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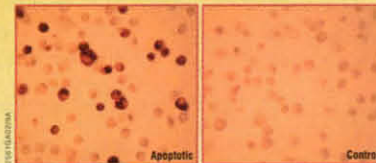
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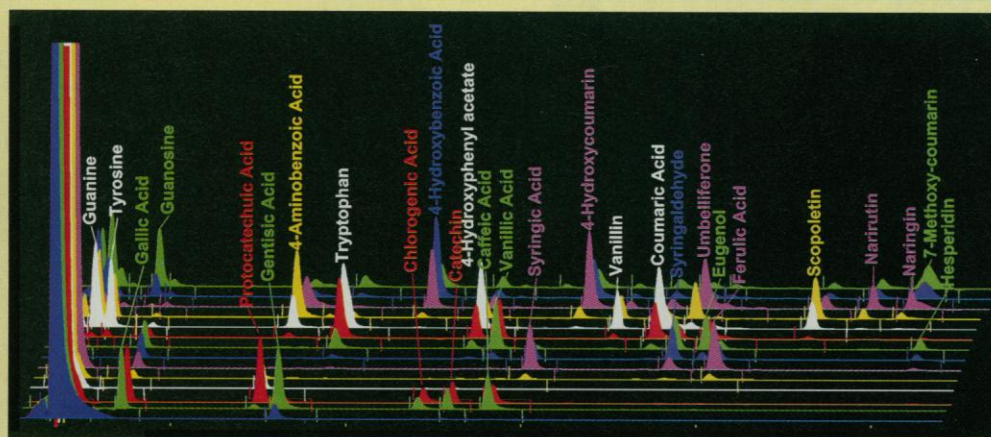
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## focus on careers

## BIOINFORMATICS

Pharmaceutical companies have a growing need for specialists in bioinformatics, who apply mathematical, statistical, and computer skills to the process of drug discovery. Academic programs satisfy some of the demand, but many experts in bioinformatics train on the job.

**Roche Bioscience \* SmithKline Beecham Pharmaceuticals \* Pfizer, Inc.**



The increasing application of genomics to drug discovery has stimulated the need for scientists with skills in bioinformatics. Those individuals trawl a variety of databases for information relevant to new therapeutic targets and agents, and then manipulate and analyze the data to gain the greatest value from it. The discipline, which has among its ultimate goals matching the best drug to individual patients, demands a wide range of skills. Bioinformatics specialists must combine a good understanding of biology with mathematics, statistics, and computer science to develop new algorithms for analyzing complex genomics and genetics data. Generally, employers expect specialists to combine broad understanding of all those fields with particularly strong skills in at least two of them.

Not surprisingly, good specialists in bioinformatics are hard to find. The discipline has evolved so fast that very few universities offer formal courses in it. That situation is beginning to change. The University of California Los Angeles, for example, has initiated a bioinformatics program that leverages its strong biomathematics and computer science programs. Nevertheless, the majority of bioinformatics specialists now in the pharmaceutical industry have honed their skills on the job. Several life scientists have moved into bioinformatics after informally working as the local laboratory expert on information technology and database management.

Because experts in bioinformatics are in such short supply, they are heavily recruited. Pharmaceutical companies willingly pay what they describe as "competitive" salaries — although they resist extreme demands. Companies also aim to provide a challenging and stimulating scientific environment for their bioinformatics teams.

Here, the leader of a bioinformatics group at pharmaceuticals company Roche discusses his needs for bioinformatics specialists. He also outlines the ways in which the company recruits and trains them.

## Playing The Numbers Game

By Peter Gwynne

**Roche Bioscience, Palo Alto, California:** "Within Roche, we have six research sites, and each has its own group of bioinformatics experts," says Keith Joho, head of bioinformatics at Roche Bioscience. "We have four staff members, and I anticipate adding an additional scientist and a programmer this year. I definitely see a need for continued growth."

Joho tries to maintain a well-integrated department. "The skill sets for a good bioinformatics department are biology, computer science, mathematics, and statistics. Our group really spans all those disciplines," he says. "It's also important to have very strong information technology support. The databases that we're creating and the analyses we're doing place very heavy demands on infrastructure."

Roche aims to recruit individuals whose abilities can complement those of other team members. "Bioinformatics is most successful as a collaborative enterprise," Joho explains. "The way we approach our large problems is to put together a matrix group of people with different but complementary skill sets. It's very rare to find somebody with strong backgrounds in biology, computer science, math, and statistics — although I have found two. Eric Schadt and Robert Otilar will complete their Ph.D. training while working at Roche."

Joho himself provides a typical example of a self-trained specialist in bioinformatics. As a molecular biologist at the Louisiana State University Medical Center, he enjoyed working with computers and data. "I had always been the lab computer nerd," he recalls. When he moved to industry, to create a new bioinformatics program for biotechnology company Sugent, he says, "I learned as I went along."

Nevertheless, he regards a source of academically trained bioinformatics experts as essential. Thus, he is starting a Bioinformatics Frontiers Program, to stimulate collaborative projects between Roche Pharmaceuticals and academic groups by providing research grants. "In an area like this where there are many more jobs than qualified people, it's important to provide a very good environment," he explains. "The academic collaborations help to do this. They also help Roche in its therapeutic areas."

Teamwork is equally important to individual members of his team. "You have to have someone who will be comfortable in a collaborative environment," he says. "It's something I try to pick up when I interview candidates."



Keith Joho

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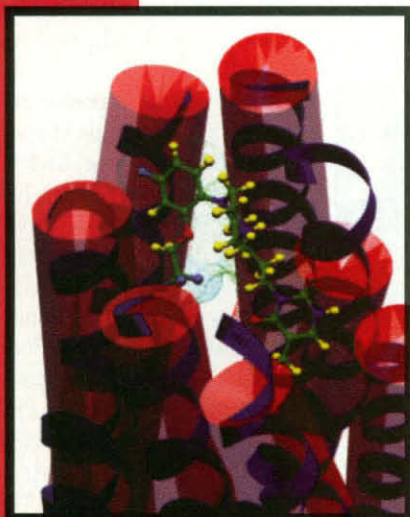
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# BIOINFORMATICS

## European Companies Train Their Own

**P**

harmaceutical research groups in Europe need specialists in bioinformatics just as much as those in the United States. Four universities in the UK offer M.Sc's in bioinformatics. A few academic institu-

tions elsewhere in Europe have started similar courses. And the European Molecular Biology Laboratory in Heidelberg, Germany has become a useful source of bioinformatics specialists. However, just as in the United States, companies largely rely on their own training programs to convert traditionally qualified life scientists into productive members of bioinformatics teams.

Indeed, many members of pharmaceutical companies' bioinformatics groups have never attended a formal training course in bioinformatics. Typically, they start with a degree in biological science. Once computer-literate, they become the information technology experts in their laboratories. Finally, they shift full-time to bioinformatics. Significantly, that path doesn't apply only to younger life scientists. The conversion can happen at any stage in a scientific career.

Often, European pharmaceutical companies seek software engineers with some knowledge of biology, or at least the ability to learn the salient points of the subject. Those rare individuals are hard to find, however, as computer scientists are exposed to engineering and physical sciences far more often than to life science.

Whatever their educational background, bioinformatics specialists require two characteristics: the ability to participate productively in teams, and good communications skills. Here, representatives of two international pharmaceutical companies' European laboratories discuss their use of bioinformatics experts, and their considerations when they recruit them.



**Chris Rawlings**

**SmithKline Beecham Pharmaceuticals, Harlow, UK:** "As bioinformatics matures as a scientific discipline, more scientists are gaining exposure to the analytical techniques and tools, such as during their Ph.D's," says Chris Rawlings, UK director of bioinformatics at SmithKline Beecham (SB). "We're also

now beginning to see the benefit of more formal bioinformatics training, as graduates of the M.Sc. bioinformatics courses enter the job market. However, the breadth of SB's bioinformatics commitment means that we still need to provide our own training programs to extend the core skill range and ensure that we stay at the front in a fast-moving field."

SmithKline Beecham's interdisciplinary bioinformatics team

works on a wide range of topics. It helps to validate new genes and drug targets against

therapeutic needs, evaluate how potential new drugs might interact with targets, and support the evaluation of drugs in the development process. It also works with pharmacogeneticists to help determine populations' likely responses to drugs. To underpin these activities, the group also develops new bioinformatics software and databases.

SmithKline Beecham has one of the largest and most established bioinformatics groups in the pharmaceutical industry and is seeking between five and ten new members for posts at various levels in the UK and United States. What does the company expect of its applicants? Says Rawlings: "A broad skillset; we expect people to be experts in their own area, but if they're biologists, they must be able to relate to computational problems, and vice versa. And they need the ability to communicate and interact effectively with other scientists."



**Lee Beeley**

**Pfizer, Inc., Sandwich, UK:** "We recruit different kinds of people for bioinformatics," says Lee Beeley, director of target genomics at Pfizer's British research facility. "We require a whole spectrum of expertise, from scientists with information technology skills to biologists who realize that they can achieve an awful lot at the computer. We recruit individuals with M.Sc's in bioinformatics. And we are recruiting postdocs and Ph.D. biologists

who are ready to make the transition to a computer-based career."

A key criterion for candidates without a formal qualification in bioinformatics is research laboratory experience. "We're not taking just any biologists," says Beeley. "We want people who have been in a quality research environment, with reasonable experience in database searching."

A feel for teamwork is also critical. "Most of the people in the bioinformatics group have to work with scientists in discovery biology," continues Beeley. "It's important to have the ability to communicate well. You also have to be persuasive, as you are continually bringing forward ideas at a very early stage. You have to convince people." Translating database-derived ideas into viable drug targets is a major challenge throughout the industry.

"We have a position at the moment for the head of bioinformatics," says Beeley. "These people are the hardest to get hold of. They need to have people skills, and to understand what our business is about at the highest level." ■

For further valuable career features, go to [www.scienceonline.org](http://www.scienceonline.org), click on **Science Careers**, then click on **Advice and Perspectives**.

# Making a world of difference.



SmithKline Beecham, who pioneered the bioinformatics revolution in the pharmaceutical industry, continues to recruit top bioinformatics professionals. Positions are available in both the U.S. at our R&D facility (outside Philadelphia, PA), and in the U.K., at our new science complex at New Frontiers Science Park, Harlow (outside London).

## **Director, Target Discovery (U.K.)**

Reporting directly to the Vice President and Director, Bioinformatics, this individual will lead a transnational group of 10+ PhD level scientists. The Target Discovery group plays a vital role in identifying and characterizing novel human targets for drug discovery, supporting and working closely with bench scientists of the various therapeutic departments, and also interacting extensively with the remainder of our 80+ bioinformatics scientists and engineers. The successful candidate will have a substantial track record in bioinformatics, preferably as a group leader in industry or academia, and will be experienced in the discovery and characterization of genes from sequence databases by computational means. Especially important is a deep knowledge of protein families from a biochemical and/or structural standpoint, and in either case within a physiological context. Also required are strong management skills, and a willingness to participate energetically in the broader scope of discovery activities across SmithKline Beecham R&D. (Ad Code: NB/BIX/007S)

## **Bioinformatics Scientist (U.S.)**

We are seeking a PhD level molecular curator/sequence analyst with experience in the analysis of large molecular data sets. The ability to do careful, correct curation of sequence data is critical. An ideal background could include a biology PhD with an emphasis in bioinformatics, molecular evolution, or molecular systematics. Basic biochemistry and extensive knowledge of sequence analysis and sequence classification are required. Knowledge of GCC, Unix, Perl and SQL is highly desirable, but not required. This position will entail curation and classification of large gene families. The applicant must be able to collaborate closely and communicate effectively with wet-bench scientists. (Ad Code: 970670)

## **Bioinformatics Software Engineer (U.S.)**

We are seeking computer scientists and software engineers at the BS or MS (preferred) level with proven track records of success on both large and small scale projects in a research setting. A background in bioinformatics or biology is desirable but not required. Individuals in these positions will be providing software solutions related to the analysis and display of genomic data using a variety of technologies. Experience in many or all of the following is desired: CORBA, RMI, CGI, Java, Servlets, HTML, C/C++, Perl5, and SQL. (Ad Code: 981602)

## **(Senior) Bioinformatics Software Engineer (U.K.)**

As part of the transnational Genomic Bioinformatics group, you will work closely with bioinformatics analysts/researchers and laboratory scientists to develop and support software to exploit the use of gene sequence, genotyping, and gene expression to support initiatives in high-throughput molecular biology research. A BSc in computing or physical science and a minimum of 2 years post-graduate experience in software development or databases in a scientific software development environment are required. An MSc in bioinformatics is preferred. Experience with C and Perl programming, as well as familiarity with relational databases and Web application development are also required. (Ad Code: NB/BIX/011)

## **Bioinformatics Systems Analyst (U.S.)**

This individual will be responsible for database administration functions such as creating Sybase databases, managing backups and restores, problem resolution and performance tuning. This will include maintaining database systems, allocating and managing resources for all the ongoing projects and applications in the Department; recommending the appropriate integration of systems, databases and/or application modules to improve operational performance; and providing technical support and expertise to application developers. Knowledge of Unix and Sybase is required. (Ad Code: 990356)

SmithKline Beecham is dedicated to an innovative workplace and supports you with career long opportunities and learning. We offer a competitive benefits and compensation package.

To be considered for U.S. opportunities, please forward your scannable resume to: SmithKline Beecham, c/o National Resume Processing, (Ad Code), P.O. Box 1070, Burlington, MA 01803.

To be considered for U.K. opportunities, please forward your CV to: The U.K. Recruitment Manager, SmithKline Beecham, (Ad Code), c/o A.E.P., Suite 6, Silk Mill House, 21 Marsh Parade, Newcastle-under-Lyme, Staffordshire ST5 1BT.

Indicating Ad Code is essential. For a full listing of current opportunities, or to submit an application online, visit our website at [www.sb.com/careers](http://www.sb.com/careers)

*Developing talent through equality of opportunity, M/F/D/V.*

*Realize Your Potential*



**SmithKline Beecham**  
Pharmaceuticals

# *bioinformatics*

## *Where bioinformatics is @*

Proteomics is *the* drug discovery and development technology for the 21st century and OGS is *the* proteomics company. Bioinformatics is *the* key enabling technology for proteomics and OGS is now intent on becoming *the* bioinformatics company. Building on our existing strength in this area, we are seeking additional staff for the following positions.

### **Bioinformaticians**

The correct and timely analysis of proteomics data - in the relevant biological context - provides the driving force for our product development as well as our own research programme. It is key to our future - and we have a number of positions available in data analysis and new method development.

### **Computational Scientists**

All our scientific processes are automated - and all the data generated is collected automatically. We are now seeking a number of computational scientists to improve the throughput and efficiency of these processes. Experience of software development in a scientific computing environment with C, C++ or JAVA is desirable. Familiarity with Mass-Spectrometry and Image Analysis is a bonus.

### **Computational Statisticians**

In this key analytical role you will work with our scientists and customers to ensure that the most appropriate statistical methods are developed and applied to the analysis of protein expression data. You have already demonstrated your skills as a statistician but knowledge of biological sequence analysis and expression data would also be desirable.

### **Sequence Analysis Manager**

Sequence analysis is a key component of proteomics and our data production activity. In this role, you will take responsibility for this activity in order to ensure that OGS implements the best available sequence analysis methods and that OGS sequence databases are second to none. You will also work with OGS scientists to ensure that they are able to utilise these methods and data in an appropriate and timely manner.

### **Data Integrity Manager**

The timely delivery of correctly analysed data to our customers is crucial to our future. You will be responsible for maintaining the integrity, confidentiality and availability of all our data, working directly with our scientists and developers as well as developing and implementing policies and procedures.

### **Software Reliability and Configuration Manager**

OGS develops and utilises a considerable amount of software as a key component of its business. In this role you will be responsible for the administration of source code control and configuration management of all software systems, developing policies and procedures for configuration management, release control, migration-to-production and software quality assurance.

@ ogs.co.uk

**Scientific Computing Support Manager**

You will be responsible for running all aspects of the OGS user support function, offering first line technical solutions for hardware and software as well as co-ordinating, monitoring and reporting on the function's activities. This is the perfect role for a quick learner with a broad computing and scientific background and the ability to communicate with users across a wide range of IT skills.

**Data Production System Project Manager**

An Enterprise Resource Planning (ERP) system is fundamental to our expansion and development and you will manage its implementation for our data production capability. You will provide a single point of contact for all issues relating to the system, liaising with the supplier, staff and users and implementing infrastructure-development. All-in-all managing a timely implementation that will evolve in line with the emerging requirements of our customers.

**Infrastructure Developers/  
Infrastructure Development Manager**

A cutting edge scientific computing infrastructure underlies all that we do. In these roles you will be responsible for the development and administration of new scientific computing systems based on UNIX, NT and industrial strength RDBMS.

For all positions, experience of UNIX, NT and RDBMS is desirable. However we welcome applicants with a broad range of scientific and/or computing experience.

We offer attractive salaries, superb benefits, exceptional training and limitless potential (this is just the beginning, after all!).

If you want to be where it's @, please send your CV and salary details, stating the position for which you are applying, to: Miriam Burton at Oxford GlycoSciences (UK) Ltd, 2 The Quadrant, Abingdon Science Park, Abingdon, Oxfordshire OX14 3YS. For further information contact Andrew Lyall, IT Director & Chief Information Officer on +44 (0) 1235 543200. Alternatively, e-mail Andrew.Lyall @ ogs.co.uk. We thank all candidates in advance for their interest and would welcome applications by our closing date of Friday, 25th June 1999. [www.ogs.com](http://www.ogs.com)





**Novartis Agribusiness  
Biotechnology Research, Inc.**

## Creating opportunities...

Novartis is a world leader in life sciences with prominent positions in Crop Protection, Seeds, and Animal Health. Our resources and experience enable us to continually develop new chemistries and technologies to create and improve environmentally responsible herbicides, insecticides, and fungicides. This is your chance to make a significant contribution to world agriculture in our casual dress, 250 person, state-of-the-art biotechnology facility located in Research Triangle Park, NC.

### INSECT CONTROL GROUP (SEED DIVISION)

We seek highly motivated and creative individuals to join a large multidisciplinary team focused on insecticidal protein research. Scientists are needed to clone, express and characterize new lead genes, identify receptor genes in insects, and manipulate insecticidal proteins.

Candidates must have an MS with at least 5 years experience or a PhD with postdoctoral experience, and have a strong background in molecular biology, protein structure, or protein biochemistry. Candidates should have extensive experience in one or more of the following areas: heterologous gene expression systems, gene cloning, affinity chromatography, ligand blot analysis, protein engineering or mutagenesis. Knowledge of entomology and insecticidal genes is beneficial, but not required. **Job code 9910-SM-BRI**

### BIOINFORMATICS GROUP

Members of the Bioinformatics group are responsible for adapting software to facilitate the assembly, analysis, annotation, and function of DNA and protein sequence information. You will analyze data of agriculturally important plants, pests, and model organisms, write scripts for analysis of proprietary and public sequence information, and assist in the creation of NetBrowser-accessible tools for our bioinformatics intranet use. To qualify, you must have a BS/MS degree and/or equivalent experience in computer science, a working knowledge of biology, demonstrated proficiency in annotation and/or DNA and protein assembly and analysis, and experience using PC, MAC, and UNIX tools. **Job Code 9906-SM-BRI**

### MICROBIAL GENE DISCOVERY GROUP

The goal of the Microbial Gene Discovery Group is to identify genes that control the biosynthesis of novel principles active against fungal and insect pests. We seek a Microbiologist to isolate, characterize, and maintain pure cultures of microorganisms from environmental samples, prepare and grow microbes for high through-put biological screens, and determine growth conditions and media which optimizes production of proteins and metabolites. You will also coordinate the acquisition of microorganisms and DNA libraries from 3rd parties. We are especially interested in candidates with experience in direct extraction of microbial DNA from soil and other environments. This position requires an MS with 5+ years experience (or equivalent) or a PhD. **Job Code 9934-SM-BRI**

We also seek a Molecular Biologist who will develop heterologous expression systems for the production of insecticidal and fungicidal principles. You will clone and express genes from a wide diversity of microorganisms, including the isolation and cloning of DNA from nonculturable microorganisms. This position requires an MS with 5+ years experience (or equivalent) or PhD. Candidates must have advanced skills in recombinant DNA technology, including experience with multiple gene expression systems and the construction of large-size DNA insert libraries. Experience cloning genes whose products are insecticidal or fungicidal would be considered a plus. **Job Code 9936-SM-BRI**

### BIOCHEMISTRY GROUP

Members of the Biochemistry Group closely interact with the Target and Chemistry Groups in the discovery of novel crop protection solutions. You will join a team responsible for all phases of assay design from conceptualization through development, optimization, miniaturization, and HTS implementation. Additional responsibilities will involve performing follow-up assays and assisting with chemical lead optimization. You will assist with evaluation, adaptation, and implementation of advanced screening technologies including FRET, FP, DELFIA, and/or HTRF.

To qualify, you must have a BS/MS in biochemistry or equivalent and 2+ years of hands-on laboratory experience. Expertise in protein purification, assay development, and high-throughput screening is highly desirable. Molecular biology experience is preferred but not required. **Job Code 9932-SM-BRI**

### POST-DOCTORAL POSITIONS

We currently have three Post-Doc positions for PhDs with experience with modern molecular biology or genetic techniques who seek a stimulating research environment combining basic and applied research for the improvement of crop productivity.

One position will use DNA array and efficient functional analysis approaches to isolate and characterize fungal genes expressed in different infection or life stages in *Magnaporthe grisea* and *Botrytis cinerea*. Besides identifying genes that are essential for fungal pathogenicity or viability, you will also conduct research on fungal plant interactions with *Arabidopsis*. **Job code 9927-SM-BRI**

A second position will use genetic and genomic approaches to study fungicide mode of action with *Neurospora crassa* or *Aspergillus nidulans*. The primary responsibility is to generate gene expression profiles for different fungicide treatments, and identify genes that are targeted by novel fungicides or mutations that confer fungicide resistance. **Job code 9937-SM-BRI**

A third position will conduct research aimed at cloning genes controlling disease resistance from model plant species using genetic and genomic approaches. You will also design strategies for using such genes to develop novel seed and chemical products that enhance crop disease resistance. **Job Code 9926-SM-BRI**

Novartis offers a competitive salary commensurate with qualifications and experience, a comprehensive benefits package, and an environment conducive to professional achievement. Qualified candidates should forward a resume and cover letter to: [novartisbiotech@hiresystems.com](mailto:novartisbiotech@hiresystems.com). Indicate the **Job Code # \_\_\_\_ -SM-BRI** in the subject area. To ensure that your information is uploaded into our HR System, please do not send your resume and cover letter as attachments.

For more information about Novartis visit our website: [www.novartis.com](http://www.novartis.com). For Job Opportunities at Novartis visit: [www.careermosaic.com](http://www.careermosaic.com). Click on "Employers" and follow the alphabetized links to the Novartis site. We are an Equal Opportunity Employer M/F/D/V.

