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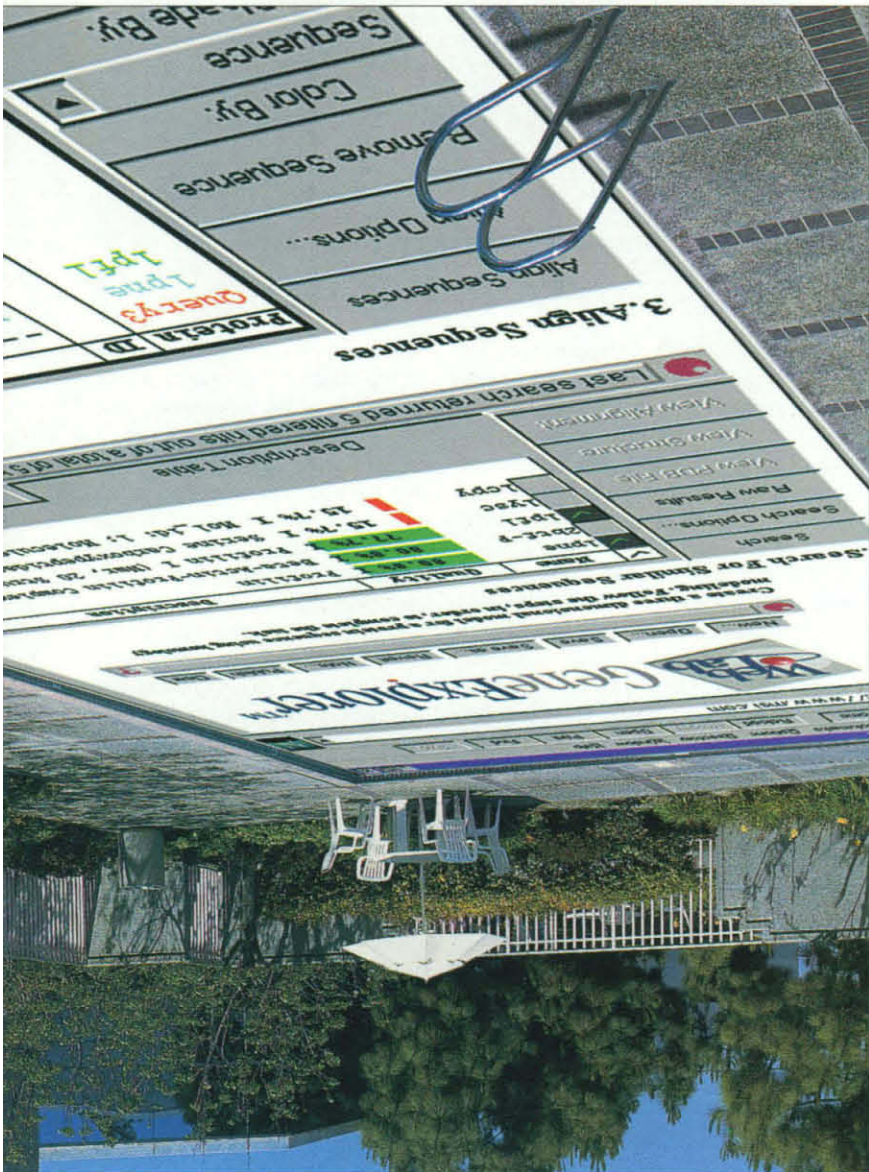
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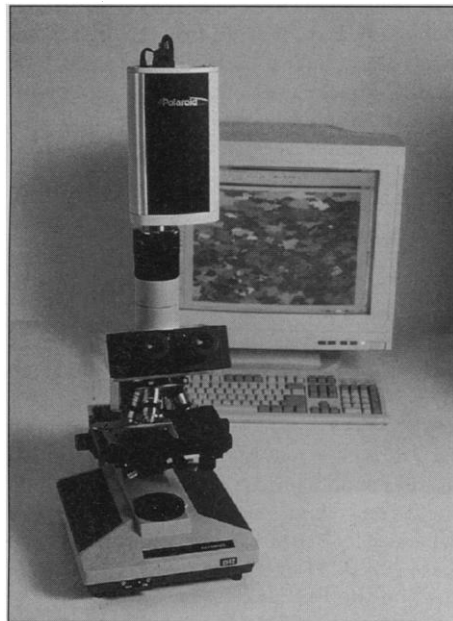
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PRODUCTS

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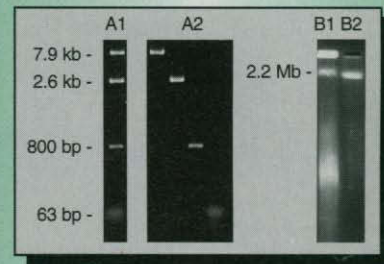
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(Pulsed-field CHEF gels B1 & B2 courtesy of L. Chen & A. Atherly, Zoology & Genetics, Iowa State Univ., Ames, IA.)



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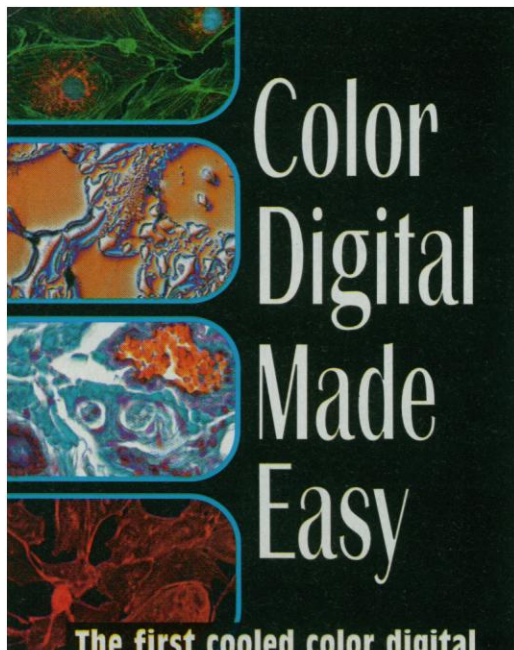
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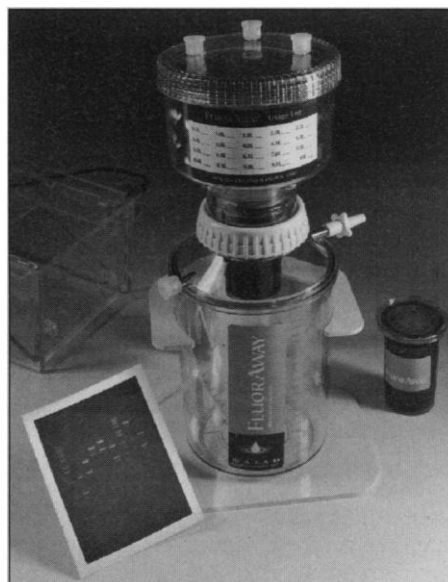
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Literature

Catalogue 96-97: Life for the Living describes new products for apoptosis research, telomerase detection, polymerase chain reaction quantitation, gene methylation analysis, in situ hybridization, nonisotopic labeling and detection, and antisense research. It includes a full line of molecular biology reagents, kits, and laboratory instruments. **Oncor.** For information call 301-963-3500 or circle 147 on the Reader Service Card.

ASPEX Asahi Glass *Schizosaccharomyces pombe Expression System: The Advanced Protein Production System That's Ideal for Meeting Your Protein Needs* describes a system that is based on a eukaryotic organism capable of expressing intracellularly or into medium various active proteins including cytoplasmic, membrane-derived, and secreted proteins. The strain of *S. pombe* used has been optimized for reliable expression of cross-species or allogenic proteins with both high yield and high quality. **Asahi Glass/BioScience Ventures.** For information call 619-793-0741 or 81-45-374-8722 or circle 148 on the Reader Service Card.

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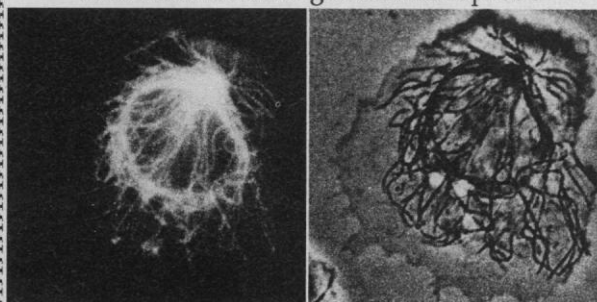
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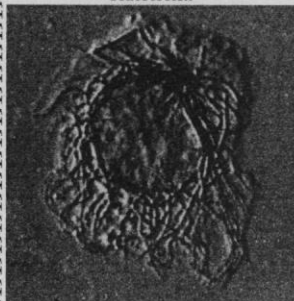
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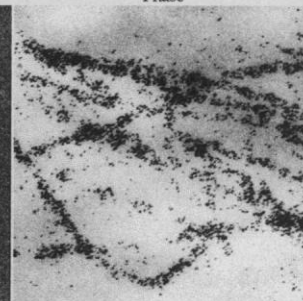


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Immunolocalization of microtubules with FluoroNanogold-Fab' in the same human monocyte visualized by various microscopies. Work done by J.M. Robinson & D.D. Vandre, Ohio State University. See J. Histochem. Cytochem. 45, 631 (1997).

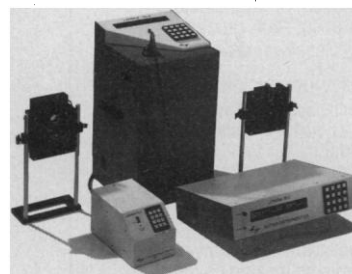
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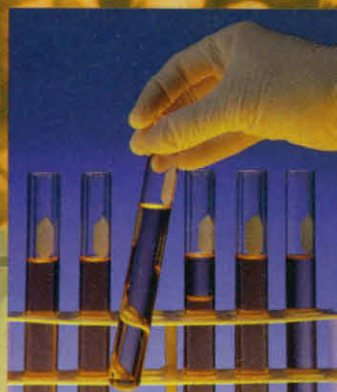
The following organizations have placed full-page recruitment advertisements in the special advertising supplement in this issue of SCIENCE beginning on page 2019.

Advertiser	Page
Organizations	
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Hot Careers Through 2005

by John Timpane

“We truly value the ability to do parallel processing, to sustain several research efforts at once. Increasingly, that’s what all members of a combinatorial chemistry group do.”

—Stephen Kaldor, *Eli Lilly and Company*

Linear thinkers are good at thinking in strings that have beginnings and ends. More laser than broadcast, these are thinkers whose excellence shines in narrowly concentrated intensity: the algorithm, the experiment, the equation. Science relies on these thinkers; their patience, consistency, and sustained attention have revealed some of the greatest discoveries in human history.

A second kind of thinking is global rather than linear. More broadcast than laser, this kind of thinking stays aware of its relationship to other thinkers and events in the field. This is parallel thinking, multitask thinking, a sense of where you are and how your next move relates to those of your colleagues elsewhere in the building, the academy, the company, the discipline.

As of 1997, science careers are asking the job-seeker to be both laser and broadcast, linear thinker and global thinker, an accomplished expert in a particular field and a knowledgeable, multidisciplinary factotum, aware of what’s going on across dis-

ciplines and technologies. Job advertisements increasingly ask for the scientist with cross-disciplinary experience: the biologist who speaks chemistry, the chemist who thinks in biology, the computer scientist who is also a biologist and/or chemist.

Below, we hear from scientists at small companies (Emisphere Technologies, Inc.), medium companies (Genetics Institute) and larger companies (Allergan and Eli Lilly and Company), as well as academe (Johns Hopkins University) and consulting (McKinsey & Co.). They tell us of six hot career areas, areas of expertise that are hot now and promise to remain so for years to come: bioinformatics, communications, combinatorial chemistry, genomics, neuroscience, and consulting. These fields have in common the need to be flexible—the ability to think both linearly and globally, both within a discipline and between disciplines.

The Key to it All: Communications at Allergan

You will hear several scientists remark in this piece that communication skills are “key” or “crucial” for the successful career scientist. Nowhere is this more the case than in the area of communications itself. Here is where the institution tells the world of

John Timpane, PhD, writes frequently on the biotechnology and pharmaceutical industries.

continued ►

2019

Fellowships for Biological and Biomedical Sciences

The Howard Hughes Medical Institute announces the 1998 competitions for fellowship programs that support training in fundamental biological and biomedical research. Awards, based on international competitions, focus on research directed to understanding basic biological processes or disease mechanisms. Fellowships may be held at academic or nonprofit research institutions.

Predoctoral Fellowships in Biological Sciences

Up to five years of support for full-time graduate study toward a Ph.D. degree in biostatistics, cell biology, epidemiology, genetics, immunology, neuroscience, or structural biology. Applicants must not have completed the first year of postbaccalaureate graduate study in biology. *Application deadline: mid-November.*

Postdoctoral Research Fellowships for Physicians

Three years of support for training in fundamental research subsequent to at least two years of postgraduate clinical training and no more than two years of postdoctoral research training. *Application deadline: early December.*

Research Training Fellowships for Medical Students

An opportunity for medical students in the United States to explore a burgeoning interest in fundamental research. Support is awarded for one year of full-time fundamental research in a laboratory at the student's medical school or another institution (except NIH in Bethesda, Maryland). *Application deadline: early December.*

Research Scholars at the National Institutes of Health

Under this joint HHMI-NIH program, medical students in the United States spend an intensive year in research in the intramural program at NIH in Bethesda, Maryland. Residence is provided at the Cloister on the NIH campus. *Application deadline: early January.*

1998 Program Announcements and Applications

For Predoctoral Fellowships:

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United States of America
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Office of Grants and Special Programs
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United States of America
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NPS Pharmaceuticals, Inc. is pleased to announce job opportunities for Scientists in the areas listed below. NPS discovers and develops innovative drugs that target cell surface receptors and ion channels to treat a variety of important diseases. The Company is pursuing small molecule therapies for key endocrine, bone, and central nervous system disorders, including hyperparathyroidism, stroke, and osteoporosis.

RESEARCH SCIENTIST

Job Reference # 500-BVW-8/08/97-0001

PRIMARY RESPONSIBILITIES

The selected individual is required to have 5 to 10 years of experience in the pharmaceutical industry and to utilize their understanding of a multidisciplinary approach to the drug discovery and design process to prepare novel therapeutic agents. This individual is expected to use their written and verbal communication skills to communicate with research staff and management, as well as to make contributions to patents, scientific literature, and conferences.

SPECIFIC RESPONSIBILITIES

The selected individual will be required to design and synthesize compounds active at G-protein coupled receptors. This individual will work within a team environment composed of chemists, pharmacologists, and molecular biologists and will be expected to interact effectively with supervisors and direct reports.

JOB QUALIFICATIONS

- Ph.D. in Chemistry with 5 to 10 years experience in the pharmaceutical industry required.
- Experience with the synthesis of complex heterocycles highly preferred.
- Demonstrated success working within team environments across disciplines and developing team members and subordinates required.
- Excellent verbal and written communication skills as evidenced by contributions to patents, scientific literature, and conferences.
- Experience with combinatorial chemistry and high-throughput screening desired.



IN VITRO PHARMACOLOGIST

Job Reference # 500-TS-8/29/97-0001

PRIMARY RESPONSIBILITIES

The selected individual will perform and oversee *in vitro* pharmacological studies directed at a variety of G-protein coupled receptors (GPCRs) in order to identify novel small molecules modulating these receptors. This individual will have extensive experience applying *in vitro* pharmacological techniques to the study of GPCRs; and will be responsible for the implementation of project strategies requiring these techniques. A strong background in the theory underlying receptor-ligand interactions, experimental design, statistical analysis and data interpretation is required; as is a current knowledge of the relevant scientific literature and emerging pharmacological techniques. The individual will effectively interact with chemists and molecular biologists on multidisciplinary project teams; and is expected to work independently while helping supervise research associates.

SPECIFIC RESPONSIBILITIES

- Pharmacological characterization of small molecule leads targeted at GPCRs
- Development of ligand binding assays for GPCRs
- Assist with the development of high-throughput functional assays for cloned GPCRs expressed in transfected cell lines
- Assist with the development of secondary functional assays for GPCRs in nonrecombinant systems
- Perform experimental design, data analysis and data interpretation; as well as preparation and communication of technical reports and scientific publications

JOB QUALIFICATIONS

- Ph.D. in Pharmacology or relevant discipline with 5 to 10 years relevant experience; previous pharmaceutical industry experience with small molecule drug development is desirable
- Extensive experience with the pharmacological characterization of novel small molecule ligands and their interactions with GPCRs
- Demonstrated history of relevant contributions to the scientific and patent literature. Previous history of working successfully within a multidisciplinary team environment; with an emphasis on excellent oral and written communication skills, as well as interpersonal skills

SCIENTIST, SIGNAL TRANSDUCTION

Job Reference #500-DH-8/28/97-0001

PRIMARY RESPONSIBILITIES

The selected individual will contribute to a multidisciplinary team focused on drug discovery. This individual will be expected to develop, implement, and optimize functional assays for the pharmacological characterization of compounds active on G protein-coupled receptors (GPCRs)

SPECIFIC RESPONSIBILITIES

The selected individual will perform and oversee studies aimed at characterizing the intracellular signaling pathways of GPCRs. Based on such characterization, the individual will implement functional assays of GPCRs for drug discovery in native and recombinant systems. Further, this individual will be expected to productively interact with pharmacologists, molecular biologists and chemists, and may supervise and train other team members. The individual will also prepare and communicate technical reports and contribute to the scientific literature.

JOB QUALIFICATIONS

- Ph.D. in Pharmacology, Biochemistry or relevant discipline with a minimum of 3 years related experience
- Demonstrated success in working within a team environment
- Extensive experience in the characterization of enzyme activities that are modulated by GPCR function
- Expertise in fluorescence detection methods desirable



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Companies, universities, and government agencies need people to get out the word. And these institutions would prefer that their communicators be scientists. Kevin Burnett, senior manager of strategic communications for Allergan in Irvine, California, says, “Ideally, individuals pursuing a career in the field will have a solid background in science—for example, an advanced degree in biological science or medicine—but will also have broader interests that could include education, psychology, public policy, marketing, or business.” Burnett believes that the evolution of the health care field in the past 5 years or so—“particularly the impact of managed care”—has fundamentally altered the communications landscape for health care products.

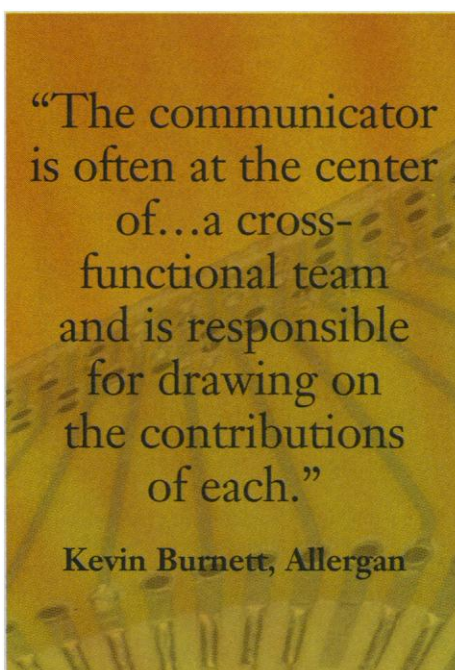
How so? “Increasingly,” Burnett says, “the traditional forms of promotional advertising are giving way to direct-to-consumer communications.” The marketplace is far more competitive than in the past, and new technologies are welcomed with far greater scrutiny and skepticism. It is no longer possible to introduce a technology and expect to ride on the coattails of a previous innovator. Companies must demonstrate the advantages of their products in terms of safety, efficacy, cost, and quality of life. And that message has to be communicated to a broader variety of audiences, including primary and specialist physicians, allied health care professionals, managed care organization administrators, pharmacists, and patients.

