling, DNA replication, bioinformatics. Applications and further information at [website: http://bc.georgetown.edu/jobs/jobs.html](http://bc.georgetown.edu/jobs/jobs.html).

## POSITIONS OPEN

### FACULTY POSITION Department of Medical Informatics University of Utah Health Sciences Center

The University of Utah seeks **ASSOCIATE PROFESSOR- or PROFESSOR-level** tenure-track faculty with academic training and experience in medical informatics to serve as the **VICE CHAIR OF THE DEPARTMENT** of Medical Informatics. The new faculty member will have opportunities and responsibilities in the development of a computerized health data dictionary and decision-support capabilities as part of the installation of a new electronic medical records system at the University of Utah Health Sciences Center and also working with the Department Chairman of Medical Informatics to supervise graduate students, develop and perform research in the integration of health care informatics, and be involved in the continued development of the curriculum of the Department of Medical Informatics.

The Department of Medical Informatics at the University of Utah was established in 1972 and has an international reputation for its contributions to computer-assisted clinical, medical education, and research. The Medical Informatics Department was recently granted a National Library of Medicine training grant in medical informatics to support predoctoral and postdoctoral research training. Affiliation of the Medical Informatics Department faculty with the University of Utah Health Sciences Center, Veterans Affairs Medical Center, Intermountain Health Care (IHC) (LDS Hospital and other facilities), and the Utah State Department of Health will provide unique opportunities for the new faculty member.

Send curriculum vitae, statement of research and career plans, and three letters of reference to:

**Reed M. Gardner, Ph.D.  
Department of Medical Informatics  
50 North Medical Drive, AB193 SOM  
Salt Lake City, UT 84132  
E-mail: reed.gardner@hsc.utah.edu**

*The University of Utah is an Equal Employment Opportunity/Affirmative Action Employer and encourages applications from women and minorities.*

### FACULTY POSITION Oral Pathology

The University of Nebraska Medical Center (UNMC) College of Dentistry, Department of Oral Biology, has a full-time, tenure-track faculty position available July 1, 2002. Responsibilities include teaching in general and oral pathology, consulting in the college clinics, and participation in a tissue diagnostic service. In addition, the Department is expanding its research focus in oral cancer, and the selected candidate is expected to make a significant contribution in building this program. Applicants must be eligible to be licensed to practice dentistry in Nebraska and have completed a postgraduate training program in oral pathology. Salary and rank commensurate with background, training, and experience. Review of applications will continue until the position is filled. To apply, submit a letter of interest, current curriculum vitae, and the names of three references to: **Office of the Dean, Room 115, Position Number 2-0051, UNMC College of Dentistry, P.O. Box 830740, Lincoln, NE 68583-0740.** The University of Nebraska Medical Center is an Equal Opportunity/Affirmative Action Employer.

**ASSOCIATE RESEARCH SCIENTIST** positions available. Applicants must have a Ph.D. or M.D. degree and three to five years of postdoctoral training. Research involves studies on mechanisms of synaptic plasticity related to learning in rodents and Aplysia. Candidates should have experience with molecular biology, immunocytochemistry, confocal microscopy, image analysis, cell culturing, and behavioral techniques. Send curriculum vitae and the names and addresses of three references to: **Seta Izmirly, Program Coordinator, Center for Neurobiology and Behavior, Columbia University, 1051 Riverside Drive, New York, NY 10032.** We are an Affirmative Action/Equal Opportunity Employer.

## POSITIONS OPEN



### ASSISTANT/ASSOCIATE/ FULL PROFESSOR Neuropharmacology

The Department of Pharmacology, University of Tennessee Health Science Center ([website: http://www.utm.edu/pharmacology](http://www.utm.edu/pharmacology)), invites applications for a full-time, tenure-track faculty position in the area of neuropharmacology. The Department is well funded and has active research programs in the areas of drug abuse, psychopharmacology, signal transduction, and cardiovascular and cancer pharmacology. Members of the Department faculty also are involved in the teaching of graduate and professional students and participate in the University's centers of excellence including the Center for the Neurobiology of Brain Diseases. The selected candidate will be provided with laboratory space, generous start-up funds, and access to core research facilities and will be expected to maintain an active research program and to contribute to the Department's teaching efforts. Candidates for the position should have an M.D. or Ph.D. in pharmacology or a related discipline, postdoctoral experience, and a record of research accomplishments in neuropharmacology. Applications will be reviewed beginning May 15, 2002, but will continue to be accepted until the position is filled. Curriculum vitae, statement of research interests, and three reference letters should be sent to: **James M. O'Donnell, Ph.D., Neuropharmacology Search Committee, Department of Pharmacology, University of Tennessee Health Science Center, 874 Union Avenue, Memphis, TN 38163.**

*The University of Tennessee is an Equal Opportunity/Affirmative Action/Title VI/Title IX/Section 504/ Americans With Disabilities Act/Age Discrimination in Employment Act Employer.*

### ASSISTANT/ASSOCIATE PROFESSORS Cellular Microbiology University of Vermont

The Department of Microbiology and Molecular Genetics invites applications for two tenure-track faculty positions. We are soliciting applicants who have demonstrated superior productivity in the area of cellular microbiology. Individuals using cell biology, genetics, and genomics-based or other innovative approaches to study fundamental mechanisms of host-pathogen interaction are of particular interest. Extensive opportunities for collaborative research exist both within and outside the Department in the areas of pathogenesis, signal transduction, molecular genetics, environmental microbiology, and structural biology. Applicants must hold a Doctoral degree and have had postdoctoral research experience. Candidates will be expected to establish a vigorous, independent research program as well as contribute to the Department's teaching responsibilities. Details about the Department, the University, and the Burlington area may be accessed at [website: http://www.uvm.edu/microbiology/mmg](http://www.uvm.edu/microbiology/mmg). Applicants should submit curriculum vitae, a description of research interests, and have three letters of reference sent to: **Dr. Gary Ward, Search Committee Chair, Department of Microbiology and Molecular Genetics, 214 Stafford Hall, University of Vermont, Burlington, VT 05405.** Review of applications will begin immediately and continue until a suitable candidate is identified. The University of Vermont is an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.

**Principal Investigator  
Dermatology Branch, Center for Cancer  
Research (CCR)  
National Cancer Institute**

The Dermatology Branch CCR, NCI seeks an energetic and accomplished, tenure track or tenure eligible Principal Investigator to join a group of colleagues who are committed to excellence in research, training and patient care. The group is currently comprised of seven physicians who are engaged in laboratory- and clinic-based research. The successful candidate will establish an independent laboratory that conducts high quality research in an important area of contemporary skin biology. It is anticipated that the area of emphasis will complement those that are already represented in the Branch and be relevant to the diagnosis or care of patients with cancer. Candidates must be Board-certified in Dermatology, hold a valid state medical license and be eligible for NIH Clinical Center privileges. Ideal candidates will, in addition, have a commitment to, and active interest in, clinical medicine and must be willing to contribute to the development of a Branch clinical research program. Research activities will be fully supported. Compensation and other resources are negotiable and dependent on qualifications. Loan repayment programs may be available for qualified applicants. Applicants should send a letter of interest and curriculum vitae to: **Dr. Lee Helman, Chair, Dermatology Branch Principal Investigator Search Committee, c/o Ms. Sallie Baird, Dermatology Branch, CCR, NCI, Building 10, Room 12N238, Bethesda, MD 20892-1908.** Applications must be postmarked by May 30, 2002.

*The National Cancer Institute is an  
Equal Opportunity Employer.*



**VETERINARY MEDICAL  
OFFICER/ANIMAL SCIENTIST**

The USDA, Agricultural Research Service, National Program Staff, in Beltsville, Maryland, is seeking a National Program Leader for Animal Health and Safety, GS-701/487-15. Salary commensurate with experience (\$92,060-\$119,682 per year). This national leadership position is responsible for planning, leading, coordinating and implementing agricultural research programs relating to animal health research with emphasis on bacterial infections. This position has specific education and experience requirements, and factors that must be addressed.

In order to ensure submission of a complete application, applicants must request a copy of the announcement by calling (301) 504-1484 or by printing it from the Internet at <http://www.ars.usda.gov>. Click on Employment Opportunities. The vacancy announcement number for this position is ARS-X2E-2241.

*USDA/ARS is an Equal Opportunity  
Employer and Provider.*

**Assistant/Associate Professor  
Translational Virology**

The University of Texas M. D. Anderson Cancer Center, The Department of Veterinary Sciences, is seeking to fill a tenure-track position in the broadly defined area of translational virology. Qualifications include a Ph.D. in virology or a related discipline of biology and a proven record of conducting independent as well as collaborative research. We are especially interested in candidates pursuing animal model research geared towards understanding pathogenic mechanisms that have potential for intervention by therapeutic/prophylactic reagents. The environment offers extensive opportunities for collaborative research with basic, veterinary and clinical researchers involved in understanding the mechanistic and translational aspects of human cancers with viral and non-viral etiology. The successful applicant is expected to develop a high-quality, extramurally funded research program that utilizes the unique resource of animal models available in the department including rodents, SPF rhesus macaques, chimpanzees and livestock (swine, sheep, goats, calves). Current areas of departmental research include: rhesus macaque model for HIV-AIDS, chimpanzee model for hepatitis C virus, sheep model for pain management and artificial bone development, and prospective studies to define immune correlates in patients treated for cervical neoplasia induced by human papillomavirus.