# Weaving the Strands of Agriculture and Technology



## Bioinformatics Specialists, Plant and Microbial Research

Implements and improves data analysis and data mining tools for plant and fungal functional genomics areas. Domain expertise in plant and/or fungal systems required. Requires a Ph.D. in Biology, Molecular Biology, or Biochemistry; a minimum of 3 years experience in bioinformatics and/or computer software development related to molecular biology; and proficiency in C++, perl, Java, html. In addition to database technology and communication with databases using Java, or an equivalent combination of education and experience is required. Job #SCI0604/109P—Plant Group, Job #SCI0604/133P—Microbial Group

## Bioinformatic Developers

Implements and provides data analysis and mining tools for functional genomics. Requires at least 2 years of experience in coding in C++, perl, Java, and html, along with experience in database technology and communication with databases using Java or perl. A CS degree with experience in a commercial biotechnology company, or a Ph.D. in Biology, Molecular Biology or Biochemistry is required, or an equivalent combination of education and experience. Prefer the candidate have extensive experience in computer software development related to molecular biology. Job #SCI0604/134P

## Director, Software Engineering

Plans, coordinates, and manages the development of the Company's flagship product, AgDB (TM). Requires a proven track record of leading, directing, and managing the development of a significant commercial software product; thorough understanding of software product management, including development, adherence to functional and engineering specifications, project planning, resource management, project budgeting, and QA/QC; an MS or Ph.D. with certification in software engineering or equivalent; and a minimum of 5 years of relevant experience, or an equivalent combination of education and experience. Job #SCI0604/138P

Paradigm Genetics, Inc., is creating new and exciting innovations in Bioinformatics, the integration of Biology and Computer Science. As one of the first companies to apply functional genomics in the agricultural arena, we are developing unique and powerful computer applications for analyzing genetic information, and rapidly becoming a leader in a agricultural bioinformatics. We are currently seeking highly motivated and qualified people to join our Research Team in Research Triangle Park, NC. Be a part of changing the world.

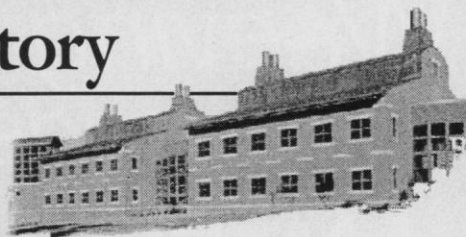
Successful candidates will be offered a competitive salary and benefits package, stock options as well as an exciting team environment with emphasis on achievement and career development. For consideration, PLEASE INCLUDE THE JOB NUMBER on your cover sheet and submit a resume and salary requirements to: Paradigm Genetics Resume Processing, P.O. Box 14528, RTP, NC 27709; or Email: [paradigmhr@hiresystems.com](mailto:paradigmhr@hiresystems.com) (MS Word or RTF only). No faxed resumes will be accepted. EOE

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# The Jackson Laboratory BIOLOGISTS



The Jackson Laboratory is one of the world's foremost centers for mammalian genetics research. Located in Bar Harbor, Maine, the lab is adjacent to Acadia National Park. Mountains, ocean, forests, lakes, and trails are all within walking distance. If you love high tech challenges but you're looking for a more natural environment, this could be the opportunity you've been searching for.

## DATABASE INFORMATICS: BIOLOGISTS

Professional positions are available in the expanding Bioinformatics Programs working with the Mouse Genome Database and a new, genomic sequence-oriented database for mouse.

Successful candidates will be primarily responsible for data acquisition and analysis, evaluating and annotating data to be incorporated into the databases, integrating information from disparate sources, and interacting with research laboratories to facilitate electronic data contributions. In addition, they will participate in database and interface design work through input into database content and display concepts.

Applicants should be experienced in molecular biology or mammalian systems and versed in genetics, genomics, cellular or developmental biology. Other desirable attributes include excellent writing/communication skills and user-level experience with UNIX/Windows/MAC-OS. Ph.D. in Life Sciences or M.S. with appropriate experience required.

## DATABASE USER SUPPORT: BIOLOGIST

A professional position is available as a member of the User Support Staff associated with the Mouse Genome Informatics Group at The Jackson Laboratory. This position supports developing mammalian genomic, expression, and biological databases and interfaces for the scientific community. The individual in this position will be responsible for responding to user queries that are biological in nature, instructing users in software installation, demonstrating software at conferences, and helping users with electronic data submission. In addition, he/she will participate in writing promotional and training material and in developing on- and off-line tutorials.

The ideal candidate will be expected to develop excellent familiarity with the biological databases and become facile with other on-line database resources, to aid biologists in searching for and analyzing information.

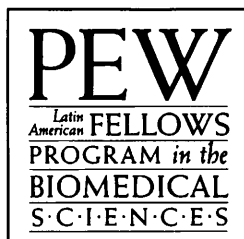
Applicants should have demonstrated people skills and good organizational abilities. An M.S. or Ph.D. in genetics, cellular or molecular biology is required. Knowledge of mammalian systems and experience in genomics a plus.

**Qualified candidates should send resume to: The Jackson Laboratory**, Attn: Human Resources Dept, 600 Main Street, Bar Harbor, ME 04609, **Phone:** 207-288-6103; **Fax:** 207-288-6106 **Email:** jobs@jax.org

AA/EOE

<http://www.jax.org>

## FELLOWSHIP



The Pew Latin American Fellows Program in the Biomedical Sciences provides support for young scientists from Latin America for post-doctoral training in the United States.

**T**en Fellows will be selected in 2000. An award of \$50,000 will be provided as a salary stipend for the fellow during the period of training (2 years) and will be administered by the sponsoring U.S. institution. The sponsoring institution is expected to supplement the stipend with at least \$5,000 a year and to provide medical benefits for the fellow. Following the two year fellowship, the Program will issue an additional \$35,000 award to the sponsoring institution to purchase equipment and supplies for the fellow to establish a laboratory in his or her home country.

Applicants must have held a Ph.D. and/or M.D. degree, or equivalent, for no more than five years as of July 1, 2000. Applicants may not have had previous post-doctoral training outside of Latin America nor may they already hold a post-doctoral position in the U.S. Applicants are not required to have a commitment of a position and laboratory space after the fellowship. However, applicants must submit a written statement of intent to return to Latin America. Fellows must accept a position and have confirmed laboratory space in Latin America by the end of the fellowship period in order to obtain the \$35,000 portion of the award.

Fellows will be selected on the basis of their promise as outstanding investigators, as well as the scientific merit of their research proposal, their record of training and how well their interests coincide with the laboratory of their sponsor in the United States. If potential applicants need assistance with the identification of an appropriate sponsoring laboratory in the United States, they may contact the Program Office before August 1, 1999. The program will accept applications from Mexico, Central and South America. Applications may be obtained from the Regional Committee contact listed here for each country or from our website at <http://futurehealth.ucsf.edu/pewlatin.html>

The application deadline is October 1, 1999. Winners will be notified in April 2000 and the fellowship should begin no later than August 2000.

**APPLICATION DEADLINE IS OCTOBER 1, 1999**

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### All Other Countries

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San Francisco, CA 94118  
Tel: (415) 476-5116 Fax: (415) 476-4113  
E-mail: montano@itsa.ucsf.edu

# PIONEER HI-BRED INTERNATIONAL, INC.



## ...the plant genetics company.

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

### RESEARCH MANAGER - Transgenic Protein Analysis (Job #99097B)

Pioneer's Protein Analysis Group is seeking a motivated individual to manage the team responsible for analysis of transgenic proteins for Research and Product Development. This individual will work closely with product development teams in Crop Protection, Agronomic Traits and Quality Traits resulting in the successful development of new products. This individual will have overall responsibility for all non regulatory transgenic protein analysis including the design, implementation, interpretation, and data quality of these studies. The successful candidate will also be expected to proactively identify and evaluate new technologies for immunoassay and transgenic protein analysis applications. We are seeking an individual with a Ph.D. in biological sciences or biotechnology plus at least 5-7 years appropriate research/supervisory experience including knowledge and implementation of transgenic protein analysis. Excellent working knowledge of immunoassay and protein biochemistry is also required. Working knowledge of statistical QC and nucleic acid analysis very useful.

### RESEARCH ASSOCIATE - Crop Protection, Genetics of Disease Resistance (Job #99171B)

We are seeking an enthusiastic individual to participate in the mapping and cloning of maize disease resistance genes identified through QTL and mutational analyses. This position requires an M.S. in Plant Molecular Biology or Genetics with working knowledge of molecular biology techniques. A background in plant pathology or mycology will be an advantage. Applicants should have strong organizational skills and a demonstrated ability to carry out simultaneous projects to timely and successful completion. Excellence in record keeping, written and oral communications, and interpersonal skills are essential. Proficiency in common and specialized computer programs is also required.

### RESEARCH ASSOCIATE - Soybean Transformation (Job #99105C)

Pioneer Hi-Bred International, Inc. is seeking a Research Associate for the Quality Traits Group. The Associate will be responsible for research designed to improve soybean transformation. A working knowledge of plant tissue culture, plant transformation and plant genetics are ideal competencies. Experience with experimental design and data management is essential. A practical working knowledge of computer applications is required. Minimum qualifications are a B.S. degree in a plant science, genetics or related discipline with 2-3 years of experience. M.S. level candidates are encouraged to apply.

### POST-DOCTORAL POSITIONS

Pioneer is seeking individuals with skills in the following areas:

A Ph.D. in biochemistry who will become a part of a dynamic proteomics team, an integral part of our gene discovery effort. Experience in protein isolation/characterization, affinity chromatography and immunochemistry is required. Prior experience with 2D-gels, mass spectroscopy, investigations of post-translational modifications and molecular biology techniques will be considered a plus. (Job #99156B)

Ph.D. in population genetics, phylogenetics, molecular systematics, or molecular evolution, with a background in statistics and/or biometrics. Experience in analysis of sequence data plus good communications skills and the ability to work as part of a multidisciplinary team will also be considered in the candidate selection. (Job #99085C)

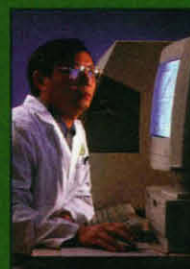
Two positions will involve research related to DNA recombination, repair and gene targeting in maize. One position will primarily focus on the molecular cloning and characterization of maize genes for use in gene targeting studies, while the second position will involve development and use of biochemical and transformation-based assays to evaluate DNA recombination and repair processes, and associated gene products. A Ph.D. in Molecular Biology, Biochemistry or Molecular Genetics with at least four years of relevant research experience is desired. (Job #99172B)

More detailed information regarding these positions can be found at our website <http://www.pioneer.com/employment/general/research.htm>



Pioneer Hi-Bred Int'l. Inc., is the world leader in the discovery, development and delivery of elite crop genetics.

We are committed to developing and incorporating both time-tested approaches and cutting edge technologies that will continue to make our products superior to any in the industry. Pioneer's research programs, research collaborations, extensive germplasm base and advanced work in genomics are unmatched by our competitors.



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

Pioneer Hi-Bred is committed to competitive compensation and excellent annual reward systems plus a comprehensive benefits package including 401(k), tuition reimbursement and relocation assistance. Des Moines is a prospering, growing city with diverse cultural, economic, industrial and consumer resources. It ranks well above the national average in quality of life including affordability and education ( [www.smartcareermove.com](http://www.smartcareermove.com) ). For confidential consideration,

e-mail your resume and a cover letter, indicating job code to: [jobsresearch@phibred.com](mailto:jobsresearch@phibred.com)

or send to:  
Human Resources,  
Pioneer Hi-Bred International, Inc.  
Research & Product Development  
7300 N.W. 62nd Ave.  
PO Box 1004  
Johnston, Iowa 50131-1004

<http://www.pioneer.com>



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## Bioinformatics Career Opportunities

### Genetics Computer Group Madison, WI

#### Software Engineers

We are seeking motivated, experienced software engineers interested in working as part of an expert team recognized around the world for innovative solutions to bioinformatics problems. Experience with one or more of the following is essential: JDBC and Java servlet programming, Java GUI development, RDBMS and SQL programming (Oracle® preferred), database design, and microarray gene expression data analysis.

#### User Education Specialist

This position requires an individual with a strong background in molecular biology/biochemistry, strong interpersonal skills, and experience in teaching and sequence analysis. The key aspect of this position will be presentation of training seminars for GCG supported software including the Wisconsin Package, OMIGA, and SeqStore™. Applicants must have a minimum of a master's degree in molecular biology or a related field, experience with sequence analysis software, and a willingness to travel up to 50% time.

#### Technical Support Specialist

The technical support team provides assistance to the worldwide community of biologists that use the Wisconsin Package for sequence analysis. Your primary responsibility will be answering sequence analysis and software management questions from both biologists and system administrators. You will also be part of the GCG software development process — providing feedback to development and reviewing new software. As the ideal candidate, you have these qualifications:

- An advanced degree in molecular biology/biochemistry or related field
- Experience with sequence analysis
- Expertise with Windows® 95, Windows NT, or Macintosh systems
- Strong interpersonal and communication skills
- Extensive computer experience and interest
- Strong problem-solving abilities
- Experience with or knowledge of the following (not in order of importance): MacVector, OMIGA, Wisconsin Package, UNIX operating systems, terminal emulation software, C, Fortran, Perl, and SQL

### Oxford Molecular Group Baltimore, MD

#### Technical Sales/Applications Specialist

The successful candidate will become proficient with our bioinformatics product line and provide pre-sales support to the sales force by performing demos at customers' sites and at trade shows. You will provide training to distributors and the sales team and serve as a conduit for customer feedback/requirements to the Bioinformatic Business Unit. Additionally, you will follow up with customers to ensure satisfaction. To be considered for this position, you should possess a degree in molecular biology or related life science, 3-5 years experience in a technical sales support role, strong communication and presentations skills, and working knowledge of molecular biology software.

Please send CV or resume with references to:

Genetics Computer Group  
575 Science Drive  
Madison, WI 53711 USA

An equal opportunity employer.

Genetics Computer

Group and its

parent company

Oxford Molecular

provide software

solutions for

discovery research

In bioinformatics,

including the

GCG® Wisconsin

Package™ which is

used by more than

30,000 scientists

worldwide.

We offer excellent

benefits and a

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environment. For

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



## Faculty and Fellowship Positions In Primary Biliary Cirrhosis Research

Mount Sinai School of Medicine is a leader in medical education and research. We seek an Assistant Professor of Medicine with a strong background in basic immunology to join an expanding multi-departmental primary biliary cirrhosis research program. The successful candidate will have either an M.D. or Ph.D. degree, an established record in immunologic research, and will devote 80% of his/her time to laboratory investigation. We offer laboratory space, start-up funds, and 3 years of initial research support along with a competitive salary consistent with prior experience.

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This program also seeks Post-Doctoral Research Fellows to join projects in the Departments of Medicine (3) and Pathology (1). Positions in Medicine range from purely clinical investigation, including clinical trials, to laboratory projects in immunology, cell biology, and viral pathogenesis. Appointments are for terms of 1-3 years.

For further information or to apply, contact: **Paul D. Berk, M.D., Division of Liver Disease, Box 1633, Mount Sinai School of Medicine, One Gustave L. Levy Place, New York, NY 10029-6574; Fax: 212-348-3517.** We are an equal opportunity employer fostering diversity in the workplace.

**Mount Sinai School of Medicine**

### Center for Immunotherapy of Cancer and Infectious Diseases

#### POST-DOCTORAL FELLOWSHIPS

The Center for Immunotherapy of Cancer and Infectious Diseases (CICID) has been recently established at the University of Connecticut School of Medicine in order to promote basic and clinical research and training in immunology as it applies to therapy of cancer and infectious and autoimmune diseases. The Center has four existing faculty (Pramod Srivastava, Director, Antoine Ménoret, Zihai Li, and Adam Adler, Assistant Professors) and additional recruitment efforts are in progress. Several post-doctoral fellowships are available in the CICID in each of the four laboratories. The area of emphasis for the laboratories are: *Role of heat shock proteins in innate and adaptive immunity, cancer immunology antigen presentation*, (Srivastava); *The immunological properties of the stress inducible Heat Shock Proteins* (Ménoret); *Roles of heat shock proteins in T cell development and apoptosis, tumor vaccines post stem cell transplant* (Li); *Mechanisms of T cell tolerance for peripherally expressed self and tumor antigens, immunotherapy strategies for treating prostate cancer* (Adler).

To apply, please send curriculum vitae, description of research interests to:

**Ms. Susan Wasik**  
**Administrative Program Coordinator**  
**Center for Immunotherapy of Cancer & Infectious Diseases**  
**University of Connecticut School of Medicine, MC 1601**  
**263 Farmington Avenue**  
**Farmington, CT 06030-1601 USA**  
**E-mail: [wasik@nso2.uchc.edu](mailto:wasik@nso2.uchc.edu)**

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*At Monsanto, we share a common goal - to help people lead longer, healthier lives. We are pioneering the use of life-science technologies to understand how the connections between human health, nutrition and agriculture can be used to develop products to improve the quality of life for everyone, everywhere. To achieve this goal, we are selectively hiring the best and the brightest people in the world - people who can make a difference and want to leave their mark. Can you see yourself working on our dream of helping to improve food, health and hope in the world? Do you think about what you can achieve and the difference you, personally, can make? All of us at Monsanto ask these questions daily. It's what brought us together and keeps us together. Imagine the possibilities - a better world, healthier families, a more enjoyable life. We are a team with a dream, and we would like you to be a part of it.*

## LIFE SCIENCE INFORMATICS

We're putting together a team of top professionals who can work together to help us achieve our goals. You'll have a chance to make your mark and work with all aspects of our business relating to bioinformatics. This includes everything from pharmaceuticals to agriculture to genomics. It's silicon valley technology, right here in the Midwest. As you'd expect, our environment is cutting-edge and entrepreneurial. We can offer you the feel of a start-up and the resources of a global company. **Various positions available in St. Louis, MO, Boston, MA, and Mystic, CT.**

### Bioinformatics Team Leader

As a key member of the Science and Technology Core Capability Team, you will ensure that Monsanto builds and maintains a world-class effort in bioinformatics and remains at the cutting edge of technology. In this instrumental position you will lead the effort to educate Monsanto's scientific community in the use of bioinformatics tools through teaching, seminars, and writing internal articles.

We require a Ph.D. in Molecular Biology, Molecular Genetics, Biochemistry, Biostatistics or Computer Science. In addition, the qualified candidate will have 5+ years experience in bioinformatics or chemical informatics and a proven track record of advancing the understanding of the human, animal, microbial or plant genome. A record of publishing and experience in a commercial environment would be advantageous. **Ad Code: 99-0309**

### Bioinformatics Scientist

The Bioinformatics team supports the development and implementation of high-speed, high-throughput information and biology technologies, which comprise Monsanto's rapidly growing Genomics initiative. Your primary responsibility will be in the area of DNA polymorphism analysis. You will be responsible for processing and analyzing sequence data and molecular marker data. In addition, you will oversee DNA sequence data and analysis pipeline.

We require a Ph.D. in Molecular Biology, Genetics and 2 years experience in bioinformatics with a strong biology and computer background, especially in generating useful information from massive output of data generated by sequencing, genetic fingerprinting, mapping positional cloning, or transcriptional profiling efforts. An in-depth knowledge of bioinformatics tools and a demonstrated skill in a programming language such as C, C++, Java, or PERL are a must. **Ad Code: 99-0315**

### Scientific Programmer

Work to support bioinformatics research and applications. Responsibilities include designing, implementing, and maintaining bioinformatics programs, databases, and web pages. This will require you to work closely with scientists and software developers to provide data analysis solutions in the area of sequence analysis and data mining. You must have a BS in a scientific or IT related discipline and a minimum of 3-5 years related experience. Strong development experience in PERL, Oracle/SQL, and HTML in UNIX environments is required. Knowledge of CGI and JAVA servlets programming a plus. Understanding of biological sciences desirable. **Ad Code: 99-0253**

### Web Programmer

In this position you will design, implement, test and maintain both web-based software and non-web software utilities using a variety of programming languages and tools. In addition, you will identify and document customer requirements and enhancement requests while documenting software requirements and design. We require a Bachelors degree in Computer Science and 3-5 years of work-related programming experience. Knowledge and experience using one or more of the following programming languages in a work-related environment: C, C++, PERL and Java a must. **Ad Code: 99-0599**

### Data Integration Analyst

Provide expertise in the skillsets of database design, integration, and linking related to genomic databases. Work closely with programmers to develop a multi-tier distributed OO architecture. Must have 2+ years experience in data warehouse design and development and an expert on Oracle. Experience with Oracle Data Cartridges and object-oriented/relational mapping methodologies is highly desirable. **Ad Code: 99-0602**

### Object Oriented Analyst

Working closely with a software architect and teams of OO designers/programmers, you will aid in the development of a multi-tier OO architecture that unifies the systems of Life Science Informatics. Must have 2+ years experience in mentoring project teams in the use of the Objectory or Rational Unified Process and 7 years in application development. A high-level of expertise in the use of the Rational Rose tool and at least 1 year of applying OO methodology in a Java/CORBA environment is highly desirable. **Ad Code: 99-0601**

## PHARMA SECTOR

### Drug Discovery Chemist

We are seeking an analytical chemist with a strong background in organic and/or medicinal chemistry. The selected individual will join our Discovery Research Program as a Research Chemist in our High Throughput Screening (HTS) Group. The primary responsibility of this position will be to characterize chemical actives and develop pharmaceutical leads identified by our HTS program. This position relies heavily on applied laboratory research to accomplish these objectives. The independently motivated individual will be computer literate with solid database searching skills, have extensive experience in HPLC chromatography method development, and possess a broad knowledge of spectral analysis (MS and NMR). Synthetic chemistry and computer modeling skills also would be desirable. Development and innovation of new technologies is an ongoing effort of our group. Good organizational, communication, and interpersonal skills are required to work in an interdisciplinary team atmosphere, collaborating with biologists, biochemists, and pharmacologists. Position is located in Chesterfield, MO. **Ad Code: 99-1289**

### Senior Research Scientist

We are looking for a Senior Research Scientist to join our Bioprocess Technology Department, which is responsible for the development and optimization of processes to produce potential pharmaceuticals products. The qualified candidate will provide technical leadership for a team utilizing mammalian cell cultures to support Pharma Research and Development projects ranging from early stage Discovery to production of Drug Substance for Clinical trials. These activities

will include the development, characterization and culture of new cell lines, production of roller bottle cultures of significant scale, development and operation of large scale perfusion/batch bioreactor systems, and the application of recombinant cell lines to potency bioassays. The qualified candidates should have a Ph.D. degree in Biochemistry, Pharmacology, or Chemical Engineering, and at least 10 years relevant experience. The ideal candidate will have experience in cGMP production of a licensed biological utilizing a mammalian cell system combined with a strong background in analytical characterization of proteins. Position is located in Creve Couer, MO. **Ad Code: 99-1291**

For the previous 8 positions and for fastest consideration, please submit your resume in scannable format to: **monsanto@aon-hros.com**, **Ad Code (insert from above) on your subject line and cover letter for expedited review. Or mail to: Monsanto-(Ad Code), PO Box 1262, Findlay, OH 45840.** You will receive a postcard acknowledging receipt of your resume.

### Postdoctoral Training Position

We are looking for a recent or soon to be Ph.D. scientist trained in biochemistry, pharmacology, and/or lipid metabolism to dissect the role of lipid pathways in immune cell physiology and in vivo models of inflammation. Training in cellular immunology or cellular biology and tissue culture is required and training in arachidonic acid metabolism is advantageous. For this opportunity, please direct CV's with a list of 3 references and a cover letter detailing your experience and scientific interests to Dr. Philip Needleman, Senior Vice President and Chief Scientist and Dr. Catherine Tripp, Senior Research Scientist at **The Monsanto Company, Ad Code: PD-CT, 700 Chesterfield Pkwy, Mail Code: BB5B, Chesterfield, MO 63198; Fax: 314/737-6419.**

## AG SECTOR

### Molecular Biologist

As part of a multidisciplinary team, successful candidates will discover and develop disease control opportunities in multiple crops. We seek adaptable, innovative people with strong communication skills and an ability to work well in a team-based research atmosphere.

Responsible for isolation and characterization of tissue specific/enhanced and pathogen inducible promoters for disease control in crop plants. Required to interact closely with other groups within Monsanto working in the areas of genomics and plant gene expression.