And, according to Burnett, “the necessity to communicate relevant information effectively to each constituency will only become more acute over the next 5 years, as health care cost containment continues to be a priority.” Meaning that communications is a permanent and growing area of need.

As for the particular background a communicator should have, Burnett does not single out a specific area of expertise. He does, however, point to the present and near future as a guide: “Since the next decade has been characterized as the ‘Biological Decade,’ in which advances in

biopharmaceutical technology will increasingly be based on therapeutic interventions at the cellular or genetic level, the ability to communicate about these new technologies will require an intimate understanding of how and why these technologies work in a given disease state.”

Writing, of course, is fundamental, as is computer literacy, including the essentials: knowledge of word processing, spreadsheet programs, and graphics programs. With so many divergent audiences, needs, and occasions, the versatile scientist Burnett describes above will rely not only on his or her grasp of science but also on “creative writing, psychology, and marketing skills.”



Like most industrial science jobs, communications is interdisciplinary. “The most effective communications programs involve people from a variety of disciplines, including basic science research, clinical research, marketing, and regulatory affairs,” Burnett says. “The communicator is often at the center of such a cross-functional team and is responsible for drawing on the contributions of each.”

Burnett recommends global thinking for such a job, or, as he puts it, “the cognitive skills to grasp the big picture and to communicate your vision to different audi-

ences with shared interests.” How to develop such skills? Burnett sees several paths:

“That may mean taking courses outside the scope of a traditional science-based curriculum. It may mean interning at a nonscientific post or even joining the sales force of a health care company; it may simply mean pursuing excellence in both scientific pursuits and nonscientific interests.”

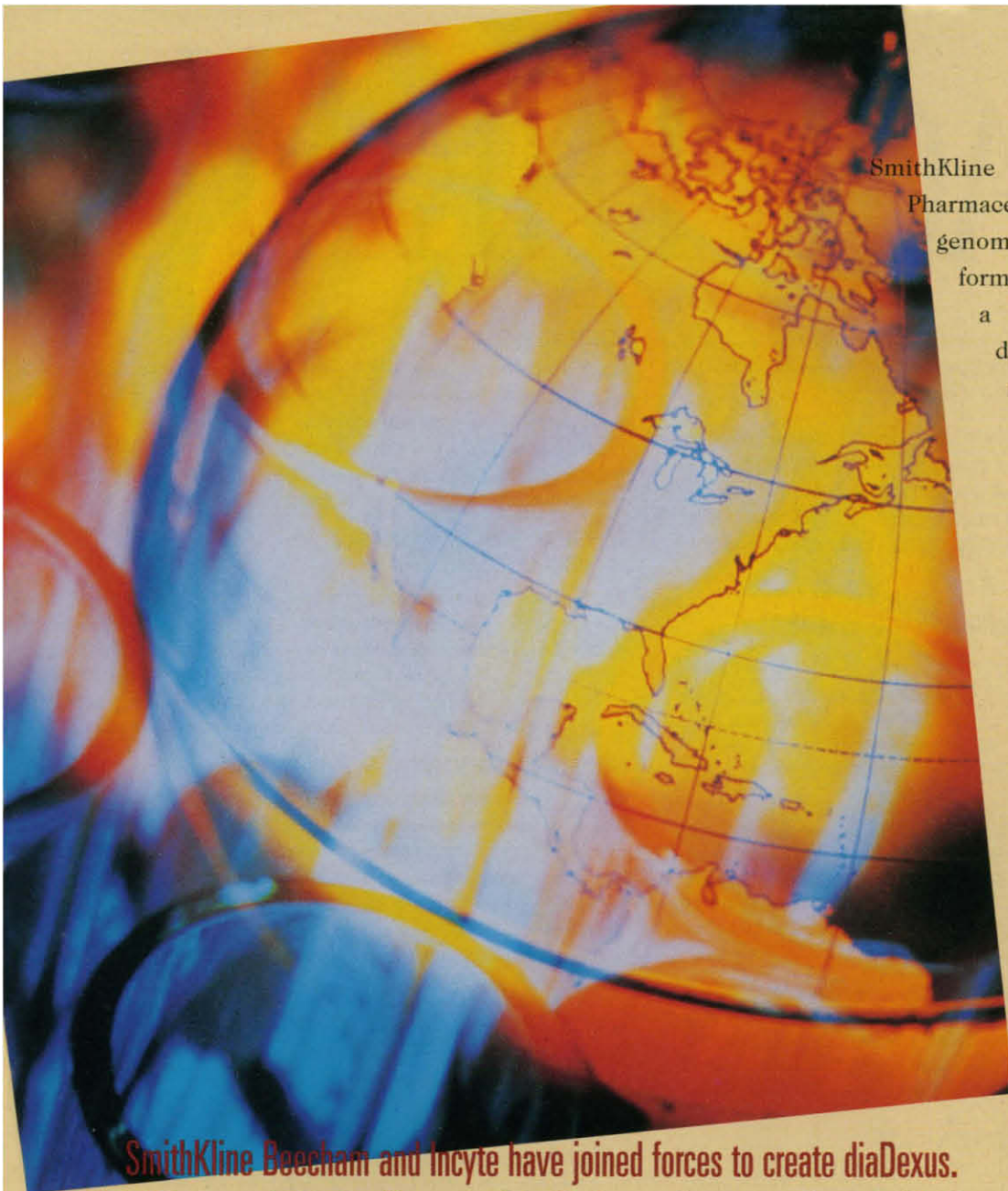
Above all, Burnett and employers like him are looking for what he calls “a multifaceted individual who enjoys learning and educating in a stimulating, crossfunctional environment in a growth industry.”

Wish Lists and Genies: Drug Delivery at Emisphere Technologies

“If I had a genie in a bottle, I would want every hire, from technician to director, to be reasonably fluent in about half a dozen disciplines.” Sam Milstein, president and chief scientific officer of Emisphere Technologies, Inc. of Hawthorne, New York, is discussing the “wish list” he and many other employers have concerning new employees. “The reality is that most of that training occurs here, once they walk through the door.”

Emisphere develops drug delivery systems so that a variety of therapeutics—typically proteins—can now be delivered by mouth rather than by injections. Drug delivery in general, and in particular as developed at Emisphere, is an amalgam of technical disciplines. “We have organic chemists, pharmacologists, animal technicians, chemical engineers, spectroscopists, analytical chemists, and formulations people,” Milstein says. “An alphabet soup of graduate school. What few disciplines we don’t have here in the shop are represented via a university link or a professional contract vendor.”

Drug delivery, once considered, in Milstein’s words, “a Neanderthal discipline, not well respected relative to discovery research,” has undergone a great deal of change in the past decade. As Lilian Stern, vice president of corporate planning and investor relations, points out, “Big pharmaceutical companies real-



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diaDexus is seeking exceptional scientists with experience in molecular biology, gene expression, protein biochemistry, novel immunoassay and DNA probe assay development, and biotechnology to work in Santa Clara, California. If you have a BS, MS, MD or Ph.D. and would like to be part of reshaping the landscape of diagnostic medicine, please send your resume to: diaDexus, Dept. S926, PO Box 2676, Bala Cynwyd, PA 19004. EOE, M/F/D/V.

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Focus on enhancing the software development process by using your full understanding of the processes as they apply to the development of multiple software applications within multiple projects. You will be expected to have strong professional credibility and technical competence. Requires a BSCS with 10 years' commercial experience or MSCS with 5 years' experience. Knowledge of FDA certification, tools selection, software development methodologies, and revision control and versioning would be highly desirable. Ref: 5567TC.

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Responsible for coordinating the continuing development and release into manufacturing of a variety of projects. Work with Product Line Managers, Service Specialists and Manufacturing Engineering to prioritize, plan, and direct R&D efforts to enhance existing product lines. Requires a minimum of 5-7 years' experience in product development and/or manufacturing along with a solid understanding of a variety of technical disciplines, including mechanical engineering, molecular biology, biochemistry, physics, and/or software engineering. Excellent planning, analytical, communication, team leadership and project management skills are a must. Ref: 4059.

POST-DOCTORAL RESEARCHER

Responsible for designing and implementing experiments testing feasibility of mammalian cell capture on micro-fabricated devices and integration of cell capture with other microscale diagnostic procedures. Requires the knowledge and skills acquired through the successful completion of a Ph.D. with 0-5 years' relevant post-doctoral experience. Strong background in mammalian cell tissue culture and basic molecular biology techniques are required. Ref: 4094.

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Working in a team environment, you will provide market and technical input on new product and technology development. In addition, you will provide technical, marketing, and product training to field sales and in-house personnel. A high level of interaction between customers, field sales, product development and manufacturing teams is essential. A BS/MS in Molecular Biology or related field and experience with fluorescent DNA analysis techniques and instruments are recommended. Direct sales experience is desired. Strong team working, excellent interpersonal and solid public speaking skills are also essential. 25% travel, both domestic and international. Ref: 8452.

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Responsible for chemistry development, testing, implementation, and troubleshooting on breadboard DNA electrophoresis instruments. Demonstrate feasibility of automated applications as part of a team effort to develop next-generation electrophoresis instrumentation. Requires an MS or Ph.D. in Molecular Biology, Biochemistry, or related field with 2+ years' experience. Excellent troubleshooting skills and the ability to develop novel solutions to complex chemical/mechanical problems are essential. Good working knowledge of robotics, electrophoresis, automation, PCR and DNA sequencing is highly desirable. Ref: 4041.

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Work to reduce the sales costs and time-to-market for Genetic Analysis software products by researching alternative sales channels and software distribution worldwide. Responsibilities include developing a sales strategy, shepherding new software products, investigating new technologies, and maintaining the site licensing program. Requires a BS in Biological Science, Computer Science, or equivalent, plus 1-3 years' experience selling or marketing software products. Excellent written and verbal communication skills, strong project management skills, attention to detail, and consensus building skills are also essential. Ref: 5219.

BIOINFORMATICS SCIENTIST III, SENIOR

Work as a part of a team focused on the development of systems for automated genetic analysis. Responsibilities include working with others to evaluate, coordinate and support the development of bioinformatic and biostatistical tools for high-throughput genetic mapping. In addition, you will participate in the development of innovative Web tools. Requires an MS or Ph.D. in Bioinformatics/Biostatistics/Genetics/Computer Science, and 2+ years' experience in an industrial or academic setting. Strong background in bioinformatics/biostatistics and basic knowledge of molecular genetics required. Web savvy, aptitude for information gathering, and experience with linkage analysis and ABI software are highly desirable. Written and verbal communication skills are essential. Ref: 4077.

GENETIC ANALYSIS BIOCHEMIST, SCIENTIST II/III/SENIOR

Looking for an eclectic individual combining talents in biochemistry, analytical instrumentation and preferably some experience in apparatus prototyping and testing. Expect that this individual would acquire these talents during the completion of a doctorate and/or post doctoral program, and/or in industry subsequent to advanced degree work. Capable, creative individuals with Bachelor's or Master's degrees will be considered. Experience in enzymology and electrophoresis, especially of DNA or RNA, very beneficial. Teamwork is essential, as is the ability to drive projects from feasibility to product stage. Ref: 5243.

TECHNICAL TRAINING SPECIALIST

You will be the primary instructor/co-instructor for the training of Field Service Engineers on the repair, operation, and maintenance of instrumentation, including the PRISM Genetic Analysis instrument line. You will prepare training materials and interface with product groups. Requires knowledge of electronics and mechanical devices as they relate to ABD technology. Strong teaching and computer skills are essential. Excellent documentation, writing, and communication skills are a must. EE degree is desirable. Ref: 4284.

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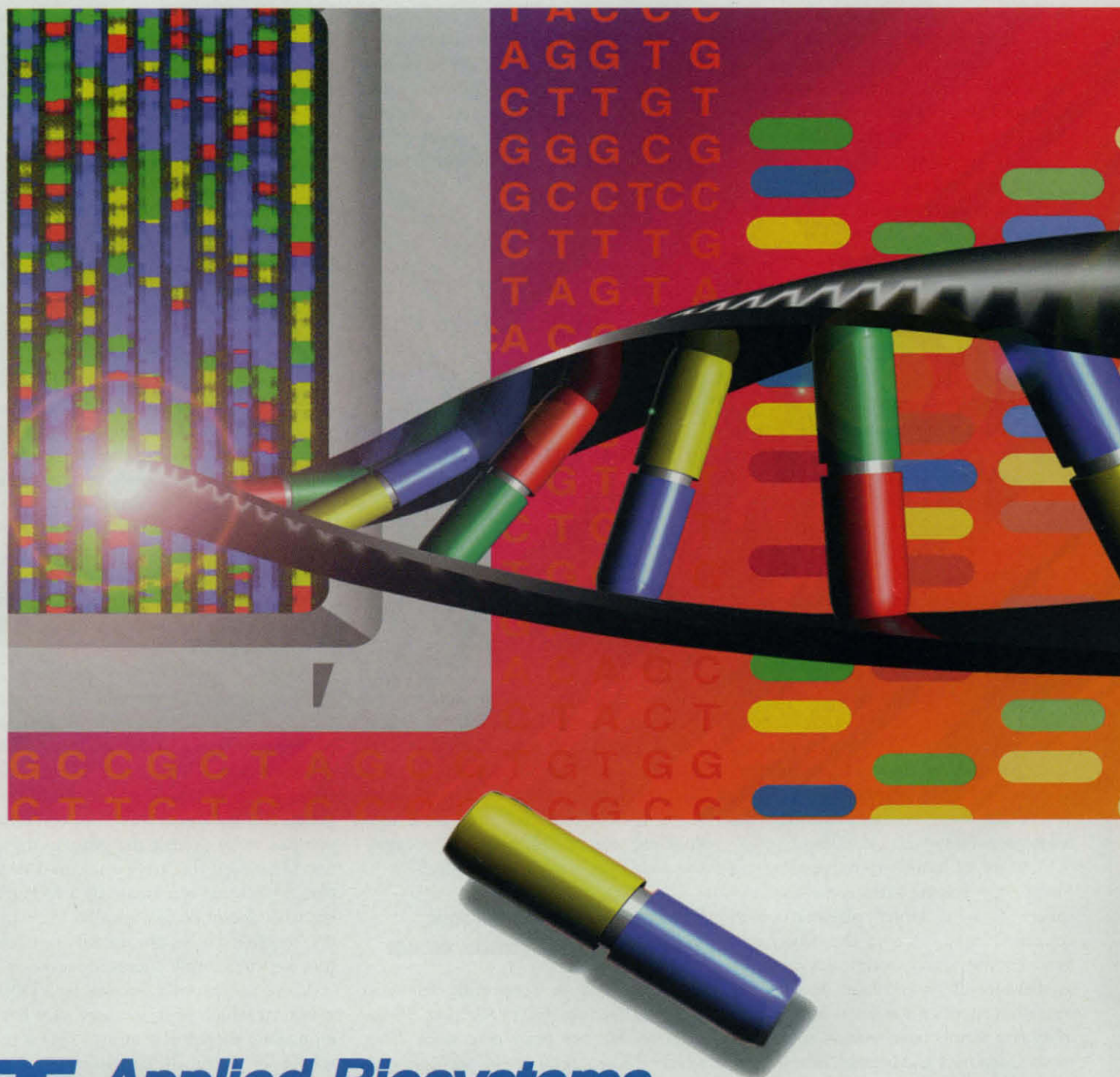
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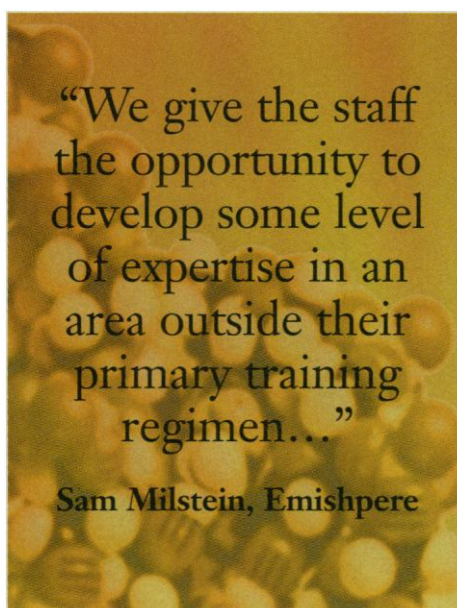
ize that they need to become more consumer-friendly, and that injection is not necessarily most patients' first choice as a mode of delivery." As biotechnology moves into maturity, more and more novel drugs, many of them available only as injectables, are hitting the market. "And we think genomics is here to stay and will come up with generations of novel protein therapeutics," Stern says. Milstein believes that as the demand for oral formulations for these drugs rises, "drug delivery will be a significant growth area into the next decade."

That area has changed as it has absorbed all the new tools of biotechnology. "We can approach challenges in drug delivery at a molecular level now," Milstein says, "which is revolutionizing the field." Computer modeling and combinatorial chemistry (especially its incarnation as parallel synthesis) are also part of the mix.

Emisphere is about 65 employees strong, all but a dozen or so of them scientists. "In four to five months," Milstein says, "we will be moving into a facility of triple the square footage, and we will significantly increase our personnel in the next two years as well." Of special need at Emisphere are organic chemists and biologists, the latter to help in the preclinical testing of promising agents in animal models. Although most development and manufacture is being done with contract vendors at the moment, the company is seriously considering an in-house clinical and manufacturing effort. (Emisphere doesn't develop new drugs, but the FDA considers its formulations to be new chemical entities, which must be taken through the complete round of clinical testing.)

Director of human resources Barbara Mohl, who has recently come to Emisphere from a larger pharmaceutical company, says, "One of the differences between the larger companies and the smaller biotechs is in culture. In a smaller operation there's a looseness and a flexibility you simply have to have to accommodate diversity and breadth of responsibility. The environment is conducive to people who are self-starters and for those who choose to have immediate impact."

Where larger, more established companies may engage in a more pragmatic approach when training new hires in disciplines outside their expertise, such learning is encouraged early on at Emisphere. "We give the staff the opportunity to develop some level of expertise in an area outside their primary training regimen," Milstein says. "We've already seen the rewards of this philosophy. It encourages creativity, caters to people who are ambitious, and in a short period of time can help you develop a rather impressive resume."



So Sam Milstein keeps looking for promising scientists who, while they may not be genies, are at least good at what they do and flexible enough to think globally as well as linearly. They'll have to, in a field that has gone from ugly duckling to what Milstein calls "an explosive field in an explosive industry."

Enthusiasm, Skepticism, and Basic Training: Genomics at Genetics Institute

Gordon Wong is a scientific fellow at Genetics Institute (GI) of Andover, Massachusetts. He has been here since 1983, when GI had only 60 employees (it now has more than 1400). He jokes about having "parking sticker number 23 out of 1400." This enthusiastic but skeptical scientist has

been present for most of the biotech revolution, the different phases and the accelerating pace of change. His story combines a keen interest for the latest discoveries and techniques with a healthy reserve regarding the "sexy" topics of the moment.

Wong spends "about 15 percent" of his time directing embryonic growth in the regulatory protein group at GI, and the rest of his time doing work in functional and structural genomics. He reflects on the shifting path of his own career: "I started out in chemistry and physics and ended up doing graduate work in biochemistry," he says. His PhD work at Oxford involved using nuclear magnetic resonance technology to study metabolism in animals. For his postdoc, he did something completely different: molecular biology. It was as a molecular biologist that Wong came to GI.