The Department of Veterinary Sciences is located in a rural park-like setting in **Bastrop, Texas**, just outside of the state capital of Austin, in the beautiful Texas hill country. The department offers state-of-the-art research facilities that include flow cytometry, immunohistochemistry, biohazard animal and laboratory facilities, and a full-range of novel animal models. Ongoing research activities of the facility are described in M. D. Anderson's Research Report at <http://www3.mdanderson.org/~resrep/>. Generous start-up funds are available.

Interested candidates are invited to contact **Michael E. Keeling, DVM, Chairman of Veterinary Sciences, at (512) 321-3991** for additional information. Please send curriculum vitae, a brief summary of research experience, and names and contact information of three references by e-mail to [mkeeling@mdanderson.org](mailto:mkeeling@mdanderson.org) or mail: **650 Cool Water Drive, Bastrop, TX 78602**

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

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

**PROGRAM HEAD  
STRUCTURAL BIOLOGY & BIOCHEMISTRY**

The Research Institute at The Hospital for Sick Children is world renowned for significant scientific achievement across a broad spectrum of research, from the molecular and cellular level to clinical studies of individual human subjects and populations. The exceptional researchers that compose our Structural Biology & Biochemistry Research Program have achieved international recognition for their work in X-ray crystallography, NMR spectroscopy, computational chemistry, protein design, and protein and peptide biochemistry.

The Program requires an outstanding scientist and leader who is dedicated to a wide area of structural biology and biochemistry research. Your sterling record of scientific accomplishment is complemented by strong interpersonal, leadership, organizational and communication skills. In addition to your own research, you will foster critical research and the careers of Program staff, including the facilitation of interactions between experimental and clinical research activities. As well, you will act as an advocate for the Program in all communication with internal and external contacts. You will guide resource allocation within the Program while participating in the ongoing development of our Research Institute. The successful applicant will be offered a professorial appointment in the Department of Biochemistry at the University of Toronto.

You will be supported in your scientific endeavours by our integrated organizational matrix structure, excellent technical/administrative resources and collaboration with others in an exciting research community that encompasses the University of Toronto and its affiliated hospital research institutes.

Applicants are invited to forward a curriculum vitae, reprints of three to five recent publications, and the names, addresses and contact numbers of three referees by **May 19, 2002**, to: **Dr. Manuel Buchwald, Chief of Research and Director of the Research Institute, Research Institute, The Hospital for Sick Children, Room 5270, 555 University Avenue, Toronto, Ontario, Canada M5G 1X8. Fax: (416) 813-5085. [www.sickkids.ca](http://www.sickkids.ca)**

The University of Toronto encourages applications from qualified women and men, members of visible minorities, aboriginal peoples and persons with disabilities. All qualified candidates are encouraged to apply; however, Canadians and permanent residents will be given priority.



THE HOSPITAL  
FOR SICK CHILDREN  
TORONTO CANADA



University of Toronto

*Be Someone to look up to.*

## POSITIONS OPEN

### RESEARCH ASSOCIATE

Stanford Genome Technology Center is seeking an individual with diverse expertise in biological model systems as well as automation assay development and high-throughput integration. This position requires a Ph.D. with three years of postdoctoral experience and several years of industrial experience. Individual should have hands-on experience in fungal and mammalian cell biology, expertise in fungal molecular genetics including human pathogens, technical expertise in high-resolution and high-throughput cellular imaging and working knowledge of instrument development, and familiarity with Visual Basic and LabView for system integration. This position requires excellent laboratory management skills as well as the ability to interface with specialists in chemistry, automation, and informatics both within the Genome Technology Center and with outside collaborators. Individual will be expected to establish a self-supporting research group as well as to give support to existing programs within the Center. Contact: **Marie E. Casey, Administrative Director, Stanford Genome Technology Center, 855 California Avenue, Palo Alto, CA 94304 (Mail Code 8307). Telephone: 650-812-2020; FAX: 650-812-1975.** *Stanford University is committed to Equal Opportunity through Affirmative Action in Employment and we are especially eager to identify minority persons and women with appropriate qualifications.*

### ASSISTANT PROFESSOR Plant Taxonomy/Ethnobotany

Frostburg State University seeks a full-time, tenure-track Assistant Professor to begin August 2002. Responsibilities: Teach courses in plant taxonomy, dendrology, and ethnobotany; establish an active research program; contribute to the general biology programs; play a leadership role in ethnobotany initiative; herbarium curation; direct graduate and undergraduate research; collaborate with faculty in area of expertise. Minimum qualifications: Ph.D. by the end of fall 2002 in plant systematics or related field, strong knowledge of eastern North American flora, demonstrated potential for excellence for teaching and research. Preferred qualifications: college-level teaching and knowledge of both molecular and morphological systematics. To apply, send a letter of interest; résumé; and the names, addresses, and telephone numbers of three professional references by May 20, 2002, to: **Frostburg State University, Office of Human Resources, Attention: Assistant Professor of Plant Taxonomy/Ethnobotany (Position Number 2002-1041), Frostburg, MD 21532. E-mail: humanresources@frostburg.edu; website: http://www.frostburg.edu.**

*FSU is an Affirmative Action/Equal Opportunity Employer. Appropriate auxiliary aids and services for qualified individuals with disability will be provided upon request. Please notify in advance.*

**POSTDOCTORAL POSITION** available immediately in smooth muscle functional genomics laboratory. Our laboratory is currently studying vascular and visceral smooth muscle cell physiology and pathology at the genetic, cellular, and tissue level (for more detail, see website: <http://www.aecom.yu.edu/home/SGGD/faculty/christ.htm>). Candidates will be considered who have experience in molecular biology (such as cloning, RT-PCR, Northern, Western, and microarray analysis) and are capable of applying these techniques to a multidisciplinary project. Both human tissue and appropriate animal models of disease are employed. This is an extraordinary translational research opportunity. Please send a letter of interest, curriculum vitae, and contact information for three references to: **George J. Christ, Ph.D., Professor of Urology and of Physiology and Biophysics, Ben Marden Distinguished Scholar in Urology, Director of the Institute for Smooth Muscle Biology, Room 744, Forchheimer Building, Albert Einstein College of Medicine, 1300 Morris Park Avenue, Bronx, NY 10461.** *The Albert Einstein College of Medicine of Yeshiva University is an Equal Opportunity/Affirmative Action Employer.*

## POSITIONS OPEN



### GROUP LEADER Metabolic Disorders

You will lead a team dedicated to the development of preclinical candidates in CuraGen's metabolic disorders program. Previous research in diseases such as obesity, diabetes, hypertension, and hypercholesterolemia is required. Ph.D. and/or M.D. with significant experience and publication record required. Industry experience preferred. Reference Number 190-01.

### SENIOR RESEARCH SCIENTISTS Preclinical Pharmacology

Multiple positions are available for Scientists with expertise in the areas of pharmacokinetics, diabetes/metabolism, CNS, and inflammatory *in vivo* models. Primary responsibilities are to design and oversee *in vivo* studies to characterize protein therapeutics and monoclonal antibody therapeutics for the above-mentioned research areas. Ph.D. or equivalent degree with appropriate postdoctoral training required. Industry experience and a superior publication record preferred. Reference Number 006-02 and Number 007-02.

These and many other exciting career opportunities are available in genomic technology implementation; protein expression and production; genomic, proteomic and genetic target discovery; *in vitro* and *in vivo* validation; drug development; and clinical development.

To apply, visit website: <http://www.curagen.com/careers>.

The Laboratory of Biophysics at the Center for Biologics Evaluation and Research, FDA, has an immediate opening for a **SENIOR STAFF FELLOW** with a strong background in NMR. The Laboratory is part of the Division of Bacterial, Parasitic, and Allergic Products in the Office of Vaccines Research and Review and is located on the campus of the National Institutes of Health in Bethesda, Maryland. The successful candidate will be expected to develop an active research program in polysaccharide vaccines and will be responsible for regulatory review related to the characterization of these vaccines and other biologic products by NMR. This appointment is equivalent to a tenure-track appointment; i.e., the candidate would be eligible for conversion to a permanent position if successful. The initial appointment is for two years and may be extended up to a total of seven years by mutual agreement. Candidates must have an advanced degree (e.g., Ph.D. or M.D.); at least two years of postdoctoral experience; and must be U.S. citizens or resident aliens eligible for citizenship within four years.