Applicants should have completed a Ph.D. degree with postdoctoral experience or an MS with significant work experience. Publication and/or patent record in the areas of Molecular Biology or Disease control is preferred. Seek a scientist with a strong interest in gene expression and promoter analysis. Strong technical and communication skills are essential. For this position, please direct resumes to: **The Monsanto Company, Ad Code: 99-1371, 700 Chesterfield Pkwy North, Mail Code: GG4C, Chesterfield, MO 63198; Fax: 314/694-3038.**

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- Several mid to senior level positions available
- Perform analysis of microbial and/or human genes and proteins using sequence analysis tools
- MS or BS in a related field with 2-4 years' experience or Ph.D. with 1-2 years' experience, plus significant experience with Perl system environment required.

## Group Leader/Functional & Structural Genomics

- Plan and lead efforts in support of new areas of biology including functional genomics, proteomics and computational structure - function research.
- Perform computational biology research and write computer programs as needed
- Ph.D. in Structural Biology or Chemistry plus 5 years' experience in Computational Biology of Structural and Functional Genomics.

## Software Engineers

- Several mid to senior level positions available
- Build Web applications and other programs/tools in Perl and Java using Sybase or Oracle, Java servlets, HTML, Javascript and UML
- BS/MS Computer Science with multiple years' experience with object oriented relational database design in a team-oriented environment. Emphasis is on building reusable components as part of the software development cycle.

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## FACULTY POSTIONS BIOINFORMATICS AND COMPUTATIONAL BIOLOGY

The Center for Bioinformatics seeks outstanding candidates at all levels for tenure-track faculty positions in bioinformatics and computational biology. Applicants with a research record in computational genomics are particularly encouraged to apply. Other areas of bioinformatics and computational biology will also be considered. Applicants should have a commitment to working in a strongly interdisciplinary environment involving biologists, computer scientists, mathematicians and statisticians. The successful applicant will participate in an ongoing, dynamic training program in computational biology bioinformatics at the graduate and post-graduate, masters, and undergraduate levels. Primary appointments will be within a School of Medicine department with secondary appointments in other departments (e.g., Computer and Information Science) as appropriate.

Review of applications will continue until all positions are filled. Letters of interest, CV, and names of references should be sent to:

**Angel Pizarro, Secretary;  
Bioinformatics Faculty Search Committee  
Center for Bioinformatics  
University of Pennsylvania  
1312 Blockley Hall, 418 Guardian Drive  
Philadelphia, PA 19104-6021**

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



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## BIOASSAY ANALYST

We are seeking an experienced professional to perform ELISA and cell-based assays to support product release and clinical trials, while assisting our manager in the administration of our Bioassay group. Your responsibilities will encompass routine assay operation, troubleshooting and validation, data tracking and analysis. Additional duties include assay automation, experiment design, technical writing and staff mentoring. Must have experience in a GMP QC or clinical setting plus strong skills with immunoassays or cell-based assays; supervisory experience is preferred. BS in a biological science and 5 years of relevant laboratory work are required.

Biogen has an outstanding record of leadership and accomplishment in the biotechnology field. We have one of the strongest financial profiles in the industry, and our compensation and benefits package, including equity participation, is unmatched. We invite you to forward your resume. Biogen, Inc., HR Department, PO Box 14627, RTP, NC 27709. Fax: (919) 941-1115; Email: [resumes@biogen.com](mailto:resumes@biogen.com) No phone calls please. Biogen is an Equal Opportunity Employer.

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## POSTDOCTORAL POSITION

Position immediately available to study the role of mitochondrial mutations and dysfunction in lung disease. Expertise in mutation analysis, bioenergetics and molecular biology are required. The successful candidate should have a Ph.D. in pharmacology, biochemistry, molecular biology, or related discipline.

Refer to Job #600-48

Send detailed curriculum vitae and three references to:

National Jewish Medical  
and Research Center  
1400 Jackson St., G110  
Denver, CO 80206

Fax: (303) 398-1775

e-mail to: [MccollumL@njc.org](mailto:MccollumL@njc.org)

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*Since our inception, Cambridge, MA based Millennium has developed and purchased cutting-edge technology, acquired a company and created over-the-top alliances with the world's premier pharmaceutical companies. Millennium has over \$1 billion in potential partnership funding, a powerful proprietary science and technology platform, and a great group of scientists and business people. The innovation, excitement and achievement continue as we strive to build the biopharmaceutical company of the future and thus change the practice of medicine as we know it today.*

*Given the challenges still to be faced, and the breakthroughs yet to be discovered, there's no better time than now to bring your spirit of innovation to a company that reflects it, respects it, and rewards it. We currently seek top performing professionals in the following areas:*

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- Computational Biologist • Senior Licensing Manager

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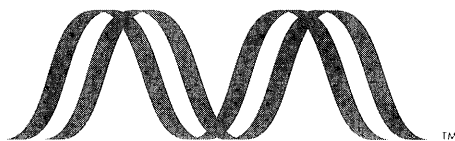
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*Please use Source Code SC699 when applying.*

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## DIRECTOR, BIOSCIENCES DIVISION ARGONNE NATIONAL LABORATORY

Applications/Nominations are invited for the position of Director of the Biosciences Division, Argonne National Laboratory. Argonne is one of the preeminent multidisciplinary research facilities in the country and is operated by the University of Chicago for the Department of Energy. Current research programs in the fields of structural biology, protein biochemistry, molecular biology, and cell biology include studies of protein structure, stability and interactions, as well as, genome usage and regulation. Basic research and technology development focus on systems relevant to environmental remediation, energy production, and human health. The Division is also responsible for the operation of the Structural Biology Center at the Advanced Photon Source, which is a national user facility for protein crystallography.

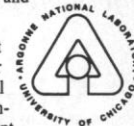
For a description of current Divisional programs and facilities, please visit the Biosciences Division home page on the internet: <http://www.anl.gov/BIO/>

The Director will have responsibility for the overall quality of research programs in the Division. Responsibilities will involve long-range planning, providing broad technical and administrative leadership in the development, management and the expansion of programmatic initiatives, establishment of policy and priorities, and interacting with funding agencies and with academic and industrial research communities. In addition, the Director will be responsible for the recruitment and development of scientific staff, maintaining environmental safety and health standards and promoting interdivisional and multidisciplinary research when opportunities arise.

The successful candidate should have a Ph.D. with at least 10 years of relevant experience and international recognition in cell biology, structural biology, molecular biology, biochemistry or related fields. In addition, the candidate should have a general comprehension of the various scientific disciplines that are associated with the programmatic activities in the Division, and at least 5 years experience in research management.

Interested candidates should submit a curriculum vitae, references and a short statement of their qualifications no later than July 1, 1999 to: Rosalie L. Bottino, Employment and Placement, Box #204248-BIO-43, Argonne National Laboratory, 9700 S. Cass Avenue, Argonne, IL 60439. Electronic resumes may be submitted to [bioresearch@anl.gov](mailto:bioresearch@anl.gov). Telecommunications device for the Deaf-630-252-7722. Argonne is an equal opportunity/affirmative action employer.

For additional information, please refer to Argonne's Home Page on the internet: <http://www.anl.gov/welcome.html>

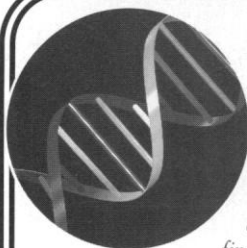


## St. Jude Children's Research Hospital

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### POSTDOCTORAL POSITION

A Postdoctoral position is available to participate in an established research program addressing the regulation of key enzymes in fatty acid and membrane phospholipid synthesis. Candidates with a recent Ph.D. degree interested in utilizing contemporary molecular biology, genetics, structural biology and biochemistry to problems related to gene expression and the regulation of membrane phospholipid biogenesis in bacteria are encouraged to apply. The research focuses on understanding enzyme structure/function and the biochemical mechanism of action of novel antibacterial drugs that target lipid biosynthesis. Applicants should submit their curriculum vitae, reprints and names of three references to: **Dr. Charles O. Rock, Biochemistry Department, St. Jude Children's Research Hospital, 332 N. Lauderdale, Memphis TN 38105-2794. E-mail: [charles.rock@stjude.org](mailto:charles.rock@stjude.org)**  
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### SCIENTIST – IMMUNOLOGY

A PhD-level Scientist with 2+ years of postdoctoral training, possessing exceptional immunology skills, is needed to study the biology of various members of the TNF family. Additional skills include in vivo physiological analyses of rodents, histology, cellular immunology and genetic manipulation of mice.

Biogen has an outstanding record of leadership and accomplishment in the biotechnology field. We have one of the strongest financial profiles in the industry and our compensation and benefits package, including equity participation, is unmatched. We've created an environment designed to attract and retain the world's most accomplished talent, and we invite you to forward your resume. For fast consideration, please send your resume via email, referencing Source Code RC-JB in subject line, to [ron\\_cornila@biogen.com](mailto:ron_cornila@biogen.com) or fax to (617) 679-2546. Via mail: Biogen, Inc., Attn: Human Resources, Source Code: RC-JB, 14 Cambridge Center, Cambridge, MA 02142. Biogen is an Equal Opportunity Employer. No phone calls, please.

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Will establish ICN's worldwide pharmaceutical research and development program from discovery through synthesis, clinical trial, and registration. Additionally, will coordinate and develop relationships for research with other scientific discovery organizations. M.D./Ph.D. required.

Please send your scannable resume, introductory cover letter, salary history and requirements to: Joe S. Disbennett, Corporate Director of Human Resources, ICN Pharmaceuticals - World Headquarters, 3300 Hyland Avenue, BOX SCRIP6049, Costa Mesa, California 92626.

ICN Company information can be found at our website: [www.ICNPharm.com](http://www.ICNPharm.com)

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Avigen, Inc. is a leader in the development of gene therapy based on adeno-associated virus (AAV) for the treatment of inherited & acquired diseases. Our continued growth has created a number of great opportunities in our Alameda, Ca. facility for experienced and self-motivated professionals to join our expanding R&D Team.

### **DIRECTOR OF CLINICAL/REGULATORY AFFAIRS**

Exciting opportunity for the right individual to be responsible for representing Avigen's interests, both internally and externally, by establishing relationships with key leaders, contract clinical organizations, and other partners for leading the clinical development of AAV based gene therapy based products for the treatment of Hemophilia, which is currently under way, and other major diseases in the future.

This position will be responsible for directing and implementing all clinical development activities and strategies to achieve the clinical program objectives. Will design, compose, and implement approved clinical protocols and direct the assembly of clinical sections of regulatory submissions. Candidate will also manage the monitoring of clinical studies in progress ensuring they are conducted on time and appropriately.

Minimum requirements are a medical degree and 4+ years previous clinical research experience. Must have a demonstrated record of Phase I, II or III clinical achievement as well as a history of successful relationships with investigators. Must be knowledgeable in FDA regulations and basic statistical procedures. Must have excellent verbal and written communication skills.

### **DIRECTOR OF DEVELOPMENT**

Great opportunity for an experienced, energetic and motivated individual to provide scientific leadership, management and vision to product development efforts to commercialize AAV based gene therapy. The Director of Development will head a department comprising 10-15 scientists engaged in scale up, purification and analytical methods development for the commercial manufacture of AAV gene therapy vectors using mammalian cell culture.

The ideal candidate will hold a Ph.D degree and will have a minimum of 10 years of relevant experience in biopharmaceutical process and methods development, including at least 5 years in a management or supervisory role. Experience in the development of pharmaceutical products derived from mammalian cell culture in a GMP environment is highly desirable and familiarity/experience with viral vector based gene therapy technology is a plus. This position will provide the successful candidate with an excellent opportunity for personal and professional growth, as part of a company at the forefront of gene therapy research.

Candidates must have excellent communications skills, a demonstrated track record of productivity and a desire to work in a highly collaborative team environment are key requirements for this position.

### **RESEARCH SCIENTISTS**

We have opportunities for molecular virologists (preferably with backgrounds in herpes or adenovirus biology), or cell biologists, to further understand the biology of AAV with a view to designing and implementing new methods for AAV vector production. Candidates must have a Ph.D. or M.D. and at least 3 years of postdoctoral experience in a relevant field.

### **DEVELOPMENT SCIENTISTS**

Positions available for Development and Analytical Scientists, who will be responsible for process and assay development in the production of recombinant AAV vectors for clinical trials. Candidates must have a Ph.D. and at least 2 years experience in the relevant areas of purification and assay development. Experience with live virus production, GMP and small/large scale mammalian cell culture a plus.

### **PRODUCTION MANAGER**

We have an immediate opening for a Production Manager, who will be responsible for GMP production of AAV vectors for gene therapy clinical studies. Candidate must have a Masters degree, a Ph.D. is desirable, and at least 5 years progressive prior experience. Must be able to work with minimal supervision, be a self-starter and possess excellent people and organizational skills. This position offers a great opportunity for growth for the right person.

We offer competitive salaries, benefits paid in full by the Company, stock options, 401(k), growth potential and an exciting opportunity to work with a dynamic team focused on exploring the impact of gene therapy on selected human diseases.

To apply, email/send/fax resume, **specifying position of interest**, to: Avigen, Inc., Human Resources, 1201 Harbor Bay Parkway, Suite 1000, Alameda, CA 94502; e-mail: [sdelph@avigen.com](mailto:sdelph@avigen.com), fax: (510) 748-7155. EOE - Principals Only.

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### SCIENTISTS, VIROLOGY

We are seeking experienced PhD, MS and BS level scientists to join an expanding Virology team. The overall responsibility will include planning and implementing research aimed at the discovery, evaluation and development of novel therapeutic anti-viral agents. Candidates should have demonstrated ability in basic virology techniques, cell culture, and assay development as well as expertise in molecular biology and biochemistry laboratory techniques. Experience with infectious HIV would be advantageous. In addition, candidates must have the desire to work in multi-disciplinary team and an enthusiasm for discovery research. Code 125/AP

### SCIENTIST, MOLECULAR BIOLOGY

We have an immediate opportunity for an experienced scientist to contribute to a multi-disciplinary team. Successful candidate will have a PhD in molecular biology and be skilled in mammalian tissue culture, cDNA synthesis and cloning with knowledge in molecular basis of human diseases and structure-based drug design. Requires 2-3+ years' industrial experience in mRNA expression profiling using SAGE, microarray, and Affymatrix chip technology. Communication skills, and a flexible team-oriented approach are a must. Code 105/MB

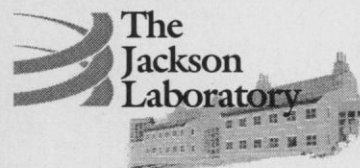
### SCIENTIST, CELL BIOLOGY

We have a current opening for a PhD level scientist to join our Cell Biology team. The successful candidate will be a creative individual with understanding of the emerging possibilities of functional genomics for identification and validation of new therapeutic targets in areas of oncology and/or virology. A PhD with cellular/molecular biology background is preferred while an enthusiasm for exploratory research is a must. Code 102/ZH



If you have a desire to deliver promising therapeutics to the people who need them most, submit your resume referencing code to: Agouron Pharmaceuticals, Inc., Code (see above), 3301 N. Torrey Pines Ct., La Jolla, CA 92037; email: jobs@agouron.com. EOE

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The Jackson Laboratory is one of the world's foremost centers for mammalian genetics research. Located in Bar Harbor, Maine, the lab is adjacent to Acadia National Park. Mountains, oceans, forests, lakes, and trails are all within walking distance. If you're looking for a more natural environment, this could be the opportunity you've been searching for.

### RESEARCH SCIENTIST/ RESEARCH ASSOCIATE In atherosclerosis/lipid oxidation

Applications are invited for a position to lead a team investigating the role of an antioxidant protein in atherosclerosis working in the laboratory of Dr. Beverly Paigen. The successful candidate will be responsible for designing and implementing experiments to elucidate the regulation and function of this protein. The successful candidate will have a Ph.D. and post-doctoral experience in molecular biology and biochemistry. The ability to work as a member of a research team is essential and supervisory experience is a plus.

#### Please reply in confidence to:

The Jackson Laboratory, 600 Main Street, Bar Harbor, Maine 04609, Attention: Human Resources, fax (207) 288-6106 or e-mail to jobs@jax.org. EOE/AA Employer

<http://www.jax.org>

Mitotix is a biotechnology company developing cell-cycle based biotherapeutics for cancer, cardiovascular and infectious diseases.

### ASSAY DEVELOPMENT SCIENTIST

We are seeking an individual to design, develop and implement assays for the high-throughput screening of compound libraries and for follow-up studies of inhibitor "hits". Previous experience in laboratory automation and database management systems will be considered a plus.

A Ph.D. degree in Biochemistry or Cell Biology with postdoctoral experience would be ideal. Candidates with an MS degree and extensive work experience will also be considered. The candidate must have a track record of developing biochemical and cell-based assays.

Mitotix offers competitive salaries, benefits and a chance to work in an exciting scientific environment. Please send resume to: Human Resources, Mitotix, Inc., Job Code: ADS99, One Kendall Sq., Bldg. 600, Cambridge, MA 02139; Fax: (617) 225-0005; [www.mitotix.com](http://www.mitotix.com) EOE.



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*...that brings new understandings in science, technological innovations and drug discoveries to meet the medical needs of our world. The people at Axys Pharmaceuticals are putting pieces of that future together every day.*

Located in San Francisco and San Diego, CA, Axys Pharmaceuticals is a leader in the integration of drug discovery technologies from gene identification through clinical development. We are focused on the discovery of small molecule therapeutics, and have several promising research collaborations with world-class pharmaceutical companies. We currently have a great opportunity for experienced scientists to join our interdisciplinary R&D team.

### Computational Chemist Structural Chemistry Department

(San Francisco)

We're looking for a computational chemist to support our ongoing programs in structure-based drug design. You will work within an interdisciplinary project team to apply structural principles to the design and optimization of small molecule therapeutics. As part of the structural chemistry group, you will also interact with crystallographers and other computational chemists to explore principles of protein small-molecule recognition. The position requires a Ph.D. (postdoctoral or industrial experience preferred), experience with standard molecular modeling methods, and a basic understanding of organic chemistry. UNIX programming experience is helpful. (Job# N99-037-SCI)

### Computational Chemist Combinatorial Chemistry

(San Francisco)

You will assist with the refinement of follow-on directed libraries and new target library design in collaboration with Axys Scientists and corporate partners. The position requires a Ph.D. in chemistry; 1-3 years' experience in Petimimedic and library design/analysis, molecular modeling and organic chemistry; and familiarity with basic computation methods. UNIX programming experience is helpful. (Job# N99-039-SCI)

### Senior Scientist Computational Biology

(San Diego)

In this key role, you will be responsible for data management and analysis for our gene identification and validation projects in oncology. The position requires a Ph.D. in molecular biology or related field; 4+ years of experience in protein and nucleic acid sequence analysis and with genetic and genomic databases/web sites; 3 years of experience working in a UNIX environment; and proficiency with Perl (candidate should expect to show code). (Job# S99-018-SCI)

We offer an extremely competitive salary, full benefits, and career advancement within a progressive, growing company.

For the San Francisco positions,  
please forward your resume/cv to:  
Axys Pharmaceuticals,  
HR Department, (Attn: Job#)  
180 Kimball Way  
South San Francisco, CA 94080  
email: [human\\_resources@axyspharm.com](mailto:human_resources@axyspharm.com).

For the San Diego position,  
please forward your resume/cv to:  
Axys Pharmaceuticals,  
HR Department, (Attn: Job#)  
11099 North Torrey Pines Road,  
Suite 160, La Jolla, CA 92037  
email: [hr\\_lajolla@axyspharm.com](mailto:hr_lajolla@axyspharm.com)  
fax: (619) 452-6653.

*We look forward to hearing  
from you. EOE*

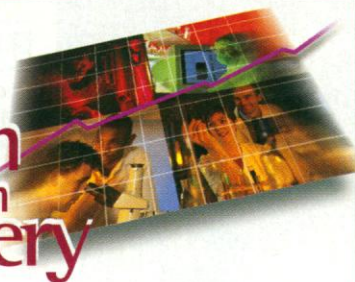


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## Growth through Discovery



Parke-Davis, a Division of Warner-Lambert Company, has demonstrated an excellent track record of innovation through the use of great science to discover drugs for unmet medical needs. These scientific accomplishments have perpetuated the growth of the organization and the need for a research professional to join our Ann Arbor, MI facility.

### SR. RESEARCH ASSOCIATE Job Code XHXM99352

In this role, you will serve as the Analytical R&D knowledge expert on method and specification development for biotechnology-oriented projects. You will guide the preparation of regulatory submissions, particularly BLAs, for biotech products. Ensure ICH and regulatory agency standards are met on assigned projects and interact with Quality Design personnel to ensure consistent approaches to testing and specifications. Candidate will also interact effectively with project representatives from other Parke-Davis departments to monitor progress on biotech development programs and ensure that analytical time lines are met throughout development. Other key responsibilities include collaborating with other R&D colleagues to assess potential biotechnology in-licensing opportunities. Evaluate contract laboratories proposed for testing Parke-Davis biotech products to determine practices, procedures, strengths and weaknesses; and ensure that contract lab testing is completed in a timely manner. Regularly review data and data trends for third-party testing of biotech products.

To qualify, you must have a PhD in analytical chemistry, biochemistry, or molecular biology and 6-8 years of industrial experience in the analysis of biotechnology products. Outstanding interpersonal and communication effectiveness is required to present product assessments and testing strategies to project teams and management colleagues and to interact with colleagues across departments.

We provide a highly competitive compensation package including comprehensive benefits. For immediate consideration, please forward your scannable resume, indicating Job Code (SEE ABOVE) with salary history, to: Warner-Lambert Processing Center, P.O. Box 92242, Los Angeles, CA 90009-2242. Fax: 888-223-8312 or E-mail: [warner@isearch.com](mailto:warner@isearch.com). Please note that we will only contact those individuals that meet our requirements. Warner-Lambert scans and processes resumes electronically. Please use a minimum 12-point black font, do not use underlining, bold, italics, or fancy fonts. Visit our website at: [www.parke-davis.com](http://www.parke-davis.com). Equal opportunity in action. Smoke-free environment.



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A Warner-Lambert Division

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research-oriented

pharmaceutical

company. We are

bringing the world

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treatments for diseases

and their symptoms

every day—delivering

hope and the best

possible care for

people in pain.

Currently, we have the

following opportunities

in our Biostatistics

and Clinical Data

Management

departments.



## BIostatisticians

### Requirements:

- M.S. or Ph.D. in Statistics
- 1+ year pharmaceutical experience
- A broad knowledge of statistical theory and applications
- Strong problem-solving and interpersonal skills
- Proficiency with statistical computing
- Experience in statistical aspects of IND/NDA submissions is a plus

## Statistical Programmers

### Requirements:

- B.S. or M.S. in Computer Science or a related discipline
- 5 years' experience in SAS programming
- Strong background in UNIX and PC-network environment
- Experience with clinical trial data in the pharmaceutical industry or clinical research

## Senior Applications Developers

### Requirements:

- B.S. or M.S. in Computer Science or related discipline
- 5 years' experience in SAS programming
- Familiarity with clinical data management
- Data structure concepts
- The ability to understand programming logic concepts
- An understanding of Validation Concepts
- Applications development using SAS/AF

## Clinical Data Analysts

### Requirements:

- B.A./B.S. or equivalent in a scientific or computer area of study
- SAS experience in the pharmaceutical industry or an equivalent combination of education and SAS experience is preferable
- Knowledge of PC and UNIX is preferred for the performance of the job
- Experience with clinical data structures

You'll enjoy working in our contemporary environment and the chance to work in all phases of clinical trials. We offer competitive salaries, an excellent benefits package and opportunity for personal and professional growth. For confidential consideration, please mail or fax resume, indicating position of interest and salary requirement, to: **Human Resources Services, Dept-CKK/SM, Purdue Pharma L.P., 100 Connecticut Avenue, Norwalk, CT 06850; FAX: (203) 851-5300.** Corporate standards require drug testing and background investigation. We are an equal opportunity employer committed to a diverse workplace.