"I spent my first five years isolating and cloning genes that directed the elaboration of growth factors," he says. "In those days, the process was a hassle. The biochemistry for cDNA generation, expression, vectors, and protein isolation was a crude and labor-intensive process. Now people have machines like the ABI 377 sequencer, which allow them to roboticize or automate the process, doing thousands or hundreds of thousands of tasks, PCR reactions, genomic mapping."

While remaining in the mainstream of isolating therapeutic proteins, scientists at GI have taken a different path. "Some people are now trying to deduce function by sequence alone," Wong says. "While you certainly can tell shape and structure, and get certain analogies, we're not confident you can really predict the protein's function in biology. You may be able to deduce that the protein is a kinase or a receptor, but what does it do biologically? We think that functional bioassays are still one of the best ways to identify interesting proteins."

There are probably about 10⁵ cDNA genes, of which only a subset may have immediate therapeutic utility. This is the subset of extracellular proteins, e.g., receptors and cell-to-cell signaling proteins. "We've found that it's most interesting to look for genes that code for sig-

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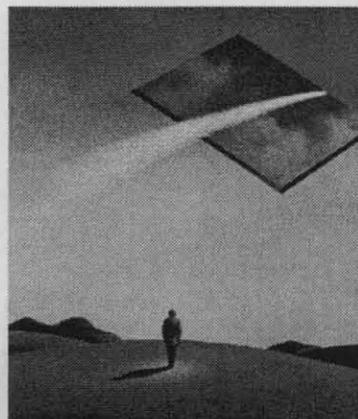
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Genetics Institute has developed an impressive functional genomics initiative to isolate and express a comprehensive library of novel human secreted proteins. Our DiscoverEase[®] protein development platform provides access to the library and corresponding relational database containing information about each protein. As part of the international human genomics project, both the database and the library are being made available to commercial and academic researchers for biological evaluation and to commercial researchers for the selection of therapeutic candidates for development and commercialization. This is a program that promises to identify the breakthrough candidates of the future and has **immediate openings at all experience levels for Research Associates, Staff Scientists and bioinformatics professionals** to contribute to this critical effort. **Job Code: SC-926-MM-GI**

HEMATOLOGY/IMMUNOLOGY

Genetics Institute is a world leader in the discovery and development of novel blood cell growth factors and of immune modulation factors that may stimulate the ability of cells to destroy or inhibit tumors or other cells infected with viruses. We are also heavily involved in the discovery and development of coagulation factors for controlling bleeding episodes in hemophilia. **Openings currently exist at all levels for Research Associates and Staff Scientists** to help us enhance our leadership position. **Job Code: SC-926-MM-HI**

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We are doing extensive work on investigating osteoinduction in response to recombinant human BMP-2 by itself or in combination with a number of osteoconductive carriers. Potential applications include oral/maxillofacial indications, spinal fusion, trauma, and osteoporosis. **The Group currently has an opening for a professional with a Bachelor's Degree and 2 years of related experience** to participate in the development of preclinical (animal) models for oral/maxillofacial reconstruction. **Job Code: SC-926-MB-BBG**

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This innovative, multidisciplinary department capitalizes on its staff's expertise in molecular and cell biology, biochemistry, microbiology, cell physiology, and chemical engineering to create the capacity to manufacture recombinant human proteins consistently and economically, while ensuring exceptional quality. The Lab has **opportunities at all levels** for professionals with hands-on experience in any of the areas listed above who are committed to applying state-of-the-art science and technology to address the challenges of biopharmaceutical manufacturing. **Job Code: SC-926-LL-MMC**

DRUG PRODUCT DEVELOPMENT

We are currently focusing on understanding and enhancing the stability of proteins and developing sensitive assays to characterize proteins and their degradation products. We are also developing rugged manufacturing processes and delivery systems for protein drugs. Currently, we have **excellent opportunities for professionals** whose experience includes protein drug delivery, especially in the development and characterization of collagen-based delivery matrices. **Additional opportunities exist for professionals with experience in the biochemistry of antibodies to work on the development of several new antibody drug products.** **Job Code: SC-926-LL-DPD**

To be considered for current or future job openings, please send resumes, suitable for scanning (see below), indicating Job Code, directly to: Human Resources Dept., Genetics Institute, Inc., 87 CambridgePark Drive, Cambridge, MA 02140. Fax: (617) 876-8847.

Scannable resumes should be forwarded on plain white bond paper, using standard types and fonts, and no bold or italic print. When faxing resumes, please also mail an original copy.

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◆ POSTDOCTORAL FELLOW:

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You will actively support current research interests in reproductive therapeutics. To qualify, you'll need a PhD in Reproductive Physiology, Molecular Pharmacology or related discipline, with 2-3 years' postdoctoral training. Knowledge of Molecular Biology techniques, including protein expression is essential. Background in high throughput screening, Bone Physiology, Neurobiology, and animal modeling is desired. **Please respond to Dept. 1586.**

◆ SCIENTIST/SR. SCIENTIST (BIOLOGY):

Be a key member of a team with research interest in growth factors/cytokine receptor biology and signal transduction pathways, cancer/angiogenesis and diabetes/obesity. Requirements include a PhD in Biology, Cell Biology, Pharmacology, Biochemistry or related disciplines and 2+ years' postdoctoral training. Background in recombinant DNA techniques, protein expression, and invitro bioassays is also needed. Knowledge of enzymology and signal transduction pathways is preferred, as is hands-on experience in animal models. **Please respond to Dept. 1587.**

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naling molecules,” Wong says. “Currently, we are using a yeast signal trap screen to isolate mammalian signal sequences. We identify pieces of cDNA that encode these sequences, to isolate their corresponding full-length genes, express these genes, and catch them in relevant, interesting bioassays.” GI’s discovery program has generated libraries of potential therapeutic genes, which GI licenses to other companies. One company, Ontogeny, has already taken an option on licensing one of these genes.

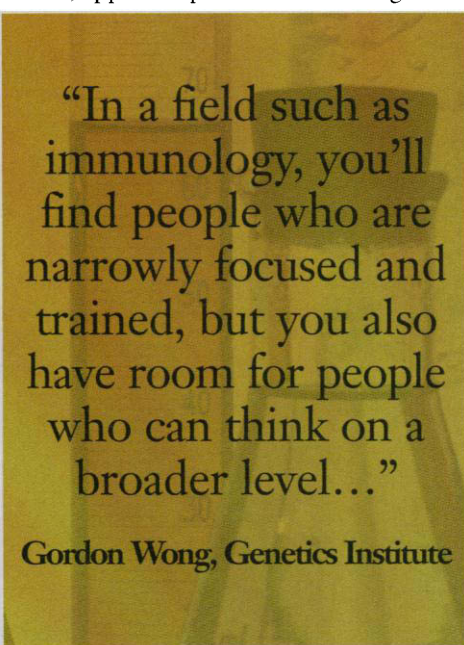
Asked about hiring needs, Wong names bioinformatics, a huge need in any field involving genomics, as well as cellular biology and physiology. “But people being trained in bioinformatics don’t have the necessary science background to exploit the data they generate,” he says. Would-be bioinformaticists should have a good grounding in biology, genetics, even evolution, to make the most of the homologies they see. They should also be able to write programs, not simply run them. “Sometimes we get together with our sequence people,” Wong says, “and we ask, ‘Can we search with X kind of pattern?’ Often, the standardized computer programs won’t do it quite in that way, and we’ll need someone who can write the proper program.”

Wong sees a continuing need for good molecular biologists, biochemists, and specialists in total animal physiology: “Ultimately, after we’ve done all these clever things to produce these genes and proteins, you still have to test them in some biological scenario.” In fact, this is a critical path roadblock.

Despite being right at the forefront of current technique and discovery, Wong is wary of the call of the hot field. “People in undergraduate and graduate school need to realize that things change so quickly it’s almost impossible to predict where we’ll be in five years,” he says. “What’s needed today won’t necessarily be what’s needed then—meaning that getting trained in the hot fields of right now won’t guarantee long-term success. There’s so much pressure to follow something sexy, what happens is that you can

miss out on getting basic training.”

Such advice, though sensible, won’t strike prospective scientists as comforting. But Wong would address the issue of “attributes necessary for success” in a slightly different way. “Scientists who have been able to stick around and continue making contributions usually have a strong, broad general background in understanding how genetics, biochemistry, or molecular biology works,” he says. “But to continue to contribute, they have to be able to think outside of their niche, approach problems in more gener-



al, creative sorts of ways instead of getting sidetracked into one approach.”

So once again, global complements linear. “In a field such as immunology,” Wong says, “you’ll find people who are narrowly focused and trained, but you also have room for people who can think on a broader level, bring in different kinds of ideas to address a problem.” Sometimes the key is an attitude rather than book-learning. “Being well-read is fine,” Wong says, “but sometimes you need to be able to question the way things are done. Just because experts are doing it a particular way doesn’t mean that is the only way or the most effective way.”

Wong values the basics. “In grad school, you need to do something you’re extreme-

ly in love with,” he says. “The basic training you get there—how to ask a question, test ideas, think up experiments—is the most important you’ll ever get. If you’ve picked up good training in those thinking processes, that’s the stuff that stands you in best stead. That training allows you to think well in narrowly focused situations and broadly when broad thinking is called for. The important question is not whether your work has been in *Drosophila* as opposed to *C. elegans*, but whether you can think in the research processes of those fields—that’s what genetics is.”

The Other Things Scientists Can Do: Consulting at McKinsey & Co.

“Consulting and nontraditional nonresearch careers are never emphasized or encouraged in graduate training. Academic programs are structured to train researchers, after all—but it just so happens that they are training people who are good at other things too.”

Dave Speiser, an associate at McKinsey & Co., a general management consulting firm, is reflecting on the fact that his line of work, consulting, was never mentioned as a career option to him. Speiser received his AB in biochemistry and molecular biology from Harvard, and a PhD in biochemistry from Berkeley. He then did postdoctoral research for five years.

But his postdoc, as postdocs are meant to do, taught him something important. “I realized that I had broader interests than a research career would allow. Focusing narrowly within a research topic was no longer attractive to me.” When he heard of McKinsey, he investigated and found that the company helped clients achieve long-lasting improvements in performance, and also discovered that McKinsey had several clients in the fields of electronics and aerospace, interests he’d had for a long time. Speiser applied to the Los Angeles office of McKinsey and made his interest in aerospace known.

To be sure, consulting presents a challenge to any consultant: absorb a great deal of new information quickly. “One of the

continued ►

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Enzymologist - Expertise in enzymology is critical to work with a team to identify well-characterized molecular targets and to evaluate mechanism-based inhibitors and potential inhibitors identified by "virtual" screening methods. **Dept. SM-JS**

Protein Chemist - Biophysical characterization of proteins using circular dichroism and analytical ultracentrifugation techniques is essential to characterize protein targets, and enhance sample formulation for structural studies by X-ray crystallography and NMR. **Dept. SM-JS**

Informatics

- B.S./M.S. in a biological discipline and experience with evaluation of compounds for biological activity, with emphasis on data capture, data reduction, and Excel or related expertise. **Dept. TG-EP**

- B.S., M.S. or Ph.D. in Chemistry or a related discipline, chemical structure and relational database expertise, and programming ability with ISIS and Oracle. **Dept. TG-EP**

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Protein Mass Spectrometrists - Ph.D. in Biochemistry or Chemistry, with 3-5 years relevant post-doctoral training to be responsible for characterizing proteins by ESI-MS. Appreciation of the application of genomics research to understanding biological processes is desired. **Dept. SM-SH**

Protein Chemist - B.S./M.S. with 3-5 years Edman sequencing experience. **Dept. SM-SH**

Biochemist - Ph.D. with 3-5 years post doc experience to study the functional aspects of intracellular proteins. Expertise in bioassay development, intracellular signal transduction mechanisms and molecular biology techniques required. **Dept. SM-SH**

Bioinformatics - Ph.D. with experience with major bioinformatics software tools, competency with UNIX and Perl, and broad knowledge of molecular biology, to apply bioinformatics research to the biology of cardiovascular and metabolic diseases. **Dept. SM-WC**

Database Applications Programmer - B.S./M.S. with 2 years programming experience to provide bioinformatics support. Expertise in C/C++, SQL, and Perl; knowledge of Oracle on UNIX systems, experience in the development of HTML-cgi interfaces. **Dept. SM-DG**

Oncology

B.S./M.S. scientists with 2-3 years of experience in drug formulation and administration to in-vivo disease models and monitoring the effects thereof. Will be responsible for designing experiments, husbandry, and harvesting biological and molecular data. **Dept. PG-DB**

Endocrine Oncology - M.D. or Ph.D. with knowledge of molecular and cellular biology and biochemistry to work on endocrine hormone dependent tumors. Drug discovery experience preferred. **Dept. TG-RW**

Cardiovascular

Ph.D.s (2) with post doctoral experience and evidence of excellence in molecular biology and genetics to identify and characterize novel cardiovascular targets at the molecular level. **Dept. TG-MB**

Metabolic Diseases & Age Related Disorders

Drug Candidate Evaluation - Ph.D. with experience in biochemical, cell culture and bioanalytical methodology to operate and maintain a primary compound evaluation research laboratory. Demonstrated expertise in automating assays, computerized data capture and reduction, and data base management. **Dept. SM-JW**

Biological Process Sciences

Group Leader/Assoc. Director - 10 years Pharm. industry experience, proven team leadership skills- 5 yrs mgt. Experience in cell line development & expression, cell culture, fermentation, purification or analytical chemistry. Budgeting, cost estimating, cost goods analysis. Leader in field of Biologics Process Development. **Dept. JA-BPS**

Cell Biologist - Ph.D., Industrial Experience and skills in mammalian cell culture, recombinant techniques including electroporation and amplification, scale-up technology, and sencecence. **Dept. JA-BPS**

Protein Chemist - Ph.D. Pharm. Industry experience and skills in optimization of protein purification processes. Knowledge of cGMP operations. **Dept. JA-BPS**

Validation Engineer - Pharm. Industry experience and skills in biopharmaceutical facilities design, equipment qualifications (IQ & OQ), biopharmaceutical process validation. **Dept. JA-BPS**

BS/MS candidates in Cell and Molecular Biology, Chemistry, and Biochemistry with Industrial Bioprocess experience to support pharmaceutical process and development. **Dept. JA-BPS**

Immunology and Inflammation

B.S./M.S. scientists with 2+ years experience. Investigations at cellular and molecular levels including coreceptors in cell activation, transcriptional regulation, signal transduction and in-vivo modeling. Expertise in cell isolation, in-vitro tissue culture, lymphocyte proliferation assays, immunoglobulin secretion assays, cell cloning, PCR, cDNA library construction, ELISA, FACS, and lymphotic biology. **Dept. JA-II**

Exploratory Biopharmaceutics & Drug Delivery

Postdoctoral Fellow - Ph.D. in Pulmonary Physiology or Pharmaceutical Sciences and knowledge of the isolated perfused lung systems and related techniques used to evaluate physiological responses to pharmacologic intervention. Perform studies to assess factors influencing drug transport and stability in the lung and the influence of delivery systems/strategies on pulmonary physiology. **Dept. MS-DW**

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Scientist - Protein Engineering

We are seeking a peptide/organic Chemist to work closely with Researchers in the Protein Engineering Department to provide peptide-like mimics for large peptides/proteins. You must have a competent background in synthetic peptide/organic chemistry and want to apply these skills to problems in drug design. A strong interest in protein design and applications of chemistry to important problems in biology also essential. Requires a PhD or equivalent and 2+ years of postdoctoral or independent research. Job Code SCI1006

Scientist - Manufacturing Sciences

You will monitor existing commercial, large-scale recovery or purification processes, as well as identify/correct problems and collaborate with other Scientists and Process Engineers on yield improvement, plant improvement and new facilities. Requires a PhD or equivalent and conceptual understanding of chromatography and protein characterization. Initiative, sense of perspective, strong interpersonal skills and the ability to adapt quickly to change are also essential. Job Code SCI961006

Scientist - Neurobiology

In this position you will work in the Neuroscience Department investigating molecular interactions of neurturin and related molecules with midbrain dopaminergic neurons. A strong background in molecular neurobiology with publication record is essential. Preference will be given to candidates with a history of contributions towards understanding function and dysfunction of the adult nervous system. Job Code SCI370

Sr. Scientist/Scientist - Whole Animal Physiologist

The Endocrinology and Metabolism Department is currently seeking a Whole Animal Physiologist to develop a team-oriented program in which protein-based therapeutics are evaluated in relevant animal models. The successful candidate will have a PhD and/or MD and 2+ years of postdoctoral experience in a relevant area of whole animal physiology. Experience in one or more aspects of statural growth, bone metabolism, organ development, regeneration, feeding behavior and fuel homeostasis preferred. Job Code SCI782

Scientist/Senior Scientist - Immunology

Our Department of Immunology has an exciting opportunity for a highly motivated, versatile Scientist with a strong interest in the discovery of potential therapeutic molecules for immune-mediated disorders and the desire to develop an interactive research program that complements ongoing drug discovery efforts. Qualified applicants will have a PhD, MD or equivalent, postdoctoral training (preferably in the research area of Cellular/Molecular Immunology or Biochemistry of the immune system) and 5+ years of research experience in basic immunological sciences with an outstanding record of scientific productivity as demonstrated by publications and accomplishments. Job Code SCI640

Associate Scientist/Scientist - Recovery Sciences

You will design and develop commercial, large-scale recovery or purification processes using current protein purification technologies. Your work may also encompass participation on project teams and in recovery process technology development and direct participation in plant implementation of process design. Requires a PhD; 2+ years of postdoctoral study is highly desirable. A conceptual understanding of chromatography and protein characterization and experience with protein purification at lab bench scale are essential. Good communication skills and the ability to conduct independent research are necessary. Job Code SCI784

Postdoctoral Opportunities

The Genentech Postdoctoral Program consists of more than 50 researchers and is a vibrant and intensive environment for advanced scientific training. Postdoctoral Researchers conduct basic research in the areas of our scientific interest, publish in scientific journals, and attend and present work at scientific meetings. All candidates should have a Ph.D. and/or M.D. with a strong background in the appropriate field.