Interested candidates should send curriculum vitae and names and contact/information for three references to:

**Richard W. Pastor  
CBER/FDA  
1401 Rockville Pike  
Rockville, MD 20850**

*The U.S. Government is an Equal Opportunity Employer.*

Applications are invited for a full-time **ASSISTANT PROJECT SCIENTIST** position in the Department of Reproductive Medicine at University of California, San Diego. Ph.D. or M.D. and three years of postdoctoral training in molecular biology, neurobiology, endocrinology, and/or development with an interest in molecular neuroendocrinology. Please send curriculum vitae and names and addresses of references before May 20, 2002, to: **Pamela L. Mellon, UCSD, 9500 Gilman Drive, La Jolla, CA 92093-0674.** The level of appointment and salary will be commensurate with qualifications and experience in accordance with University of California policy and published pay scales. *UCSD is an Affirmative Action/Equal Opportunity Employer.*

## POSITIONS OPEN

### STAFF SCIENTIST (CORE LABORATORY) National Institutes of Health National Institute of Allergy and Infectious Diseases

The Hepatitis Viruses Section of the Laboratory of Infectious Diseases seeks a Doctoral-level Scientist to manage a translational research program related to the development and testing of monoclonal antibodies directed against a variety of human pathogens. The goal of the program is to recover such antibodies from combinatorial phage libraries generated from bone marrow aspirates of immunized or convalescent individuals. Such antibodies will be used for immunoprophylaxis and/or immunotherapy of relevant human pathogens. The ideal candidate will have experience in combinatorial phage library construction and analysis. Space, technical, and Postdoctoral Fellow support and budget are committed. Starting salary ranges from \$66,000 commensurate with experience/present salary. Benefits associated with federal employment are included. Specific application procedures apply. Contact: **Joann Martin; Telephone: 301-496-4634** for information about these procedures. Curriculum vitae, bibliography, three letters of reference, a detailed letter of statement of research interests and experience, and selected publications must be submitted by close of business May 10, 2002, and sent to:

**Dr. Robert Purcell, Co-Chief, LID  
Building 50, Room 6523  
50 South Drive MSC 8009  
Bethesda, MD 20892-8009  
Telephone: 301-496-5090  
FAX: 301-402-0524  
E-mail: [rpurcell@niaid.nih.gov](mailto:rpurcell@niaid.nih.gov)**

*NIH is an Equal Opportunity Employer. U.S. citizenship is required.*

### SENIOR SCIENTIST POSITION HIV-1 Vaccine Development

A position is available immediately in the Division of Vaccine Research, Institute of Human Virology, for a **PROJECT MANAGER**/Senior Scientist to supervise a mucosal HIV-1 vaccine development project that is fast-tracked for Phase I clinical trials. The successful candidate will play a key role in this milestone-driven program that is composed of both basic and clinical Scientists who share the goal of developing a mucosal vaccine against HIV-1. Experience in two or more of the following areas is required: molecular genetics of human mucosal pathogens such as *Salmonella* or *Shigella*, mucosal and/or cellular immunology, HIV vaccine development, project management, preclinical product development, regulatory compliance (GLP/GMP/IND development). Candidates must have a M.D., Ph.D., or an equivalent degree. Salary is commensurate with experience. Please send a letter of application (referencing 300257), current résumé, and names and telephone numbers of three references to the following address: **Dr. George Lewis, Institute of Human Virology, University of Maryland Biotechnology Center, 725 West Lombard Street, Baltimore, MD 21201.** Review of applications will begin May 5, 2002, and continue until a suitable candidate is selected.

### STAFF SCIENTIST Guthrie cDNA Resource Center

A skilled Molecular Biologist is sought to coordinate and participate in the cloning of cDNA for proteins involved in human signal transduction pathways. Extensive experience in cDNA preparation, amplification, cloning, sequencing, and expression required. Responsibilities include directing a team of technicians, troubleshooting laboratory operations, maintaining databases, and supervising clone distribution. Doctoral or Master's degree in a relevant field required. Further information on the Resource Center is available on our website: <http://www.cdna.org>. Please submit a letter of interest, résumé, and names of two references to: **Robert S. Aronstam, Director, Guthrie Research Institute, Sayre, PA 18840.**



# **UIC** University of Illinois at Chicago

## **Head Biochemistry and Molecular Genetics**

Applications and nominations invited for the position of Head of the Department of Biochemistry & Molecular Genetics at the University of Illinois at Chicago (UIC). The Head will be charged with integrating the faculties of Biochemistry & Molecular Biology and of Molecular Genetics, consisting of 29 full-time members with well-supported research programs funded in excess of \$11 million in the current year, including 30 NIH research and training grants. The Head will also be charged with the growth of programs in genomics, proteomics and related sciences. The graduate programs are strong, with 78 current Ph.D. students.

The successful candidate should have a Ph.D. and/or M.D. degree, be of national stature, with an active funded research program that fits well with department's mission, exceptional administrative skills, vision and drive to ensure successful integration and growth. Should be eligible for professorship with tenure.

For fullest consideration, nominations or letters of application, along with curriculum vitae and names of at least three references should be submitted by June 1, 2002 to:

**Asrar B. Malik, PhD, Distinguished Professor and Head,  
Department of Pharmacology  
Chair, Biochemistry and Molecular Genetics Head Search Committee  
c/o Gregory S. Pittsley, Dean's Office  
UIC College of Medicine at Chicago  
1853 W. Polk Street, Room 131 CMW (M/C 784)  
Chicago, Illinois 60612**

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

# **NIMH** National Institute of Mental Health

## **Post Doctoral Fellowship in Neuroimaging Research**

The Clinical Brain Disorders Branch of the NIMH is accepting applications for a post-doctoral fellow in the Unit on Clinical Neuroimaging. This Unit conducts neuroimaging research using fMRI to map brain activity with a focus on brain circuits and genetic mechanisms subserving higher cognitive function and emotion processing in healthy volunteers and patients with neuropsychiatric disorders. Through pharmacological and genetic studies the Unit is also exploring the effects of monoamines on these brain circuits and variations in genes that affect the neurotransmitters involved in these circuits.

Candidates with a Ph.D. and/or M.D. (preferably with residency training in Psychiatry and/or Neurology) and an interest in functional neuroimaging techniques are invited to apply. Contact: **Venkata S. Mattay, MD, telephone 301-435-4594; email: vsm@helix.nih.gov.**

*NIH is an Equal Opportunity/Affirmative Action Employer.*

## **ASSISTANT PROFESSORSHIPS AND POSTDOCTORAL FELLOWSHIPS IN NEUROSCIENCE**

The Louisiana State University Health Sciences Center Neuroscience Center of Excellence is recruiting two Assistant Professors in the areas of synaptic physiology and molecular neurobiology to complement the Scientists and interests below. The Center is housed in a new 36,000 square foot facility with well equipped, state-of-the-art labs and core resources (e.g., tandem MS, multiphoton confocal microscope). The Neuroscience Center is home to a highly competitive, interdisciplinary PhD program. Faculty members hold primary appointments in various Departments of the LSUHSC School of Medicine and receive attractive start-up packages. The wide range of joint appointments within the Center is broadly inclusive of both fundamental neurobiology and clinical neurosciences (**website: <http://www.neuroscience.lsuhs.edu>**).

Postdoctoral fellowship opportunities are also currently available in the following areas.

**Rene Anand** - nicotinic acetylcholine receptor-mediated signaling in neuronal plasticity and survival.

**Haydee Bazan** - cellular and molecular signaling in wound repair and angiogenesis.

**Nicolas Bazan** - lipid synaptic signaling and modulation of gene expression; neuronal survival and neurodegeneration in the hippocampus and retina.

**Chu Chen** - neuromodulation of ionic channels and synaptic plasticity in hippocampal neurons.

**Jeffrey Erickson** - molecular and cellular biology of vesicular neurotransmitter transporters.

**Walter Lukiw** - Alzheimer's disease, neurotoxicology, and gene transcription.

**Jeffery Magee** - dendritic integration and synaptic physiology.

**Anthony Ricci** - single-cell physiology investigating calcium regulation of excitability in auditory sensory cells.

**Helene Varoqui** - role of glutamine transporters in glutamatergic neurotransmission.

Faculty applicants should submit curriculum vitae, a three-to-five page research plan (Postdoctoral candidates should send a description of their accomplishments and aspirations), and names with full addresses (including e-mail) of three to four references, to: **Nicolas G. Bazan, M.D., Ph.D., LSU Neuroscience Center, 2020 Gravier Street, Suite D, New Orleans, LA 70112. LSU Health Sciences Center is an EEO/AA Employer.**



## **BUCK INSTITUTE** ADVANCING AGE RESEARCH

### **The Buck Institute Positions Available in Aging Research**

The Buck Institute for Age Research aims to increase the healthy years of life through clinically relevant biomedical research on the biology of aging and age-associated diseases. Established as an independent, nonprofit research facility, the Buck Institute is located in Marin County north of San Francisco and brings a new focus to the science of aging with a world-class Faculty.

Candidates with a strong commitment to understanding aging and the causes of age-related disease are sought for the following positions:

**Faculty** - Applications are invited for junior Assistant Professor and for mid-career Associate and Full Professor positions. Applicants with research programs in the mechanisms of normal aging, structural biology or bio-informatics are particularly welcome. The successful applicant will be an outstanding independent investigator with an excellent record of achievement and with clear potential for leadership and scholarship in mechanisms of aging or age-related disease. Further information is available from **<http://www.buckinstitute.org>** and informal enquiries can be made to **Dr. Gordon J. Lithgow ([glithgow@buckinstitute.org](mailto:glithgow@buckinstitute.org))**.

**Post-Doctoral Fellows** - Applications are invited from outstanding and innovative post-doctoral researchers with experience in molecular and cellular biology for positions in neurodegeneration, cancer biology, developmental neurobiology, neurophysiology, cerebral ischemia, mitochondrial function, oxidative stress and protease/disease research. Further information is available from **<http://www.buckinstitute.org>**.