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### Paleobotanist Curator, Rank-Open

The Department of Geology seeks a broadly interested, productive colleague with an innovative specimen-based research program in paleobotany. Special areas of interest include systematics, phylogenetics, and morphologic evolution. The successful candidate will have a Ph.D., a record of scientific achievement, and is expected to pursue an interdisciplinary approach building strong interactive ties with the Department of Botany. The position entails the curation of a major paleobotanical collection. Curators participate in a wide range of public learning programs (including exhibits, mentoring, and informal education), development, administrative and service activities. Participation is also expected in undergraduate and graduate education at area universities.

Both junior and senior scientists are encouraged to apply. Please include: Curriculum Vitae, statement of research objectives, and copies of relevant publications. Direct applications to, and arrange for three letters of reference to be sent to, **Search Committee, Dept. of Geology, The Field Museum, Roosevelt Road at Lake Shore Drive, Chicago, IL 60605-2496.**

**Deadline for applications is 7/30/99.** The Field Museum is an equal opportunity institution. For more information, visit: <http://fmnh.org>

## VICAM – Your Silent Partner in Food Safety

*VICAM is dedicated to being the leader in manufacturing rapid test kits for the food/agriculture industry. We welcome you to join us as we market and continue to develop innovative diagnostic tests for the food industry.*

### SCIENTIFIC DIRECTOR, R & D

Seeking Ph.D. level scientist with 3–5 years industrial experience in diagnostics industry (colloidal gold assay development preferred) for an exciting opportunity. Reporting to the Vice President of R & D, the successful candidate will be responsible for the development of new products for detection of pathogens and analytes of relevance to the food industry. Responsibilities include conduct of international and domestic validation studies, the design, execution and interpretation of experiments leading to new products, and supervision of day to day operations of laboratories. ONLY applicants with record of successful product development, supervisory experience and microbiological experience will be considered. Small company experience a plus. Must be willing and able to interact with customers of varied educational backgrounds and be a team player with positive attitude.

We offer a competitive salary and benefits package. For consideration, please FAX, email, or send resume with cover letter indicating salary history, IMMEDIATELY to: **VICAM, (Job Code: SD), 313 Pleasant Street, Watertown, MA 02472 FAX: (617) 923-8055, email: [HRD@vicam.com](mailto:HRD@vicam.com).** Principals. No phone calls please. EOE.



**NATIONAL INSTITUTE OF MENTAL HEALTH  
NATIONAL INSTITUTES OF HEALTH**

**Deputy Director  
Division of Neuroscience & Basic Behavioral Science**

The National Institute of Mental Health, one of the National Institutes of Health, invites applications from scientists with neuroscience or behavioral science backgrounds for the position of Deputy Director of the Division of Neuroscience and Basic Behavioral Science.

The Division is responsible for NIMH funding of extramural research grants in the areas of basic and clinical neuroscience, genetics, therapeutics development, and basic behavioral science, as well as research training in these areas. The goal is increased understanding of the etiology, treatment, and prevention of a broad spectrum of brain-behavior disorders. The Division has an annual budget of approximately \$240 million and a staff of 50. The incumbent will report to and assist the Division Director in the scientific and administrative management of the Division's research grant and contract portfolio.

Applicants should have an M.D. or Ph.D. degree, or equivalent training, in a discipline related to neuroscience or basic behavioral science, and should have substantial experience in conducting research as well as in research administration. The position will be filled through the Civil Service or Commissioned Corps of the U.S. Public Health Service. The grade of the position is a GS-14/15, with a salary range from \$80,658 to \$104,851 per annum (with locality pay) which includes special salary for Medical Officers. Physicians may be eligible for a Physicians Comparability Allowance (PCA) between \$5,000- \$20,000 per year. Benefits include a retirement plan, health and life insurance, sick and annual leave. Relocation expenses may be paid. Duty Station is Rockville, MD. U.S. citizenship is required.

A copy of the full text vacancy announcement is available via the World Wide Web: <http://www.nimh.nih.gov/orm/pmb/jobs.htm>. Interested candidates may contact Ms. Margot Darby, NIMH Personnel Management Branch, at (301) 443-9094. Applications will be accepted if postmarked by July 16, 1999 and received within 5 working days.

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**PHYSICIAN-SCIENTIST POSITION IN PROSTATE CANCER  
UROLOGIC ONCOLOGY BRANCH  
DIVISION OF CLINICAL SCIENCES  
NATIONAL CANCER INSTITUTE**

The newly established Urologic Oncology Branch, NCI is offering tenure/tenure track positions in Urologic Oncology. Candidates must be urologic surgeons who have a record that indicates potential for establishment of independent laboratory research programs in urologic malignancies with special emphasis in (but not limited to) prostate cancer. Individuals with expertise in molecular and cellular biology, molecular genetics or translational investigations are of particular interest. There are outstanding opportunities to work closely with other clinicians and basic scientists at the NCI including the Cancer Genome Anatomy Project (CGAP), the Cancer Chromosome Abnormality Project (CCAP), the Cancer Proteomics Project. Candidates must also have a commitment to, and demonstrated active interest in, clinical urologic surgery. The position carries with it a support package including technical, post-doctoral support and supplies budget are committed. Salary is negotiable and commensurate with the candidate's level of experience. Opening: May 1, 1999. Closing: July 2, 1999.

Candidates should send a letter of interest, curriculum vitae, bibliography, five letters of reference, and copies of up to three reprints and a statement of the candidate's research program. The completed application should be mailed to:

**Ronald Gress, M.D.  
Chairperson, Search Committee  
National Cancer Institute  
10 Center Dr., Bldg. 10, Rm. 2B47  
Bethesda, Maryland 20892-1501  
Telephone: (301) 496 6353  
FAX: (301) 402 0922**

*Selection for this position will be based solely on merit with no discrimination for non-merit reasons such as race, color, gender, national origin, age, religion, sexual orientation, or physical or mental disability.*

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# CuraGen

**Engineering Cures Through Genes**

*CURAGEN's rapid growth and collaborations with Biogen, COR, Genentech, Pioneer Hi-Bred International, Glaxo Wellcome, and Hoffmann-La Roche have created significant new career opportunities. Openings exist for exceptional individuals with backgrounds in medicine, molecular biology, human genetics, bioinformatics, and process engineering. Successful CuraGen employees have an entrepreneurial spirit, a passion for their work, a talent for organization, and thrive in a challenging, team-oriented environment.*

## **Bioinformatics Department Project Leader**

You will lead a team providing software to help generate and analyze genomic information. Your users will include medical and disease experts from CuraGen and its pharmaceutical, biotech, and agricultural collaborators. You will be responsible for communicating and coordinating project specifications, design, implementation, and release, as well as making individual contributions and providing technical guidance to your team. You must have at least 2 years previous experience leading a software development or bioinformatics group with a record of completing projects. You must hold a Ph.D. in a bioinformatics-related field or have extensive work experience and technical expertise in software and database design. Opportunities to advance will come as you and your team conquer projects.

## **Research Scientist**

You will develop new computational and informatics systems to extract biological knowledge from our industry-leading genomics databases. You must have strong programming skills and either hold a Ph.D. in a biological, computational, or statistical field or have extensive experience and strong scientific skills. Desired experience includes DNA or protein sequence analysis software, gene expression or microarray data analysis, scientific visualization of large data sets, data mining, or development of expert systems for computer-assisted decision-making. Successful candidates will have the opportunity to advance along management or scientific tracks.

## **Software Engineer**

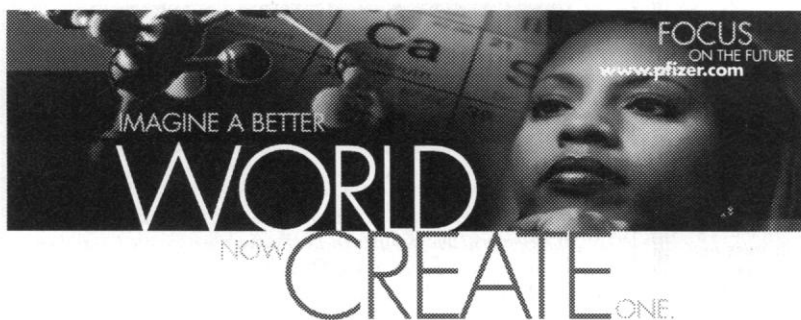
You will work as part of a multidisciplinary team to help convert research ideas into robust software applications. You must love having your software be used heavily as a crucial component of an integrated system. You must have expertise in traditional structured languages (C, Java, Perl), web-based interface design, and/or database design and optimization (Oracle, RDBMS). You must hold an M.S. or Ph.D. in a computational field or have equivalent work experience. Experience with biological software, scientific software, and data visualization is desired but not essential. Advancement opportunities include software or database management.

## **Database/Systems Administrator**

You will help manage hardware/software resources devoted to bioinformatics developers and users, provide technical guidance for database schema design and optimization, and administer internal and third-party database systems and applications. You will also coordinate company-wide with internal and client systems/networks groups. You must have 3+ years experience serving as DBA for a Unix-based RDBMS (Oracle preferred) and/or serving as a Unix systems administrator. Familiarity with NT is essential, and excellent management skills will lead to increased responsibilities and advancement.

*Please send cover letter, resume/CV and 3 letters of recommendation and/or references. EOE*

**555 Long Wharf Drive  
New Haven, CT 06511 USA  
[www.curagen.com](http://www.curagen.com)  
Email: [jobs@curagen.com](mailto:jobs@curagen.com)**



At Pfizer Central Research, located in Groton, CT, you'll have all the resources you need to bring new and dynamic ideas to fruition. As a company committed to innovation, we share your goal of making this world a healthier place and value the creative drive and professional expertise it takes to get there. Working together, we will continue to develop and launch the products that make such a difference in the lives of so many. At Pfizer, the power to create a better world is as immediate as it is real—and it belongs to you.

## SENIOR RESEARCH SCIENTIST, Ph.D.

### DRUG METABOLISM DEVELOPMENT

An exciting opportunity exists for a highly motivated Scientist in our Drug Metabolism Development Group. This position involves the supervision of the following laboratory activities: in vivo pharmacokinetic and toxicokinetic studies, including assessments of formulations on oral bioavailability; drug metabolic studies, including the determination of metabolites, in vitro metabolism studies, protein binding and other specialized studies to develop a mechanistic understanding of the drug candidate. The position also requires that the individual participate in multi-disciplinary project teams; prepare documents for regulatory submission and publication; and supervise, coach and mentor laboratory staff. Ph.D. or equivalent in Chemistry, Biochemistry or Pharmaceutical Science with a minimum of 3-5 years of industrial pharmaceutical science experience is necessary. Knowledge of drug metabolism and pharmacokinetics; strong interpersonal skills; excellent oral and written communication skills; desire to manage multiple projects and knowledge of PK attributes for pulmonary drugs is highly desirable.

Pfizer offers exceptional salaries and benefits, as well as tremendous growth potential. Please send your resume in confidence to: Pfizer Inc, Job Code: 9922832SCI, Central Research, c/o Aon Consulting, P.O. Box 25, Findlay, OH 45839, or e-mail to: [Pfizer@aon-hros.com](mailto:Pfizer@aon-hros.com). As an Equal Opportunity Employer, Pfizer is focused on building a diverse workforce.



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## The Pursuit of Progress Through Bioinformatics

...is swift and strong at Dow AgroSciences. Several opportunities at our research campus in Indianapolis reflect our commitment of leadership in science and technology to meet the agricultural needs of an expanding world population. Our endeavors in cutting-edge research in plant and microbial genetic manipulation span more than a decade. Poised for substantial growth, our biotechnology program will be impacted by the following key positions:

### BIOINFORMATICS TECHNICAL LEADER

This position requires a scientist with Ph.D. credentials in Bioinformatics, Molecular Biology, Computer Science or related field and 2-5 years in sequence mining who can lead, interact and coordinate the Bioinformatic capability of our Biotech Departments, develop tools, model information needs and serve as top liaison with the Information Management function. Department Code: R-GEN-0027

### BIOINFORMATICS CURATOR

We seek a scientist at the Ph.D. or M.S. - level in Computer Science, Molecular Biology, Bioinformatics or related field and 2-5 years managing Bioinformatic databases to maintain quality and integrity of Dow AgroSciences genomics data, help departments organize and leverage information technology across Biotech R&D functions and assist users in searching public and proprietary databases. Department Code: R-GEN-0028

Both positions require in-depth knowledge of public databases, models, data structures and algorithms in commercial packages (e.g. Pangea, GCG). Experience in Oracle database, NT and UNIX servers and Perl scripts are preferred.

Indianapolis provides the cultural advantages of a major metro area, a wealth of recreational offerings and comfortable Midwest hospitality. For consideration, send a letter of interest, resume, transcripts and references by June 25, 1999 to: Dow AgroSciences LLC, Human Resources Recruiting, (please indicate Department Code), 9330 Zionsville Road, Indianapolis, IN 46268-1054



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**Exelixis Pharmaceuticals, Inc.** is a rapidly growing pre-IPO biopharmaceutical company in South San Francisco. Our mission is to identify novel therapeutic targets for drug discovery. Established in 1995, Exelixis Pharmaceuticals, Inc. is the premier functional genomics company defining connections between genes and human disease. We are also applying Exelixis' technology platforms using model systems to identify critical genes in disease pathways, determine function relationships, and select optimal targets for therapeutic intervention. We are currently seeking experienced individuals to support our Bioinformatics Department:

### Position: Computational Biologist

You will use available algorithms and software, and where necessary develop new tools, for phylogenetic analysis of sequences for the same gene collected from a number of sources: identify homologous genes among human and model organisms; detect and interpret function of uncharacterized sequences; do structure prediction and modeling for functional analysis; and data mine among a growing number of databases to help automate the linking of information from multiple sources.

**Requirements:** Ph.D. or MS in either Computer Science or Molecular Biology with experience in the complementary discipline; programming skills (Python, C, C++, Java, or Perl). Job#: CB-01-SA

### Position: Applications Programmer

You will design and develop in-house software and integrate in-house tools with externally acquired tools, evaluate software for archiving and analyzing genomic data, and deploy software for in-house users.

**Requirements:** BS/MS in CS or equivalent; 2+ years of programming experience with Python, C, C++, Perl, HTML, SQL and/or Java in a production environment. Job#: CB-03-SA

### Position: Scientific Database Administrator

You will be responsible for the design, development, and maintenance of biological databases, both developed in-house and imported.

**Requirements:** BS/MS with two years of database experience in a production environment with one or more UNIX-based RDBMSs, preferably Oracle. Experience/familiarity with the following: relational database normalization and optimization; SQL queries; client-server architectures; common UNIX tools. Job#: CB-04-SA

We offer competitive salaries & benefits packages. Please send resume to **Exelixis Pharmaceuticals, Inc., HR Dept. (Attn. Job #), 260 Littlefield Ave., So. San Francisco, CA 94080. Fax (650) 825-4226. Email [careers@exelixis.com](mailto:careers@exelixis.com).** EOE

For more information on these positions, please visit our website at [www.exelixis.com](http://www.exelixis.com)

**Chief, Mood and Anxiety Disorders Branch**  
*National Institute of Mental Health*

The National Institute of Mental Health Intramural Research Program invites applications for a **tenured senior investigator** to be the Chief, Mood and Anxiety Disorders Branch. The candidate is expected to develop an independent research program which will plan and conduct clinical and basic research studies on the pathophysiology, etiology, and treatment of mood disorders and their comorbid conditions such as anxiety disorders; and will be provided with personnel and budget to conduct this research. The candidate must have an M.D. and/or Ph.D. in psychiatry or related discipline with broad research experience, including a record of high scientific achievement as an independent investigator; experience in direct administration of a research program; and national and international recognition. Applicants should send their curriculum vitae, statement of research interests, and have three letters of recommendation sent by **June 30, 1999** to:

**Dr. Robert Desimone**  
**Chair, Search Committee**  
**National Institute of Mental Health**  
**Bldg. 10, Rm. 4N-222**  
**9000 Rockville Pike**  
**Bethesda, Maryland 20892**

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Physiome Sciences develops "virtual" cells and organs to integrate the vast amounts of information available for pharmaceutical research and development. Immediate openings are now available for Ph.D. scientists with the ability to evaluate, interpret and apply experimental and clinical data to the development of detailed computer-based models in the following areas:

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Ph.D. with 5+ years experience in immune system function at the molecular, cellular and/or system level.

**RECEPTORS, SIGNALING  
MECHANISMS, ION CHANNELS**

Ph.D. with 0-3 years experience in modeling receptor function, signal transduction or ion channel gating.

Physiome Sciences offers a comprehensive salary and benefits package. Please send resumes to: **PHYSIOME SCIENCES INC./HR**, 307 College Road East, Princeton, NJ 08540 or via email to: **info@physiome.com**.

*Physiome Sciences is an equal opportunity employer*

**THE STRENGTHS  
OF SERONO**

**ARES ADVANCED TECHNOLOGY, INC.**

*the U.S. R&D arm of the Ares-Serono Group, employs state-of-the-art methods in High Throughput Screening, Combinatorial Chemistry, Experimental Pharmacology, Mammalian Cell Recombinant DNA technology, and Differential Gene Expression to discover and evaluate new biopharmaceutical agents of clinical importance. The exciting, on-going success of our product portfolio, fueled by a \$200 million annual investment in R&D, means that Ares Advanced Technology can offer you what no other Biotechnology company can - Innovative Products - Full Integration - Financial Stability - Entrepreneurial Environment.*

**SENIOR  
BIOINFORMATICS SPECIALIST**

As a key member of the Scientific Computing team, you will manage applications development for R&D activities in the field of Reproductive Endocrinology, and will spearhead new technology development for the company in the areas of Chemoinformatics, Bioinformatics, and Genomics. Other responsibilities include: computational support for High Throughput Screening projects; developing a bioinformatics system that integrates data mining and analysis tools with relational databases to build a function genomics platform; implementing a relational database for tracking and analyzing vast amounts of discovery research data using new genomics and proteomics technologies; and developing and supporting a variety of software methods related to combinatorial chemistry and chemical/biological database management.

To qualify, you must have a Ph.D. in a scientific discipline or equivalent, plus at least 4 - 6 years of post-doctoral, computer-related experience in the application of scientific computing and bioinformatics to the identification and exploitation of new/novel targets. Knowledge of C, C++, Perl and Web Programming is essential. Supervisory and Project Management experience is strongly preferred. **Job Code: A99-13**

**SENIOR INVESTIGATOR/  
FUNCTIONAL GENOMICS**

Highly motivated professional with supervisory experience and excellent communication skills to contribute intellectually and technically to the discovery of new lead molecules. Applying Functional Genomics methodologies to projects in the area of Reproductive Endocrinology, you will initiate a research program and participate in discovery teams aimed at identifying potential drug candidates/targets in relevant disease states. You will also develop a state-of-the-art program to study differential gene expression in selected tissues using DNA micro-array, differential display, suppression subtractive hybridization, representational difference analysis, or equivalent techniques. Requires a Ph.D. in a biological science, plus at least 3 - 5 years of experience in Functional Genomics. Experience with differential display methods, DNA micro-arrays, or other differential gene expression technologies is essential. **Job Code: A99-09**

For consideration, please forward your resume, indicating Job Code: \_\_\_\_\_, to: **Ares Advanced Technology, Inc., Attn: Monica Fox, 280 Pond Street, Randolph, MA 02368. E-mail: monica.fox.us\_bos03@serono.com**

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**Serono**  
PART OF THE ARES-SERONO GROUP



**Incyte Pharmaceuticals, Inc.** is a leading provider of an integrated platform of genomic technologies designed to aid in the understanding of the molecular basis of disease. Incyte's platform includes database products, genomic management software tools, and related reagents and services which Incyte provides to the pharmaceutical and biotechnology industries to assist their drug discovery and development efforts.

#### **Genomics or Expression Scientist/Senior Scientist**

You will provide scientific leadership in Incyte's genome or expression program. You will be part of a team designing and implementing new informatic tools to process and annotate the human genome or mRNA/protein expression databases. Experience with genomic databases or expression technology is required, as well as experience with DNA and protein analysis software. A Ph.D. with 2-3 years postdoctoral experience, good communication and managerial skills are required. Experience with UNIX and PERL is desired.

#### **We also have opportunities available for:**

Account Managers - SCI	Scientific Programmers - SCI
Bioinformatics Programmers - SCI	Scientific Project Managers - SCI
Database Designers - SCI	Software Developers - SCI
Database Analysts - SCI	Software Engineers - SCI
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Patent Attorney - SCI	System Analysts - SCI
Project Managers - SCI	Technical Publications - SCI
Research Associates - SCI	Unix System Administrators - SCI
Scientists - Biology/Bioinformatics - SCI	

*EOE/F/M/V*

To apply for any of these positions please submit your resume to:

US MAIL

**Incyte Pharmaceuticals, Inc.**

**3174 Porter Drive**

**Palo Alto, CA 94304**

**Fax: 650-845-4176**

**Email: [employ@incyte.com](mailto:employ@incyte.com)**

**Website: [www.incyte.com](http://www.incyte.com)**

## **UNIVERSITY OF PENNSYLVANIA SCHOOL OF MEDICINE**



**Assistant Professor  
Division of Experimental  
Therapeutics  
Department of Medicine**

Full-time clinician-educator (non-tenured) position available in the Division and Center for Experimental Therapeutics. Position will co-direct administrative and clinical trial activities in the Clinical Research Center.

Requires demonstrated ability to conduct clinical trials; supervise post-doctoral fellows, research and nursing staff; and organize effective collaboration within and outside the University. Expertise in drug delivery and clinical trials required, with experience in biochemical, immunological and cell biology. Independent funding from NIH and national agencies required.

Interested applicants should forward curriculum vitae, selected reprints or preprints, a statement of research interests, and the names and addresses of three references to:

**Garret A. FitzGerald, M.D., Director  
Division of Experimental Therapeutics  
University of Pennsylvania  
School of Medicine  
Room 153, Johnson Pavilion  
Philadelphia, PA 19104-6084**

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

## **Toupin Chair in Neurological Sciences**

**The Division of Neurology in the Department of Medicine, University of Alberta,** invites applications for the Henri M. Toupin endowed chair in Neurological Sciences. Applicants will be either MD or PhD scientists with a record of accomplishment in Neurological Science. The successful applicant will be expected to establish and develop research and educational programs that improve the care of patients with neurological problems. This senior academic appointment will be at the associate or full professor rank and carry with it an appropriate research supplement and the privileges and benefits of the academic rank. For clinical scientists, additional professional income at a competitive level will be an option. The University of Alberta is a leading research intensive university in Canada. The Faculty of Medicine and Dentistry has a large variety of research initiatives unique in Canada and providing excellent collaborative opportunities. The Department of Medicine attracts over \$12M in research support annually and the presence of the Alberta Heritage Foundation for Medical Research has spawned the development of world class research and facilities. Applications complete with curriculum vitae and the names and addresses of three professional references familiar with the candidate's qualifications should be submitted by August 1, 1999 to: The Chair, Toupin Chair Search Committee, Department of Medicine, Room 2F1.30 WMC, **University of Alberta**, 8440 - 112 Street, Edmonton, Alberta T6G 2B7. The University of Alberta is committed to the principle of equity in employment. As an employer, we welcome diversity in the workplace and encourage applications from all qualified women and men, including Aboriginal peoples, persons with disabilities, and members of visible minorities.