Immunology

A position is available to investigate lymphocyte cell surface protein interactions with endothelial cells associated with inflammatory diseases. See *J. Immunology* 157:2488-2497 (1996); *J. Immunol.* 155:5257 (1995); *J. Cell Biology* 125:1395 (1994); *J. Biol. Chem.* 269:14411 (1994). Manager: Dr. Sherman Fong. Job Code SCI620

Postdoctoral position available for research involving regulation of oxygen radical production by phagocytic cells. The candidate will join an active research group whose focus is the role of oxygen radicals in inflammation, tissue injury, and host defense as well as the development of therapeutic strategies to regulate these processes. See *J. Biol. Chem.* 271:25400 (1996); *J. Biol. Chem.* 270:8194 (1995). Manager: Dr. John Curnutte. Job Code SCI1007

A position is available to research protein engineering. Current interests include re-designing antibodies and growth factors, antibody-Fc receptor interactions and design of antibody/other protein chimeras with novel functions. Experience in several of the following areas is preferred: molecular biology techniques, mammalian cell culture, protein structure-function studies, protein folding, biophysical techniques and molecular modeling. See *Biochem.* 36 (16):4775-4781 (1997); *J. Immunology* 157:4986-4995 (1996). Manager: Dr. Leonard Presta. Job Code SCI1010

A position is also available for a molecular or cell biologist to work in the area of integrin cell adhesion molecules and their ligands. The candidate will join a group whose focus is the role of leukocyte integrins in inflammation and Vitronectin receptors in angiogenesis. See *Mol. Biol. Cell* 8:501-515 (1997); *J. Exp. Med.* 183:1247-1252 (1996); *J. Biol. Chem.* 270:12635-12640 (1995). Manager: Dr. Sarah Bodary. Job Code SCI1008

Molecular Biology

A position is available to probe the function of novel hormones in growth and development. This will include the use of transgenic mice or other model systems, as well as the identification of novel receptor-ligand interactions. See *Nature Biotech.* 15:768-771 (1997); *Stem Cells* 14 (suppl 1):116-123 (1996); *Proc. Natl. Acad. Sci. (USA)* 92:5292-5296 (1995); *Science* 265:1445-1447 (1994). Manager: Dr. Austin Gurney. Job Code SCI777

Molecular Oncology

A position is available to focus on the identification of cell death pathway components responsible for apoptosis, a process of fundamental importance in development and one that is intimately involved in the pathogenesis of cancer and neurodegenerative disorders. See *Nature* 388:728-729 (1997); *Science* 277:815-818 (1997); *Science* 276:111-113 (1997); *Science* 275:1122-1126 (1997); *Nature* 385:86-89 (1997); *Science* 274:990-992 (1996); *Cell* 85:817-828 (1996); *Science* 269:1424 (1995); *Science* 268:567-569 (1995); *Cell* 81:801 (1995); *Cell* 81:505-512 (1995). Manager: Dr. Vishva Dixit. Job Code SCI266

Manufacturing Sciences

A position is available to develop new tools for the assessment of performance of manufacturing operations and of the scalability of these operations. Requirements include a PhD in Chemical Engineering or a related field. Experience with statistical techniques for the retrospective analysis of process data, mass spectrometry or optical biosensor technology preferred. See *Biochem.* 35:1897-1903 (1996). Manager: Dr. John Frenz. Job Code SCI270

Toxicology

A position is available to assess the safety and mechanism of toxicity of exogenously administered human growth factors on tumor initiation, promotion, growth and metastasis. Experience or knowledge of tumor biology, laboratory techniques, animal handling, and with in-vivo and in-vitro tumor models is required. See *Cancer Res.* 56:921-924 (1996); *Ann Intern Med.* 122:54-59 (1995); *Cancer Res.* 55:249-252 (1995); *J. Clin. Invest* 95:1789-1797 (1995); *Am. J. Clin. Pathol.* 92:415-423 (1989); *J. Histochem Cytochem* 36 (4):383-389 (1988). Manager: Dr. Jeanine Bussiere. Job Code SCI535

Protein Engineering

A position is available for a Structural Biologist with experience in crystallography and biophysical techniques. The work will also involve mutagenesis and protein biochemistry. See *J. Mol. Biol.* 256, 144-159 (1996); *J. Mol. Biol.* 250:553-570 (1995); *Nature* 372:478-481 (1994); *Prot. Sci.* 3:1697-1705 (1994). Managers: Dr. Tony Kossiakoff and Dr. Bart de Vos. Job Code SCI0014

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things I like about consulting is that I learn so much on the job,” Speiser says. McKinsey also has an extensive training program for associates without business degrees.

“But the really important thing,” Speiser says, “is this: Many of the skills scientists develop in an academic environment are applicable in a business environment. I use my scientific training, if not my specific scientific knowledge, on the job every day. What we do is not rocket science, but rocket scientists can do much of it.”

What skills does the well-trained scientist have? Analytical skills, first and foremost: the ability to break down complex problems into smaller components. Comfort with numeracy. The ability to structure a problem. The talent for distinguishing between good and bad data. “And I’ve found that good scientists have certain core communications skills,” Speiser says, “including the ability to explain complicated systems and situations clearly and simply.” In the consulting environment, where Speiser must collaborate closely with clients and fellow associates from many different backgrounds, working on a variety of different problems, all these skills come in very handy indeed, and that is why McKinsey seeks out the best scientists at the best institutions.

Projects may last anywhere from two months to more than a year. All work is done in teams from two to more than five strong. “One thing a lot of us say,” Speiser says, “is that it’s a great career for people with a short attention span. You might work in oil and gas for five months, then health care, then electronics, and so forth. It always changes, but that’s part of what’s interesting about it.”

Speiser likes being able to work in an industry he has always liked, and he especially likes the “tremendous caliber, intelligence, integrity, and sheer personal skills” of the clients he serves and the associates with whom he works. “The people,” he says, “are just spectacular.” And you can often see the impact your work is having on the company’s fortunes: “That’s how we measure ourselves.”

What does McKinsey look for in would-be consultants? “Academic excel-

lence, clear evidence of problem-solving ability, a high level of drive and personal aspirations, the willingness to give extra effort,” Speiser says. Just completing a graduate career may be evidence in and of itself. He also mentions strong interpersonal and communications skills, empathy, the ability to understand the motivations and aspirations of others, and strong leadership. “People in science often have leadership skills and experience,” he says. “Whether it be in leading a research team or in other activities.”

Speiser returns to the theme of flexibility and openness. While it’s clear he likes his job, he knows it’s not for everyone. “It’s fun and challenging, but it’s not the environment for someone who wants to work on a single thing for years and years.”

“...it’s particularly exciting to bring new people in at a time like this, to bring new ideas together with new technologies.”

Stephen Kaldor, Eli Lilly

The Age of the Global Thinker: Combinatorial Chemistry at Eli Lilly and Company

Stephen Kaldor, head of molecular diversity at Eli Lilly and Company in Indianapolis, Indiana, is well-placed to discuss the growth and impact of combinatorial chemistry, since he is responsible for heading up Eli Lilly’s combinatorial chemistry effort. He sees two major rea-

sons for the growth of combinatorial chemistry. “First, with the advent of high-throughput screening,” he says, “biologists can screen many more drug candidates, meaning that the chemistry side must accelerate the rate at which they synthesize compounds of therapeutic interest. Secondly, it’s clear that innovation is what is being favored by the market. Being third, fourth, or fifth into the market with a ‘me-too’ compound won’t work any more. I really think combinatorial chemistry for medicinal chemistry purposes could have been practiced 30 years ago, but the driving forces I just mentioned weren’t there at the time.”

Eli Lilly takes two main strategies in developing combinatorial chemistry expertise within the organization. One is to recruit high-quality candidates with proven skill sets from premier academic groups. “But also, we have hundreds of excellent chemists already,” Kaldor says. “We’re retooling and retraining them internally.” Eli Lilly has a 3- to 4-month training program of lectures and laboratory work to train established chemists in combinatorial techniques. “We also value new employees who are good chemists but come in without formal training in these techniques. If the chemistry background is good—experimental rigor, breadth of synthetic organic chemistry experience—we feel we can work with that and train them to do medicinal chemistry and combinatorial chemistry with good results.”

We ask Kaldor about talk of a renaissance for synthetic organic chemists, and he agrees. “There definitely has been a rebirth there, and we’re genuinely excited about it. With genomics and all the press it has received, it’s reassuring that synthetic organic chemistry and medical chemistry are also increasingly valued. Generating and optimizing leads for the explosion of new biological targets coming from genomics represents an enormous and exciting new challenge for the chemist in the pharmaceutical industry. As a further stretch goal, chemists now are using combinatorial chemistry to develop cassettes of compounds to functionalize a genomics

continued ►

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Lilly Neuroscience is looking for dedicated scientists to help in the discovery of novel therapies for CNS disorders. We currently have the following positions available:

Ph.D. and BS/MS Behavioral Pharmacologists

These positions require expertise in pain and analgesia, anticonvulsants, memory and learning, antidepressants and anxiolytics, or antipsychotics are especially encouraged to apply. The current discovery research is focused on the following areas: serotonin, excitatory amino acids, muscarinic cholinergic, neuropeptide receptors, Alzheimer's, and neurodegeneration. We are seeking candidates with demonstrated independent research abilities that are interested in careers in the exciting field of drug discovery and development.

Ph.D. and BS/MS Electrophysiologists

- BS/MS - These positions require a background in neuropharmacology or related fields and experience performing in vivo or in vitro electrophysiological studies. Experience with hardware and software applications, a knowledge of small animal surgery (including stereotaxic surgery) and cell isolation or cell culture is preferred.
- Ph.D. - These positions require experience performing either in vivo or in vitro electrophysiological studies. Expertise is required in either single unit recordings, intracellular recordings, multi-unit recordings, EEG recordings, or synaptic recordings in slices using sharp electrode or patch clamp techniques. A strong publication record and evidence of independent research are essential.

Ph.D. and BS/MS Biochemical Pharmacologists

These positions require the ability to carry out both in vitro and in vivo measures of drug receptor interaction and effects on brain neurochemistry. Experience in radioligand binding, second messenger assays, neurotransmitter release/turnover and/or in vivo microdialysis is desired.

Ph.D. and BS/MS Neuromolecular Biologists

These positions require some experience in the following areas: neuronal signal transduction, receptor-mediated biology, neuropeptides, neurosteroid biology, knock-out mouse technology and proficiency in neuronal tissue culture, immunohistochemistry. Candidates must have a strong molecular biology background; protein expression, expression cloning, gene delivery systems, anti-sense technology and protease biology. BS/MS applicants should have 3-5 years experience.

Ph.D. applicants should have a minimum of two years post-doctoral experience or its equivalent.

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Division of Neuroscience, US Recruiting and Staffing, Lilly Corporate Center, Indianapolis, IN 46285.

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NEUROSCIENCE



NATIONAL CANCER INSTITUTE

Division of Basic Sciences
Bethesda, Maryland



Opening Date: September 22, 1997
Closing Date: November 10, 1997
Announcement Number: CA-97-0328
Director, Division of Basic Sciences

The National Cancer Institute (NCI), National Institutes of Health (NIH) has recently taken major steps to assure the continuation of innovative biomedical research that meets the scientific standards of the research community. In order to further this objective and assure its success, the NCI is seeking an outstanding senior-level scientist to fill the position of Director, Division of Basic Sciences (DBS). The Director, DBS provides scientific leadership of NCI's intramural basic research program, initiating and coordinating scientific programs that encourage the effective recruitment of key research staff to generate innovative investigator-initiated research. The Director is responsible for creating and maintaining a research environment that fosters collaboration between NCI's intramural research investigators and extramural scientists and continually stimulates novel research directed ultimately towards the treatment and prevention of cancer, AIDS, and other related diseases. The Director, DBS is also responsible for establishing effective partnerships with academia and industry to assure that innovative technology is developed and is successfully transferred, enhanced, and commercialized. The Director determines immediate and long-range research objectives and directs the implementation of these objectives through the effective utilization of fiscal and other resources. Long-term planning includes expanded research effort into the areas of developmental biology, cell biology, and molecular cytogenetics as well as the maintenance of innovative, ongoing basic research. The Director must ensure that DBS research reflects the highest standards of scientific excellence validated through rigorous peer review. The Director, DBS will provide national and international leadership to ensure that the quality of biomedical research in DBS enhances the position of the organization as a world leader in the cancer research field.

The DBS is organized into 34 Laboratories and Branches staffed with approximately 700 personnel positions and 500 Fellowship positions supported with an annual budget of approximately \$125 million. Candidates should be internationally recognized for their scientific accomplishments, leadership, and collaborative capabilities in the areas of molecular biology, cell biology, genetics, immunology, biochemistry and/or other areas of basic studies of cancer, AIDS, and related diseases, and the application of modern biotechnology to these studies. Candidates must also possess a medical and or other doctoral-level degree in a biomedical or related field. *In addition, candidates must either be a U.S. citizen, a citizen of a treaty-allied country, or a nonresident alien with a valid work visa.* Total annual compensation will be commensurate with education and experience and range from \$75,935 to \$148,400.

Applicants should send a letter expressing their interest in the position; a statement of research interests; a career synopsis and brief biography; curriculum vitae and bibliography; and the names and the addresses of five individuals who can be contacted as references. Letters of reference should not be submitted by the applicant.

The material should be sent to:

Ms. Toni McKeown

National Cancer Institute

Human Resources Management and Consulting Branch

6120 Executive Boulevard

Room 550, EPS

Rockville, MD 20852

Applications may also be faxed to (301) 402-9333.

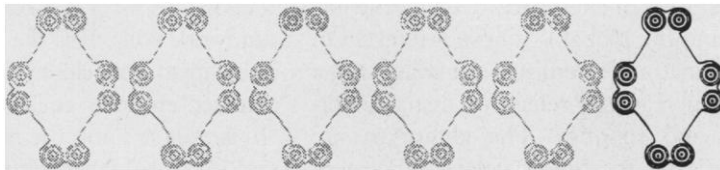
If you need additional information, please call

Ms. Toni McKeown,

NCI Human Resources Management and Consulting
Branch on (301) 402-2812.

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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EXELIXIS
pharmaceuticals, inc

Headquartered in South San Francisco, **Exelixis Pharmaceuticals, Inc.** is a rapidly growing, privately held biopharmaceutical company focused on the identification of key biochemical pathways using model genetic systems and genomics technology to bridge the gap between gene sequence and optimal drug screening targets. Exelixis, the Greek word for evolution, recognizes that evolutionary links between species hold profound insight into the mechanics of human cellular function. We also realize that our research will play a crucial role in the discovery and development of novel therapeutics for the treatment of human disease. As such, we have a rare opportunity for a select group of dedicated team players to help us pioneer the future generation of ground-breaking pharmaceuticals.

SCIENTIST/ ASSOCIATE SCIENTIST

GENOMICS

We're looking for a skilled experimentalist with a keen interest in the development and implementation of novel methods for genome analysis and positional cloning in model organisms. Candidates should possess a PhD and/or MD and 0-4 years of postdoctoral training. Experience and/or interest in the following areas is desirable: genomic library construction and screening; physical, genetic, syntenic and transcript mapping; mutation and polymorphism detection; high-throughput genotyping; and lab automation. (Job# AG-02-SCI)

SCIENTIST

COMPUTATIONAL BIOLOGY

This scientist will be focused on the development & application of software tools for the analysis of genomic & molecular biological data. The positions require a MS/BS or PhD in computer science or molecular biology; working knowledge of molecular biology, genetics, or genomics; proficiency with DNA & protein sequences; familiarity with algorithmic underpinnings for DNA & protein sequence comparison, pattern recognition and function prediction; and strong programming skills using C, C++, Perl, or Java. (Job# CB-02-SCI)

SCIENTIST

AGRICULTURAL GENETICS

We are seeking a proven leader with a strong interest in agricultural applications of genetics and genomics. Candidates should possess a PhD, 1-3 years of post-doctoral experience, and a strong molecular biology orientation. Expertise in entomology, nematology, plant biology, or mycology will be given preference. (Job# JM-02-SCI)

SCIENTIST

GENETICS - C. ELEGANS

We seek scientists (PhD with minimum 3 years' C. elegans postdoctoral experience) to join group focused on genetic analysis of pathways related to human diseases. Neurobiologists are especially encouraged to apply. (Job# MC-02-SCI)

RESEARCH ASSOCIATES

GENOMICS

We're looking for hands-on RAs with an interest in genomics to participate in genome analysis and gene identification projects in invertebrate model organisms. Candidates should be familiar with the standard repertoire of molecular biology and DNA cloning methods. Experience in genomic and/or cDNA library construction and screening, physical mapping, high-throughput PCR, genotyping or DNA sequencing is desirable. (Job# AG-01-SCI)

RESEARCH ASSOCIATES

DNA SEQUENCING

These RAs will join our ongoing high throughput sequencing project. Responsibilities include performing DNA sequencing reactions, robotic preparation of DNA templates, preparing DNA sequencing gels, and data analysis. Experience with ABI 377 or other automated DNA sequencers is desired. Supervisory experience a plus. (Job# CS-01-SCI)

RESEARCH ASSOCIATES

GENETICS & MOLECULAR BIOLOGY - C. ELEGANS

We are also looking for research associates (BA, BS, and/or MS) with either experience in genetic manipulation of C. elegans or strong molecular biology expertise. (Job# MC-01-SCI)

RESEARCH ASSOCIATES

GENETICS - DROSOPHILA

We're looking for bright individuals to join our research team that is analyzing genetic pathways of Drosophila. Qualifications include experience in genetics and/or molecular biology. The strongest candidates will have knowledge & expertise in one of the following areas: invertebrate mutagenesis, STS mapping, gene cloning, gene expression analysis and germline transformation. (Job# CK-01-SCI)

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www.exelixis.com

target. We'll take a set of ligands made via combinatorial chemistry techniques and start to probe the nature of a particular genomic target."

Does that mean that good chemists should also be good biologists? "We're torn between focused chemists and chemists who know enough biology to make key discoveries at the chemistry/biology interface," Kaldor says. The crossover chemist with some biology is indeed useful. "We are interested in people from groups such as Jonathan Ellman's at Berkeley, Stuart Schreiber's at Harvard, or Peter Schultz's at Berkeley—solid synthetic organic training coupled with application to biological targets. We find that appealing, but we also draw quite heavily from people focused exclusively on total syntheses of complex organic molecules and synthetic methods development."

Kaldor sees a candidate pool "as strong as it's ever been."

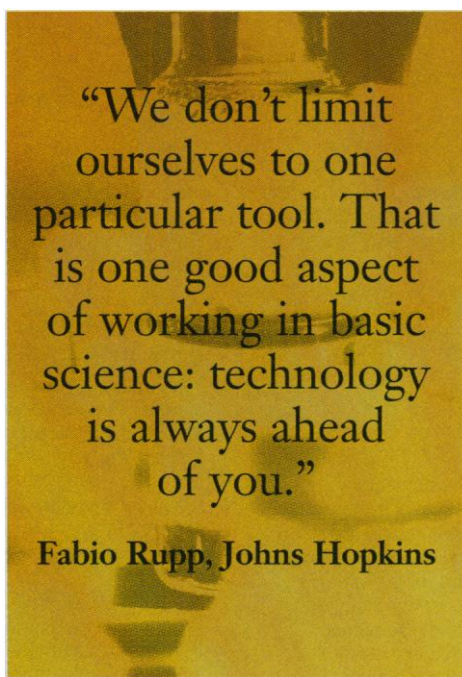
Most large pharmaceutical companies started quite actively recruiting again in late 1995, and the up-trend continues, partly because of the improved economy, partly because of the excitement of new opportunities and tough competition. Kaldor thinks that "the market is better for people interested in a job as a chemist at a large pharmaceutical company than it has been for the past decade. Good people will find an number of excellent opportunities." Eli Lilly is actively recruiting for its formal medicinal chemistry group and its combinatorial chemistry group.

Kaldor often lectures about skills that will be necessary in the science of the twenty-first century. Assuming that the hard science learned in graduate school is top-notch ("an absolute necessity," in Kaldor's words), he sees more general, basic scientific skills as being sorely needed. They include the ability to develop and test a chemical hypothesis efficiently, experimental rigor, and the ability to begin and complete projects.

"We like to see their hands-on synthetic repertoire—what they've actually done," Kaldor says, "and how much they can extrapolate from that repertoire into

other areas of chemistry." (Again, the linear and the global.) "Those interested in combinatorial chemistry are going into a field increasingly reliant on instrumentation and robotics. The ability to use them, and to exploit databases, is very important. And we look for some hands-on experience with analytical techniques such as HPLC, NMR, and the like."

For medicinal chemists to be effective, they must have a fundamental understanding of inter- and intramolecular forces in physical organic chemistry. In their graduate training, they need to have thorough



understanding of acidities, hydrogen bonding, reaction kinetics, enzyme kinetics, and conformational analysis.