Applications (cover letter and resume) to: **Human Resources, Buck Institute, 8001 Redwood Blvd, Novato, CA 94945; email: [hr@buckinstitute.org](mailto:hr@buckinstitute.org); Fax: (415) 899-1810.**

**The deadline for submission is 31 August 2002**

*The Buck Institute is an Equal Opportunity Employer*



## POSITIONS OPEN



The Agricultural Research Service, Plant Sciences Institute, Systematic Botany and Mycology Laboratory in Beltsville, Maryland, is seeking an interdisciplinary **RESEARCH MOLECULAR BIOLOGIST/BOTANIST (MYCOLOGIST)/MICROBIOLOGIST**, GS-11/12/13, with promotion potential. Salary is commensurate with experience (GS-11 starting salary \$46,469 per annum; GS-12 starting salary \$55,694 per annum; GS-13 starting salary \$66,229 per annum) plus benefits. *Candidates must be U.S. citizens.* Incumbent will plan and conduct research on the molecular systematics and genomics of the rust fungi (*Uredinales*) of importance to agriculture. He/she will determine molecular approaches to characterize the genetic variability and systematic relationships of rust fungi. For research information, contact: **Dr. Amy Rossman; Telephone: 301-504-5364.** Candidates must request a copy of Vacancy Announcement ARS-D2E-2226 by either calling **Telephone: 301-504-1482** or **website: <http://www.ars.usda.gov>** in order to address specific information outlined in the vacancy announcement. Applications must be postmarked by May 28, 2002. *USDA/ARS is an Equal Opportunity Provider and Employer.*

### DIRECTOR OF BIOLOGY LABORATORIES University of Richmond

The Department of Biology at this highly selective, liberal arts university invites applications for a full-time, nine-month, continuing nontenure-track position as Director of Biology Laboratories beginning August 2002 (negotiable). We seek an individual with a Master's or Ph.D. degree who is broadly trained in biology and who will work with faculty to implement the goals and vision of two courses in our introductory core sequence for majors, Biodiversity and Integrative Biology. Responsibilities encompass all aspects of the laboratory: preparing and teaching laboratory classes, organizing and fine-tuning laboratory exercises, supervising prep sessions, ordering supplies, supervising undergraduate and graduate student personnel, and maintaining laboratory equipment. Teaching experience and basic computer skills are required. Send curriculum vitae, statement of teaching experience, copies of undergraduate and graduate transcripts, and three letters of recommendation to: **Dr. W. John Hayden, Department of Biology, University of Richmond, Richmond, VA 23173-9998.** Review of applications will begin on May 1, 2002, and continue until the position is filled. For more information about the university and department, visit our **website: <http://www.richmond.edu/~biology>**. *The University of Richmond is an Equal Opportunity Employer.*

### ASSOCIATE RESEARCH SCIENTIST

The candidate must be thoroughly familiar with the following microsurgical procedures in mice: The applicant must be able to perform sciatic nerve crush and transection with minimal mortality and thoroughness of crush/transection. The applicant must be able to perform crush of the spinal cord with minimal mortality and thoroughness of crush. The applicant must be thoroughly familiar with means to perform post-operative management through seven days after crush. In addition, the candidate must be thoroughly familiar with the murine model of amyotrophic lateral sclerosis with respect to clinical signs and symptoms, neuropathology, and molecular indices of apoptosis and inflammation. The candidate must be able to characterize transgenic mice; perform Southern, Northern, and Western blotting; electrophoretic mobility shift assays; immunohistochemistry; and quantitative analysis. Ability to work independently and to develop and learn techniques is essential. Please send curriculum vitae to: **Ms. Claudia Edwards, College of Physicians and Surgeons, P&S 17-401, 630 West 168th Street, New York, NY 10032.**

*Columbia University is an Affirmative Action/Equal Opportunity Employer.*

## POSITIONS OPEN

### FACULTY POSITION Department of Molecular and Medical Genetics Oregon Health and Science University Portland, Oregon

Candidates with an M.D. and/or Ph.D. degree are invited to apply for an appointment in the Department of Molecular and Medical Genetics. The Department is composed of both basic science and clinical faculty who are nationally recognized for their clinical and research programs. It also offers pre- and postdoctoral training programs in both human and medical genetics. We seek outstanding candidates with the ability to conduct an independent, extramurally funded research program. A responsibility of this position includes co-Directorship of the Molecular Diagnostics laboratory, a component of the OHSU Genetics Laboratories. Board certification or eligibility in clinical molecular genetics (American Board of Medical Genetics) or in molecular genetic pathology (American Board of Pathology) is preferred. Applicants should include curriculum vitae, a brief description of research accomplishments and goals, and the names of three references. Deadline is June 30, 2002. To find out more about the Department, visit our **website: <http://www.ohsu.edu/som-genetics/>**. Please address applications to:

**Glenda Benton  
Department of Molecular and  
Medical Genetics, L-103  
Oregon Health and Science University  
3181 S.W. Sam Jackson Park Road  
Portland, OR 97201-3098  
E-mail: [bentong@ohsu.edu](mailto:bentong@ohsu.edu)**

*OHSU is an Equal Employment Opportunity/Affirmative Action Employer.*

Interdisciplinary supervisory position: **SUPERVISORY ELECTRONICS ENGINEER/SUPERVISORY PHYSICAL SCIENTIST/SUPERVISORY PHYSICIST**. DBIV (GS-14/15 equivalent). Salary range: \$78,265 to \$119,682 per annum (includes locality payment).

A full-time position as a Supervisory Electronics Engineer or a Supervisory Physical Scientist or a Supervisory Physicist to serve as Branch Chief at the Army Research Laboratory, Adelphi, Maryland, is available. The Branch Chief is responsible for managing the professional and technical work of the organization. The work involves research and development of a wide variety of scientific and experimental tasks associated with microelectromechanical sensors (MEMS), wide band gap (WBG) devices, III-V radio frequency (RF) devices, and basic research in materials and structures. The mission of the organization involves sensors and imaging technology as one of the key Army research programs with substantial effect on national defense issues and new technology areas. Programs directed generally involve substantial fiscal responsibility (e.g., management of multimillion-dollar efforts). This position closes on 1 May 2002. For more information about the position, go to the following website and type in Announcement Number ACH020029: **website: <http://www.cpol.army.mil/va/scripts/public.html>**.

The University of South Alabama invites applications for a full-time, 12-month faculty position with primary teaching responsibility in human anatomy and physiology for nursing and allied health students. The successful candidate must have qualifications to teach anatomy and physiology; however, it is desirable that he/she also have the expertise to teach either hematology or clinical chemistry. Minimum qualifications: Ph.D. in appropriately related field or M.D. The position is available to start in summer 2002. Deadline for applications is May 15, 2002, or until filled. Interested candidates should submit curriculum vitae with a cover letter along with the names of three references to: **Dr. Dan Sellers, College of Allied Health Professions, University of South Alabama, Mobile, AL 36688. Telephone: 251-380-2785; FAX: 251-380-2787; e-mail: [dsellers@usouthal.edu](mailto:dsellers@usouthal.edu).** *Affirmative Action/Equal Employment Opportunity/Minorities/Females/Disabled.*

## POSITIONS OPEN



**American  
Red Cross**

**We'll be there.**

### EPIDEMIOLOGIST

The American Red Cross' Holland Laboratory is currently seeking a full-time, Doctoral-level Epidemiologist to join our team. The Holland Laboratory is the research and development division of the American Red Cross and is located about 10 miles north of the NIH. The Epidemiologist will support ongoing research efforts in the Transmissible Diseases Department. This is a senior-level position at the **ASSOCIATE to FULL PROFESSOR** level. The successful candidate will be expected to develop a leading-edge program of epidemiologic, surveillance, and interventional studies focusing on transfusion-transmitted infections and other potentially adverse outcomes of transfusion. Existing support includes baseline funding, laboratory facilities, a database representing approximately six million donations annually, and funded personnel in selected blood centers. Excellent interpersonal and communications skills and appropriate experience are required. Competitive benefits options offered. Interested individuals should send their curriculum vitae, no more than three key publications, and three references to:

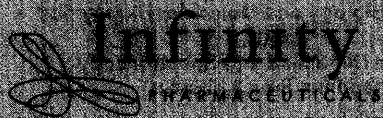
**Roger Y. Dodd, Ph.D.  
Executive Director, Biomedical Safety  
American Red Cross Holland Laboratory  
15601 Crabbs Branch Way  
Rockville, MD 20855  
E-mail: [dodd@usa.redcross.org](mailto:dodd@usa.redcross.org)**

### RESEARCH MOLECULAR BIOLOGIST/ RESEARCH CHEMIST

The United States Department of Agriculture, Agricultural Research Service, Western Regional Research Center, Albany, California, invites application for two research positions, GS-12/13/14 (\$59,471 to \$108,642 per annum; salary commensurate with experience) to create novel enzyme variants for the breakdown of cellulosic residues from agriculture. Incumbent will apply genomic approaches via directed molecular evolution techniques to select target enzymes, create mutant libraries, screen, and evaluate enzyme activity. Enzymes for pretreatment (hemicellulases) as well as cellulose hydrolysis are desired. Ultimately these enzymes will be applied to agricultural residues from grain processing and straw. The ideal candidates will have interdisciplinary experience in molecular biology, particularly evolutionary protein design and engineering, and will be responsible for conceptualization and planning of research, conducting experiments, and reporting results. The Center is located in the San Francisco Bay area near Berkeley, California (see **website: <http://www.pw.usda.gov>**). This is a competitive, permanent appointment and U.S. citizenship is required. A complete copy of the vacancy announcement and where to apply can be found at **website: <http://www.ars.usda.gov>**; see Careers with ARS, Research Scientists, select announcement ARS-X2W-2232, or contact: **WRRP Personnel; Telephone: 510-559-6090.** Closing date for applications is June 3, 2002. For more detailed information on this listing, please contact: **Dr. Dominic Wong; Telephone: 510-559-5860; e-mail: [dws@pw.usda.gov](mailto:dws@pw.usda.gov).** *The USDA is an Equal Opportunity Provider and Employer.*

### POSTDOCTORAL POSITION

Available immediately to investigate molecular mechanisms involved in retinal degeneration by evaluating expression of genes and biological pathways associated with degeneration. A strong background in molecular or cell biology is desired. Additional experience in genetics is a plus. To apply, please send curriculum vitae and names and addresses of three references to: **Dr. Radha Ayyagari, W. K. Kellogg Eye Center, University of Michigan, Ann Arbor, MI 48105. E-mail: [ayyagari@umich.edu](mailto:ayyagari@umich.edu).**



### Revolutionizing Drug Discovery

Infinity is aiming to revolutionize the drug discovery process by using large libraries of natural product-like molecules obtained by diversity oriented synthesis. This unique collection of complex and diverse molecules will enable us to: obtain leads for previously 'undruggable' targets, use protein-protein interactions as drug targets, screen for enzyme inhibitors using compound libraries printed on solid support, and select drug candidates through phenotypic and pathway screens using cellular models of disease.