## **UNIVERSITY OF CHICAGO Department of Human Genetics**

### **KATZ POSTDOCTORAL FELLOWSHIP IN HUMAN GENETICS**

Applications are invited for the newly established David and Janice Katz Postdoctoral Fellowship in Human Genetics at the University of Chicago. This fellowship is designed to provide training to outstanding scientists planning to pursue an independent research career in any area of human genetics. Applicants should have a Ph.D. and/or M.D. in human genetics or a related discipline. The fellowship award provides a competitive stipend and small research fund for the recipient for a period of up to three years. Potential faculty mentors include Drs. Nancy Cox, Soma Das, Anna Di Rienzo, William Dobyns, Augustine Kong, David Ledbetter and Carole Ober.

Interested applicants please submit a CV and the names and addresses of three references to: [recruit@genetics.bsd.uchicago.edu](mailto:recruit@genetics.bsd.uchicago.edu) (electronic submissions only by email with Word or WordPerfect attachments). Specifically indicate in the subject line that the application is for postdoctoral fellowship.

<http://www.genes.uchicago.edu>



**THE UNIVERSITY  
OF CHICAGO**

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

## PAIN RESEARCH

The University of Texas M.D. Anderson Cancer Center's Division of Anesthesiology and Critical Care has tenure track openings for individuals at the assistant professor level to perform basic research in pain. The successful applicant will have a M.D. degree, Ph.D., or both and have training in pain research. The individuals will be expected to develop independent programs in basic pain research. Joint appointments in related basic science departments are available. Anesthesiologists will be expected to have a minor role in clinical care and must be certified by the American Board of Anesthesiology or be in the examination system and must be eligible for a license to practice medicine in the State of Texas.

Please send inquiries, curriculum vitae and names of three references to: **Howard B. Gutstein, M.D., Director of Research, Division of Anesthesiology and Critical Care, University of Texas M. D. Anderson Cancer Center, 1515 Holcombe Blvd. - Box 42, Houston, TX 77030; or fax to (713) 745-3941.**

*The University of Texas M.D. Anderson Cancer Center is an equal employment opportunity employer. Women and minority candidates are encouraged to apply. Smoke-free environment.*

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### Department Head, Fisheries and Wildlife College of Natural Resources University of Minnesota

This person is the departmental administrative officer and program leader and reports directly to the dean of the College of Natural Resources. Duties include: academic undergraduate and graduate program leadership; administrative responsibility for academic affairs, personnel, financial matters, and physical facilities; leadership in procurement of grant and endowment funding; leadership and coordination of the department's interactions with College and University units, natural resource agencies and professionals, professional societies, citizens' groups interested in fisheries, wildlife, and conservation, and the general public; teaching and research in an appropriate field.

**Essential Qualifications:** Ph.D. in fisheries, wildlife, or conservation biology and eligibility for faculty tenure at the University of Minnesota. Faculty rank (associate or full professor) depends on qualifications and experience consistent with department and University policy.

**Availability:** as soon as feasible after October 1, 1999.

Review of applications will begin on July 15, 1999. The position will remain open until a suitable candidate is selected.

**Inquiry:** for a complete position description and application requirements, please contact:

**Bobby Berwin, 235 NRAB  
2003 Upper Buford Circle  
St. Paul, MN 55108  
Phone: 612/624-0772  
Fax: 612/624-8701  
[rberwin@forestry.umn.edu](mailto:rberwin@forestry.umn.edu)**

## UNIVERSITY OF MINNESOTA

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## Graduate and Postdoctoral Opportunities in Bioinformatics and Computational Biology

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Web: [www.grad-college.iastate.edu/bioinformatics](http://www.grad-college.iastate.edu/bioinformatics)

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## POSITIONS OPEN



### ASSISTANT/ASSOCIATE PROFESSOR OF MEDICINE, BROWN UNIVERSITY PHYSICIAN/RESEARCH SCIENTIST Division of Gastroenterology Rhode Island Hospital

Rhode Island Hospital seeks a medical degree Physician/Scientist who is Board-certified in internal medicine and gastroenterology, and who is qualified to direct an active research program. Candidates must qualify for a full-time faculty appointment at the rank of Assistant/Associate Professor of medicine at Brown University. Documented qualities as a teacher of medical students and house officers, a documented ability to conduct basic research, and a demonstrated record of scholarly publications are required. Candidates for appointment at the Associate Professor level will require a national reputation and scholarly achievements at that level. Candidates should have demonstrated expertise in gastrointestinal malignancies and/or inflammatory bowel disease, and should have a record of publication in peer-reviewed scientific journals; active research support or independent peer-review research is highly desirable. Applications are expected by September 15, 1999, and will be reviewed until a successful candidate is selected, or the search is closed. Interested individuals should send their curriculum vitae and four letters of recommendation to: **Jack Wands, M.D., Chair, Search Committee, Division of Gastroenterology, Rhode Island Hospital, 593 Eddy Street, APC 421, Providence, RI 02903.** *Brown University/Lifespan is an Affirmative Action/Equal Opportunity Employer and actively solicits applications from women, minorities, and protected persons.*

### FACULTY POSITIONS IN GEOCHEMISTRY AT YALE UNIVERSITY

The Department of Geology and Geophysics at Yale University is starting a new multidisciplinary hiring initiative in earth science, which will include several ladder faculty appointments in the general area of geochemistry, starting as early as January 2000. We invite applications from both **JUNIOR** and **SENIOR**-level candidates who will develop internationally recognized research programs in collaboration with present and future Yale Geoscientists. The positions will include teaching at both undergraduate and graduate levels. All subfields will be considered, including, but not limited to, biogeochemistry, earth surface chemical processes, experimental geochemistry, mantle geochemistry, organic geochemistry, radiogenic and stable isotopes, and theoretical geochemistry. Closing date for applications is September 30, 1999.

Applicants should send a curriculum vitae, a statement of professional goals, and the names and addresses of three or more referees to:

**Geochemistry Search Committee  
c/o Professor Danny Rye, Chair  
Department of Geology and Geophysics  
Yale University  
P.O. Box 208109  
New Haven, CT 06520-8109**

*We encourage applicants from historically disadvantaged ethnic, racial, and gender categories. Yale University is an Equal Opportunity Employer.*

The Neurosurgery Service at Memorial Sloan-Kettering Cancer Center seeks a candidate for a **FACULTY POSITION**. Applicants must have previous training in neurosurgical oncology and extensive experience in neuroscience research, specifically in the field of central nervous system stem cells and regeneration. The position requires commitment to academic research and clinical responsibilities. Please forward curriculum vitae and letters to: **Ms. J. Blemling, Neurosurgery Service, Memorial Sloan-Kettering Cancer Center, 1275 York Avenue, New York, NY 10021.**

## POSITIONS OPEN

### BIOLOGY FACULTY ZOOLOGIST

**TENURE-TRACK POSITION** available beginning January (preferred) or September 2000.

Earned Ph.D. with specialization in zoology or related field (preference will be given to applicants able to teach histology) and teaching experience in the discipline are required. Candidates must be committed to excellence in teaching. Successful performance in an on-campus interview, including a teaching session, is required. Perceived ability to work productively with students and colleagues required. Preference will be given to candidates demonstrating familiarity with a broad range of continuous assessment techniques, the use of instructional technology in the teaching-learning process, and the role of faculty in student success, recruitment, and retention.

Responsibilities will include, but not restricted to, teaching courses such as general zoology for biology majors and introductory non-major biology courses such as human anatomy and physiology, human biology, and general biology, which are part of the Liberal Studies Program; developing courses in area of specialization, establishing a research program designed to involve undergraduates; academic advising; and service to the department, college, and university. Applicants must provide evidence of teaching and research effectiveness.

Send letter of application, current résumé, graduate and undergraduate transcripts (official transcripts will be necessary before hiring), statements of long-term goals, research interests, teaching philosophy, and the names, addresses, and telephone numbers of three references to: **Dr. Jack R. Layne, Jr., Search Chairperson, Department of Biology, Slippery Rock University, Slippery Rock, PA 16057. FAX: 724-738-4782; e-mail: jack.layne@sru.edu.**

Review of applications will begin August 13, 1999. You can learn more about us on our website: **www.sru.edu**. *Slippery Rock University is a member of the State System of Higher Education and is an Affirmative Action/Equal Opportunity Employer building a diverse academic community and encourages minorities, women, veterans, and persons with disability to apply.*

### BIOCHEMISTRY

The Department of Biochemistry at the University of Alberta is undergoing a restructuring and invites applications for positions preferably at the **ASSISTANT PROFESSOR** level. The positions are entries into the regular tenure-track progression of the university. Successful candidates are expected to secure extramural funding to support high-quality research programs. We are particularly interested in applicants studying mammalian systems. Specific areas of interest include, but are not limited to, immune system function, transformation biology/oncology, signal transduction, regulation of gene expression, and membrane receptor systems. See website: **www.biochem.ualberta.ca** for existing strengths. We offer an outstanding research environment, including modern animal facilities and a transgenic mouse laboratory. Department members participate in a strong graduate program and have modest undergraduate teaching responsibilities. An attractive start-up package, including three years of initial salary support, will be provided. *In accordance with Canadian immigration requirements, priority will be given to Canadian citizens and permanent residents of Canada. If suitable Canadian citizens and permanent residents cannot be found, other individuals will be considered. Individuals with a Ph.D. or equivalent and appropriate postdoctoral experience should send a letter of application, curriculum vitae, brief description of research plans, and arrange to have three letters of reference sent to: Dr. B. D. Sykes, Acting Chair, Department of Biochemistry, 474 Medical Sciences Building, University of Alberta, Edmonton, Alberta T6G 2H7 Canada. The application deadline is July 31, 1999. The University of Alberta is committed to the principle of Equity in Employment. As an employer, we welcome diversity in the workplace and encourage applications from all qualified women and men, including Aboriginal peoples, persons with disability, and members of visible minorities.*

## POSITIONS OPEN

Children's Hospital

Harvard Medical School



### FACULTY POSITION CARDIOVASCULAR DIVISION Children's Hospital, Harvard Medical School

Is seeking an outstanding scientist at the level of **PROFESSOR**. The candidate should have a strong interest in the genetic and developmental basis of cardiac structure and function. Although training in pediatric cardiology is an asset, it is not required. Please submit a letter of application, curriculum vitae, a short description of research goals, and a list of potential referees to:

**David E. Clapham, M.D., Ph.D.  
Chair, Cardiovascular Search Committee  
Children's Hospital  
Room 1309 Enders Building  
P.O. Box EN-306  
320 Longwood Avenue  
Boston, MA 02115**

*Children's Hospital and Harvard Medical School are Equal Opportunity Employers. Women and minorities are encouraged to apply.*

### VISITING FACULTY POSITIONS IN EARTH SCIENCES AT YALE UNIVERSITY

The Department of Geology and Geophysics at Yale University announces the opening of several visiting faculty positions, starting as early as September 1, 1999. Applicants from all areas of earth science and all career levels are welcome to apply. The visiting positions are part of a major hiring initiative in earth sciences at Yale focused on rebuilding the size and strength of the department. We are looking for individuals who would enjoy contributing and interacting in a broad multidisciplinary department that includes active programs in atmospheres, oceans, and climate; geochemistry; petrology; solid-earth geophysics; paleontology and evolutionary theory; and tectonics. The successful applicant would be expected to conduct an active research program, to interact with students and faculty, and to teach one course or seminar per semester with the topic to be negotiated. The duration and scope of the visit are negotiable as well. Applications will be considered as they arrive.

Applicants should send a curriculum vitae, a statement of objectives for the visit, and the names and addresses of three referees to:

**Visiting Faculty Search Committee  
c/o Professor Danny Rye, Chair  
Department of Geology and Geophysics  
Yale University  
P.O. Box 208109  
New Haven, CT 06520-8109**

*We encourage those from historically disadvantaged ethnic, racial, and gender categories. Yale University is an Equal Opportunity Employer.*

### MOLECULAR BIOLOGIST ASSISTANT/ASSOCIATE PROFESSOR

Section of Surgical Specialties, VA Puget Sound Health Care System, Seattle Division and Department of Orthopaedics, University of Washington.

Position available for Molecular Biologist interested in molecular and genetic basis of tumors of the musculoskeletal system. Interest in matrix biology also desirable. Candidate is expected to establish an independent research program and collaborate with clinical faculty. Qualified candidates may possess an M.D. and/or Ph.D. Rank and salary commensurate with experience.

Submit a letter of interest, curriculum vitae, reprints of selected publications, and addresses of three or more references to: **Howard A. Chansky, M.D., Assistant Professor, Orthopaedics, 1660 South Columbian Way, Mailstop S-112-ORT, Seattle, WA 98108.**

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## Scientific Applications, Marketing Specialist

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■ Please send, fax or email your resume and cover letter to: **Axon Instruments, Inc.**, Human Resources, Attn: Job# SCI0604-SAMS, 1101 Chess Drive, Foster City, CA 94404; fax: (650) 571-9500; email: [jobs@axon.com](mailto:jobs@axon.com).

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## Neurotrophic Regulation of Synaptic Plasticity

A postdoctoral position is available to study the role of neurotrophic factors in the development and function of synapses. Projects include isolation and manipulation of genes involved in the neurotrophic regulation of synapse development and plasticity (see <http://www.nih.gov/nichd/docs/research.html> for detail). The candidate will be working with a team of highly interactive electrophysiologists and molecular biologists. Experience in either molecular cloning or synaptic physiology is required. A background in gene knockout or Ca<sup>2+</sup> imaging is highly desirable. Send a statement of research interests, vita, and names of 3 references:

Bai Lu, Ph.D.

NICHD, National Institutes of Health  
Building 49, Rm 6A-80, MSC 4480

Bethesda, MD 20892-4480

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## HUMAN GENOME PROJECT

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## Database Application Designers/Programmers

Will shape the systems that manage the very latest high-throughput laboratory genomics and DNA sequencing environments. Use the latest technology to architect and deploy solutions for scientific and laboratory management problems. Interact with biologists to translate requirements into robust, high-performing application and database designs. BA/BS, minimum 2 years' software development experience including experience with a commercial RDBMS, Sybase or Oracle preferred. Knowledge of Perl, CGI, HTML, Java, JavaScript preferred.

## Database Administrator

To provide support for some of the most critical bioinformatics systems in the center. Will perform ongoing database administration for some of the latest laboratory genomic and DNA sequencing systems. Includes reviewing and refining database and Unix systems management procedures and tools with key emphasis on automation, collaborating in defining the architecture/design of bioinformatics applications by addressing issues such as database configuration, web deployment, and integration with automation systems. Requires a BA/BS and 2 years' professional software development experience including a minimum 2 years' experience with a major commercial relational DBMS, Sybase or Oracle preferred. Unix administration preferred.

## Automation Programmers/ Software Engineers

Experienced programmers (1-3 yrs) and software engineers (3+ yrs) to support the deployment of cutting edge robotic laboratory automation systems. Will work with our automation and development team to integrate diverse robotic workdecks with an overall laboratory control and sample tracking system and be responsible for creation of workdeck user interfaces. Requires a BA/BS, experience in C/C++ programming in a Windows and/or Unix environment, excellent communications skills, and the ability to work closely with an interdisciplinary team of biologists, engineers, and programmers. Must have interest in biology and the learning laboratory process. Experience in Perl or Java, database interfaces, networking, or hardware driver or data collection interface design and prior biology training or automation experience helpful.

**We offer excellent salaries, generous benefits (including tuition reimbursement), state-of-the-art research facilities, opportunity to attend scientific lectures, interaction with the MIT community, and a convenient location.**

**Please send resumes to: Whitehead Institute for Biomedical Research, Human Resources Dept., Ref. SC:699, Nine Cambridge Center, Cambridge, MA 02142; Fax: (617)258-6294.**

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## POSITIONS OPEN

### FACULTY POSITION IN PALEONTOLOGY AT YALE UNIVERSITY

The Department of Geology and Geophysics at Yale University is starting a new multidisciplinary hiring initiative in earth science, which includes the strengthening of its program in paleontology. To this end, we intend to fill a ladder faculty position in paleontology, at either the **JUNIOR** or the **SENIOR** level, starting September 2000. We invite applicants who will develop an internationally recognized research program in collaboration with present and future Yale Geoscientists and Bioscientists. The position will include teaching at both the graduate and undergraduate levels. All subfields of paleontology will be considered, including, but not limited to, biogeochemistry, biostratigraphy, event stratigraphy, evolutionary processes, functional morphology, macroevolution, origin of major groups/body plans, marine paleoecology, mass extinctions, paleobiogeography, paleoenvironmental analysis, systematics, or taphonomy. Closing date for applications is January 15, 2000.

Applicants should send a curriculum vitae, a statement of professional goals, and the names and addresses of three or more referees to:

**Paleontology Search Committee**  
c/o Professor Danny Rye, Chair  
Department of Geology and Geophysics  
Yale University  
P.O. Box 208109  
New Haven, CT 06520-8109

*We encourage applicants from historically disadvantaged ethnic, racial, and gender categories. Yale University is an Equal Opportunity Employer.*

### FACULTY POSITIONS IN SOLID-EARTH GEOPHYSICS AT YALE UNIVERSITY

The Department of Geology and Geophysics at Yale University is starting a new multidisciplinary hiring initiative in earth science, which includes a major expansion in solid-earth geophysics. To this end, we intend to fill several ladder faculty positions in solid-earth geophysics, either at the **JUNIOR** or **SENIOR** level, starting as early as January 2000. We invite applicants who will develop internationally recognized research programs in collaboration with present and future Yale Geoscientists. The positions will include teaching at both undergraduate and graduate levels. All subfields of solid-earth geophysics will be considered, including, but not limited to, geodesy, geodynamics, geomagnetism, mineral physics, rock and earthquake mechanics, and seismology. Closing date of applications is September 30, 1999.

Applicants should send a curriculum vitae, a statement of professional goals, and the names and addresses of three or more referees to:

**Solid-Earth Geophysics Search Committee**  
c/o Professor Danny Rye, Chair  
Department of Geology and Geophysics  
Yale University  
P.O. Box 208109  
New Haven, CT 06520-8109

*We encourage applicants from historically disadvantaged ethnic, racial, and gender categories. Yale University is an Equal Opportunity Employer.*

## UNIVERSITY OF FLORIDA

Seeks an **ASSISTANT/ASSOCIATE PROFESSOR/PROFESSOR** in the Department of Medicine, Division of Cardiology. M.D. degree, Board-certified/Board-eligible in cardiology. This is a full-time, tenure-track position. The responsibilities will include patient care in the Shands Hospital Cardiology Clinics also providing care for patients located in our off-campus office. This position will provide teaching to the cardiology Residents and medical students. Salary and benefits commensurate with experience. Recruiting deadline: June 3, 1999. Anticipated start date: July 1, 1999. Please reply with curriculum vitae to: **C. Richard Conti, M.D., Eminent Scholar, Division of Cardiology, Box 100277, JHMHC, Gainesville, FL 32610.** An Affirmative Action/Equal Opportunity Employer.

## POSITIONS OPEN

### ASSISTANT PROFESSOR DRUG TRANSPORT UNIVERSITY OF WASHINGTON

The Department of Pharmaceutics of the School of Pharmacy at the University of Washington invites applications for an Assistant Professor position in the area of drug transport. Areas of interest could include, but are not limited to, the study of transport mechanisms, structure/function relationships, intracellular processing and targeting, or regulation of expression of drug transporters. Qualifications include a Ph.D. and at least one year of postdoctoral experience. Duties include developing an independent research program with extramural support and teaching in the graduate (Ph.D.) and the professional (Pharm.D.) programs. The faculty of the department are highly interactive with basic and clinically related research in drug transport, drug metabolism, drug delivery, and development of vaccines. All applications should include a curriculum vitae, a brief description of past research accomplishments and future research plans, and three letters of references to: **The Chair, Search Committee, Department of Pharmaceutics, Box 357610, University of Washington, Seattle, WA 98195.** For additional information contact: **Dr. Shen, Telephone: 206-543-9434; e-mail: ds@u.washington.edu; website: <http://weber.u.washington.edu/~pceut/>.**

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

### ECOSYSTEMS ECOLOGIST LEHIGH UNIVERSITY

The Department of Earth and Environmental Sciences (EES) has an opening at the level of **ASSISTANT PROFESSOR** for an Ecologist interested in the role of plants in ecosystems. In particular, we seek applicants whose work bears on issues in both past and projected environmental change. We expect the successful candidate to develop a vigorous externally funded research program, teach an undergraduate course in plant ecology, and develop additional courses to complement diverse department curricula and research activities in earth and environmental sciences.

To receive full consideration, applicants should submit by September 20, 1999, a letter of application, curriculum vitae, statement of research and teaching interests, up to three reprints, and the names of three referees to: **Peter Zeitler, Chair, Department of Earth and Environmental Sciences, 31 Williams Drive, Lehigh University, Bethlehem, PA 18015.** For further information about the EES Department, see **website: <http://www.ees.lehigh.edu/~inees>.**

*Lehigh University is committed to recruiting and retaining women and minorities.*

## UNIVERSITY OF FLORIDA

Seeks a **CLINICAL ASSISTANT PROFESSOR** in the Department of Medicine, Division of Pulmonary/Critical Care. M.D. degree. Board-certified in pulmonary and critical care is essential, as is at least five years of clinical experience. Experience in clinical research in critical care is desirable. The responsibilities will include clinical care and teaching in the MICU and Pulmonary Consultation Service. Salary and benefits commensurate with experience. Recruiting deadline June 17, 1999. Anticipated starting date October 1, 1999. Please reply with curriculum vitae to: **Eugene Ryerson, M.D., Professor, Division of Pulmonary/Critical Care, Box 100225 JHMHC, Gainesville, FL 32610.** An Equal Opportunity/Affirmative Action Employer.

## POSITIONS OPEN

**ASSISTANT-LEVEL Cooperative Extension (CE)/Agricultural Experiment Station (AES) ACADEMIC CAREER-TRACK** appointment (11 months).

The Department of Botany and Plant Sciences, University of California, Riverside, is recruiting for a position in the area of environmental horticulture-nursery and floriculture crops. Salary commensurate with education and experience.

Applicants must have a Ph.D. degree and research experience with plants. Postdoctoral experience is desirable. The position has both a CE research and education component and an AES research component that are related to California nursery and floriculture production. The successful candidate will provide strong mission-oriented research and educational activities. These include conducting research focusing on the needs of this multibillion dollar industry. Expectations also include planning and establishing statewide extension programs addressing nursery and floriculture production concerns for exotic and native plant species. Expertise in one or more of the following areas is desirable: plant physiology, plant improvement, post-harvest handling of crops, soil and water science, pest management, and restoration horticulture.

Send letter of application, curriculum vitae, statement of research interests, transcripts, and the names and addresses of at least three references to: **Dr. Elizabeth M. Lord, Chair, Department of Botany and Plant Sciences, University of California, Riverside, CA 92521-0124.** E-mail: [lord@ucr.ac1.ucr.edu](mailto:lord@ucr.ac1.ucr.edu); FAX: 909-787-4437; website: <http://cnas.ucr.edu/%7Ebbs/homepage.htm>.

Deadline: Review of files will begin in early September 1999, and will continue until the position is filled. Position available: January 1, 2000.

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

### HEMATOPATHOLOGIST AND CLINICAL CYTOGENETICIST

**ASSISTANT/ASSOCIATE PROFESSOR.** The Department of Pathology and Laboratory Medicine at the University of California, Los Angeles (UCLA) invites applications for clinical faculty positions at the level of Assistant or Associate Professor. The Department is seeking two individuals with primary interest in hematopathology and clinical cytogenetics. Candidates must be an M.D. and Board-eligible/Board-certified. Hematopathology candidates must have experience in bone marrow, flow cytometry, hematology, and molecular pathology. Clinical Cytogeneticist candidates must have diagnostic experience that includes prenatal, postnatal, and solid tumor diagnosis. The candidates will be expected to assume teaching responsibilities and to develop a translational research program.