Ability to use molecular modeling tools and to perform computational literature searching is a distinct advantage. "Increasingly, we see some formal schooling in bioorganic chemistry or biochemistry as a plus," Kaldor says. "That's because it's important that, when you are working in close collaboration with your biology colleagues, as you will be doing constantly, you are able to ask not only a first question but also a second and third question to establish credibility and common ground."

Excellence in the hard sciences, then, is the sine qua non. But on the softer side,

Kaldor calls for a demonstrated knack for teamwork skills. Has the candidate shown an ability to work closely with colleagues, to conduct effective collaborative research? "In getting to know the candidate," Kaldor says, "we key in on their working relationships with supervisors and peers. Have they alienated their peers, or have they been key go-to people?"

Other skills—oral and written communication, interviewing skills, time management—are "not to be undervalued." And again he mentions "parallel processing," the ability to do several tasks effectively at once.

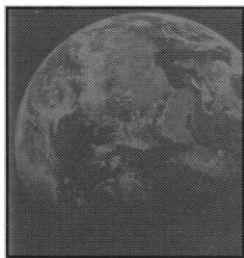
"This area has staying power," Kaldor says. "It will stick, no doubt about it. I would say over 80 percent of the projects in the company are currently being affected by this technology. That's why it's particularly exciting to bring new people in at a time like this, to bring new ideas together with new technologies."

Asking the Right Questions: Neuroscience at Johns Hopkins

What makes neuroscience hot, and why it promises to stay hot for quite a while, is the vast unmet need throughout the world for effective treatment of psychological and CNS diseases and disorders. Even to say the words *Alzheimer's disease*, *Parkinson's disease*, *depression*—even the word *pain*—is to realize that this is a science just beginning to wedge open the gate of understanding. And the solutions, treatments, and cures (if there are any) will not reveal themselves easily. They will take the same combination of the linear and the global that we have seen elsewhere.

Fabio Rupp, assistant professor in the department of neuroscience at Johns Hopkins University, actually switched from one hot field (immunology) to another (neuroscience) in the course of his graduate work. He had completed his PhD in immunology, but after one postdoc with Tak Mak at the University of Toronto and another with Richard Scheller at Stanford, he made the switch. Immunology was great, but Rupp liked the "challenging questions" in neuro-

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AT MONSANTO, we're researching the world's most ground-breaking innovations. We're a global Life Sciences company on a mission—to develop solutions for a sustainable planet. That's why our entire organization, from agricultural biotechnology to pharmaceuticals to food ingredients, is dedicated to life sciences. We've already strengthened a plant's natural resistance to insects. We've discovered new treatments to relieve arthritis pain and control high blood pressure. And with some of the best professionals in the industry, we're developing the breakthroughs that will revolutionize the entire field of biotechnology.

AG SECTOR

Transforming the way food and fiber are produced while contributing to delivering health, wellness and nutrition to everyone in the world.

St. Louis, MO Opportunities

Protein Biochemist (Disease Control Team)

Provide expertise and experimental support for discovery/development of novel proteins for plant disease control. PhD/BS/MS in Biochemistry or related field and 2-3 years experience in protein purification from microbial and plant sources required. Molecular Biology experience and knowledge of protein assay development, protein characterization and/or high-throughput a plus.

Molecular Biologist

BS/MS in Molecular Biology or related discipline essential. Experience in/knowledge of recombinant DNA technologies including nucleic acid isolation, gene cloning and expression, library construction and screening and PCR techniques required.

Biochemist

BS/MS in Biochemistry or related discipline and experience in/knowledge of biochemical assays, protein isolation and/or purification a must. Experience in/knowledge of immunological detection techniques such as Western blotting and ELISAs desirable.

Biologist

BS/MS in Biological Sciences or a related field and basic lab skills essential. Experience in/knowledge of one or more of the following desirable: general microbiology; cell culture; sterile technique; plant cell culture; plant transformation; and/or whole plant biology including greenhouse or growth chamber experience a must.

Technical Leadership (Insect Control Program)

Selected individual will provide leadership to the team developing insect control in cotton. PhD in Molecular Biology, Biochemistry, Entomology or other relevant discipline essential. Four years experience in a biotechnology-related field a must; agricultural biotechnology experience preferred. Experience with transgenic plants and/or insect control and project leadership skills/experience desirable. Excellent technical capabilities a must.

Protein Engineers (Insect Control Program)

PhD/MS/BS in Molecular Biology, Biochemistry or related discipline required. Experience in a broad range of biochemical, recombinant DNA technologies and expression essential. Demonstrated experience in the engineering of proteins or protein structure/function studies desirable.

Analytical Molecular Biologist

Responsible for the development/application of diagnostic analytical methods for the characterization of genetically modified crops and research materials (DNA). Will include evaluating new molecular diagnostic methods to make improvements and implementing/improving efficiency of high-throughput DNA extraction to analyze genetic materials. PhD and experience with molecular diagnostic methods (PCR and Southern blotting) and molecular breeding required. Experience with RFLPs, AFLPs and marker-assisted plant breeding, along with knowledge of good lab practices (GLP) a plus.

Plant Molecular Analyst/Lab Manager

Responsible for managing a molecular analytical lab which analyzes genetic material, including transgenic plants. Will include supervising scientists, managing sample archives and implementing high-throughput analyses and novel processes. BS/MS scientist with superb plant molecular biology skills required. Experience with plasmid and genomic DNA isolation, DNA analysis using restriction enzymes, gel electrophoreses, Southern blot analysis, DNA probe construction, PCR and cloning a must. Knowledge of word processing, spreadsheets and DNA analysis software, along with the ability to work in a team-based research environment are essential. Experience with RFLPs, AFLPs, and marker-assisted plant breeding and knowledge of good lab practices (GLP) a plus.

Post Doctoral Biochemist/Molecular Biologist

Research the effects of environmental stresses on plant metabolism and yield the engineering of plants to reduce these effects. Take part in a multifunctional program team, to include Molecular Biologists, Biochemists and Plant Physiologists, working to genetically engineer plants. Responsibilities include: identification of important genes to the program; gene isolation and manipulation; kinetic evaluation of enzymes; enzyme assay development; biochemical characterization of plants; development of hypotheses and research plans; technical communication and interaction internal and external to the program. PhD and publication record in Biochemistry or Molecular Biology required. Experience in gene cloning, PCR analysis, Northern and Southern hybridization and assay development in kinetic evaluations desired. Expertise in a plant system is not required and applicants with relevant skills from research in other organisms are encouraged to apply. Critical thinking, innovation, strong technical and communication skills essential.

If interested in any of the AG Sector positions, please send your resume and three references to: *Monsanto Life Sciences Company, Job Code: SC19/26 - (please indicate position of interest), 800 N. Lindbergh Blvd., Mail Zone: C3SB, St. Louis, MO 63167.*

NUTRITION AND CONSUMER SECTOR

Enabling people to enjoy healthier, longer, happier lives through a new generation of food ingredients, food-product systems, and products for outdoor living.

Downtown Chicago, IL Opportunities

EDI Analyst

A solid understanding of third party networking and business information systems, particularly with regard to all aspects of EDI, to include standards for retail, grocery, finance and warehousing. Responsibilities include: identifying, evaluating and recommending innovative uses of EDI; monitoring SAP 3.0c workflow and EDI interfaces; developing long term plans in conjunction with corporate strategies; managing business partners' expectations through phases of development; maintaining/designing

translation tables and application databases. BS/BA or equivalent with 2-4 years business experience and the ability to handle simultaneous priorities with multiple business areas required. Knowledge of integrated system processing critical, experience with SAP 3.0c/UNIX beneficial.

Research Scientist

Development/implementation of analytical methodologies in support of specialty food ingredient research applications. Carry out analytical investigations and problem solving to support various in-house research endeavors. PhD in Analytical Chemistry and a diversified background in development of proteins, lipids, and polysaccharides using various separation and detection techniques. Excellent written/verbal skills and ability to collaborate with scientists from any discipline essential.

If interested in any of the Nutrition and Consumer Sector positions, please send your resume and three references to: *Monsanto Life Sciences Company, Job Code: SC19/26 - (please indicate position of interest), Merchandise Mart, 200 World Trade Center, Suite 900, Chicago, IL 60654.*

PHARMA SECTOR

Bringing to the world increasingly innovative and important pharmaceutical products that satisfy unmet medical needs.

Discovery Opportunities in St. Louis, MO

Protein Biochemist (Purification/Related Biochemical Analyses)

BS in Biological/Chemical Sciences with 2+ years of biochemical lab experience in a pharmaceutical or academic research setting required; lab experience in protein electrophoresis (SDS-PAGE and IEF), immunoblotting, protein quantitation, liquid chromatography, and UV/vis spectrophotometry required. Prior experience with HPLC instrumentation and chromatography methods development, as well as experience with prokaryotic and eukaryotic protein expression systems a plus.

Biochemist (High-Throughput Screening Group)

Assist in the identification of chemical leads for discovery projects using high-throughput screening techniques. Implement new assays according

the future

happens here first

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Bioscience

Roche Bioscience offers an exciting environment of innovation in human pharmaceutical research. Situated in one of the Bay Area's most vital technological regions, our Palo Alto campus presents a unique setting that combines the synergy of science and business to produce research that delivers results. Join our research-based enterprise as we discover important new medical therapies and create a future of industry firsts.



See us at the bioScience Career Fair, October 3-4, Stanford University Campus in Palo Alto, California.

We proudly offer ongoing career opportunities for Research Associates and Research Scientists in most areas of modern biology and chemistry. We also seek Bioinformatics, LIMS, and other qualified I.S. professionals to support our leading edge technical environments. Positions typically require a related BS/MS/PhD degree with 0-5+ years' experience. Ongoing openings exist in the following areas:

- Molecular Biology
- Biochemistry
- Organic Chemistry
- Analytical Chemistry
- Pharmaceutical Chemistry
- Bioinformatics
- Computer Science

**For complete details on openings,
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Roche Bioscience offers a highly attractive salary and full benefits package, which includes health coverage, life insurance, incentive bonuses, 401(k) and pension plans. Rewarding new ideas and the spirit of innovation, our progressive environment also features an on-site Fitness Center and a Children's Day Care Center to help our employees maintain a superior quality of life in one of the world's best places to live. If you are unable to meet with us at the bioScience Career Fair, but would like to explore our opportunities further, apply today by sending your resume to: Roche Bioscience, Job Code: SCI0926-KH, 3401 Hillview Avenue, Palo Alto, CA 94304. Fax 650/424-8159. As an equal opportunity employer, we are committed to workforce diversity.

science, the “complexity” there, the fact that “there is so much to do.” While acknowledging that at the moment, immunology and its offshoots dominate biotech research and products, Rupp thinks that in the next ten years, more products will follow for neuroscience.

“There is more awareness today that there are probably many more diseases related to neurological and psychological processes than people think,” Rupp says. “Consider the proportion of Americans who take Prozac. Depression will always be a hot topic. Even more, people are starting to understand that there are molecular tools to get to previously inaccessible questions. That has to be extremely interesting, especially for young scientists.”

As mentioned, Rupp was drawn to neuroscience because of the fundamental kinds of processes and questions available for study. Neuroscience is that sexiest of paradoxes, a very sophisticated science in which the fundamental questions remain unanswered. “Think of it: memory, self-perception, consciousness,” he says. “Even sleeping and dreaming. Very familiar, but still these things and the processes that underlie them are fairly unknown. They are also difficult to study, but I have confidence that the tools available, especially those coming out of molecular biology, will render many of these things much more accessible.”

Rupp’s current research concerns a fascinating fundamental question: the developmental aspects of synaptogenesis. “I’m studying how the nervous system developed, particularly how neurons develop their connections,” he says. He shows he is a neuroscientist of the 1990s in that his toolkit derives heavily from molecular biology. “We use the conventional molecular biology techniques—PCR, cloning, and a lot of DNA recombinant techniques. We don’t limit ourselves to one particular tool. That is one good aspect of working in basic science: technology is always ahead of you. You get the chance to try different things, to find out what the new tools can do for you.”

Some might think that academic science would place less of an emphasis on

communications skills than does industrial science, but for Rupp, these skills are, if anything, even more important in his work place. Why? Two words: grant writing. “Many of my colleagues spend more than half their time—and some much more—writing grants,” Rupp says. “And grant writing is an art with many aspects. Your main challenge, the main task on your shoulders, is conveying the excitement of your work to the readers on the grant committee.”

These readers will read many grants describing extremely deserving research projects; many of these grants will be of similar or near-similar quality, and the edge may go to the grant that sticks somehow in the readers’ memories, that makes them interested in the project. And often that comes down to the writing skills of the grant seeker. “I don’t think such skills are actually taught enough in PhD programs,” Rupp says. “I think grad students should be forced to write more.”

As we saw above, neuroscience is a polyglot field. Rupp advises interested students to become very well-grounded in classical biology and perhaps another science. “For example,” he says, “if you have a BS in physics and do a PhD in molecular biology, that could make a lot of sense. As we get further and further into the molecular basis of neurologic processes, we’re finding that physics, biology, and chemistry are coming closer and closer together. Neuroscientists of the near future will need a deep understanding of fundamental chemical and physical phenomena.” Such flexibility will come in handy when the sequencing of the genome is completed. Rupp wonders aloud about 2010 and beyond, when the tools of molecular biology, no longer novel, will have done their job, when neurobiology will be past the era of technique and come back to an era of understanding: “Then the question will become, What can you do with the knowledge of the gene you have? Students therefore need to develop a deeper understanding of biology rather than of techniques alone.”

When it comes to advice for would-be graduate students, Rupp returns to the notion of asking the right questions.

“Frankly, if I were a young scientist considering graduate school,” he says, “I’d first ask myself what question I would like to solve. I’d try to get a clear vision of why I like the brain and the central nervous system—something more specific than simply ‘It’s cool’—and then I would try to identify a question that interests me.” From there, students should seek out as many scientists in the field as they can and talk to them about their chosen question. “Find out whether the question is a promising one, and what tools would help you study it,” Rupp says. “Information is what you need most. So read and talk to people. Don’t be afraid of asking someone for an hour of their time.”

This is in fact the path Rupp followed. He found that choosing his research laboratory was a crucial step. “Lots of people go for big names,” he says, “but I’ve found that that approach isn’t necessarily the best. I looked for a good mentor. I’d rather have that than a nonmentor, someone who doesn’t have time for you. In such a lab, you basically end up collaborating with postdocs and don’t get as much input.” How did Rupp find that mentor? By asking around. “I asked people, ‘Are they readily available? Can they explain things well? Will they take an interest in my work?’ And I talked to these scientists and tried to gauge whether they were interested. There’s always a certain risk involved, but you can minimize the risk by talking to people. And,” he says—and should we be surprised?—“by asking the right questions.” A true blueprint for successful graduate study and a career in neuroscience. ■

September Career Workshops:

Join us for an online discussion group on Hot Careers Through 2005 at the Science Professional Network Web page (www.sciencemag.org). Click on Science Professional Network, and then click on Career Workshops. Don Truss, President of Science Registry, will be our guest expert for the month of September.

to established protocols and modify to accommodate high-throughput instrumentation. BS in Biology and 2+ years experience in a research lab performing biochemical assays required; experience in high-throughput screening with knowledge in the use of automated lab equipment preferred. Expertise in different cellular and in vitro assay formats (enzymes, receptors, ELISA) desired.

Research Biologist

BS in Biological Sciences with 3+ years of molecular biology lab experience in a pharmaceutical or academic research setting required; lab experience to include cDNA library construction, DNA sequencing, PCR analysis, RNA quantitation analysis, DNA mutagenesis, expression plasmid construction, eukaryotic and prokaryotic recombinant protein expression systems, Western analysis, and ELISA development. Experience with cell-based assays, cell cultures and screening techniques preferred. Ideal candidates will have strong PC skills including experience with GCG computer package for UNIX and Sequencher. Structure/function analysis, protein purification, quantitative PCR and yeast-two hybrid experience a plus.

In Vivo Pharmacology (Pain)

Responsible for in vivo pharmacology research aimed at identifying novel therapeutic agents for the treatment and management of pain and identifying drugs that are effective for the treatment of arthritis. BS in Biological Sciences and 2+ years of in vivo pharmacology lab experience required; lab experience to include development/utilization of animal models of hyperalgesia for the testing of analgesic agents. Candidate should have an understanding of the neuronal pathways involved in hyperalgesia and a background in prostaglandins, nitric oxide and free radicals. A background in the mediators of inflammation a plus.

In Vivo Pharmacology (Oncology)

Experience in tumor in vivo animal models, as well as some surgical skills, to fill a position driving lead compounds for fast-paced projects. BS in Biology or related field with a minimum of 1-2 years lab/animal experience with several species required. Basic tissue culture skills and ELISA and cell-based assay experience desirable. Some night and weekend work required.

Pre-Clinical Opportunities in Suburban Chicago, IL

Supervisor, Document Management

Provide leadership and technical direction for the Pharmacokinetics, Bioanalytical and Radiochemistry document preparation and reports while ensuring a client-focused structure. Participate/advise on departmental teams to ensure customer satisfaction, evaluate/improve upon systems to deliver products and state-of-the-art processes for reliable services and deliverables. BS/BA in a scientific discipline or equivalent with demonstrated writing competence in a health care related area required. A solid understanding of electronic documentation preparation & management and information systems a must. Mastery of Microsoft Suite software, ability to incorporate graphics and spreadsheets into compound Word documents required. DeltaGraph, FileMaker, PRO, and Documentum desired.

Senior Development Engineer

Independently carry out engineering aspects of development processes for design/implementation of new chemical entities on a large scale, to include reducing emissions, waste and costs while assisting technology transfers within the Chemical Sciences Department. You will also train department personnel, prepare Standard Operating Procedures and participate in Process Safety Reviews. BS in Chemical Engineering (MS preferred) and 5-7 years pharmaceutical or fine chemical experience required. Knowledge of unit operations, chemical engineering principles, chemistry and math is essential. Experience in Batch Manufacturing techniques, Fisher PROVOX process control, SOP preparation and project management techniques a plus.

Genetic Toxicologist

Conduct genetic toxicology studies on new chemical entities, and perform assay development studies to improve test capabilities including implementation of pre-clinical safety study protocols; maintenance of lab operations and ensurance of all lab activities in compliance with management standards is expected. You will independently suggest/investigate new test methodology or improvements on existing methodology or lab operations, and manage the testing of compounds. BS with several years experience in relevant area and knowledge of genetic toxicology assays required. Solid understanding of Food Lab Practices, GLPs, SOPs and departmental policies/procedures with 2+ years in industrial genetic toxicology desired.

Research Analytical Chemist

Independently perform bioanalytical analyses and maintain instruments involved. Assist in the development and/or validation of and perform bioanalytical analysis using ELISA/RIA and lab automation. Under minimal supervision perform/assist in one or more of the following: method definition/development; method validation; implementation/training. Protocol and/or report preparation, support to PBR Laboratories. Compliance of SOPs, policies/procedures, GLPs, and safety regulations essential. BS in Chemistry, Biochemistry or Immunochimistry and 1-3 years related experience required. Experience working with immunoassays desired.

Senior Group Leader

Represent Product Safety Assessment on arthritis/inflammatory diseases franchise project teams and design, execute and defend pre-clinical safety assessment packages for IND and NDA submissions. Serve as study director on critical/complex studies; and aid in development of junior PhD personnel. Implement research programs to address toxicological issues arising in development. Publish research in peer review journals and within Monsanto Technical Community. PhD in Toxicology, Pharmacology or related discipline and 5-10 years relevant post doctoral experience essential. Supervisory experience of lab and PhD lab staff desired. Thorough knowledge of GLPs a must.