Join us in harnessing the power of chemical diversity to discover new and important medicines using cutting edge technologies at the interface of Biology, Chemistry and Information Technology. For these challenging projects we are currently seeking:

- Director/VP of HTS
- Enzymologist/Protein Biochemist (Ph.D.)
- Assay Development Scientists (Ph.D. and BS/MS)
- HTS Scientists (Ph.D. and BS/MS)
- Molecular Biologists (BS/MS)
- Synthetic Organic and Analytical Chemists (Ph.D./MS/BS)
- Scientific Knowledge/Informatics Professionals

Respond to [www.ipi.com](http://www.ipi.com) to apply and to view all of our scientific career opportunities. Currently in Boston - relocating to Cambridge late 2002.

[www.ipi.com](http://www.ipi.com)



## The cure for a common career.

Lilly is about breakthrough medicines and treatments to confront many of the most challenging diseases. While employing more than 41,000 individuals worldwide and marketing our medicines in 159 countries, Lilly continues to earn consistent recognition for creating an exceptional environment.

### SENIOR-LEVEL BIOINFORMATICS SCIENTIST

This scientist will be responsible for developing and maintaining in-silico tools and algorithms, leading the design and development of bioinformatics tools allowing scientists to analyze data more effectively, and managing and providing scientific direction to the Group.

Requirements include a Ph.D. in biology and/or computer science, 5+ years' bioinformatics experience, knowledge of micro array data generated from Affymetrix platform, and knowledge of single nucleotide polymorphism and other DNA sequence variations. Experience with PERL, JAVA, C languages on UNIX platforms, and bioinformatics applications required.

To apply for this position, please visit our Web site at [www.lilly.com/careers](http://www.lilly.com/careers) and view Senior-Level Bioinformatics Scientist. We are an equal opportunity employer who recruits, hires, trains, and promotes persons in all job titles without regard to race, color, religion, national origin, age, disability, or veteran status.

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## GRANTS

# Invitrogen's Research Tools Development Grants Program

## Creating the future of biotech — together

New and established investigators working in academics, not-for-profit institutions, and for-profit companies are encouraged to apply for Invitrogen's Research Tools Development Grants Program. Grants are provided on a quarterly basis, with total funding of US\$5 million per year and annual awards up to US\$100,000.

The second quarter 2002 focus is on **Functional Analysis**, understanding how genes and their corresponding proteins function and interact *in vitro* and *in vivo*. Deadline for full Grant Proposals is June 1. A preproposal is required. Visit [www.invitrogen.com](http://www.invitrogen.com) for more information, or contact us at [grants@invitrogen.com](mailto:grants@invitrogen.com).

1600 Faraday Ave., Carlsbad, CA 92008 USA  
P: 760 476 6140 F: 760 602 6563  
[www.invitrogen.com](http://www.invitrogen.com)



## ANNOUNCEMENTS



NATIONAL  
CANCER  
INSTITUTE

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

### NIH INTER-INSTITUTE PROGRAM FOR THE DEVELOPMENT OF AIDS-RELATED THERAPEUTICS (IIP)

IIP will use its contract resources to facilitate the preclinical development of:

1. Therapies for the treatment of HIV disease, AIDS-associated malignancies, opportunistic infections and tuberculosis associated with AIDS.
2. Microbicide-based prevention strategies for HIV.

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

- The next deadline for receipt of applications is June 1, 2002; prior to that date (no later than May 1) a Letter of Intent must be submitted to the Inter-Institute Program Coordinator.
- Further information about this program can be found at <http://dtp.nci.nih.gov/>.
- Inquiries can be made to the Inter-Institute Program Coordinator by telephone at 301-496-8720 or by e-mail at [iip@dtp2.ncifcrf.gov](mailto:iip@dtp2.ncifcrf.gov).



wine & cheese on Airstile lawn overlooking Cold Spring Harbor



## Cancer Genetics & Tumor Suppressor Genes

**August 14 - 18, 2002**

**Abstracts Due: May 22, 2002**

### Organizers:

Douglas Hanahan, *University of California, San Francisco*  
 Jacqueline Lees, *MIT Center for Cancer Research*  
 Scott Lowe, *Cold Spring Harbor Laboratory*  
 Charles Sherr, *HHMI/St. Jude Children's Research Hospital*

### Topics:

- Apoptosis • Telomerase & Senescence
- DNA Repair & Genomic Instability • Rb & p53 Pathways
- Tumor Progression • New Cancer Genes
- Novel Therapeutic Approaches

### Keynote Speakers:

Anton Berns, *The Netherlands Cancer Institute*  
 Stephen Elledge, *Baylor College of Medicine*

### Session Chairs include:

- Jerry Adams (Parkville, Victoria) • Lynda Chin (Boston)
- Suzanne Cory (Parkville, Victoria) • Titia de Lange (New York)
- James Downing (Memphis) • Gerard Evan (San Francisco)
- Richard Hynes (Cambridge) • Maria Jasin (New York)
- David Livingston (Boston) • Lynn Matrisian (Nashville)
- John Petrini (Madison) • Carol Prives (New York)

## Other 2002 CSHL Meetings

Evolution of Developmental Diversity *April 17 - 21*  
 Gene Expression and Signalling in the Immune System *April 24 - 28*  
 Molecular Chaperones and the Heat Shock Response *May 1 - 5*  
 \* Genome Sequencing & Biology *May 7 - 11*  
 The Cell Cycle *May 15 - 19*  
 \* Retroviruses *May 21 - 26*  
 67th CSHL Symposium: The Cardiovascular System *May 29 - June 3*  
 Molecular Genetics of Bacteria & Phages *August 20 - 25*  
 Mouse Molecular Genetics *August 28 - September 1*  
 Translational Control *September 10 - 15*  
 Dynamic Organization of Nuclear Function *September 18 - 22*  
 Axon Guidance & Neural Plasticity *September 25 - 29*  
 Molecular Genetics of Aging *October 2 - 6*  
 Germ Cells *October 9 - 13*  
 Human Origins & Disease *October 30 - November 3*  
 Tissue Engineering *November 21 - 24*  
 Therapeutic Opportunities in Neurodegenerative Diseases *Dec 5 - 8*  
 Comparative Plant Genomics *December 12 - 15*

\* oversubscribed as of April 19 - please to call to inquire

## Cold Spring Harbor Laboratory

Meetings & Courses Programs

1 Bungtown Road, Cold Spring Harbor NY 11724

[www.cshl.edu/meetings](http://www.cshl.edu/meetings)

Tel 516 367 8346 Fax 516 367 8845 email [meetings@cschl.edu](mailto:meetings@cschl.edu)

## GRADUATE PROGRAMS

### Two Taiwan International Graduate Programs in Chemical Biology and Molecular Biophysics and Molecular Dynamics and Spectroscopy Academia Sinica, Taiwan

The Taiwan International Graduate Program has been established to attract high-quality young researchers from abroad. "Chemical Biology and Molecular Biophysics" and "Molecular Dynamics and Spectroscopy" are the first of the interdisciplinary and crossinstitutional Ph.D. graduate programs in Taiwan administrated jointly by Academia Sinica, National Taiwan University and National Tsing Hua University. The former program stresses student training with a strong research emphasis in basic and applied science at the interface between Chemistry/Physics and Biology. The latter one is designed to offer specific training and research opportunities to Ph.D. students interested in working on dynamics and spectroscopy of molecules in the gas phase as well as in condensed phases. Applicants with undergraduate degrees in the general science and engineering disciplines are welcome to apply. Students must have a B.S. or M.S. degree from an accredited institution in order to be considered for admission.

Interested applicants are requested to send (1) undergraduate and graduate (if applicable) academic records, or transcripts; (2) Graduate Record Examination (GRE) scores, including subject test scores in Chemistry, Physics, Mathematics or Biology; (3) TOEFL: all applicants whose first language is not English must submit the TOEFL score, except those who have recently completed two or more years of study in an English-speaking country; (4) three letters of recommendation; (5) plan of graduate study to: **Nancy Yang, Taiwan International Graduate Program, Academia Sinica, No.128, Academia Road Sec. 2, Nan-Kang Taipei, 11529, Taiwan** by May 31, 2002. Inquiries can be made via FAX: 886-2-27898045; e-mail: [tigp@gate.sinica.edu.tw](mailto:tigp@gate.sinica.edu.tw); website: <http://www.sinica.edu.tw/~tigp>.