Qualified candidates should send their curriculum vitae, statement of interest, and a list of three references to: **David A. Bruckner, Sc.D., Search Committee Chair, Department of Pathology and Laboratory Medicine, UCLA Medical Center, 171315, 10833 LeConte Avenue, Los Angeles, CA 90095-1713.**

*University of California is an Affirmative Action/Equal Opportunity Employer. Women and members of minority groups are encouraged to apply. Hiring is contingent upon eligibility to work in the United States.*

Columbia University, Department of Pathology. Applications are requested for new faculty positions at **ASSISTANT, ASSOCIATE, and FULL PROFESSOR** rank in the areas of oncogenesis, Alzheimer's disease, neurology, immunology, cell biology, and infectious disease. Applicants will be expected to provide evidence of ability to develop a vigorous, grant-funded research program. Preference will be given to those who have current funding and who have certification in pathology. Please send curriculum vitae, statement of research program, and names of three references to: **Judith Burrell, Department of Pathology, 630 West 168th Street, New York, NY 10032.** E-mail: [jb141@columbia.edu](mailto:jb141@columbia.edu). *Columbia University takes Affirmative Action toward Equal Employment Opportunity.*

## Phased Technology Application Award for Pilot Applications of Novel Technologies

Applications are solicited for:

### Applications of Innovative Technologies for the Molecular Analysis of Cancer

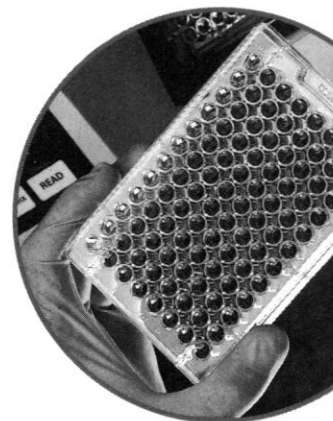
The program features:

- Single application for technology evaluation and application phases
- Expedited transition for successful technology evaluation to an expanded application phase
- Flexible budgets
- Flexible staging of evaluation and application phases

Applications of molecular analysis tools for the study of cancer model systems, preclinical and clinical samples, and for the use in population or epidemiologic research are sought.

Technologies of interest include those that are suitable for *in vitro*, *in situ*, or *in vivo* (e.g. imaging) analysis of:

- Alterations and instabilities in genomic DNA
- Expression of genes and gene products
- Cellular localization, post-translational modification, and function of proteins
- Major signal transduction networks involved in cancer
- Exogenous infectious agents in cancer



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**[www.nih.gov/grants/guide/pa-files/PA-99-102.html](http://www.nih.gov/grants/guide/pa-files/PA-99-102.html)**

**Small businesses** are encouraged to consider a parallel announcement at: [www.nih.gov/grants/guide/pa-files/PA-99-103.html](http://www.nih.gov/grants/guide/pa-files/PA-99-103.html)

## Phased Innovation Award for Technology Development

Applications are solicited for:

### Innovative Technologies for the Molecular Analysis of Cancer

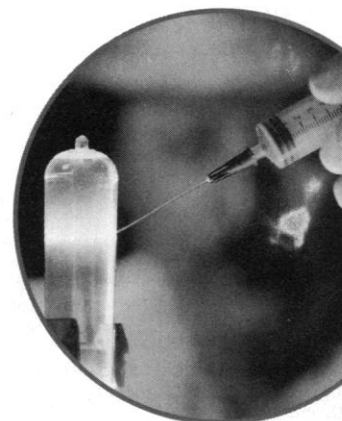
The program features:

- Single application for technology research and development phases
- Expedited transition for successful technology research to an expanded development phase
- Flexible budgets
- Flexible staging of feasibility and development phases

Molecular analysis tools for the study of cancer model systems, preclinical and clinical samples, and for the use in population or epidemiologic research are sought.

Technologies of interest include those that are suitable for *in vitro*, *in situ*, or *in vivo* (e.g. imaging) analysis of:

- Alterations and instabilities in genomic DNA
- Expression of genes and gene products
- Cellular localization, post-translational modification, and function of proteins
- Major signal transduction networks involved in cancer
- Exogenous infectious agents in cancer



**For complete information on this new program:** Visit our Web Site or call us at 301/496-1550

**[www.nih.gov/grants/guide/pa-files/PA-99-100.html](http://www.nih.gov/grants/guide/pa-files/PA-99-100.html)**

**Small businesses** are encouraged to consider a parallel announcement at: [www.nih.gov/grants/guide/pa-files/PA-99-101.html](http://www.nih.gov/grants/guide/pa-files/PA-99-101.html)

## POSITIONS OPEN

### FACULTY POSITION IN ACTIVE TECTONICS AND GEOMORPHOLOGY AT YALE UNIVERSITY

The Department of Geology and Geophysics at Yale University announces a ladder faculty position, at either the junior or senior level, in the general area of active tectonics and geomorphology, starting as early as January 2000. This position is part of a broad multidisciplinary hiring initiative in earth sciences at Yale, including the areas of the dynamics of the oceans, atmospheres, and climate; geochemistry; solid-earth geophysics; and paleontology. For the active tectonics and geomorphology search, we are particularly interested in finding candidates who relate the evolution of landforms to the forcing caused by tectonic and climate processes. We also welcome applications from related fields, including, but not limited to, geodynamics of landscape evolution, paleoseismology, structural geology, and tectonics. The successful candidate is expected to develop an internationally visible research program, and to teach at both the graduate and undergraduate levels.

The closing date is September 30, 1999. Applicants should send a curriculum vitae, a statement of professional goals, and the names and addresses of three or more referees to:

**Geomorphology Search Committee**  
c/o Professor Danny Rye, Chair  
Department of Geology and Geophysics  
Yale University  
P.O. Box 208109  
New Haven, CT 06520-8109

*We encourage applicants from historically disadvantaged ethnic, racial, and gender categories. Yale University is an Equal Opportunity Employer.*

### MEDICAL GENETICIST DEPARTMENT OF MEDICINE

The Department of Medicine at the University of California, Irvine is seeking a faculty member at the **ASSOCIATE PROFESSOR** or **PROFESSOR** level (tenured) with expertise in medical genetics. The ideal candidate is an Investigator with a nationally recognized and independently funded research program in medical genetics. Extensive collaborative interactions will be available with members of the University genetics and molecular biology communities. Qualifications include an M.D., Ph.D., or M.D.-Ph.D. degree and extensive background, training, and experience in the field of human genetics. The Department is undergoing reorganization under the leadership of a new Chair. Our goal is to identify scientists of the highest caliber for this expanded research initiative. Interested candidates should send a curriculum vitae and names and addresses of three references to: **Murray Korc, M.D., Vice Chair for Research, Division of Endocrinology, Diabetes and Metabolism, Department of Medicine, Med Sci I, C240, Irvine, CA 92697.** *The University of California is an Equal Opportunity Employer, committed to excellence through diversity.*

### STAFF ASSOCIATE COLUMBIA UNIVERSITY

The Gertrude H. Sergievsky Center has a full-time position for a Staff Associate on a study of Down syndrome and Alzheimer's disease. Responsibilities include cognitive assessment of adults with mental retardation, interviewing, medical record review, and phlebotomy. Previous experience with adults with mental retardation and interviewing required. Must be a licensed Phlebotomist. A car is required to travel to interview sites, with reimbursement for travel expenses and travel time; may require occasional evening work. B.A. required; M.A. in epidemiology, psychology, or biomedical studies preferred. Salary is \$31,000, with good benefits.

Qualified applicants should send résumés to: **Dr. Nicole Schupf, Gertrude H. Sergievsky Center, P&S Box 16, 630 West 168th Street, New York, NY 10032.**

*Columbia University takes Affirmative Action toward Equal Employment Opportunity.*

## POSITIONS OPEN

### DIRECTOR FOR RESEARCH

The VA Greater Los Angeles Healthcare System (VAGLAHS) invites applications for the position of Director for Research. VAGLAHS is the largest VA integrated health care system. It includes a tertiary medical center, extended care facilities, and comprehensive outpatient programs with five ambulatory care centers, eight community-based clinics, and a wide variety of special programs: VA Center of Excellence in Health Services Research; CURE: Digestive Diseases Research Center; Geriatric Research, Education, and Clinical Center (GRECC); and Mental Illness Research, Education, and Clinical Center (MIRECC). Strong research, education, and clinical affiliation with the University of California at Los Angeles (UCLA) and the University of Southern California (USC) enhances a highly successful research program with more than 300 funded Investigators conducting basic sciences, clinical, and health services research. The successful candidate is expected to play a critical role in policy development and management of the VAGLAHS Research and Development Program and a central role in assuring full compliance with federal, state, and VA research regulations. Board-certified M.D. candidate with evidence of significant administrative and management experience and a strong record of peer-reviewed extramural funding and research productivity are encouraged to apply. Excellent interpersonal, supervisory, and mentoring skills are a prerequisite. Candidates must be eligible for an appointment at the level of Associate or Full Professor. *U.S. citizenship is required. All applicants are subject to drug testing. Direct Deposit Enrollment is required of all employees. Relocation expenses are offered.*

Applications (including names, addresses, telephone numbers, and e-mail addresses for three references) should be received by July 31, 1999. Please send this information to: **Dr. M. Samloff, Chair, Search Committee, c/o S. Setoda, Human Resources (05), VA Greater Los Angeles Healthcare System, 11301 Wilshire Boulevard, Los Angeles, CA 90073.**

*The Department of Veterans Affairs is an Equal Opportunity Employer.*

### THE UNIVERSITY OF NEW MEXICO HEALTH SCIENCES CENTER SCHOOL OF MEDICINE Department of Molecular Genetics and Microbiology

Applications are invited for an **ASSISTANT PROFESSOR** tenure-track faculty position in the Department of Molecular Genetics and Microbiology at the University of New Mexico School of Medicine. Candidates must have a Ph.D. or equivalent degree and postdoctoral experience by time of application. Evidence of research productivity in the form of publications and/or external funding; research experience and interests in cellular immunology, innate immunity, or the interface between innate and acquired immunity; and the potential to participate in collaborative research within the School of Medicine are desired. The applicant will be expected to develop an externally funded research program and to participate in departmental teaching of medical students and graduate students. Interested individuals should submit a letter of application including a description of research interests, plans, and support; a curriculum vitae; and three (3) letters of recommendation. Application materials must be received by August 1, 1999 (late applications will not be accepted). Salary will be commensurate with experience. *Must be legally authorized to work in the United States.* Materials should be mailed to: **Dolores Tarin, Department of Molecular Genetics and Microbiology, University of New Mexico, School of Medicine, Albuquerque, NM 87131.** Job requisition #4332 must be referenced. For more information about the Department of Molecular Genetics and Microbiology website: <http://macbeth.unm.edu/som/micro/micro/html>. *UNM is an Affirmative Action/Equal Opportunity Employer and Educator.*

## POSITIONS OPEN

### FOUR NEUROSCIENCE FACULTY POSITIONS NEUROLOGICAL SCIENCES INSTITUTE Oregon Health Sciences University

The Neurological Sciences Institute (NSI) is recruiting additional faculty to staff its new, expanded research facility being built on Oregon Health Sciences University's west campus, at the western edge of Portland. We invite applications from Neuroscientists at the level of **ASSISTANT, ASSOCIATE, or SENIOR SCIENTIST** whose research complements that of the current faculty ([website: www.ohsu.edu/nsi/](http://www.ohsu.edu/nsi/)). Preference will be given to those with extramurally funded programs. All levels of investigation will be considered, including molecular, cellular, systems, and behavioral.

Our institute is a multidisciplinary center dedicated to advancement of our understanding of the brain and neurological disorders and to application of that understanding to address problems in human health. We are part of a rapidly growing university that is strong in basic and clinical neurosciences. Our new building will be located adjacent to the Oregon Regional Primate Research Center, which makes primate research possible.

Applicants should submit a curriculum vitae, a statement of research interests, and three letters of recommendation to: **Search Committee, Neurological Sciences Institute, Oregon Health Sciences University, 1120 N.W. 20th Avenue, Portland, OR 97209.** Applications must be received before August 1, 1999; interviews will be conducted in the fall of 1999 for appointments to begin in the fall of 2000.

*OHSU is an Equal Opportunity Employer.*

### ASSISTANT/ASSOCIATE PROFESSOR

The Center for Molecular and Structural Biology (CMSB), invites applications for faculty positions at the Assistant or Associate Professor level.

CMSB is located in the new Hollings Cancer Center on the campus of the Medical University of South Carolina in Charleston. This Center was originally formed by an active research group of Molecular Oncologists recently relocated from National Cancer Institute (NCI). In addition, the Center has successfully recruited young scientists with expertise in Developmental Genetics. CMSB is well supported by RO1 grants and an NCI Program Project Grant.

Applicants should have expertise in their area of research with proven ability in competing for federal, private, or industrial research funding. The Laboratories are present in a newly constructed well-equipped facility with excellent accessibility to clinical staff and materials.

Please send curriculum vitae, representative reprints, and current and future research plans. **Dr. Takis S. Papas, Medical University of South Carolina, The Center for Molecular and Structural Biology, 86 Jonathan Lucas Street, P.O. Box 250956, Charleston, SC 29425.**

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

### ASSISTANT PROFESSOR GENE THERAPY RESEARCH

Position immediately available at newly established Musculoskeletal Disease Center. Successful candidate will have training in mammalian gene therapy. Requirements include working experience in *in vivo* gene transfer in animal models, good publication record, and grant-writing skills. Management and administrative experience is essential. Salary and benefits competitive; possibility exists for long-term position. Please send curriculum vitae, cover letter, and names of three references to: **David J. Baylink, M.D., Loma Linda University, P.O. Box 7210, Loma Linda, CA 92354.** *Loma Linda University is an Equal Opportunity Employer.*

## Magnetic Resonance Engineer/Physicist

The Laboratory of Cardiac Energetics in the National Heart, Lung & Blood Institute is recruiting a Ph.D. level physicist or engineer to help develop and support cardiovascular MR imaging projects. The Laboratory runs two MRI scanners dedicated to cardiovascular MRI. This individual will specifically support the clinical cardiovascular imaging program. This position will require the selected individual to program MR acquisitions in the EPIC programming language on a General Electric LX platform for the CV/I system. This individual will also provide hardware support for the project. Experience in cardiac imaging is necessary. Interest in fast imaging or myocardial mechanics is desirable. MR hardware and coil development experience is desirable.

This position provides full salary support, research support, and travel expenses for 2 – 5 years. Salary level is commensurate with experience. Applicants should submit a CV and 2 letters of recommendation to:

**Andrew Arai, M.D.**  
**Laboratory of Cardiac Energetics/NHLBI**  
**National Institutes of Health**  
**Bldg. 10, Room B1D416**  
**10 Center Drive MSC 1061**  
**Bethesda, MD 20892-1061**

*The National Institutes of Health  
is an Equal Opportunity Employer.*

## ANNOUNCEMENT

### NATIONAL SPACE BIOMEDICAL RESEARCH INSTITUTE

#### *Special Announcement to Institutions*

**The National Space Biomedical Research Institute (NSBRI) announces a special opportunity for institutions to compete to become a member of the NSBRI Consortium.**

**NSBRI Announcement 99-01 (May 10, 1999)**  
**An Opportunity to Become a Member of the**  
**National Space Biomedical Research Institute**  
**Consortium**

**Letter proposals will compete in a two-phase process. The second phase involves a more detailed application and a reverse site visit.**

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

**Initial Letter of Application Due: July 2, 1999**

**Paper copies of this Announcement are available to those who do not have access to the Internet by calling 713-798-7412 or by writing to R. J. White, NSBRI, One Baylor Plaza, NA-425, Houston, TX 77030.**

# PRESIDENT

STATE UNIVERSITY OF NEW YORK

COLLEGE OF ENVIRONMENTAL  
SCIENCE AND FORESTRY

SYRACUSE, NEW YORK

The SUNY College of Environmental Science and Forestry (ESF), founded in 1911, seeks a president to lead this premier doctoral-granting institution focused on science, technology, design, and policy issues associated with natural resources and the environment. This is an exciting opportunity to lead an outstanding college that is effectively addressing some of society's most pressing concerns.

The Search Committee seeks a proven leader to engage the ESF community in refocusing its vision; to leverage its remarkable people, programs, and traditions to further enhance its national and international visibility; and to raise resources to help ensure continued success. The successful candidate's credentials and experience must be sufficient to earn the respect of the academic community and foster excellence. The new president will be committed to the College's tripartite mission of instruction, research, and public service and will demonstrate the ability to maintain the unusually strong working relationship between ESF's administration and its faculty, staff, and students.

ESF's status as a small, specialized college with a major research program is enhanced by a combination of productive relationships. It is one of eight doctoral-granting institutions in the diverse, public, 64-campus SUNY system and enjoys a close partnership with neighboring, private Syracuse University. ESF's regional campuses and field stations on 25,000 acres throughout New York State offer unique educational, research, and demonstration opportunities.

The College offers a wide array of programs to 1200 undergraduates and 600 graduate students through its Faculties of Chemistry, Construction Management & Wood Products Engineering, Environmental & Forest Biology, Environmental Resources & Forest Engineering, Environmental Studies, Forestry, Landscape Architecture, and Paper Science & Engineering. Its 130 faculty members have impressive records of scholarship, excellence in teaching, strong extramural funding, and active community involvement.

Confidential inquiries, nominations, and applications with cover letter, curriculum vita, and list of references may be made to: Ms. Karen Wilcox at Isaacson, Miller, 334 Boylston St., Boston, MA 02116. E-mail: [kwilcox@imsearch.com](mailto:kwilcox@imsearch.com). Fax: 617-262-6509. A full position profile is available upon request, and information on ESF can be found at [www.esf.edu](http://www.esf.edu).



*An Equal Opportunity/Affirmative Action Employer*

## POSITIONS OPEN

### NATIONAL CANCER INSTITUTE NATIONAL INSTITUTES OF HEALTH

The Cell and Cancer Biology Department, Medicine Branch, Division of Clinical Sciences has an opening for a **STAFF SCIENTIST**. This is a renewable position with a five-year term. Candidates will be self-motivated individuals with an expertise in confocal microscopy and microinjection. Preference will be given to individuals with experience using the Zeiss 510. Research experience in tumor biology, particularly with small animal models is required. The successful candidate will be part of a highly interactive group of scientists and clinicians engaged in various aspects of cancer cell research.

Candidates must have a Doctoral degree or equivalent and at least five years of postdoctoral experience. Salary range \$58,000 to \$65,000 is commensurate with qualifications and is accompanied with full benefits. Applicants should send their curriculum vitae, bibliography, and three letters of recommendation to: **Kathleen Kelly, Ph.D., Cell and Cancer Biology Department, MB/DCS/NCI/NIH, Building 10, Room 3B43, 9000 Rockville Pike, Bethesda, MD 20892. E-mail: kkelly@helix.nih.gov.** Deadline for receipt of applications is July 1, 1999. NIH is an Equal Opportunity Employer.

**MOLECULAR BIOLOGIST.** Non-tenure-track position in internal medicine (hematology/oncology) and the Massey Cancer Center to develop a collaborative, extramurally supported research program in molecular cell signaling and apoptosis. Requires Ph.D. or equivalent degree in molecular biology or cancer molecular genetics and formal training and expertise in molecular cell signaling of cancer cells, with an emphasis in transcriptional regulation of apoptotic pathways (e.g., Bcl-2, Fas). A proven track record of peer-reviewed publications, excellent oral and written communication skills, and at least four years of productive postdoctoral cancer research experience is required. Teaching and advising at the graduate, postdoctoral, or professional level and participation in service activities at the departmental, school, or institutional level is required. Send statement of research interests, curriculum vitae, selected reprints, and contact information for three professional references by July 6, 1999, to: **Dr. Richard Seither, Massey Cancer Center, P.O. Box 980037, Richmond, VA 23298-0037.** Virginia Commonwealth University is an Equal Opportunity/Affirmative Action Employer. Women, minorities, and persons with disability are encouraged to apply.

Research and development **INTERNATIONAL TECHNOLOGIST II** (cigar blends). Develop cigarette and fine-cut blends, with a focus on the Canadian and other strategic Virginia blend markets (Africa, Far East, and Middle East). Provide input/approval for Canadian and offshore Virginia tobacco purchases, and assist in the establishment of global leaf specifications. Maintain and develop Canadian cigar blends. Ensure adherence to leaf and blend specifications. Requirements: High school diploma plus two years of experience in job offered or in research and development of cigar blend tobacco products. Salary range: \$47,000 to \$55,900 per year, 37.5 hours per week, Monday-Friday, 8:00 a.m. to 4:30 p.m. Submit résumé to: **R. J. Reynolds Tobacco Company, Susan Clapp, Department NL, P.O. Box 1487, Winston-Salem, NC 27102-1487.**

### CELL BIOLOGIST

A position with long-term support is available immediately for a Cell Biologist in the Laboratory of Lung Biology, Georgetown University. The position involves work to understand cellular and molecular aspects of lung formation (*Nature Medicine* 3:675, 1997). The applicant must be a U.S. citizen or permanent resident. Experience in tissue culture required, experience with *in situ* hybridization and electron microscopic immunolocalization is highly desirable. Please send curriculum vitae, bibliography, and three letters of references to: **Dr. Donald Massaro, FAX: 202-687-8538; e-mail: massaro@gusun.georgetown.edu.**

## POSITIONS OPEN

### NEXTRAN

AN AFFILIATE OF BAXTER HEALTHCARE CORPORATION

### SCIENTISTS

NEXTRAN, an affiliate of Baxter Healthcare and an established leader in xenotransplantation research, has two Ph.D. positions available at our Princeton, New Jersey location.

**IMMUNOLOGIST:** We are looking for an innovative Immunologist (Ph.D. with postdoctoral experience preferred) interested in investigating the unique immunological challenges that are presented by xenotransplantation. The successful candidate will join an active team that supports our preclinical transplantation program and is focused on research to control the immune response induced during pig-to-primate xenografts. Candidates with general expertise in B-cell activation, or with experience in primate immunology are preferred, but all candidates will be considered. Responsibilities will be commensurate with experience.

**VIROLOGIST:** Extensive experience working with retroviruses (Ph.D. plus postdoctoral experience preferred), with proficiency in basic molecular biology and tissue culture techniques are required for this position. Incumbent will join an established group that is characterizing porcine endogenous retroviruses at the molecular and functional level.

NEXTRAN offers an excellent working environment along with competitive compensation and benefits. Please submit your curriculum vitae indicating the position you are applying for and your salary requirements to:

**The Human Resources Manager  
NEXTRAN  
303B College Road East  
Princeton, NJ 08540**

U.S. Genomics is a radically different genomics company focused on the development of superior genetics technologies. We are looking for a few dashing individuals to pursue advanced genetic techniques.

**GURU OF HUMAN GENETICS.** Requires experience with working out complex molecular biology assays for the study of human genetics. Must have a Ph.D. in human genetics and have worked with BACs, YACs, genomic DNA isolation, and pulsed field gel electrophoresis.

**OPTICS/FLUORESCENCE BIOENGINEER.** Do you have optics, fluorescence, microfabrication, and instrument design skills? M.S. preferred.

**DEDICATED TECHNICIAN.** Position requires standard treasure trove of laboratory tricks, including PCR, gel purification, PAGE, and DNA hybridization. M.S. preferred.

**WIZARD IN GENE-HUNTING SOFTWARE DEVELOPMENT.** You should be able to produce sophisticated programs for facile gene-hunting. Requires deep knowledge of whole genome association studies, large-scale linkage analyses, sib-pair analyses, and quantitative trait mapping techniques. Ph.D. in genetics/bioinformatics.