Research Scientist

Oversee and participate in development, validation and application of sensitive and specific bioanalytical methods for proteins and conventional small molecules in animal and human matrices to support the development of these compounds into marketed products. PhD in Analytical Chemistry, Biochemistry, Pharmacology or related discipline with at least one year of post doctoral experience required. This experience would ideally be in protein analysis (immunoassay-based) and bioanalytical method development. Pharmaceutical industry and drug development support experience desired. Compliance with GLPs and modern management techniques a must.

Veterinary Anatomic Pathologists

Requires exceptional veterinary pathologists to serve as members/leaders for our teams of scientists assigned to the discovery and development of novel products that are highly efficacious, safe to humans and friendly to the environment. Opportunities to work at all levels of the safety assessment process in the development of a wide spectrum of new classes of compounds coming from our pharmaceuticals, agricultural, and

food/nutrition sectors. DVM and certification by the ACVP required. PhD with experience as a toxicologist pathologist and/or experience in molecular pathology preferred. Strong interpersonal/leadership skills required. **Looking for candidates in both St. Louis and Suburban Chicago; please apply to applicable address.**

Clinical Opportunity in Suburban Chicago, IL

Senior Project Director

Serve as liaison between teams and senior level management, as well as coach teams to achieve peak performance and proactively lead multi-disciplinary, matrixed project teams. Team projects involve the development of products and line extensions through Phase III clinical trials, regulatory approval, manufacturing start-up and Phase IIIb/IV. This includes planning of project objectives, establishing project milestones and ensuring that these objectives/milestones are consistent with approved Integrated Drug Development Strategy. PhD/MD in Life Sciences with minimum 5-10 years experience in pharmaceutical industry and high level responsibility/demonstrated results in drug development/project management. Must possess experience managing multiple overall NCE/NBE drug development projects that have resulted in FDA and other regulatory filings/approvals. Demonstrated successes in working with co-developers/co-marketers to achieve high performance teams essential.

If interested in any of the Pharma Sector Discovery positions, please send your resume and three references to: Monsanto Life Sciences Company, Job Code: SC19/26 (please indicate position of interest), 800 N. Lindbergh Blvd., Mail Zone: C3SB, St. Louis, MO 63167.

If interested in any of the Pharma Sector Clinical or Pre-Clinical positions, please send your resume and three references to: Monsanto Life Sciences Company, c/o Searle, Job Code: SC19/26 (please indicate position of interest), 4901 Searle Pkwy., Skokie, IL 60077.

All candidates must be able to work effectively in a team-based environment and possess excellent written and verbal communication skills. The ability to coordinate and plan specific objectives and meet aggressive timelines required. Strong PC skills a must.

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Few biotechnology companies can offer you the promise and excitement of Gilead Sciences. We are a leader in the discovery and development of a new class of broad spectrum antiviral therapeutics that may provide powerful new treatments for CMV retinitis, HIV, influenza and other viral diseases. Here, you'll be a part of a company that takes pride in its achievements, knowing that patients may benefit from the products we create. Currently, we are seeking the following professionals to contribute to our leading team.

RESEARCH SCIENTISTS

Candidates with a PhD in a related field and 0-5 years of experience are invited to apply for Research Scientist openings in these areas:

- Analytical Chemistry
- Research Virology
- Cell Biology
- Molecular Biology

RESEARCH BIOLOGISTS

We encourage BS/MS-level candidates with 0-3+ years' experience to inquire about openings in these areas:

- Clinical Virology
- Research Virology
- Molecular Biology

See us at the bioScience Career Fair at the Stanford University Campus in Palo Alto, California.

We are committed to developing important treatments for a wide range of viral diseases, from influenza to AIDS. As you will discover, we are as committed to opportunity as we are to scientific achievement. If you are unable to meet with us, but would like to learn more, please send or fax your CV/resume to: Human Resources, Gilead Sciences, Inc., 333 Lakeside Drive, Foster City, CA 94404, fax (650) 573-4800. We are proud to be an equal opportunity employer.

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PROGRAM GUIDE

3 October: 11am-4pm

4 October: 11am-3pm

The following organizations are interviewing at the 3-4 October SCIENCE Career Fair. See their recruitment ads in this issue for details on scientific career opportunities.

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Participating organizations as of 9/18/97

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Philadelphia, PA
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Computational Chemist

You will model compounds with computational approaches including force field, semi-empirical, and ab initio methods; discover relationship between molecular descriptors & biological activity; and develop databases. The position requires a Ph.D. in computational chemistry applied to small molecule organic compounds; experience with design of biologically active molecules & QSAR analysis; 1-5 years' industrial experience; and excellent communication & interpersonal skills. Must be able to develop & apply software for molecular modeling and statistical analysis to evaluate relationships between molecular descriptors and biological activity. The ideal candidate will have a strong fundamental knowledge of theoretical & physical organic chemistry.
(Job# SC10926-CC)

Cell Biologist

You will establish in vitro drug screening models; develop the mechanistic studies of compounds using biochemistry, cell biology, histopathology and animal study techniques; maintain cell lines; and perform ELISA, microscope photography, cell counting and biochemical analysis. The position requires an MS or equivalent with a minimum of 8 years' related experience; a solid background in cell biology, biochemistry and dermal toxicology; and experience with cell cultures. (Job# SC10926-CB)

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AUTOMATION SUPERVISOR ANALYTICAL

You will manage the Analytical group, which is responsible for the acquisition, implementation, validation, and training of automated analytical testing systems hardware, software, and documentation. You will also manage LIMS and development applications. Requires a Ph.D. in Analytical, Robotic, or Computer Sciences, or equivalent experience with 8+ years of analytical/computer science/industrial experience.

QA/COMPLIANCE MANAGER QA/QC

Assure that all operations are in compliance with device quality systems regulations, GMPs, and SOPs. Support the manufacture and release of commercial and non-commercial products to meet internal and partner schedules. A BS in Science or equivalent, a minimum 10 years' QA/QC experience in a GMP environment, and at least 5 years of supervisory experience are a must.

QC SPECIALIST QA/QC

As the lead person in the execution and training for medical device component inspection, you must have a BS in Science, Engineering, or Chemistry with 4-5 years' experience in GMP-regulated industries.

QC LABORATORY MANAGER

Manage the QC laboratory, with primary responsibility for supporting medical device manufacturing processes from feasibility through process commercialization. You will direct a group of scientists, managing method validation and technology transfers. You will also coordinate QC activities with Analytical Sciences, subcontractors, and Manufacturing Engineering. Requires an MS in Chemistry (or equivalent), 5-10 years' industrial experience, and 5 years' experience in managing a QC lab in the medical device industry.

VALIDATION MANAGER

You will be responsible for the development and execution of validation protocols for facilities, equipment, processes for medical devices and drugs during all phases of manufacturing. Serve as technical expert during compliance assessments of major subcontractors as you manage company-wide metrology and software validation activities. Requires a BS in Science or Engineering and 10-15 years' experience in an FDA-regulated environment.

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PHARMACOLOGISTS, TOXICOLOGISTS, PHARMACOKINETICISTS

These are senior scientific positions responsible for the design, conduct, reporting and management of IND, BLA and NDA enabling programs. Positions are responsible for all

scientific issues related to preclinical and clinical ADME, toxicology, pathology, biopharmaceutics and associated product development strategies. Positions require a minimum of 7-10 years of relevant experience in the biopharmaceutical industry with direct involvement and responsibilities in the development of small molecules and biotechnology-derived products. A Ph.D. or equivalent, specific expertise in pharmacology, toxicology, or pharmacokinetics, and a strong publication record is required. Candidates with credentials in the scientific disciplines noted above are urged to apply. The ability to perform independently and collaboratively in a matrix environment is essential for a successful candidate. Prior experience working with interdisciplinary project teams and with CROs is essential. **Job Code: JT/PTP**

SCIENTIST-ANALYTICAL PROTEIN CHEMISTRY

The successful candidate will be responsible for performing experimental characterization and structural analysis of proteins, and for the coordination of these activities with other protein chemistry groups. This person must have demonstrated expertise in protein characterization, including peptide mapping, HPLC, disulfide structure elucidation, and glycoform analysis; familiarity with other protein characterization techniques such as protein sequencing, MS, CD, AAA, CE, etc. is desirable. A Ph.D. in Biochemistry, Chemistry or Biology with at least 4 years' industrial experience is required. **Job Code: RC/SAPC**

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Please forward your resume, indicating appropriate job code, to: Biogen, Inc., 14 Cambridge Center, Cambridge, MA 02142; Fax: (617) 679-2546; E-mail: resumes@biogen.com. Biogen is an Equal Opportunity Employer.

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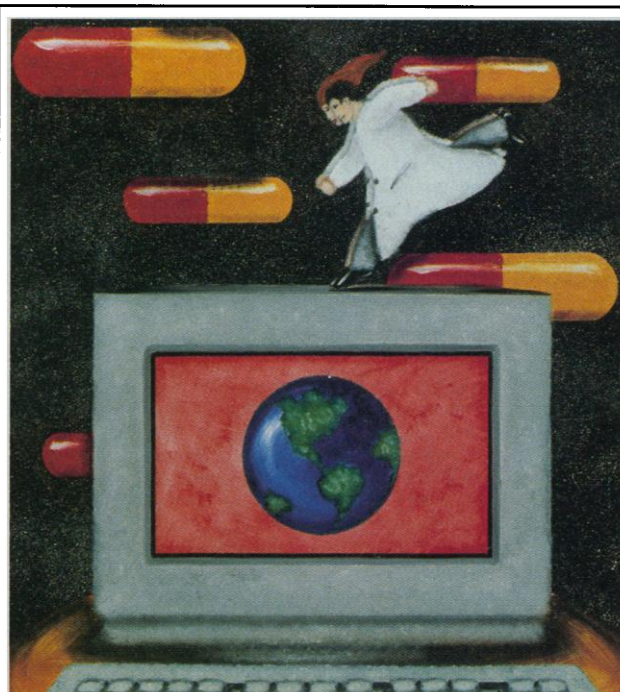
Scientific Communications Writers are responsible for communicating the findings of clinical and developmental research studies to the medical and scientific community. They write research and review articles for publication in the peer-reviewed literature and prepare slide and poster presentations for professional meetings. They also write product monographs, professional education materials, and product backgrounders for use by both the medical community and their colleagues within Allergan.

Scientific Communications Writers also develop and maintain scientific expertise in targeted therapeutic areas and function as important liaisons between scientific and marketing professionals within the organization.

The position requires an advanced degree in biological science or medicine (eg, PhD, PharmD, MD). Excellent written and oral communication skills and the ability to communicate technical material to both technical and nontechnical audiences are also required. The qualified candidate should demonstrate strong planning and organizational skills, high energy, and the ability to take initiative within a team framework.

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By pioneering some of our industry's most impressive technological and pharmaceutical innovations, RPR and our 26,000 employees worldwide have created a new standard by which excellence is measured. As our corporation expands to meet the increasing needs of patient populations, our demand for dedicated, pioneering and innovative individuals has never been greater.

Bioinformatics Research Scientist Gene Medicine Department

The individual we are seeking should possess a BS/MS in Life Science or Computer Science with 3-5 years of biocomputing experience. Additional requirements include: demonstrated experience in DNA and protein sequence analysis and in the design, implementation, and maintenance of annotated sequence databases; programming experience in C++, SQL, PERL (and/or CGI), UNIX, Java, as well as HTML page design; background in scientific database development (Oracle); and, familiarity with the Macintosh and Windows operating systems. The selected individual will perform sequence and structural searches related to proprietary DNA and protein information generated within the department, liaison with the Information Services Department to coordinate the scientific design and implementation of applications for search and analysis of genomic and biological data, and design proprietary database structures for the storage and manipulation of genomic and proteomic information. (SD-SF)

Project Leader/Senior Systems Analyst-Bioinformatics Research & Development Information Systems

To qualify, candidate must possess a Bachelor's degree, preferably in the Sciences and/or Information Technology. Master's degree preferred. In addition, 5-7 years of IS and/or Scientific experience is needed, especially in a broad range of applications and systems supporting research and development. Programming experience should include C++, SQL, PERL (and/or CGI), UNIX, JAVA, as well as HTML page design. Additional requirements include experience in technical project management and formal life cycle approach, a background in scientific database development (ORACLE), familiarity with the desktop operating environment and bioinformatics resources, methods, and solutions, along with excellent communication, organization and interpersonal skills. (SD-PL)

In addition to an exciting and dynamic environment, Rhône-Poulenc Rorer offers a competitive salary, comprehensive benefits, an ideal location, and the opportunity for advancement. Interested, qualified candidates should forward resume, indicating position of interest, to: **Susan Dyson, Manager, Human Resources, Rhône-Poulenc Rorer R&D, 500 Arcola Road, Position _____, Mailstop H37, P.O. Box 5096, Collegeville, PA 19426-0800.** Equal Opportunity Employer M/F/D/V.



Due to unprecedented growth, the National Center for Genome Resources, a bioinformatics company based in Santa Fe, New Mexico, is seeking the following individuals to join our staff:

Bioinformatics Associates

These individuals will be members of a team that through selective data analysis, annotation and review will evolve our sequence database into a functional genomic database. Responsibilities will include nucleotide and protein sequence analysis, identifying data inconsistencies, data mining from several sources, and processing mined data to create highly curated data sets. Individuals must be willing to learn computer technology and become expert in Perl, SQL and NT or UNIX. Qualifications include: experience with commonly used DNA/protein analysis programs, MS in Molecular Biology, Genetics or related fields, and, although this is not a wet lab position, 2-3 years molecular biology lab experience is required.



To find out more about NCGR, you may access our homepage at www.ncgr.org.

E-mail to: hr@ncgr.org
(in ascii or postscript format)
via fax to: 1-505-995-4461
via mail to: NCGR
1800-A Old Pecos Trail
Santa Fe, NM 87505 EOE

BIOINFORMATICS

Merck Research Laboratories, a world leader in the discovery and development of pharmaceutical and biological products, is expanding its Bioinformatics group to more fully address the integration of Genome Project information into the drug discovery process. The department has three highly visible opportunities which report directly to the head of Bioinformatics.

RESEARCH ASSOCIATE

To work as an integral member of drug discovery project teams, providing expertise in the areas of sequence analysis and protein informatics. Other duties include coordination of aspects of the bioinformatics users group, instruction in protein sequence analysis, and performance of independent research. A Ph.D. in Biochemistry, Molecular Evolution, Molecular Biology or Biophysics with post-doctoral experience is desired. Excellent communication skills, the ability to function effectively in a multi-disciplinary environment, and experience performing sequence analysis and gene finding are essential.

SCIENTIFIC PROGRAMMING ASSOCIATE

To be responsible for Sybase database administration and data management. The selected candidate will maintain and tune the Sybase SQL server and implement/maintain relational data warehouses, in support of gene finding efforts, target identification, and DNA sequence analysis worldwide. A degree in computer science or a related field with at least two years experience with a relational database and software development on a UNIX platform is required. Good communication skills and the ability to work well with others are necessary. Experience with protein and nucleic acid sequence databases is desirable.

SCIENTIFIC PROGRAMMING ASSOCIATE

To design, develop, and implement computer-oriented systems in collaboration with other members of the bioinformatics group. Advanced prototype systems for analysis of research data will be developed and you will work with corporate computer resources to develop production versions of such systems. Will integrate public domain and commercial software packages into the Bioinformatics research system and ensure that these software systems are maintained properly. Work with bioinformatics department members to develop new databases and database scanning mechanisms for nucleic acid and protein sequences and related information. M.S. or Ph.D. in biological, physical or computer science and at least 5 years of research programming experience using C, Fortran and object-oriented programming languages, or the equivalent, and the ability to perform independently are required. Must possess excellent communication and programming skills and be able to convey complex thoughts in written materials.

These positions may be located at either one of our laboratories in Rahway, New Jersey or West Point, PA. Our salaries, benefits, and growth potential are excellent. For consideration, send your resume with the names of three references and indicating your desired location to: **Merck Research Laboratories, Human Resources, Ad #52, P.O. Box 2000, RY 80-A3, Rahway, NJ 07065.** Equal Opportunity Employer.



MERCK
Research Laboratories



**U.S. Department of Agriculture (USDA)
Agricultural Research Service (ARS)**

LABORATORY DIRECTOR GS-14/15

The USDA, Agricultural Research Service (ARS), is seeking a highly motivated and articulate research scientist who can serve as Laboratory Director, and provide vision and leadership, to the ARS Appalachian Fruit Research Station, Kearneysville, WV. The mission of the Station is to identify and solve critical problems of temperate fruit production, protection, harvesting, and sorting, and to develop the science, technology, and genetic base needed to maximize productivity, cost-efficiency, and fruit quality, while minimizing the adverse effects of biotic and abiotic environment. The incumbent will be responsible for personal research (70%), and research coordination and administration (30%). The incumbent will also have the opportunity to mold and manage research programs consisting of 17 senior scientists, a 90,000 sq. ft. research laboratory and greenhouse facility, and a 550-acre research orchard. Professional experience is required in Horticulture, Entomology, Plant Physiology, Plant Pathology, and/or Agricultural Engineering. Salary is commensurate with experience, (GS-14/15) \$64,555 – \$86,059. Ph.D. is desirable. *Candidate must be a U.S. citizen.* For further information on research programs contact **Wilda H. Martinez at 215-233-6593**. For application information and forms contact **Janie E. Carr at 301-344-4569**. Applications must be postmarked by October 24, 1997.

USDA/ARS is an Equal Opportunity Employer. Women and minorities are encouraged to apply.

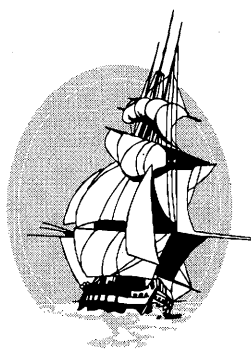
Stony Brook University Program in Computational Neuroscience

The Swartz Foundation has recently announced the establishment of the Swartz Fund for Computational Neuroscience to promote collaborative studies between neuroscientists at SUNY Stony Brook and Cold Spring Harbor Laboratories and researchers working in the mathematical, physical and computer sciences. The aim is to understand the algorithms that the brain actually uses. Stony Brook and Cold Spring Harbor have strong programs in the areas cited above, and support from the Swartz Fund will allow the growth of interactive research in brain theory. In the first year the Stony Brook component of this initiative will hire 1 - 2 scientists at the postdoctoral level to work either with an existing faculty member, or independently, but in association with existing faculty. The salary will be highly competitive. Candidates should submit a one-page summary of their research interests and goals, a CV and the names of three referees. For full consideration, applications should be received by October 15, 1997. The Fellow will be eligible for further Swartz Fund support. Further information about this position can be obtained at <http://www.neurobio.sunysb.edu> or from the following individuals: **Paul Adams (to whom applications should be sent at: Department of Neurobiology, SUNY Stony Brook, Stony Brook, NY 11794-5230; padams@neurobio.sunysb.edu)**, Lorne Mendell (Neurobiology; lmendell@neurobio.sunysb.edu), Robert Shrock (Institute of Theoretical Physics; shrock@insti.physics.sunysb.edu), Stuart McLaughlin (Physiology and Biophysics; smcl@epo.som.sunysb.edu).

An AA/EO educator and employer.



Society for Integrative and Comparative Biology 1998 Annual Meeting



With the:
American Microscopical Society
Animal Behavior Society
Ecological Society of America
Int'l Society for Reef Studies
Julia B. Platt Club
The Crustacean Society

**January 3-7, 1998 • Boston, Mass.
Boston Marriott Hotel Copley Place**

For more information, contact:

SICB Business Office • 401 N. Michigan Ave., Chicago, IL 60611
312/527-6697 • 800/955-1236 • Fax 312/245-1085
E-mail: SICB@sba.com • <http://www.sicb.org>

Don't Miss These Exciting Symposia!