## CONFERENCES

### 2nd ANNUAL CONFERENCE ON MESENCHYMAL AND NONHEMATOPOIETIC STEM CELLS: Focus on Adult Stem Cells

**September 26-28, 2002**

**Hyatt Regency Hotel  
New Orleans, Louisiana, USA**

Chairs: Edwin Horwitz, MD, PhD, Darwin Prockop, MD, PhD, Armand Keating, MD, FRCP(C), Brian Butcher, PhD and Malcolm Brenner, MB, FRCP, FRCPath

**ABSTRACT DEADLINE - JULY 15, 2002**

### CONFIRMED SPEAKERS

**KEYNOTE SPEAKER:** Ronald D.G. McKay

Tim Brazelton	Diane Krause
Giuliana Ferrari	Andra Miller
Alan Fine	Lars Olson
Francesco Frassonni	Donald Phinney
Stanton Gerson	Mark Pittinger
Margaret Goodell	Darwin Prockop
Marc Hedrick	David Shine
Karen Hirschi	Paul Simmons
Edwin Horwitz	Evan Snyder
Jeffery Kocsis	Catherine Verfaillie

*Sponsored by the International Society for Cellular Therapy, ISCT (formerly ISHAGE), St. Jude Children's Research Hospital and Center for Gene Therapy of the Tulane University Health Sciences Center*

Meeting information, registration, hotel and abstract forms may be downloaded from the ISCT (formerly ISHAGE) website at [www.celltherapy.org](http://www.celltherapy.org). For further information contact **Edwin Horwitz, MD, PhD, St. Jude Children's Research Hospital, 332 North Lauderdale, Memphis, Tennessee, USA, 38105. Tel: 901-495-2746; Fax: 901-495-2176; Email: [edwin.horwitz@stjude.org](mailto:edwin.horwitz@stjude.org)**

**NEW PATENT RELATED CAREER OPPORTUNITIES FOR  
CHEMISTS – ENGINEERS IN ALL DISCIPLINES  
BIOTECHNOLOGISTS – COMPUTER SCIENTISTS  
PHYSICISTS – MOLECULAR BIOLOGISTS**

**BACHELORS TO DOCTORAL DEGREES  
THROUGHOUT THE UNITED STATES, WESTERN EUROPE AND JAPAN**

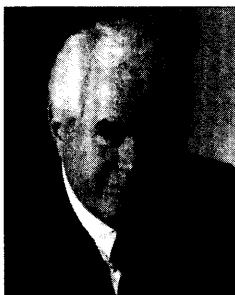
The patent and intellectual property departments of the corporations and law firms below (listed randomly) seek to employ professionals with Bachelors to Doctorates having the appropriate technical or scientific backgrounds, with work experience from none to 30 years or more. Although not all the listed organizations always have openings for such professionals, a changing majority *always* do. Interested professionals should have a basic knowledge of U.S. patent law, *which can be readily acquired in Professor Kayton's Patent Resources Group (PRG) course, as explained below.*

**General Electric – Novartis Corporation – Merck & Co., Inc. – Intel Corporation  
Pitney Bowes Inc. – Eastman Kodak Company – AstraZeneca – Philips Electronics  
Aventis Pharmaceuticals – PPG Industries, Inc. – Akzo Nobel Inc. – Caterpillar Inc.  
American Home Products Corporation**

**Pillsbury Winthrop – Fish & Richardson – Burns, Doane, Swecker & Mathis – Hogan & Hartson  
Robins, Kaplan, Miller & Ciresi – Oblon, Spivak, McClelland, Maier & Neustadt – Cox & Smith  
Foley & Lardner – Welsh & Katz – Finnegan, Henderson, Farabow, Garrett & Dunner  
Birch, Stewart, Kolasch & Birch – Christensen O'Connor Johnson Kindness – Dorsey & Whitney**

You could fill one of the following staff positions (the types vary with the organization), that combines the application of both scientific-technical and patent law knowledge:

- Patent Agent (non-lawyer scientist-engineer) registered to practice patent law before the U.S. Patent Office
- Patent-Technical Paralegal
- Scientific or Engineering Consultant with basic patent law training
- Patent Liaison Professional
- Patent Scientist-Engineer Search Specialist



**Professor Kayton**

The patent law training that is requisite for these staff positions is achieved in *Professor Kayton's* PRG course comprising 44 hours of either live classroom lectures (presented in several cities) or home study video lectures, all based upon, and accompanied by, texts designed *expressly for professionals with no legal background.*

**Each organization listed above has agreed with PRG to reimburse you for your PRG course tuition investment, if you are offered and you accept employment with the organization in a patent law related position.**

Demonstrating that you have basic patent law knowledge is supported by passing a six-hour U.S. Patent Office Exam. Alumni of *Professor Kayton's* PRG course have regularly passed the exam in numbers that far exceed the national average.

After you become one of those successful alumni, you may opt to have PRG forward your resumé for consideration by as many of the listed organizations as you choose. These organizations are willing to review the resúmes of successful alumni who have appropriate scientific or technical backgrounds. Most of the participating organizations now employ *Professor Kayton's* alumni.

*Professor Kayton* proposes to open for you new and exciting professional vistas with richly satisfying rewards, as he did for himself long ago, and as he has done for *many thousands* of scientists and engineers during the past 35 years.

For further details, or to register for the PRG course, or to view a PRG course brochure, visit:

**[www.DrKayton.com](http://www.DrKayton.com)**

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## POSITIONS OPEN

### RESEARCH IN GENETICS AND ENERGY METABOLISM Western Human Nutrition Research Center U.S. Department of Agriculture/ Agricultural Research Service University of California, Davis

The Western Human Nutrition Research Center invites applications for a permanent, full-time **RESEARCH SCIENTIST** to establish a vigorous research program on the role of genetics in regulating biochemical and physiological functions related to energy metabolism, body weight, and obesity. The candidate is expected to employ the full spectrum of research models including molecular biological, biochemical, cell culture, laboratory animal, and human studies as appropriate. A Ph.D., M.D., or equivalent degree in genetics, physiology, molecular biology, nutrition, or a closely related field is desired. Preference will be given to candidates with experience applying genetic approaches to studies of diet and obesity and to candidates with an interest in human studies. Base funding is available for a core research program and technical support. Opportunities exist for adjunct faculty appointments at the University of California at Davis. *U.S. citizenship is required.* Salary is commensurate with experience in the range of \$66,532 to \$120,229 (GS-13/14/15). Applicants must address and meet specific placement factors defined in official Vacancy Announcement ARS-X2W-2222. The vacancy announcement and application forms can be obtained by calling **Telephone: 301-504-1482** or through the **website: [www.ars.usda.gov](http://www.ars.usda.gov)**. Specific questions regarding the position may be directed to: **Dr. Janet King; e-mail: [jkings@whnrc.usda.gov](mailto:jkings@whnrc.usda.gov); Telephone: 530-752-5268**. Applications should include a description of research interests, curriculum vitae, and names of three professional references. All applications must be sent to the address indicated in the vacancy announcement and postmarked by July 15, 2002.

*USDA is an Equal Opportunity Provider and Employer.*

### POSTDOCTORAL/RESEARCH ASSISTANT PROFESSOR Pulmonary Immunology

Two positions are available immediately to study mechanisms of respiratory immune responses to infectious diseases. One research position will investigate T cell memory responses to influenza in the mucosa of the upper airways. A second position will study cellular mechanisms of CD8 T cell-mediated lung damage that occurs in *Pneumocystis pneumonia*. Senior postdoctoral applicants could qualify for an open position as a Research Assistant Professor. A Ph.D., M.D., or equivalent degree and a strong background in molecular and cellular immunology are required. Publications in English are also required. Montana State University in Bozeman offers a high quality of life, is located less than 90 miles from Yellowstone Park, and offers many opportunities for year-round outside activities. Please send curriculum vitae and names of three references to: **Allen G. Harmsen, Professor and Head, Veterinary Molecular Biology, Montana State University, P.O. Box 173610, Bozeman, MT 59717-3610. E-mail: [aharmsen@montana.edu](mailto:aharmsen@montana.edu)**.

### POSTDOCTORAL SCIENTIST

InGenious Targeting Laboratory (iTL) is a fast-growing biotechnology company in mouse gene-targeting technology. We are seeking a Postdoctoral Scientist with Ph.D. in molecular biology or related fields to join our research and development team to develop new technologies for mouse genomics research. We are particularly interested in candidates with the expertise in yeast genetics or DNA recombination. In addition to competitive salary and benefits, iTL offers various incentives to encourage creativity, hard work, risk taking, and decent science. Interested individuals should send curriculum vitae and a cover letter to: **Ms. Ellen Chen, InGenious Targeting Laboratory, Inc., 25 East Loop Road Number 105, Stony Brook, NY 11790. E-mail: [info@genetargeting.com](mailto:info@genetargeting.com)**.

## POSITIONS OPEN



A **POSTDOCTORAL POSITION** is available in the cancer immunotherapy laboratories of the Division of Surgical Oncology at the University of Pittsburgh. Projects include vector development for gene delivery and dendritic cell vaccine development. Candidates should hold a Ph.D. or M.D. degree and have experience in tumor immunology or pox viruses. Please send curriculum vitae, description of research interests, experience, and a list of references to: **David L. Bartlett, M.D., Division of Surgical Oncology, University of Pittsburgh, 3471 Fifth Avenue, 300 LKB, Pittsburgh, PA 15213**.