Please reply to: **U.S. Genomics, 8 Saint Mary's Street, Boston, MA 02215. FAX: 617-358-0016.**

**SCIENTIST.** Applicants are being accepted for the position of Scientist in the Division of Allergy, Departments of Medicine and Pediatrics. Applicants must have a Ph.D. degree in pathology or related area. Experience with histology, immunohistology, and *in situ* hybridization to evaluate mechanisms of asthma is desired but not required. The successful candidate will participate in independent and collaborative research aimed at defining the roles and mechanisms of the inflammatory response in the development of asthma with human lung tissue and in an animal model. Interested candidates should send a curriculum vitae and the names of three individuals that may be contacted for references to: **Dr. William Busse, H6/367 CSC, 600 Highland Avenue, Madison, WI 53792. E-mail: wwb@medicine.wisc.edu.** The University of Wisconsin-Madison is an Equal Opportunity/Affirmative Action Employer.

## POSITIONS OPEN

### IMMUNOTHERAPY PROGRAM

St. Luke's Medical Center in Milwaukee, a 711-bed tertiary care teaching hospital located on the shores of Lake Michigan, 90 miles north of Chicago has the following openings in its Immunotherapy Program.

### SCIENTIFIC DIRECTOR

The Immunotherapy Program at St. Luke's Medical Center invites applications for a Scientific Director to oversee translational research in a fully funded, hospital-based program. We encourage applications by individuals with interests in adoptive immunotherapy, gene therapy, angiogenesis inhibitors, or vaccine development for solid tumors. Applicants must hold an M.D. or M.D.-Ph.D. degrees and demonstrate a record in translational clinical research and obtaining external funding. Primary responsibilities include development of an industry outreach program; coordinating preclinical studies of active and adoptive immunotherapy of solid tumors; and developing Phase I clinical trials. An additional responsibility is participation in ongoing research studies (dendritic/tumor antigen vaccines, T cell gene therapy, bifunctional antibodies). The position offers exciting potential for collaborations with clinicians and scientists.

### SENIOR RESEARCH SCIENTIST

The Immunotherapy Program at St. Luke's Medical Center invites applications for a Senior Investigator who has demonstrated excellence in basic and/or translational immunotherapy research. We encourage application by individuals with interest in adoptive immunotherapy, gene therapy, angiogenesis inhibitors, or vaccine development for solid tumors. The individual is expected to direct their own independent research; participate in ongoing projects (dendritic cell vaccines, gene therapy of T cells, bifunctional antibodies); and implement molecular and cellular research procedures suitable for Phase I clinical trials. Applicants must hold a Ph.D. and have demonstrated experience with obtaining external research funding. Additional desired skills include collaborative research experience and strong interpersonal skills. The position offers excellent opportunities for interactions with clinicians and scientists in a fully funded, hospital-based research program.

Generous funding for laboratory start-up and relocation are available for both positions. Applications, including a curriculum vitae, statement of current and future research interests and names of three references should be submitted to:

**T. Rowe, Centralized Employment  
Aurora Health Care  
3033 South 27th Street, Suite 101  
P.O. Box 343910  
Milwaukee, WI 53234-3910  
Telephone: 414-649-7363**

*Equal Opportunity Employer/Minorities/Females/Disabled/Veterans. We support a safe, healthy, and drug-free work environment through criminal background checks and pre-employment drug testing.*

**POSTDOCTORAL and RESEARCH ASSOCIATE** positions available to conduct research on the role of sphingolipids as signal transducers during stress responses in *Saccharomyces cerevisiae* (*J. Biol. Chem.* 272:30196, 273:19437; *Ann. Rev. Biochem.* 67:27). Experience with yeasts, lipids, enzymology, or signal transduction is required. Send résumé with names of three references to: **Robert Dickson, Department of Biochemistry, University of Kentucky, Lexington, KY 40536-0298.**

**POSTDOCTORAL POSITION.** Virology/biochemistry position for structural, functional, and genetic studies of the baculovirus major envelope protein. Studies involve *in vitro* mutagenesis, receptor binding, membrane fusion, protein structure, and generation of mutant viruses. Experience in virology, molecular-cellular biology, and/or protein biochemistry preferred. Send curriculum vitae, letter, and names of three references to: **Dr. G. Blissard, Boyce Thompson Institute at Cornell University, Tower Road, Ithaca, NY 14853. Telephone: 607-254-1366; e-mail: gwb1@cornell.edu.**

**ICRAF**

**International Centre for  
Research in Agroforestry  
Recruiting an Ecologist for the  
Natural Resource Strategies  
and Policy Programme**

ICRAF is an international research organization supported by the Consultative Group on International Agricultural Research (CGIAR). It works in more than 20 countries in Africa, Asia and Latin America and has an annual budget of about US\$22 million provided by more than 35 donor organizations. ICRAF's ultimate purpose is to improve human welfare by reducing poverty, increasing cash income, improving food and nutritional security, and enhancing ecosystem resilience in the tropics, through improved agroforestry systems.

**The Programme**

ICRAF seeks an ecologist to join its Natural Resource Strategies and Policy Programme. This programme focuses on four research questions: (1) What conditions are most conducive to tree planting on farm and in agricultural landscapes? (2) How can trees be managed to enhance their contributions to the local, regional and global environment? (3) How does tree planting and tree management contribute to household food security and the rural economy? (4) How do policies and institutions affect the adoption and management of agroforestry technologies? The programme is comprised of a multi-disciplinary group of scientists, including ecologists, economists, anthropologists and geographers. Research projects integrate perspectives from different disciplines and span spatial scales.

**The Position**

The position of ecologist has been created to strengthen ICRAF's research on the effects of trees and tree management systems on the environment. Watershed management will be an important focus of this work, with particular attention to the effects of tree management on watershed protection and water quality in the Lake Victoria Basin and the East African Highlands. The successful candidate will be expected to initiate and implement research on other ecosystem services of trees, particularly carbon sequestration and agroecosystem resilience.

The ecologist will identify and evaluate promising options for improving farm productivity while restoring degraded agricultural landscapes or mitigating environmental problems in intensifying land use systems. He/she will design and lead field studies to assess how current and novel options shape the interactions between trees, crops, livestock, water and soils at the catchment and watershed scales. The ecologist will also design research to assess how alternative land uses and agroforestry practices can contribute to carbon sequestration and agroecosystem resilience.

**The successful candidate will have:**

- a PhD degree in an ecological science
- at least four years of relevant post-graduate research experience
- at least two years of experience living and conducting field work in developing countries especially in East Africa
- Experience in the use of geographic information and decision support systems, experience and qualifications in the analysis of satellite imagery and experience in project leadership and fund raising are added advantages
- demonstrated interest and ability to work in multi-disciplinary and multi-cultural teams
- excellent communication skills
- fluency in English, competence in French and/or Spanish is desirable
- and excellent record of achievement and publication
- strong analytical and computer skills

**Terms of offer**

ICRAF offers an internationally competitive salary and benefits package, and a collegial and gender-sensitive working environment. The contract is for continuing appointment up to 10 years; subject to a one-year probation period, annual assessment of performance, continued relevance of the position and available resources. Applicants are invited to send a detailed curriculum vitae, with salary details, date of birth and the names and addresses of three referees (including telephone, fax numbers and e-mail addresses). All correspondence should be addressed to the Head of Human Resources, International Centre for Research in Agroforestry, PO Box 30677, Nairobi, Kenya; tel: +254 2 521450 or 1 650 833 6645; fax: +254 2 521001 or 1 650 833 6646; e-mail: r.lccuyer@cgiar.org. Code SCI Women and developing country nationals are particularly encouraged to apply.

Applications will be considered until 31 August 1999 or until the position is filled.

**We invite you to learn more about ICRAF by accessing our web site at <http://www.cgiar.org/icraf> on the Internet.**

**ICRAF**

**International Centre for  
Research in Agroforestry  
Recruiting a Leader of the  
Ecosystem Rehabilitation  
Programme**

ICRAF is an international research organization supported by the Consultative Group on International Agricultural Research (CGIAR). It works in more than 20 countries in Africa, Asia and Latin America and has an annual budget of about US\$22 million provided by more than 35 donor organizations. ICRAF's ultimate purpose is to improve human welfare by reducing poverty, increasing cash income, improving food and nutritional security, and enhancing ecosystem resilience in the tropics, through improved agroforestry systems.

**The Programme**

The Ecosystem Rehabilitation Programme undertakes ICRAF's ecological research. It focuses on the major ecosystem functions which agroforestry trees and systems fulfill at various spatial and temporal scales (e.g., agricultural productivity and sustainability, nutrient cycling, water cycling, greenhouse gas and climate regulation, biodiversity). The principal objective of the programme is to understand and analyze these functions in order to design ways of enhancing them. The work is achieved through the collaboration of scientists from a wide range of disciplines, both within ICRAF's programmes and with outside collaborators. Staff are based either in Nairobi or in the various regions where ICRAF works throughout the tropics.

**The Position**

ICRAF wishes to recruit a leader for this programme, to be based at ICRAF HQ in Nairobi. Reporting to the director of research, the incumbent will provide scientific leadership to the programme, and oversee a budget of approximately US \$2.3 million and a team of 15 professionals. He/she will guide the evolution of the programme over the next few years towards an ecological approach to agroforestry research. Providing leadership will entail setting strategic research directions that are congruent with ICRAF's priorities; aligning and motivating staff in the implementation of these directions; being a member of the ICRAF middle management team; and fund raising. The leader also ensures that scientists in the programme work successfully in collaboration with scientists in other ICRAF programmes and outside institutions. Finally, the leader is responsible for the coherence and relevance of all the activities undertaken in the programme across regions.

**The Candidate**

The successful candidate will have:

- a PhD in systems ecology or an ecological discipline and at least eight years of post PhD research experience in international research
- a good international reputation as demonstrated by a strong publication record in refereed journals
- experience in fostering a team approach to research and in fund raising
- strong conceptualization and scientific leadership skills coupled with a basic familiarity with other key disciplines in ICRAF's mandate (e.g., economics, tree domestication)
- the ability to work well in a cross-cultural and multidisciplinary environment
- a willingness to travel regularly to visit ICRAF's scientists based outside of Nairobi (in Latin America, South/East Asia and sub-Saharan Africa)
- strong communication skills in English; knowledge of French and Spanish would be an advantage.

**Terms of offer**

ICRAF offers an internationally competitive salary and benefits package, and a collegial and gender-sensitive working environment. The contract is for continuing appointment up to 10 years; subject to a one-year probation period, annual assessment of performance, continued relevance of the position and available resources. Applicants are invited to send a detailed curriculum vitae, with salary details, date of birth and the names and addresses of three referees (including telephone, fax numbers and email addresses). All correspondence should be addressed to the Head of Human Resources, International Centre for Research in Agroforestry, PO Box 30677, Nairobi, Kenya; tel: +254 2 521450 or 1 650 833 6645; fax: +254 2 521001 or 1 650 833 6646; email: r.lccuyer@cgiar.org. Code SCI Women and developing country nationals are particularly encouraged to apply.

Applications will be considered until 15 August 1999 or until the position is filled.

**We invite you to learn more about ICRAF by accessing our web site at <http://www.cgiar.org/icraf> on the Internet.**

## POSITIONS OPEN

### RESEARCH OPPORTUNITY IN MOLECULAR MEDICINE

The Center for NeuroVirology and NeuroOncology invites qualified applicants for **POSTDOCTORAL, RESEARCH ASSISTANT and GRADUATE STUDENT FELLOWSHIP** positions. NIH grant-funded positions are available in several laboratories participating in a multidisciplinary research program directed toward the study of the molecular basis of viral-induced diseases and cancers. Openings are available in the following Investigators' laboratories:

**Kamel Khalili, Ph.D.:** HIV and JCV viral/host interactions in central nervous system, role of viral transforming protein, T antigen, and cell cycle regulators in tumorigenesis in central nervous system, design of molecular therapeutic strategies for cancer and AIDS therapy.

**Jay Rappaport, Ph.D.:** HIV vaccine development targeting Tat protein and its role in viral replication and immune suppression. Role of HIV-1 Tat in viral-induced central nervous system disorders.

**Shohreh Amini, Ph.D.:** Role of HIV-1 Tat-induced cytokine dysregulation in the pathogenesis of HIV in central nervous system. Interaction of viral accessory proteins with host cell cycle regulators. Mechanism of demyelination in central nervous system.

**Jagan Pongubala, Ph.D.:** Role of external signal-mediated induction of a novel transcription factor during hematopoiesis.

For Postdoctoral positions, candidates should have a recent Ph.D. in molecular biology, biochemistry, microbiology, or immunology and strong record of publication. Research Assistants should have a B.S./B.A. degree with relevant research experience. Graduate student candidates should have laboratory research experience and strong academic background.

Please send a letter, curriculum vitae, and the names of three references to: **Dottie Bathe, 245 North 15th Street, MS #406, Philadelphia, PA 19102-1192.**

*MCP Hahnemann University is an Equal Opportunity Employer.*

### PHYSIOLOGICAL FOREST GENETICIST FOREST PATHOLOGIST/GENETICIST Institute of Forest Genetics USDA Forest Service, Davis, California

The Institute of Forest Genetics (IFG) seeks to fill two permanent Research Geneticist positions at its laboratory at the University of California, Davis. Successful candidates are expected to develop research programs in physiological genetics and host/pathogen interactions, respectively, by interfacing with existing strengths in genomics and population/evolutionary genetics at the IFG. Positions will be GS-12/13. To apply, log onto website: <http://dendrome.ucdavis.edu/jobs/ifg.html> or contact: **Dr. David B. Neale, Telephone: 530-754-8431; e-mail: dneale@dendrome.ucdavis.edu.** Closing date is July 9, 1999.

*The U.S. Department of Agriculture prohibits discrimination on all program activities.*

### POSTDOCTORAL TRAINING IN REHABILITATION ENGINEERING

**Boston University and Harvard Medical School**

The Integrated Rehabilitation Engineering Research Training Program is a new NIDRR-funded program involving Boston University, Harvard Medical School, Hebrew Rehabilitation Center for Aged, and Spaulding Rehabilitation Hospital. Postdoctoral Trainees will be exposed to clinical and research activities in physical medicine and rehabilitation and geriatrics. Trainees will interact with Biomedical Engineers, Clinical Investigators, and Clinical Trainees. A Ph.D. in biomedical engineering or a related field is required. Positions are for two years. Stipend is \$32,000 per year. Program starts September 1, 1999.

Interested candidates should send a statement of research interests, a curriculum vitae, and names of three references to: **Prof. J. J. Collins, Department of Biomedical Engineering, Boston University, 44 Cummings Street, Boston, MA 02215. E-mail: abl@bu.edu.**

## POSITIONS OPEN

### SCIENTIST/TOXICOLOGIST

The International Life Sciences Institute, a worldwide nonprofit, scientific foundation, seeks a **SENIOR SCIENTIST** for its Risk Science Institute. Applicants must be broadly trained in toxicology with expertise in human health and/or ecological risk assessment. The position requires a Ph.D. in toxicology or related biological science and three-plus years of professional experience. The successful applicant will work with scientists from diverse disciplines on a wide range of fundamental issues in risk assessment. Responsibilities include conceptualizing and developing projects, organizing and staffing technical workgroups, evaluating and analyzing scientific data, drafting and editing manuscripts, and identifying and soliciting funding support for projects. Position level and salary commensurate with experience. To be considered, send detailed résumé, publication list, names and addresses of three references, and salary history to: **Human Resources, International Life Sciences Institute, 1126 16th Street N.W., Washington, DC 20036. FAX: 202-659-3859. Equal Opportunity Employer/Minorities/Females.**

Research and development **INTERNATIONAL TECHNOLOGIST** (Virginia blends). Maintain continuity and uniformity of existing cigarette and fine-cut blends, with a focus on the Canadian and other strategic Virginia blend markets. Maintain and develop bill of material structures required for the company's materials resource planning system. Provide input into the replacement of the materials resource planning system by a global product specifications system. Once the global product specifications system is in place, maintain the tobacco segment of the system for Canadian and other original blends. Participate in activities of Canadian industry and government agronomy agencies, and coordinate development work originating from those agencies. Liaise with other departments to ensure adherence to leaf and blend specifications. Requirements: High school diploma plus two years of experience in job offered or in research and development of Virginia blend tobacco products. Salary range \$47,000 to \$55,900 per year, 37.5 hours per week, Monday-Friday, 8:00 a.m. to 4:30 p.m. Submit résumés to: **R. J. Reynolds Tobacco Company, Susan Clapp, Department NL, P.O. Box 1487, Winston-Salem, NC 27102-1487.**

A full-time position as **ASSISTANT SPECIALIST** is available in the Division of Neurobiology, Department of Molecular and Cell Biology, at University of California Berkeley. Minimum salary \$33,864. Salary commensurate with experience. Duties include research to carry out experimental studies of cell lineage, cell cycle composition, and gene expression embryonic epithelia. Qualifications: M.A. in developmental biology or related field. Ph.D. preferred. An academic technical position with the following skill requirement: microinjection of cell lineage tracers, fluorescence and video microscopy, *in situ* hybridization, and immunostaining. Familiarity with embryology of micromere lineages in glossiphoniid leeches strongly preferred. 100 percent time. July 8, 1999, through December 31, 1999, with possibility of reappointment.

Deadline date of application: July 5, 1999. Interested candidates should send complete curriculum vitae, research qualifications, and names and addresses of three references to:

**Professor David Weisblat  
385 Life Sciences Addition  
Department of Molecular and Cell Biology  
University of California  
Berkeley, CA 94720-3200**

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

## POSITIONS OPEN

### RESEARCH POSITIONS IN HUMAN GENETICS/GENOMICS Pennington Biomedical Research Center Baton Rouge, Louisiana USA

The Pennington Biomedical Research Center is seeking to appoint the following staff to support the research program of its recently appointed Director, **Dr. Claude Bouchard**, for studies on the genetic and molecular basis of human obesity and of the response to exercise.

(1) **ASSISTANT PROFESSOR-RESEARCH** to act as Project Director of the Heritage Family study. A Ph.D. with experience in genetic epidemiology and/or exercise is desirable (Position 024467).

(2) **INSTRUCTOR** to coordinate data management and analysis. A Ph.D. with expertise in bioinformatics and statistical genetics is required (Position 024468).

(3) Five **POSTDOCTORAL (PH.D.) RESEARCH ASSOCIATES** with experience in modern molecular and genomic technologies including genome scans, positional cloning, differential display, and microarrays (Position 024462-024466).

(4) Five **RESEARCH ASSISTANTS** (B.S. or M.S.) with experience in genetic and molecular techniques (Position 024457-024461).

Salaries for all positions will be commensurate with experience. Letters of application should clearly identify the position applied for and to be submitted with a curriculum vitae and the names of three referees. These should be addressed to: **Evelyn Bennett, Human Resource Management, Pennington Biomedical Research Center, 6400 Perkins Road, Baton Rouge, LA 70808-4124. LSU/PBRC is an Equal Opportunity/Affirmative Action Employer.**

### POSTDOCTORAL POSITIONS IN NEUROPLASTICITY IN AGING AND AFFECTIVE BEHAVIOR

Available immediately. Seeking individuals with expertise in modern neuroanatomical techniques, including image analysis. Experience with molecular techniques would be an asset. Projects include neurotrophin-induced changes in response to injury during the aging process (**Dr. James R. Unnerstall**) and estrogen effects in limbic areas related to affect (**Dr. Rochelle S. Cohen**). Please send curriculum vitae and names/addresses of three references to: **Rochelle S. Cohen, Ph.D., Department of Anatomy and Cell Biology, University of Illinois at Chicago, Chicago, IL 60612. E-mail: rscohen@uic.edu. UIC is an Affirmative Action/Equal Opportunity Employer.**

### STANFORD UNIVERSITY SCHOOL OF MEDICINE

One **POSTDOCTORAL POSITION** is available immediately for the highly motivated individual to study transcriptional control in tumor development. A recent Ph.D. degree with strong background in molecular biology is required. Prior experience in transcription regulation, DNA-protein interactions, and yeast two-hybrid system is highly desirable. We provide fruitful research environment and competitive salary and fringe benefits. Send curriculum vitae and the names of three references to: **Dr. Z. J. Sun, R135, Department of Surgery and Genetics, Stanford University Medical School, Stanford, CA 94305. E-mail: zsun@leland.stanford.edu.**

### POSTDOCTORAL POSITION

NIH-funded position in molecular immunology/host defense. Available projects involve the molecular and functional characterization of several novel endotoxin-induced, glucocorticoid-attenuated genes (*J. Biol. Chem.* 270:16756; *Methods Enzymol.* 287:250) including two new murine chemokines. Interested applicants with a strong background in biochemistry, molecular biology, immunology, or transgenic/knockout mouse work should send a curriculum vitae and names of three references to: **Dr. Jeffrey B. Smith, Department of Pediatrics, UCLA School of Medicine B2-325, Los Angeles, CA 90095-1752. E-mail: jbsmith@ucla.edu.**

## Transcending the limits of science...

LION Bioscience is a leading privately held Genomics and Life Science Informatics company with 150 employees at our headquarters in Heidelberg, Germany and in Cambridge, U.K. Our U.S. operation will open soon.

LION Bioscience sets new standards in discovery research by providing integrated solutions in genomics and informatics. We apply genome sequencing, functional genomics and genetics in conjunction with outstanding information technology in microbiology research, in the cardiovascular area and in nuclear receptor research. Our automated bioinformatics analysis system bioSCOUT™ and our database integration system SRS are installed at leading Life Science companies. They contribute to increasing efficiency and outcome of biology driven discovery research.

LION's vision is to integrate biological, chemical, and clinical data behind a single interface, providing the basis for in-depth functional analysis of health and disease relevant genes and proteins. To reach our ambitious goals we are actively seeking talented individuals which contribute their skills and knowledge to our team-based environment:

### Expert in Expression Analysis

(Heidelberg - Ref.: MH040699)

For our internal research program on nuclear receptor biology we look for an expert in expression analysis with documented expertise in MicroArray applications. The successful candidate holds either a MD or PhD degree and has at least 2 years of postdoctoral research experience. A broad biological background is mandatory.

### Human Molecular Geneticist

(Heidelberg - Ref.: RT040699)

Applicants should have a strong background in high-throughput DNA genotyping and subsequent computational analyses. A broad knowledge of molecular cell biology is required. Our program focusses on the identification of genes involved in cardiovascular disorders and the study of functional polymorphisms. The candidate will be working in a dedicated, international team with access to the latest technology and within a strong bioinformatics environment.

### Software Engineers

(Cambridge, UK)

Experienced software engineers to work on the SRS project. SRS is evolving and growing rapidly and provides a challenging set of unique networking and data management problems. This forces us to evaluate and use the latest software technologies and develop novel solutions ourselves. Qualifications include fluency in the C language, and comfort participating in a large software development project. A background in biology or experience in HTML, Java and object-oriented programming would be welcome.

### (Senior) Consultants /

### Project Managers Bioinformatics

(Ref.: JM040699a)

We are increasing our consulting activities supporting our LSI Software products. Therefore we need consultants who work in complex and sophisticated customer projects and bring them to success. Requirements are from biological research to IT concepts and specifications. We are looking for applicants with an excellent knowledge in molecular biology/chemistry as well as a sound IT background. We are offering interesting and challenging positions which require a high degree of independence and communication skills. Seniors/Project Managers should have experience in that field.

### Software Engineers / LSI

(Heidelberg - Ref.: JM040699b)

We seek experienced software engineers whose qualifications include excellent knowledge of analysis, design, and development of modular software and experience in object-oriented (languages: C++ or Java) and/or CGI techniques. A background of biological sciences and/or experience with relational or OO database systems are a plus.