Innovations in Evolutionary Biology - Drs. Lynn Margulis and Stephen Jay Gould share their research on the latest developments in evolutionary biology.

Evolutionary Relationships of Metazoan Phyla - Explore approaches to overcome potential problems in reconstructing metazoan phylogeny.

Comparative Embryology of Myogenesis - Examine comparative, descriptive and experimental approaches to muscle development.

Origin and Further Evolution of Circulatory Systems - Review the fluid mechanical design of circulation and molluscan circulatory systems.

The Evolution of the Steroid/Thyroid/Retinoic Acid Receptor Family - Explore the divergence or conservation of the receptor family's functions and regulatory roles.

Aquatic Organisms, Terrestrial Eggs: Early Development at the Water's Edge - Review the physical properties of eggs, early development, and parental care in the intertidal zone.

Evolutionary Physiology - This symposium covers new methods and perceptions in evolutionary physiology.

Development and Evolutionary Perspectives on Major Transformation in Body Organization - Explore the emergence of new body plans, evolution of arthropod development and the vertebrate limb.

The Compleat Crustacean Biologist: Recognizing the Achievements of Dorothy M. Skinner - Examine advances in crustacean molting and growth, morphogens' role in limb regeneration, and potential roles of satellite DNA.

Coral Reefs and Environmental Change - Evaluation of reef response to environmental change through research on modular organisms central to coral reef ecosystems.

PROFESSOR & HEAD DEPARTMENT OF BIOLOGY

The University of North Carolina at Greensboro (UNCG) has reopened its search for the position of Professor and Head of the Department of Biology. UNCG is a comprehensive institution of over 12,000 students and more than 100 years of service. We seek an energetic academic leader who has a proven record of teaching and research in any biological discipline, and who has effective interpretational skills and academic abilities.

The Department offers varied Bachelor's and Master's degree program, as described more fully on our home page (www.uncg.edu/bio). This tenured position at the rank of professor, with duties to begin 1 August 1998, will allow the successful candidate to make substantial contributions in promoting and supporting excellence in faculty teaching and research.

Applicants should send a curriculum vitae, the names and addresses of 4 references, and a letter describing your teaching interests, your research program, and the skills, vision, and administrative experience you would bring to this position, to:

**Biology Department Head Search Committee,
University of North Carolina at Greensboro,
Dean of Arts & Sciences Office, 105 Foust Building,
Greensboro, NC 27412-5001.**

Applications must be completed by 1 December 1997.
EEEE/AA: W/M/V/D.

ASSISTANT PROFESSOR Kinsmen Laboratories Division of Neurological Sciences Department of Psychiatry The University of British Columbia

The University of British Columbia invites applications for a tenure track position in the Division of Neurological Sciences, Department of Psychiatry. Outstanding candidates from all areas of Neuroscience are encouraged to apply, particularly individuals with expertise in the cellular or molecular bases of neurodegenerative disorders. Candidates must hold a Ph.D and/or an M.D. degree and show clear evidence of a capacity for independent, original research. The Division of Neurological Sciences offers excellent research facilities. Generous start-up funds are available. Salary will be commensurate with qualifications and experience.

In accordance with Canadian immigration requirements, priority will be given to Canadian citizens and permanent residents of Canada. UBC hires on the basis of merit and is committed to employment equity. We encourage all qualified persons to apply.

Anticipated start date is January 1, 1998. Applicants should send a curriculum vitae, list of publications, a statement of research interests, and the names and addresses of three referees by **October 31, 1997**, to:



**Dr. H.C. Fibiger, Head
Division of Neurological Sciences
Department of Psychiatry
University of British Columbia
2255 Wesbrook Mall
Vancouver, B.C. CANADA V6T 1Z3**

SUGEN is a biopharmaceutical company focused on the development of new classes of small molecule drugs which interact in a specific manner with signal transduction molecules and their signaling pathways. These pathways are involved in a number of human diseases including cancer, diabetes, disorders of the body's immune defense and neurological systems.

SCIENTIST, PHOSPHATASES

Working in the PTP group, you must have a Ph.D. with at least 2-3 years' postdoctoral experience. A strong expertise in Biochemistry and Molecular Biology is required. Experience with tyrosine phosphatase or kinases is desirable. Dept. BJ-SCI

TOXICOLOGIST

Conduct toxicology and pharmacology studies for research and product development programs, including interfacing with contract laboratories; review toxicology data and prepare pharmacology/toxicology sections of IND and NDA documents. Interfacing with project teams and management, you will develop toxicology expertise in specific therapeutic and toxicology testing areas. Requires a Ph.D. in Pharmacology, Toxicology, or a closely related discipline, and up to 5 years' experience in conducting toxicology research in a pharmaceutical or biotechnology company. Postdoctoral experience preferred. Dept. GW-SCI

BIOANALYTICAL SCIENTIST

Responsible for the development and application of analytical methods for the characterization of xenobiotics in biological matrices. Duties include characterization and quantitation of xenobiotics and their metabolites from *in vivo* and *in vitro* pharmacokinetics and metabolism studies. Requires a Ph.D. in Analytical or Pharmaceutical Chemistry or an equivalent discipline with 3-5 years' experience. A strong background in analytical methods development, including HPLC with UV, diode-array detection, radiodetection and solid-phase extraction are required. Familiarity with LC/MS/MS applications and small animal surgery and cannulation procedures is highly desirable; familiarity with GLP guidelines is a plus. Dept. LA-SCIa

MASS SPECTROMETRIST

Senior position involved in drug discovery and development efforts, requiring extensive knowledge of mass spectrometry and structural analysis as applied to pharmacokinetics of xenobiotics and metabolites, as well as knowledge of the determination of peptide sequences and post-translational modifications. A Ph.D. in Analytical Chemistry/Pharmaceutical Sciences/Medicinal Chemistry/Biochemistry (or a related field) with 3-5 years' demonstrated experience in mass spectrometry required. Experience in quantitative and qualitative characterization of pharmaceuticals and metabolites in biological matrices by LC/MS/MS is essential. Familiarity with protein/peptide mapping is helpful. Dept. LA-SCIB

SCIENTIST, MEDICINAL CHEMISTRY

Experienced Ph.D. in Organic or Medicinal Chemistry sought to join a highly productive medicinal chemistry team designing and discovering novel kinase and phosphatase inhibitors as part of internal drug development programs that impact oncology, diabetes, angiogenesis, immunologic and other human diseases. Requires 3-5 years' pharmaceutical experience in a postdoctoral or industrial environment, with strong presentation skills and a record of achievement that indicates independent thinking and initiative. You should also have a background in synthetic methodologies and independent research that contributed to a project team and resulted in the design, development or discovery of pharmaceutically active molecules. Dept. CT-SCI

Competitive salary and benefits including stock options. Please send resume, indicating Dept. code, to Human Resources, SUGEN, Inc., 351 Galveston Drive, Redwood City, CA 94063. EOE.

SUGEN

FAIRFIELD UNIVERSITY

TENURE-TRACK POSITION. Position to start September 1998. Candidates with Ph.D. and a strong commitment to undergraduate teaching, research and health sciences advising are encouraged to apply. Start-up funds are available. Salary and benefits are competitive.

Molecular Biologist/ Health Sciences Advisor

Associate professor (tenure negotiable). Proven track record of teaching, research and advising for the health sciences. Individual will serve as the health sciences advisor and a faculty member in Biology. Teaching load will consist of two courses each semester. Teaching responsibilities open, but preference given to individual with cellular/molecular experience who can contribute to a new, interdisciplinary program in neuroscience. Participation in undergraduate research and grant-writing initiatives is expected.

Send letter of application, curriculum vitae, statement of teaching goals, statement of research interests and goals (including how you would involve undergraduates), selected reprints and three letters of reference to: **Search Committee Chair, Molecular Biologist Position, Biology Department, Fairfield University, Fairfield, CT 06430.** The deadline for completed applications is November 1st.

Women and minorities are encouraged to apply.



**Fairfield
UNIVERSITY**

Fairfield University is an Affirmative Action/Equal Opportunity Employer

Fairfield University, the Jesuit university of Southern New England, is located in Fairfield, Connecticut and enjoys a beautiful 200-acre campus in the suburban town of Fairfield within easy access to New York, New Haven and Boston.



Professor and Chair Newly Created Department of Molecular Genetics

The University of Arkansas for Medical Sciences (UAMS) has received funding from the State of Arkansas to establish a new basic science Department of Molecular Genetics. Applications are invited for the position of Chair of this department. The start-up package will include tenure-track faculty positions sufficient to staff a full basic science department. The package also includes substantial equipment funds as well as laboratory and office space in the Arkansas Cancer Research Center, a modern research facility located in the center of the campus. For Chair of this department, we seek an internationally recognized leader in any branch of molecular genetics, with some preference for areas with direct application to human health. The successful candidate, in addition to being an outstanding scientist, must also have the vision, leadership, and administrative skills to recruit an excellent faculty and develop strong research and teaching programs in the College of Medicine and the Graduate School.

The research and patient care programs as well as the physical facilities at UAMS have expanded rapidly in the past several years, with the completion of the Biomedical Research Center, Jones Eye Institute, Arkansas Cancer Research Center, and expansion of Arkansas Children's Hospital. A new bed tower for University Hospital is near completion, and ground was recently broken for a building to house the Donald W. Reynolds Department of Geriatrics. The creation of a new Department of Molecular Genetics represents an important further step in the development of UAMS as a major medical research center.

Applicants should send Curriculum Vitae and the names of at least three references to:

Michael L. Jennings, Ph.D.
Department of Physiology and Biophysics
University of Arkansas for Medical Sciences
4301 W. Markham St., Mail Slot 505
Little Rock, AR 72205

UAMS is an Equal Opportunity/Affirmative Action Employer and encourages applications from women and members of minority groups.

NATIONAL INSTITUTES OF HEALTH

Undergraduate Scholarship Program (UGSP)

Qualified undergraduates can train and be mentored at the cutting edge of biomedical research while receiving scholarship support.

The UGSP is sponsored by the National Institutes of Health (NIH), the Federal Government's lead biomedical research and research training agency. NIH offers scholarships to qualified individuals who are committed to a career in biomedical research.

Scholarships up to \$20,000 per year support tuition, educational, and qualified living expenses (room, board, transportation) while students pursue an undergraduate degree.

During each year of the award, scholars serve for 10 weeks (with salary/benefits) as employees in NIH research laboratories. They are assigned mentors, participate in seminars and programs available to all NIH researchers, and are provided with housing and transportation. After graduation, they serve 1 year of full-time employment at NIH for each year of scholarship support.

Interested students should apply if they:

- Are committed to a career in biomedical research;
- Are from a disadvantaged background;
- Have a GPA of 3.5 or are in the top 5 percent of their class;
- Are a U.S. citizen, national, or permanent resident;
- Are enrolled or accepted for enrollment as a full-time student at a qualified accredited institution.

This is a special opportunity for special students.

For more information, contact

NIH/OD/OIR/OLRS
UGSP

7550 Wisconsin Avenue, Room 604
Bethesda, MD 20892-9121

Phone: 800-528-7689

Fax: 301-402-8098

e-mail: ugsp@nih.gov

TTY: 1-888-352-3001

<http://ugsp.info.nih.gov>



Postdoctoral Positions The Life Sciences Division

Molecular Diversity

Cell & Molecular Biology Group

Postdoctoral candidates will conduct research focused on generating nucleic acids and polypeptides that recognize and inhibit the actions of target molecules, especially bacterial toxins. Candidates should have a strong research background in molecular biology and have demonstrated expertise in protein expression and purification and/or *in vitro* evolution and selection of nucleic acid molecules. **For exploratory discussions of these positions, contact Scott R. Peterson, Ph.D., telephone: 505-667-9690, e-mail: spete@telomere.lanl.gov. Advertisement #PD97115**

Qualifications/ Application Procedure

A Ph.D. within the last three years or soon to be completed is required. Annual starting salaries range from \$44,020 to \$47,570, plus a generous, comprehensive benefits package. Outstanding candidates may be considered for the prestigious J. Robert Oppenheimer Fellowship.

For consideration, submit TWO COPIES of a resume and publications list along with a cover letter outlining current research interests and the names and addresses of 3 references to:

Postdoctoral Program, Advertisement #,
Human Resource Division
Los Alamos National Laboratory, MS P290,
Los Alamos, NM 87545

NOTE: Advertisement # of position you are applying for must be referenced in the address

EOE

<http://www.hr.lanl.gov>

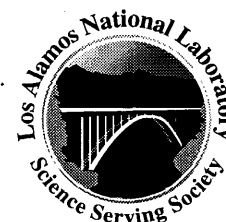
DNA Repair and Homologous Recombination

The DNA Damage and Repair Group is seeking Postdoctoral candidates in the following areas:

The chosen candidates will investigate the biological functions of the DNA-dependent protein kinase (DNA-PK) in mammalian cells. We are interested in identifying the *in vivo* phosphorylation substrates of DNA-PK and the biological functions of DNA-PK related to DNA damage and repair. Successful candidates should have extensive training in protein purification and protein biochemistry. Experience with protein 2D-gel electrophoresis and/or protein phosphorylation is highly desirable.

Will also study the biochemistry and function of mammalian DNA homologous recombination proteins. Research directions are focused on understanding the biochemical mechanism of homologous recombination and its roles in DNA double-strand break repair. Applicants should have strong training in molecular biology, protein biochemistry and protein purification. Experience in DNA recombination assays, DNA repair assays or the biochemistry of cell cycle regulation is desirable.

Must also establish *in vivo* homologous recombination and nonhomologous recombination assays in mammalian cells. The goal of this project is to identify genes that may modulate DNA recombination using transgenic mouse cells or knockout human cell lines. Applicants should have training and experience in molecular biology and DNA recombination assays in yeast or mammalian cells. **For further technical inquiries, contact Dr. David J. Chen by FAX at (505)665-0123, or e-mail: dchen@lanl.gov Advertisement #PD97114**



Still Making History



RESEARCH SCIENTISTS
MYCOLOGY/MICROBIOLOGY
IN VITRO/IN VIVO ANTIBIOTIC EVALUATION
TOXICOLOGY
FUNGAL DISCOVERY RESEARCH
ASSISTANT DIRECTOR
TOXICOLOGY

Microcide Pharmaceuticals, Inc., an innovative San Francisco Bay Area pharmaceutical company focused on the discovery of novel anti-infective agents, is seeking highly motivated individuals to join its growing state-of-the-art discovery research team. Successful candidates will be part of a multidisciplinary team of chemists, biologists, and pharmacologists working at the frontier of anti-infective discovery research. We seek qualified individuals to fill the following positions:

Mycology/Microbiology. Scientist will provide assessment of activity of leads from antifungal discovery program. Qualified applicants will have a Ph.D. degree in medical microbiology, mycology, or related experience in medical mycology and *in vitro* and *in vivo* evaluation of antifungal agents. (Job Ref.: #839)

Toxicology. Management-level (Assistant Director) and Scientist-level positions require a Ph.D. degree in toxicology or a related field. Applicants for the Scientist-level position must have experience using *in vitro* and *in vivo* models for assessment of toxicity of discovery leads. Candidates for the Assistant Director position must have demonstrated leadership abilities and expertise in the toxicological assessment of compounds in drug discovery/development programs. (Job Ref.: #810-T)

In Vitro/In Vivo Antibiotic Evaluation. Scientist will have key role in developing testing strategies for antibacterial compounds entering into the initial stages of pharmacological evaluation. Qualified applicants will have a Ph.D. degree in microbiology, biology, pharmacology, or a related field. Experience in evaluation of anti-infective agents using *in vitro* methods and animal models of infection is required. (Job Ref.: #810-ESG)

Fungal Discovery Research. Senior Research Scientist in molecular microbiology with Ph.D. degree, postdoc helpful but not necessary. Experience in fungal genetics and molecular biology required. Additional skills in cell biology, biochemistry, and bioinformatics are a definite plus. Research Associates—Qualified applicants should have a B.A./B.S. or M.A./M.S. as well as research experience in bacterial or fungal genetics and in molecular biology. (Job Ref.: #721-FDR)

Successful candidates for all positions will have excellent communication skills, and will have the ability to work both independently and as part of a multidisciplinary team. Macintosh literacy is desired. These are exciting opportunities for scientists with initiative, flexibility, and energy to contribute to a young organization that is emerging as a leader in its field. We offer competitive salaries and excellent benefits. Please send or fax your résumé to: **Human Resources Dept., Microcide Pharmaceuticals, Inc., 850 Maude Avenue, Mountain View, CA 94043. Attn: Job Ref. XX997. Fax: (650) 526-3034.** No phone calls please.

Equal Opportunity Employer

RESEARCH ASSOCIATES

Merck Research Laboratories has the following two openings for research associates within the Natural Products Drug Discovery Department.

NATURAL PRODUCTS – CHEMISTRY

The successful candidate will participate in bioactivity directed isolation and structure elucidation of natural products from fermentation, broths, plants and other biological or chemical sources. Position will also require semisynthetic modification of natural products. The candidate should possess a BS/MS in Chemistry. Excellent knowledge of organic chemistry is required. Experience in natural products or synthetic chemistry with a good knowledge of chromatography and NMR is desirable. Candidate must show appropriate documentation to work in the United States.

NATURAL PRODUCTS – SCREENING

The selected candidate will be primarily responsible for the extraction of natural products and the preparation of extracts for biological screening. Position will require computer skills and may involve supervision of technical staff. The candidate should possess a BS/MS in Chemistry or allied field. Experience in natural products, high throughput screening or robotics is desirable. Candidate must show appropriate documentation to work in the United States.

Merck Research Laboratories are located in Rahway, NJ, approximately 25 miles from New York City. Our salaries, benefits and growth potential are excellent. For immediate consideration, send your resume and the names of three references to: **Manager, Human Resources, Merck & Co., Inc., AD#53, P.O. Box 2000, RY80A-3, Rahway, NJ 07065.** Merck is an equal opportunity employer.



THE KRASNOW INSTITUTE FOR ADVANCED STUDY AT GEORGE MASON UNIVERSITY ANNOUNCES: THE CAPITAL-AREA FELLOW-MENTOR PROGRAM

Each year the Krasnow Institute will award a group of postdoctoral fellowships for research at the intersection of neurobiology, computational neurosciences, and cognitive psychology. The awards are to fellow-mentor pairs: mentors must already be institutionally-based in the National Capital area (the corridor from Baltimore to Richmond). The fellow and mentor will apply jointly for the award. The fellowship stipends will be commensurate with NIH postdoctoral awards. Initial awards are for one year with extension in one year increments usually not to exceed three years. The fellow may spend some time at the mentor's institution but will spend most of the time at the Krasnow Institute in order to encourage interaction among the fellows and other Krasnow scientists to achieve a substantive interdisciplinary approach. The mentors will become external faculty of the Krasnow Institute. The program will be guided by the following committee of Capital Area scientists.

Ann Butler, George Mason University
Ida Chow, Society for Developmental Biology
Joel Davis, Office of Naval Research
Donald Lindberg, National Library of Medicine
Dennis McBride, Naval Medical Research & Development Command
Mortimer Mishkin, National Institutes of Mental Health
Lawrence Hunter, National Library of Medicine
James Olds, Krasnow Institute
James Reggia, University of Maryland
Robert Wurtz, National Eye Institute
Steven Yantis, John Hopkins University

Applications should include both fellow and mentor CV's, a research proposal, and the names of three references for the fellow candidate.