### POSTDOCTORAL FELLOWSHIPS Neuroscience

The Louisiana State University Health Sciences Center Neuroscience Center of Excellence is recruiting Postdoctoral Fellows to perform laboratory research in the areas of synaptic physiology and molecular neurobiology, especially lipid synaptic signaling and modulation of gene expression, neuronal survival, and neurodegeneration in the hippocampus and retina. The Neuroscience Center is housed in a three-year-old, 36,000-square-foot facility including well-equipped, state-of-the-art laboratories; core resources (e.g., tandem MS, multiphoton confocal microscope, advanced biorobotics, DNA array, sequencing, and analysis facilities); and administrative support (**website: <http://www.neuroscience.lsuhsu.edu>**).

Postdoctoral candidates should send a description of their accomplishments to date, their career and scientific aspirations, and names with full addresses (including e-mail) and telephone numbers of four references to: **Nicolas G. Bazan, M.D., Ph.D., LSU Neuroscience Center, 2020 Gravier Street, Suite D, New Orleans, LA 70112. LSU Health Sciences Center is an Equal Employment Opportunity/Affirmative Action Employer.**

### POSTDOCTORAL POSITION Neuroscience

A position will be available for a Researcher interested in single cell electrophysiology and/or animal behavior in the Department of Neurobiology and Anatomy at Wake Forest University School of Medicine, Winston-Salem, North Carolina, to study mechanisms underlying the ability of the brain to integrate information from different senses. This is an exciting opportunity to be part of a group that uses an integrative approach incorporating physiological, anatomical, and behavioral techniques in animals with psychophysical techniques in humans. Send curriculum vitae, names, addresses, and contact information (including e-mail) for three references by FAX or e-mail to: **Barry E. Stein, Ph.D., Department of Neurobiology/Anatomy, Wake Forest University School of Medicine, Winston-Salem, North Carolina 27157-1010. FAX: 336-716-4534; e-mail: [bestein@wfbumc.edu](mailto:bestein@wfbumc.edu). Wake Forest University is an Equal Opportunity/Affirmative Action Employer.**

### POSTDOCTORAL FELLOWSHIPS Hemostasis and Thrombosis

M.D. and Ph.D. candidates are invited to apply for a position in a NIH training program dealing with the dynamics and proteomics of the blood coagulation/fibrinolysis system. *Applicants must be citizens, non-citizen nationals, or permanent residents of the United States.*

Additional information can be found on our **website: <http://biochem.uvm.edu>**. Send curriculum vitae to: **Dr. Kenneth Mann, Biochemistry Department, Given Building, Room C401, 89 Beaumont Avenue, University of Vermont College of Medicine, Burlington, VT 05405-0068. E-mail: [kmann@zoo.uvm.edu](mailto:kmann@zoo.uvm.edu). Minority applicants and women are encouraged to apply.**

## POSITIONS OPEN

### POSTDOCTORAL FELLOWSHIPS Neuroscience

An NIH-funded Postdoctoral position is available to study lipid cell signaling in neurons and glial cells. Highly motivated individuals with background or interest in neuroscience are encouraged to apply. Primary cell culture, lipid biochemistry, and imaging techniques including confocal microscopy and calcium imaging will all be used. Expertise in any or all of these is an advantage but not required. The Neuroscience Center is housed in a three-year-old, 36,000-square-foot facility including well-equipped, state-of-the-art laboratories; core resources (e.g., tandem MS, multiphoton confocal microscope, advanced biorobotics, DNA array, sequencing, and analysis facilities); and administrative support (**website: <http://www.neuroscience.lsuhsu.edu>**). Send curriculum vitae, relevant reprint(s), statement of research interest, and three references to: **Mark A. DeCoster, Ph.D., Louisiana State University Health Sciences Center, Neuroscience Center, 2020 Gravier Street, Suite D, New Orleans, LA 70112. LSUHSC is an Equal Opportunity Employer/Affirmative Action Employer.**

### POSTDOCTORAL/RESEARCH ASSISTANT POSITIONS IN STRUCTURAL BIOLOGY The Samuel Roberts Noble Foundation, Inc.

Two Postdoctoral positions and one Research Assistant position are open in the laboratory of **Dr. Xiaoqiang Wang**, structural biology program, Plant Biology Division. Projects center on determining protein structures involved in natural product biosynthesis, nutrient uptake, and DNA repair from *Medicago truncatula* and will interface with the Division's functional genomics program. Postdoctoral candidates should have a Ph.D. in crystallography, biochemistry, or chemistry and experience in protein expression and purification and/or macromolecular crystallography. The Research Assistant should have a B.S./M.S. in biochemistry, chemistry, or a related field and will work on protein expression, purification, and crystallization.

To learn more (including full qualification requirements) and for online application forms, visit our **website: <http://www.noble.org>**. Informal inquiries can be made to: **Dr. Wang; e-mail: [xwang@noble.org](mailto:xwang@noble.org); Telephone: 580-224-6600**.

### POSTDOCTORAL/RESEARCH ASSOCIATE POSITIONS

#### Yale University School of Medicine

Postdoctoral and Research Associate positions are available in the Department of Pediatrics to study the molecular biology of membrane proteins in erythroid and nonerythroid cells. Our work focuses primarily on the genes encoding erythrocyte membrane proteins and includes studies of the structure, function, and regulation of these genes. Mutation detection, linkage analysis, and studies of the mutations in these genes in inherited disorders of the erythrocyte are other aspects of this work. Applicants should have a Ph.D. or M.D. with experience in molecular genetics or molecular biology. English oral and written ability is required. Please send full curriculum vitae, a summary of research interests, and names and addresses of three references to: **Patrick Gallagher, M.D., Department of Pediatrics, Yale University School of Medicine, 333 Cedar Street, New Haven, CT 06520. E-mail: [patrick.gallagher@yale.edu](mailto:patrick.gallagher@yale.edu)**.

*Yale University is an Equal Opportunity/Affirmative Action Employer.*

**POSTDOCTORAL/SENIOR RESEARCH ASSOCIATE** position for individual interested in motor systems. Start date: May to November 2002. We use electrophysiological and molecular approaches to study spinal circuits and the pyloric CPG. The successful candidate will possess a strong background in neurophysiology and either experience or interest in molecular biology. For more details, see **website: <http://biology.gsu.edu/depart/faculty/baro.htm>**. Send curriculum vitae and the e-mail addresses of three references to: **Dr. Deborah Baro; e-mail: [biodjb@langatae.gsu.edu](mailto:biodjb@langatae.gsu.edu)**.

## POSITIONS OPEN

### POSTDOCTORAL FELLOWSHIPS Neuroscience

Two Postdoctoral positions are available to (1) study the role of lipid mediators in the process of corneal inflammation, angiogenesis, and wound healing and (2) participate in an interdisciplinary research group studying gene regulation and synaptic signaling in the brain during sleep deprivation. Both projects involve characterization of the functions of several lipids such as platelet-activating factor and prostaglandins and their interaction with transcription factors modulating the action of enzymes involved in angiogenesis and remodeling of the extracellular matrix. Experience in molecular biology, cell culture, and biochemistry required. The Neuroscience Center is housed in a three-year-old, 36,000-square-foot facility including well-equipped, state-of-the-art laboratories; core resources (e.g., tandem MS, multiphoton confocal microscope, advanced biorobotics, DNA array, sequencing, and analysis facilities); and administrative support (website: <http://www.neuroscience.lsuhsu.edu>). Send curriculum vitae and names of references to: **Haydee E.P. Bazan, Ph.D., Louisiana State University Eye Center and Neuroscience Center, 2020 Gravier Street, Suite D, New Orleans, LA 70112.** *LSU Health Sciences Center is an Equal Employment Opportunity/Affirmative Action Employer.*

### POSTDOCTORAL RESEARCH ASSOCIATE University of Minnesota

This NIH-supported research program investigates the structure and function of calprotectin (S100A8/A9; MRP8/14) in the cytoplasm of mucosal epithelial cells.

The Postdoctoral Associate will construct calprotectin mutant cell lines including constructs for inducible expression and analyze for intra- and extracellular targeting. After characterization, these cell lines will be infected with key pathogens to learn how the structure and expression of calprotectin modulates resistance to microbial invasion.

Applicants must have a Ph.D. degree and significant experience in eukaryotic molecular biology. Experience in protein localization, cell cycling, and structure function analysis is preferred. Provide complete curriculum vitae, three personal references with contact information, and a statement of research and career goals. Contact: **Dr. Mark C. Herzberg, 17-164 Moos Tower, 515 Delaware Street S.E., Minneapolis, MN 55455** for further information. *The University of Minnesota is an Equal Opportunity Employer.*

Senior **POSTDOCTORAL POSITIONS** available in an intellectually challenging environment to work on promoter methylation and silencing of growth suppressor genes in cancer and other diseases. A Ph.D. degree in biochemistry or molecular biology with a minimum of two years of postdoctoral experience (as evidenced by publications in well-recognized journals) is essential. Accepted candidates can be considered for **RESEARCH SCIENTIST** (equivalent to Research Assistant Professor) position in a year or two depending on performance. Recent publications include *JBC* 274:28584-28589; 275:539-547; *MCB* 21:8301-8317; *JBC* online, February 13, 2002. Highly competitive salary and benefit package. Send curriculum vitae (as attachment) and names of three references to e-mail: [jacob.42@osu.edu](mailto:jacob.42@osu.edu) or FAX: 614-688-5600.