### Field Scientific

### Applications Managers

(Heidelberg - Ref.: LK040699a)

We seek scientists with knowledge of Bioinformatics, Molecular Biology and Computer Systems interested in working directly with our current and potential customers. They will be responsible for assisting the customers to evaluate and use our products. Travel required. Multiple positions available in Europe and the United States

### Senior Sales Account Managers

(Heidelberg - Ref.: LK040699b)

We seek experienced Account Managers with knowledge of the Pharmaceutical, Genomics and/or Biotech Industry with 5 or more years experience managing key accounts. Knowledge of bioinformatics, computational analysis, databases and/or biology is preferred. Multiple positions available in Europe and the United States.

Our employees, their motivation and ideas, are the reasons of LION's success. LION lets its employees participate in its success. All LION employees can become shareholders of the company. Deadline for applications: July 15<sup>th</sup> 1999.

Please send your full application  
for Heidelberg to:

Ingrid Clay  
LION Bioscience AG  
Postfach 103780  
69027 Heidelberg, Germany

Tel.: +49 (0) 6221 40 38-0  
Fax: +49 (0) 6221 40 38-101  
e-mail: [contact@lion-ag.de](mailto:contact@lion-ag.de)

Please send your full application  
for Cambridge to:

Valerie Lapotre  
LION Bioscience Ltd.  
Sheraton House, Castle Park  
Cambridge CB3 0AX, United Kingdom

Tel.: +44 (0) 1223 2247-00  
Fax: +44 (0) 1223 2247-01  
e-mail: [contact@lionbio.co.uk](mailto:contact@lionbio.co.uk)

Please visit our new website:  
[www.lion-ag.de](http://www.lion-ag.de)



## POSITIONS OPEN

### POSTDOCTORAL RESEARCH ASSOCIATE SERQUEST

A Division of Southern Research Institute  
Frederick, Maryland

Serquest, a Division of Southern Research Institute, conducts comprehensive preclinical drug development and testing as well as basic research in drug design and synthesis, pharmaceutical formulations, toxicology, virology, microbiology, and pharmacology. The Retrovirus Research Laboratory of the Department of Infectious Disease Research is currently seeking candidates for the position of Postdoctoral Research Associate. The successful candidate will be responsible for the development of a research program compatible with ongoing research activities, supervision of technical staff, analysis and assessment of data, including report writing, from antiviral assays, development of new antiviral assays, and/or approaches to ongoing projects, and client interaction. The position requires a Ph.D. in virology, molecular biology, or antiviral studies. Experience required in culture and propagation of HIV-1 in tissue culture, molecular techniques including RNA, DNA isolation, PCR, Northern blotting, Elisa techniques, and viral immunology.

Southern Research Institute, a nonprofit research organization, employs over 500 professional, technical, and support personnel to conduct research with the NIH, other government organizations, and commercial clients.

Serquest offers an excellent compensation package that includes a competitive salary and comprehensive benefits package. Inquiries may be directed to: **Dr. Jim A. Turpin, Telephone: 301-694-3232, ext. 255; e-mail: turpin@serquest.com.** Please send your résumé to: **Sheryl H. Brown, Human Resources, Department 635, P.O. Box 55305, Birmingham, AL 35255-5305. Telephone: 205-581-2512; FAX: 205-581-2880; e-mail: s.r.brown@sri.org.** *Equal Opportunity Employment/Affirmative Action.*

### POSTDOCTORAL FELLOWSHIP GENOMIC ANALYSIS OF HOST-VIRUS INTERACTIONS

A POSTDOCTORAL FELLOWSHIP is available immediately to define the viral and host genetic determinants of hepatitis C virus (HCV) pathogenesis. Specific projects will focus on genomic analysis of dynamic changes in cellular gene expression in infected tissues during progressive HCV infections in humans and animal models.

This position will be jointly supervised by **Dr. Francis V. Chisari** (The Scripps Research Institute) and **Dr. Peter G. Schultz** (Novartis Institute for Functional Genomics). Candidates must have a Ph.D. or M.D. degree and a strong background and publication record in virology and molecular biology. Salary will be commensurate with qualifications and experience. Send curriculum vitae and names of three references with contact information to: **Francis V. Chisari, M.D., The Scripps Research Institute, 10550 North Torrey Pines Road, La Jolla, CA 92037. Telephone: 619-784-8228; FAX: 619-784-2160; e-mail: fchisari@scripps.edu.** **Peter Schultz, Ph.D., The Novartis Institute for Functional Genomics, Novartis Institute for Functional Genomics, 3115 Merryfield Row, Suite 200, San Diego, CA 92121. Telephone: 619-812-1503; FAX: 619-812-1583; e-mail: tara@scripps.edu.**

*Novartis and The Scripps Research Institute are Equal Opportunity Employers.*

Funded POSTDOCTORAL POSITION available to study the molecular regulation of assembly, ER degradation, and trafficking of proteins that are of medical significance. Requires a Ph.D. and a strong background in cell and molecular biology. E-mail or FAX résumé with names of three references to: **Steve Chuck, Molecular Medicine Unit, Beth Israel Deaconess Medical Center and Harvard Medical School, e-mail: schuck@caregroup.harvard.edu; FAX: 617-667-8040.**

## POSITIONS OPEN

### INTERESTED IN CLINICAL OR POSTDOCTORAL RESEARCH TRAINING?

The National Institutes of Health has both! For more information, visit our website which lists an array of clinical and postdoctoral opportunities, including tenure-track positions.

<http://www.training.nih.gov>

*The NIH is an Equal Opportunity Employer.*

### POSTDOCTORAL POSITIONS CELL SIGNALING/MOLECULAR BIOLOGY/BIOCHEMISTRY Case Western Reserve University School of Medicine

Cell and molecular biology training opportunities are available for U.S. citizens and permanent residents to train with the following faculty: **Cathy Carlin:** ErbB receptor trafficking and signaling, polycystic kidney disease, cell polarity. **George Dubyak:** signal transduction biochemistry, cell and molecular biology of cell surface receptors, leukocyte differentiation, inflammation. **Richard Eckert:** keratinocyte differentiation, gene regulation, gene therapy, tumor suppressor function, MAPK signal transduction, retinoid biology, transgenic mouse models of papillomavirus-dependent cancer. **Thomas Egelhoff:** cytoskeletal function, protein kinases, protein phosphatases, myosin contraction mechanisms. **Antonio Gualberto:** Genomic instability, cell cycle checkpoint regulation, cardiac and vascular hypertrophy.

Please forward your curriculum vitae including a list of references to:

**Richard Eckert**  
Department of Physiology  
Case Western Reserve University  
School of Medicine  
2109 Adelbert Road  
Cleveland, OH 44106-4970  
E-mail: [rie2@po.cwru.edu](mailto:rie2@po.cwru.edu)

### POSTDOCTORAL POSITIONS CANCER GENETICS MOUNT SINAI SCHOOL OF MEDICINE

Mount Sinai School of Medicine is a leader in medical research and education. Postdoctoral positions are immediately available to identify and characterize a number of mapped, novel neoplasia-associated genes associated with hereditary and sporadic cancers. The use of genomic and molecular genetic techniques for both gene discovery and functional analysis requires that candidates have demonstrated excellent working experience in molecular biology and the desire to work in a multidisciplinary environment.

For consideration, send curriculum vitae, brief statement of research interests/experience, and at least two letters of reference to: **John A. Martignetti, M.D., Ph.D., Department of Human Genetics, Box 1498, Mount Sinai School of Medicine, One Gustave L. Levy Place, New York, NY 10029-6574. FAX: 212-849-2638; e-mail: [jam@msvax.mssm.edu](mailto:jam@msvax.mssm.edu).** *We are an Equal Opportunity Employer fostering diversity in the workplace.*

### POSTDOCTORAL POSITION IN IMMUNOLOGY

Postdoctoral position available immediately for a qualified individual to study anti-DNA antibodies and lupus nephritis. The candidate should have a strong background in immunology and experience with cellular and molecular techniques.

Interested applicants should send a curriculum vitae, statement of research interests, copies of recent publications, and the telephone numbers or e-mail addresses of three references to: **Chaim Putterman, M.D., Division of Rheumatology, Albert Einstein College of Medicine, Jack and Pearl Resnick Campus, 1300 Morris Park Avenue, Bronx, NY 10461.** *Equal Opportunity Employer.*

## POSITIONS OPEN

### POSTDOCTORAL RESEARCH ASSOCIATE

Ernest & Julio Gallo Winery Corporate Research and Development Department is seeking a Postdoctoral Research Scientist to work on a challenging project in our Biotechnology Research Program.

The successful candidate will be responsible for constructing a genetic map of grape. Preference will be given to individuals experienced in (1) fluorescent AFLP and microsatellite marker technologies, (2) up-to-date mapping software, and (3) QTL analysis. The mapping project is tightly aligned with other projects; consequently, the candidate will also participate and interact with other group projects related to germ-plasm evaluation, screening, and gene discovery. This position involves field work in addition to laboratory responsibilities.

The position requires a Ph.D. and at least two years of prior experience in plant genetic mapping technologies.

The closing date for applications is July 15, 1999. Qualified candidates should send their résumé to:

**Ernest & Julio Gallo Winery**  
Human Resources/Research Associate  
600 Yosemite Boulevard  
Modesto, CA 95354

You may also FAX résumés to FAX: 209-341-4559.

### POSTDOCTORAL POSITIONS BRADY UROLOGICAL INSTITUTE JOHNS HOPKINS MEDICAL SCHOOL

The Department of Urology has immediate openings for two Postdoctoral positions at the Johns Hopkins Hospital. One position involves the development of gene therapy vectors for the treatment of urologic malignancies, while the other position involves the analysis of the neurophysiology and pharmacology of the lower urinary tract. Both positions involve tissue culture, molecular biology techniques, and small animal studies. The successful applicant should have either a Ph.D. or combined M.D.-Ph.D. The gene therapy position will primarily involve adenoviral vector development and immunotherapy techniques.

*Must be a U.S. citizen or have permanent VISA status (green card). Send letter of introduction, curriculum vitae, and references to: Ron Rodriguez, M.D., Ph.D., Department of Urology, Marburg 145, 600 North Wolfe Street, Baltimore, MD 21287-2101. E-mail: [rrodrig@welchlink.welch.jhu.edu](mailto:rrodrig@welchlink.welch.jhu.edu).* *Johns Hopkins is an Affirmative Action/Equal Opportunity Employer and Educator.*

**POSTDOCTORAL POSITION.** Cellular/molecular mechanisms of eye fluid drainage. Requirements: Ph.D. or M.D.; four years of postdoctoral basic science training in cellular/molecular biology and molecular genetics; formal training in ophthalmology/ocular surgery; independent study of cytoskeletal proteins, adhesion molecules, signaling pathways, protein-protein interactions (yeast two hybrid) in human trabecular meshwork, ciliary muscle, and scleral spur cells, using molecular and computerized quantitative image analysis techniques; construct HSV and amplicon vectors for gene transfer into cultured cells and live animals, including primates; write grant proposals and manuscripts independently; train students, Fellows, Technicians. Curriculum vitae, research experience, and interests to: **B. Gabelt, Ophthalmology and Visual Sciences, University of Wisconsin, 600 Highland Avenue, F4/344 CSC, Madison, WI 53792-3220.** Appointment spring 2000.

**POSTDOCTORAL POSITION.** Immediately available to study biochemical and cellular functions of phosphatase-1 binding proteins including that of a novel inhibitor protein. Requires Ph.D. with experience in cell biology and molecular biology and interests in the area of protein phosphatases. Website: [www.nymc.edu](http://www.nymc.edu). Send curriculum vitae and references to: **Dr. E. Y. C. Lee, Department of Biochemistry and Molecular Biology, Valhalla, NY 10595. E-mail: [ernest\\_lee@nymc.edu](mailto:ernest_lee@nymc.edu).**

## TWO POSTDOCTORAL RESEARCH POSITION IN STRUCTURAL BIOINFORMATICS

Two postdoctoral research positions are available, at the **Université Libre de Bruxelles, Brussels BELGIUM**, for a duration of 2 years, starting immediately.

### POSITION 1:

The work to be carried out is part of a **research project on the development of a database containing information on enzyme function and metabolic pathways**. The position is to work on identifying key features of protein-ligand interactions in selected complexes deposited in the PDB, mapping these features onto the amino-acid sequence, building structure & function-based amino-acid profiles and testing them in inferring function from sequence. The applicant should be a recent or experienced PhD graduate in **the sciences, computer sciences, or the life sciences with good knowledge of protein structures and experience in computer programming**. Experience in databases and Java programming, or a very strong motivation to gain it, will be welcome.

### POSITION 2:

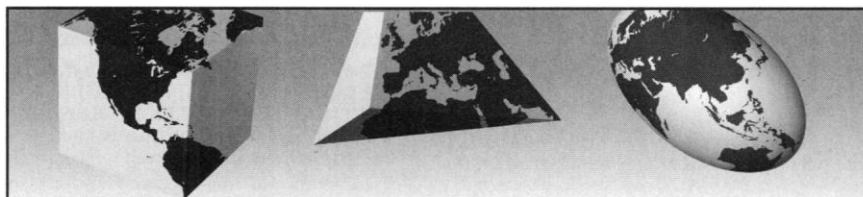
The work concerns the development of novel procedures for automatic optimization of sidechain conformation and amino-acid sequences compatible with a given protein 3D structure. These procedures are to be applied in the context of several ongoing projects in the laboratory, which include the design of peptide vaccines, *de-novo* protein design, and fold recognition. The applicant should be a recent or experienced PhD graduate in **the sciences or life sciences with good knowledge of protein structure and molecular modelling techniques**. He/she should also have **good experience with computer programming in C and Fortran**. Knowledge of C++ will be welcome.

**The host laboratory fosters an international environment; command of the French language is not required.**

Applicants should send a CV and 2 letters of recommendation to:

**Prof. Shoshana J. Wodak, U.C.M.B.,  
P2 CP160-16,  
Université Libre de Bruxelles,  
Ave. F. Roosevelt, 1050 Bruxelles.  
Tel: +322 648 5200  
Fax: +322 648 8954**

**Email: shosh@ucmb.ulb.ac.be, or  
shosh@ebi.ac.uk.**



*– Innovation is looking at things differently –*

## Department of Chemical Research

# PhD Chemist

We are seeking a PhD scientist in organic chemistry to head a laboratory in our chemical research department within our German R&D units.

The responsibilities include

- Teamwork in research groups dedicated to indication-related research targets
- Planning and synthesis of novel molecules with potential biological activity
- Cooperation with specialists in the field of computer-aided drug design and combinatorial chemistry to optimize drug candidates

For this position you need a strong background in organic chemistry and experience in multi-step organic synthesis. You should be familiar with the planning of synthetic routes, the execution of reactions, and current methods of isolation and characterization of products. You should be able to identify chances offered by new methods and techniques to increase the efficiency of your laboratory. For the work in multidisciplinary research teams in the area of respiratory diseases you need to thrive on interdisciplinary thinking and open communication. You should know how to integrate your scientific skills in target-orientated teamwork to discover innovative human therapeutic agents.

For more information, please contact Dr. Horst Dollinger, Telephone (+ 49) 61 32 / 77 29 48.

If you feel that you are qualified for this position, please send your resume to

Boehringer Ingelheim Pharma KG  
Abteilung Personal Geschäftsführungsbereiche/  
Personalleitung Forschung & Entwicklung  
und Medizin · Klaus Peter Bracker  
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[www.boehringer-ingelheim.com](http://www.boehringer-ingelheim.com)



**Boehringer  
Ingelheim**

## POSITIONS OPEN

### POSTDOCTORAL AND GRADUATE STUDENT POSITIONS

The Center for Microgravity and Materials Research at The University of Alabama in Huntsville has immediate openings in a biocrystallization program supported by grants from NIH and NASA. Research will include studies of crystal growth kinetics in particular nonlinear dynamics of layer propagation by high-resolution phase-shifting interferometry, and consequences for crystals' perfection. As a final phase, the project envisions tests in microgravity conditions aboard the space shuttle or international space station. Understanding of thermodynamics and kinetics in application to phase transitions and experience in custom-built optical methods and experiment computerization and automation are desired. Send or e-mail curriculum vitae, list of publications, summary of research achievements, and three references to the following address:

**Dr. Peter G. Vekilov**  
Center for Microgravity and Materials Research  
The University of Alabama in Huntsville  
RI M-65  
Huntsville, AL 35899 USA  
E-mail: peter@cmmr.uah.edu  
Website: <http://www.cmmr.uah.edu/peter/>  
An Equal Opportunity/Affirmative Action Employer.

### POSTDOCTORAL FELLOW MOUNT SINAI SCHOOL OF MEDICINE

Mount Sinai School of Medicine is a leader in medical education and research. We seek a highly motivated individual with strong primary tissue culture skills to examine the relationships between central or peripheral glial cells and apoptotic neurons. A cell biology or physiology background is desirable as well as some knowledge of molecular techniques.

We offer a salary commensurate with experience and excellent benefits. For consideration, send curriculum vitae to: **Dr. N. Tatton, Box 1137, Mount Sinai School of Medicine, One Gustave L. Levy Place, New York, NY 10029-6574. FAX: 212-348-1310. We are an Equal Opportunity Employer fostering diversity in the workplace.**

**POSTDOCTORAL POSITIONS** available in molecular cardiology at University of California, San Francisco. Current projects include cloning novel transcription factors; signal-dependent cell cycle regulation; array analysis of gene expression; approaches to myocardial regeneration. See website: <http://bernstein.ucsf.edu> for details. Requirements include U.S. citizenship/permanent resident status; Ph.D. and/or M.D.; strong background in molecular/cellular biology. Send curriculum vitae, research summary, and three references to: **H. S. Bernstein, M.D., Ph.D., University of California, 505 Parnassus Avenue, Box 0130, San Francisco, CA 94143. FAX: 415-514-0235; e-mail: hsbernstein@pedcard.ucsf.edu. Affirmative Action/Equal Opportunity Employer.**

Two **POSTDOCTORAL POSITIONS** are available for highly qualified individuals holding the M.D. or Ph.D. for training in molecular, cellular, and systems cardiovascular and renal physiology and genetics. The positions are funded by NIH and American Heart Association. Interested individuals should send their curriculum vitae and names of three references to: **Dr. Donna Wang, Department of Medicine, Michigan State University, B338 Clinical Center, East Lansing, MI 48824-1313. Telephone: 517-353-9178; FAX: 517-432-1326.**

**POSTDOCTORAL POSITIONS** in solid state nuclear magnetic resonance spectroscopy are available in fall 1999 to investigate the structure and function of catalytic RNAs (ribozymes), and to investigate the structure of biopolymers at materials interfaces. Experience with homonuclear and/or heteronuclear dipolar recoupling techniques is desirable. Send curriculum vitae and three letters of reference to: **Prof. Gary Drobny, Department of Chemistry, University of Washington, Seattle, WA 98195-1700. E-mail: drobny@macmail.chem.washington.edu.**

## POSITIONS OPEN

### POSTDOCTORAL RESEARCH POSITIONS EXPERIMENTAL LYMPHOMAGENESIS NATIONAL INSTITUTES OF HEALTH National Institute of Allergy and Infectious Diseases

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Send curriculum vitae and names of three references to:

**Dr. Herbert C. Morse III**  
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Two **POSTDOCTORAL POSITIONS** available immediately for structural and biochemical studies of herpesvirus proteases (*Nature Struct. Biol.*, 5:819, 1998) and other proteins of medical importance. Strong background in protein biochemistry is required. Prior experience with protein crystallography is desirable. Please send curriculum vitae and names of three references to: **Dr. Liang Tong, Department of Biological Sciences, Columbia University, MC 2451, Columbia University, New York, NY 10027. Website: [como.bio.columbia.edu/~tong](http://como.bio.columbia.edu/~tong).** Columbia University is an Equal Opportunity/Affirmative Action Employer and is especially interested in receiving applications from qualified women and minorities.

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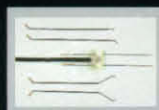
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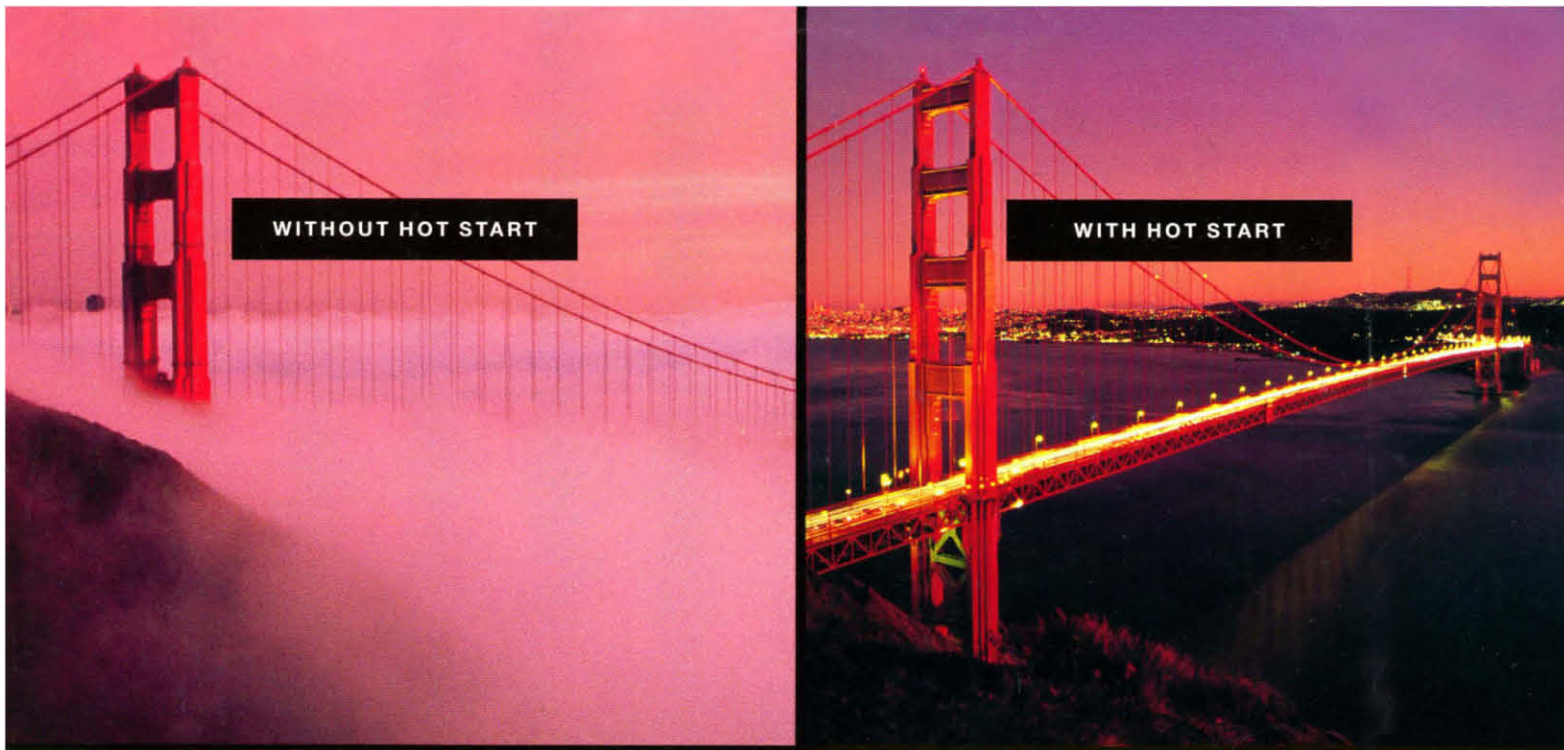
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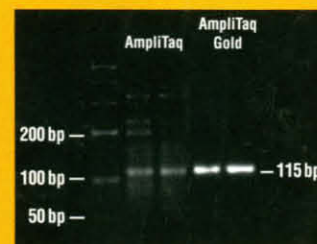
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