**POSTDOCTORAL FELLOWSHIP**, University of California San Francisco Department of Medicine and Cellular and Molecular Pharmacology/Biomedical Sciences Program. Competitive salary and benefits available now for qualified individual with interest in the molecular mechanisms of hormone action. Background in molecular cloning techniques necessary. Inquiries and curriculum vitae to:

**David Pearce, M.D.**  
UCSF Box 0532  
San Francisco, CA 94143-0532  
E-mail: [pearced@medicine.ucsf.edu](mailto:pearced@medicine.ucsf.edu)

## POSITIONS OPEN



### POSTDOCTORAL ASSOCIATE Atmospheric Modeling

The Massachusetts Institute of Technology's Center for Global Change Science seeks applicants with a Ph.D. in a field relevant to global climate modeling to participate in the development and application of a coupled atmosphere-ocean general circulation model to be used in studies of predictability and climate-ecosystem interactions. The coupled model is based on a novel approach in which atmosphere-ocean fluid isomorphisms are used to derive, from a single hydrodynamical core, atmospheric and oceanic counterparts. We are seeking to appoint a candidate with experience in atmospheric modeling to help further develop the physics and radiation of the atmospheric model, which makes use of representations of atmospheric clouds and convection developed by Professor Kerry Emanuel. The candidate will join a small group of model developers pursuing innovative approaches to coupled climate and ecosystem modeling. Candidates with experience in atmospheric physics and three-dimensional general circulation modeling will be given preference. Salary will be commensurate with experience. Proposed start date is as soon as possible.

Qualified candidates should send a copy of their curriculum vitae and names of three references to: **Professor Peter Stone, MIT, Room 54-1718, 77 Massachusetts Avenue, Cambridge, MA 02139 U.S.A.** FAX: (+1) 617-253-6208; e-mail: [phstone@mit.edu](mailto:phstone@mit.edu). Further information is available at website: <http://web.mit.edu/cgcs/www/jobs.html>. *MIT is an Equal Opportunity/Affirmative Action Employer.*

### POSTDOCTORAL POSITIONS Nuclear Hormone Receptors

Two NIH-funded positions are available to study gene regulation by nuclear hormone receptors with an emphasis on transcriptional coregulatory factors. One position will focus on androgen receptor coactivators in prostate cancer. Applicants must have experience in (1) protein purification from cellular extracts, (2) recombinant DNA and cloning, (3) mammalian cell culture, and (4) expression and purification of recombinant proteins. Applicants should send curriculum vitae and a list of three references to: **Dr. Joseph D. Fondell, Department of Physiology, University of Maryland School of Medicine, 660 West Redwood Street, Baltimore, MD 21201.** FAX: 410-706-8341; e-mail: [jfond001@umaryland.edu](mailto:jfond001@umaryland.edu).

**POSTDOCTORAL POSITIONS** are available to study gene regulation using bioinformatics approaches (**Dr. David States**) and cell signaling using molecular cellular biological approaches (**Dr. Angel Lee**) in myeloid models. Combined experimental and computational projects are possible. Candidates should have recent Ph.D. (less than two years of postdoctoral experience) in computational (bioinformatics) or biological (signaling) fields. See websites: <http://stateslab.bioinformatics.med.umich.edu/> and <http://sitemaker.umich.edu/awmlee> for more information. Please send curriculum vitae and three references to e-mail: [dstates@umich.edu](mailto:dstates@umich.edu) or e-mail: [awmlee@umich.edu](mailto:awmlee@umich.edu).

## POSITIONS OPEN

### POSTDOCTORAL POSITION

A Postdoctoral position is available in the Department of Behavioral Neuroscience at the Oregon Health Sciences University (OHSU), Portland, Oregon. The successful candidate will work with a multidisciplinary team on a collaborative research project between OHSU and the Environmental Molecular Sciences Laboratory (EMSL) at Pacific Northwest National Laboratory (PNNL) located in Richland, Washington. Magnetic resonance imaging and spectroscopy will be applied to investigate the relationships in rodents between brain metabolism and genetic differences in ethanol response. The EMSL is a state-of-the-art NMR facility that presently houses 10 fully equipped multinuclear variant and chemagnetics liquid-state and solid-state NMR spectrometers including two Unity-Plus Varian NMR spectrometers operating at seven and 11.7 Tesla. In March 2002 a Bruker microimaging spectrometer was installed, also operating at 11.7 Tesla. The position is available starting June 1, 2002. The successful candidate should have a background in neuroscience, NMR imaging, and spectroscopy instrumentation. The applicant should be also eligible for NIH funding. Send curriculum vitae and names of three references to: **Dr. Robert Hitzemann, c/o Ms. Ginger Ashworth, Department of Behavioral Neuroscience L-470, Oregon Health and Science University, 3181 Southwest Sam Jackson Park Road, Portland, OR 97201-3098.** E-mail: [hitzeman@ohsu.edu](mailto:hitzeman@ohsu.edu). Additional information on the position may also be obtained from: **Dr. Robert Wind**; e-mail: [robert.wind@pnl.gov](mailto:robert.wind@pnl.gov).

### POSTDOCTORAL FELLOWSHIPS Neuroscience

The Louisiana State University Health Sciences Center Neuroscience Center of Excellence is recruiting Postdoctoral Fellows to perform laboratory research in the areas of Alzheimer's disease, neurotoxicology, and gene transcription. The Neuroscience Center is housed in a three-year-old, 36,000-square-foot facility including well-equipped, state-of-the-art laboratories; core resources (e.g., tandem MS, multiphoton confocal microscope, advanced biorobotics, DNA array, sequencing, and analysis facilities); and administrative support (website: <http://www.neuroscience.lsuhsu.edu>).

Postdoctoral candidates should send a description of their accomplishments to date, their career and scientific aspirations, and names with full addresses (including e-mail) and telephone numbers of four references to: **Walter J. Lukiw, Ph.D., LSU Neuroscience Center, 2020 Gravier Street, Suite D, New Orleans, LA 70112.** *LSU Health Sciences Center is an Equal Employment Opportunity/Affirmative Action Employer.*

### CAREER IN OPTOMETRY, OPTOMETRIC RESEARCH, OR TEACHING

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**POSTDOCTORAL POSITION** at Brigham and Women's Hospital/Harvard Medical School to investigate the molecular biology of Kaposi's sarcoma-associated herpes virus (KSHV or HHV8)-mediated oncogenesis. Strong background in molecular biology or biochemistry desirable. Send or e-mail curriculum vitae and names of three references to: **Dr. Kenneth Kaye, Channing Laboratory, Brigham and Women's Hospital, 181 Longwood Avenue, Boston, MA 02115.** E-mail: [kkaye@rics.bwh.harvard.edu](mailto:kkaye@rics.bwh.harvard.edu).



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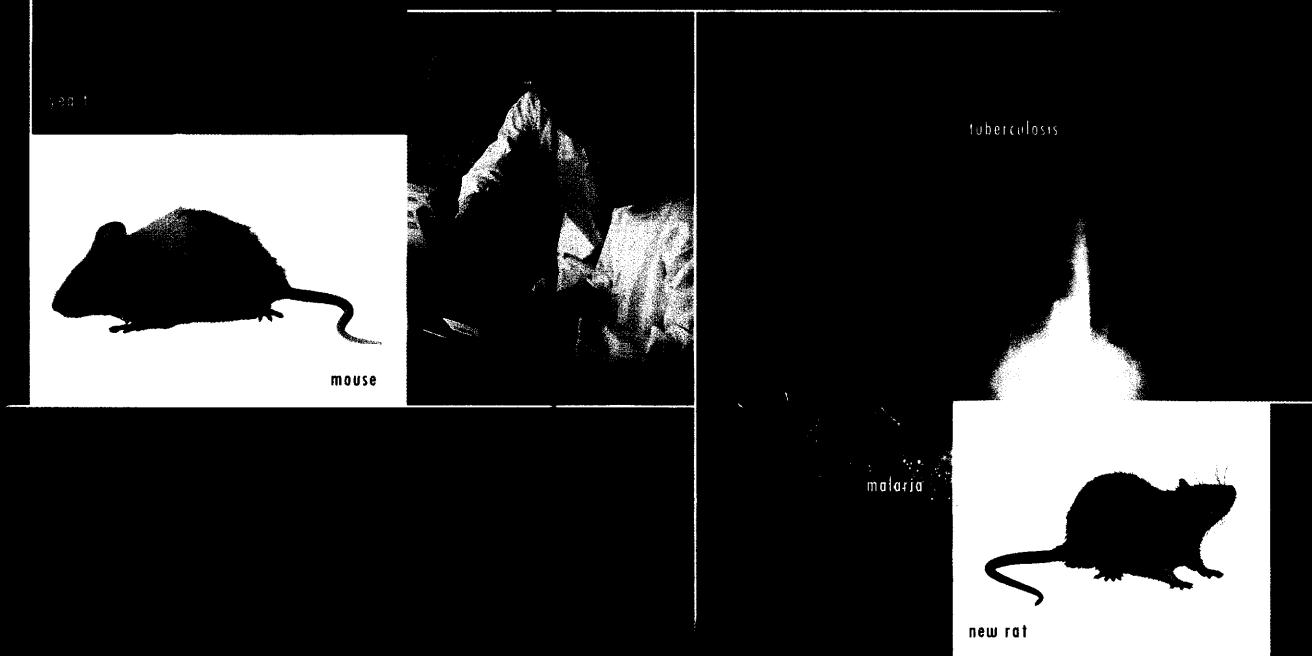
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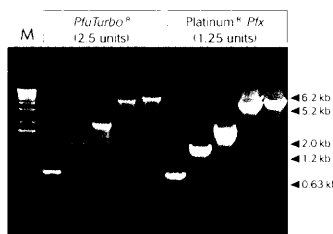
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