For information contact **Harold J. Morowitz**, Director of the Krasnow Institute, morowitz@gmu.edu, 703-993-4334.

The Krasnow Institute Web Page is, <http://www.gmu.edu/departments/krasnow>.

THE KRASNOW INSTITUTE IS AN EQUAL OPPORTUNITY EMPLOYER.

Biotechnology's Leading Edge Leads STRAIGHT to LILLY.

Lilly is a premier biotechnology company and a world leader in the production of therapeutic proteins. Our Division of Research Technologies and Proteins is leading the way in the race to identify drug targets and develop therapeutic proteins. Our position and resources allow us to offer remarkable opportunities for equally remarkable professionals who insist upon cutting-edge projects and excitement in their work. Innovation at Lilly is supported by the best scientific minds and a visionary company with a 100 year-plus reputation of constantly striving for excellence.

Ph.D. Nuclear Factor Biology

We are seeking a highly motivated and innovative individual with expertise in gene regulation and nuclear factor biology to join a team of molecular/cellular biologists responsible for the discovery and functional characterization of drug targets and therapeutic proteins. The applicants should have broad experience in mammalian cell biology and the use of molecular and cellular tools to explore gene function, with a specific emphasis in transcription factors and/or nuclear receptors. Candidates should have a Ph.D. in the biological sciences with a minimum of two years post-doctoral experience.

Ph.D. Receptor Biologist

We seek a highly qualified individual to develop and lead a world class effort in the understanding of the biology and pharmacology of G-protein coupled receptors. Successful applicants will have a minimum of 2 years postdoctoral experience and proven expertise in the molecular/cellular biology and pharmacology of G-protein coupled receptors. The individual in this position will oversee an effort that spans new gene identification through expression of these receptors in formats suitable for drug discovery. This effort will span multiple therapeutic areas and involve both known and orphan receptors.

Ph.D. and BS/MS Bioanalytical Chemists

We are seeking self-motivated, creative scientists in analytical or biochemistry for our Biopharmaceutical Development Division. These positions involve the characterization of protein pharmaceutical product candidates undergoing clinical trials. Analytical laboratory experience with knowledge of protein characterization and separation science is highly desirable. The analytical chemist will be responsible for much of the design of the experiments and the generation/interpretation of the data. Strong writing and presentation skills are required as these assignments involve extensive interactions with external groups.

Ph.D. and BS/MS Physical Biochemists

We are seeking experts in physical biochemistry for our Biopharmaceutical Development Division. These positions involve the evaluation, rapid development and use of biophysical techniques to characterize critical physical properties of new protein and peptide drug candidates. In addition, new methods for characterizing physical properties of proteins will be evaluated and implemented into standard practice. Protein physical biochemistry experience is highly desirable with knowledge of the following: protein structure, protein folding, techniques for solution state and solid state structure determination, methods to investigate protein and peptide aggregation, and protein crystallization techniques.

BS/MS Molecular/Cellular Biologists

We need multiple individuals with expertise in cell biology, cellular biochemistry, receptor biology, signal transduction and gene targeting technologies for our expanded program in functional genomics. Successful candidates will perform research to develop cell-based technologies for screening new targets derived from genomics research and develop methods for identification and functional characterization of secreted proteins.

Patent Attorneys

(Midwest, Northeast and Washington D.C. area)

We are seeking individuals with a strong technical background to work closely with our research and development areas to identify inventions and develop comprehensive patent portfolios through the preparation, global filing and prosecution of patent applications. Responsibilities will include providing client counseling on global intellectual property issues, advising on complex research collaborations, and drafting research, confidentiality and consulting agreements. A degree (advanced degree preferred) in biochemistry, organic chemistry, genetics, cell/molecular biology, protein chemistry or genomics is required. A law degree and USPTO registration with expectation of obtaining an appropriate state license is also needed. A minimum of 3 years of experience in preparation and prosecution of patent applications is required. A background which includes client counseling in the pharmaceutical area is desirable.

For confidential consideration, please send your resume and cover letter indicating the position of interest to: Eli Lilly and Company, Division of Research Technologies and Proteins, US Recruiting and Staffing, Lilly Corporate Center, Indianapolis, IN 46285.

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Incyte Pharmaceuticals, Inc., is a leader in the design, development and marketing of genomic database products, software tools and related services. Our database products integrate bioinformatics software with both proprietary and publicly available genetic information to create information-based tools used by pharmaceutical and biotechnology companies in drug discovery and development.

Scientist, Bioinformatics

Requires a Ph.D. in science or engineering or equivalent experience or at least 3+ years of work in the bioinformatics area. Must have a broad background in sequence algorithm tools and database coupled with strong skills in UNIX and Perl programming. Appropriate molecular biology and mathematics background with knowledge of DNA sequence methods essential. Must also possess strong communication and organizational skills. REF: 983SC, 1080SC.

Scientific Programmer - Image Analysis, Bioinformatics

You will develop Windows based image analysis tools for high-throughput gene expression analysis. Requires 3+ years programming experience in the Windows environment, demonstrated fluency with C++ and MFC on Win95/NT4, additional familiarity with Unix programming and prior experience developing interactive imaging packages. Strong plusses include experience with 1D and 2D DSP algorithms and toolkits, programming experience with SQL databases, and a background in molecular biology. REF: 970SC.

Scientific Programmer, Sr. Scientific Programmer, Bioinformatics

You will develop large-scale UNIX-based DNA sequence analysis software used in Incyte's products. Requires solid experience in scientific computation and proven programming skills with UNIX (C/C++, Perl) and SQL databases. Requires BS in science or engineering with 2+ years in UNIX software development. Exposure to bioinformatics or molecular biology desired. REF: 971SC, 976SC, 1081SC.

Data Flow Engineer

You will perform data processing, data analysis and quality control support for large DNA sequence databases. Requires working knowledge of molecular biology and genetics, good command-line UNIX skills, some exposure to DNA sequence analysis methods, and strong communication and organizational skills. BS in science or engineering and appropriate experience required. REF: 972SC, 973SC, 974SC.

Scientist, Data Analysis

Ph.D. Biologist with excellent analytical skills needed to provide scientific leadership for Genomics Tools software products. Ability to work effectively with multi-disciplinary teams an important ingredient to success. Minimum 2 years postdoctoral experience and strong background in molecular biology required, genomics experience a plus. Extensive experience with sequence search tools and UNIX knowledge required, programming skills a plus. REF: 846SC.

Research Associate, Data Analysis

MS/BS level Biologists with strong analytical skills and a broad background in eukaryotic systems or plant molecular biology to provide data quality control for Incyte database products. Ability to work independently and a strong background in molecular biology required, experience in the Genomics field highly desirable; experience with sequence search tools and assembly software, familiarity with biology resources on the Internet, and UNIX skills preferred. REF: 978SC, 1078SC.

Scientist, Technology Evaluation

Working in the R&D Ventures group, you will be responsible for developing and licensing commercial and academic strategic partnerships in new genomics-related technologies. The ideal candidate will have an advanced degree in a related scientific field, broad knowledge of genomics and biotechnology, and business development experience including licensing and contracts. The position requires a highly motivated, detail-oriented, efficient self-starter with strong communication skills and a professional demeanor. REF: 963SC.

Bioinformatics Programmer, Molecular Biology

You will develop algorithms for analyzing chip data. Responsibilities involve chip design, calibration and validation of expression data, and advanced analyses for assessing changes in expression levels over multiple experiments (e.g. time-lagged correlation). Experience and skills required are Unix, C/C++ programming coupled with data structures, algorithms and extensive software developing experience; sequence analysis programs including alignment & motif-finding as well as knowledge of genomic and protein databases (Genbank, Swiss-Prot); experience with at least one statistics/mathematics program such as SAS, S-plus, Statistics, Matlab, Mathematica; Knowledge of gene and protein function & structure as well as biochemical basis of diseases is desired. Must possess excellent written/oral communication and interpersonal skills. Strong presentation and interviewing skills are essential. REF: 1053SC.

Bioinformatics Programmer, Molecular Biology

You will be responsible for developing and reporting methods for the status of genome closure. You will also develop tools that report the coverage of transcript templates from all sequencing programs as well as provide direction for future library selection and sequencing strategies. Experience and skills required are Unix, C/C++ programming coupled with data structures, algorithms and extensive software developing experience; sequence analysis programs including alignment & motif-finding as well as knowledge of genomic and protein databases (Genbank, Swiss-Prot); experience with at least one statistics/mathematics program such as SAS, S-plus, Statistics, Matlab, Mathematica; Knowledge of gene and protein function & structure as well as biochemical basis of diseases is desired. Must possess excellent written/oral communication and interpersonal skills. Strong presentation and interviewing skills are essential. REF: 1077SC.

Research Assistant/Associate, Database Discovery

You will be responsible for editing CDNA projects for full-length sequence using assembly software. You will use sequence analysis search tools and UNIX data architecture to manage full-length projects for database of full-length genomics. Requires BA/BS or MS in biological or computer science with 1+ years of experience. Experience with sequence analysis search tools is required. Familiarity with DNA assembly software, UNIX or Perl programming skills a plus. REF: 1062SC.

Senior Sybase SQL Programmer/ Data Modeler

Being the SQL programmer, you will be responsible for designing, and implementing new functionality in the databases to meet customer requirements. Requires previous experience in Sybase database schema design, database implementation, and SQL programming. Prior experience with laboratory information management systems is desirable. Experience with issues pertaining to genomic informatics is a strong plus. REF: 956SC.

If you recognize these qualities in yourself, we want to hear from you. Incyte offers competitive salaries, an outstanding benefits package and significant opportunities for professional growth. Mail/Fax your resume to:

Incyte Pharmaceuticals

Attn: HR, REF: _____

3174 Porter Drive

Palo Alto, CA 94304

FAX: (650) 845-4176.

E-mail: employ@incyte.com



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WANTED

NEUROSCIENTISTS, BEHAVIORAL SCIENTISTS, EPIDEMIOLOGISTS, PHYSIOLOGISTS, BIOPHYSICISTS, CHEMISTS, BIOCHEMISTS, CANCER RESEARCHERS, CLINICIANS, BIOENGINEERS

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The Division of Research Grants of the National Institutes of Health is undergoing an expansion and has immediate openings for Scientific Review Administrators (SRAs) to manage the NIH peer review process, which is the foundation of NIH's successful support of high quality biomedical research.

We are seeking several highly motivated, enthusiastic individuals with strong scientific backgrounds; excellent judgment; and highly developed communication, analytic, interpersonal, organizational, and writing skills.

You will be responsible for understanding the current status and identifying future directions of your area of biomedical research; selecting members of review panels; managing study section meetings; and facilitating interactions with members and communicating the results of their deliberations and recommendations to the applicants and to the staff of the NIH funding components.

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Please submit a curriculum vitae and the names of three references by October 10, 1997, to:

Ellie Ehrenfeld, Ph.D.
Director, Division of Research Grants
National Institutes of Health
6701 Rockledge Drive MSC 7776
Bethesda, MD 20892-7776
E-mail: SCIREV@DRG.NIH.GOV

Selection for this position will be based on merit, with no discrimination for non-merit reasons, such as race, color, sex, national origin, marital status, handicap, age, sexual orientation, or membership/non-membership in an employee organization.

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Please forward your resume, indicating preferred location(s) to: PAREXEL International, Human Resources, Code: SCI, 195 West St., Waltham, MA 02154; Fax: (617) 684-0934 or (617) 290-5773; e-mail: hr@parexel.com or see our home page on the web at: <http://www.parexel.com>. We are an equal opportunity employer M/F/D/V.

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POSITIONS OPEN

FACULTY POSITION IN CANCER RESEARCH

The Department of Pathology at Virginia Commonwealth University—Medical College of Virginia invites applications for an **ASSISTANT PROFESSOR** position in the Division of Experimental Pathology. Minimum requirements include a Ph.D. with at least three years of postdoctoral research experience, an excellent record of research productivity and quality in the areas of cancer cell and molecular biology or molecular carcinogenesis, and clear evidence of ability to develop an independent externally funded research program. Preference will be given to individuals already having extramural grant support. Applicants should have research interests and expertise in areas that may include cellular and molecular pathogenesis of epithelial cancers, molecular genetics of tumor development and progression, signal transduction and cell cycle regulation in neoplastic cells. A focus on translational research aimed at applying basic science to clinical human disease is also desirable. The position includes a highly competitive salary and an attractive start-up package. Applications including a curriculum vitae, a letter of research interest, and the names of four references should be sent to:

Alphonse E. Sirica, M.S., Ph.D.,
Chair, Faculty of Search Committee in
Experimental Pathology
Department of Pathology,
Virginia Commonwealth University—Medical
College of Virginia
P.O. Box 980297
Richmond, VA 23298-0297

Virginia Commonwealth University is an Equal Opportunity/Affirmative Action Employer. Women, minorities, and persons with disabilities are encouraged to apply.

FACULTY POSITION IN ECOLOGY UNIVERSITY OF NOTRE DAME

As part of the Department of Biological Sciences' effort to enhance the strength and scope of the Ecology, Evolution, and Environmental Biology group, we seek an Ecologist with a strong quantitative, modeling, and/or ecosystem orientation who will complement our current strengths in aquatic and wetland ecology. Outstanding research facilities include a new ecology wing to the biology building, state-of-the-art analytical equipment in the Center for Environmental Science and Technology, and the University of Notre Dame Environmental Research Center in northern Wisconsin. Teaching responsibilities are typically one course per semester, at either the graduate or undergraduate level, plus a graduate seminar every two years. Level of appointment is anticipated to be **ASSISTANT PROFESSOR** (tenure-track), but more senior candidates will be considered. For additional information contact Gary Lamberti (e-mail: lamberti.1@nd.edu) or David Lodge (e-mail: lodge.1@nd.edu) or visit our website: <http://www.science.nd.edu/biology>. Review of applications will begin October 1, 1997, and continue until the position is filled. Notre Dame offers highly competitive salaries and start-up funds, in addition to expanding state-of-the-art facilities. Applicants should submit a curriculum vitae, statement of research and teaching interests, and three letters of reference to: **Ecologist Search Committee, Department of Biological Sciences, University of Notre Dame, Notre Dame, IN 46556.**

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

A DIRECTOR AND FACULTY POSITION NATIONAL CENTRAL UNIVERSITY, TAIWAN

Two full-time faculty positions starting February 1 or August 1, 1998, are available at Institute of Life Science, National Central University, Taiwan. Applications are invited from outstanding individuals in the area of environmental biology. Applicants should send curriculum vitae, a statement of teaching and research interests, three letters of recommendation, major reprints within three years, copy of diploma, and transcript to: **Faculty Searching Committee, Graduate Institute of Life Science, National Central University.** FAX: 886-3-4228482. Deadline for application is the 31st of October, 1997.

POSITIONS OPEN

TENURE-TRACK FACULTY POSITION ASSISTANT/ASSOCIATE PROFESSOR DEVELOPMENTAL MOLECULAR GENETICS Department of Biochemistry and Molecular Biology University of Kansas School of Medicine

Applications are invited for a tenure-track position of Assistant or Associate Professor in the Department of Biochemistry and Molecular Biology at the University of Kansas School of Medicine. Applicants should have a Ph.D. and/or M.D. degree(s), significant postdoctoral training, and demonstrated scientific expertise in the area of developmental molecular genetics. Experience in delineating molecular mechanisms of signal transduction and the regulation of gene expression, gene targeting/transgenic technologies, and/or analysis of genome structure-function is preferred. Successful applicants will be expected to establish and maintain a nationally funded independent research program, and to participate in graduate and medical education. The department currently has 15 tenure-track faculty and 10 research-track faculty with research emphasis in gene expression, protein structure-function, and the molecular basis of disease. The successful candidate will have opportunities to interact with scientists in the Smith Mental Retardation and Human Development Research Center, a nationally funded center focusing on the cellular and molecular aspects of early development and neuroscience (see website: <http://www2.kumc.edu/mrrc/>).

Send curriculum vitae, representative reprints, a summary of future research plans, and names of three references to:

Molecular Genetics Search Committee
Department of Biochemistry and Molecular Biology
3901 Rainbow Boulevard
University of Kansas Medical Center
Kansas City, KS 66160-7421

Website: <http://www.kumc.edu/biochemistry/>

Review of applications will begin as soon as they are received and will continue until this position is filled.

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

FACULTY POSITION IN CELL/MOLECULAR NEUROBIOLOGY

The Department of Cell and Molecular Biology anticipates filling a tenure-track position beginning July 1, 1998, at the level of **ASSISTANT PROFESSOR**. Targeted are individuals whose research interests involve the cellular neurobiology of mammalian systems, although other qualified applicants will be considered. Applicants must have a Ph.D., at least two years of postdoctoral experience, a strong publication record, and show considerable potential for obtaining external funding. The successful applicant will be expected to establish a vigorous, independent research program and to participate in graduate and undergraduate teaching. Opportunities exist for research collaborations and participation in the Neuroscience Interdisciplinary Graduate Program, the New Orleans Chapter of the Society for Neuroscience, the Interdisciplinary Graduate Program in Molecular and Cellular Biology, and the Center for Bioenvironmental Research. Applicants for the position should send curriculum vitae, a brief statement of research plans, and three letters of recommendation to:

Dr. Ken Muneoka, Chair
Department of Cell and Molecular Biology
Tulane University
New Orleans, LA 70118

Tulane University is an Equal Opportunity/Affirmative Action Employer and encourages minority and female applicants to apply.

FACULTY POSITIONS

The Department of Biology at Davidson College invites applications for two tenure-track **ASSISTANT PROFESSOR** positions. We seek applicants in the field of animal physiology and microbial genetics. The physiologist will teach comparative animal physiology and introductory biology. The geneticist will teach genetics, microbiology, and introductory biology. Research program involving undergraduates expected for both positions. Start-up funds available. Appointments begin August 1, 1998. Interested persons should send their curriculum vitae, teaching and research statements, selected reprints, and three letters of reference to: **Dr. Verna Miller Case, Department of Biology, Davidson College, P.O. Box 1719, Davidson, NC 28036** by November 3, 1997. Website: <http://www.davidson.edu/academic/biology/job.html>. *Equal Opportunity Employer; women and minorities encouraged to apply.*

POSITIONS OPEN

NEUROSCIENCE FACULTY POSITIONS UNIVERSITY OF CINCINNATI COLLEGE OF MEDICINE

The Department of Cell Biology, Neurobiology, and Anatomy at the University of Cincinnati College of Medicine invites applications for two new tenure-track positions at the rank of **ASSISTANT** or **ASSOCIATE PROFESSOR**. Applicants should have a Ph.D. and at least two years of postdoctoral experience. We are seeking (1) a Molecular/Cellular Neuroscientist, preferably with an interest in neuronal or glial signal transduction; and (2) an Integrative/Systems Neuroscientist with expertise in modern neuroanatomical techniques. Outstanding candidates in other areas of neuroscience are also encouraged to apply. Successful candidates are expected to develop strong, funded, independent research programs and contribute to interdisciplinary medical and graduate teaching programs. Generous start-up packages and competitive salaries are available. Applicants should send curriculum vitae, a concise statement of research accomplishments and plans, and three letters of reference to:

Michael N. Lehman, Ph.D.
Chair, Neuroscience Search Committee
University of Cincinnati College of Medicine
P.O. Box 670521
Cincinnati, OH 45267-0521
Telephone: 513-558-7628
FAX: 513-558-4343
E-mail: michael.lehman@uc.edu

The University of Cincinnati is an Affirmative Action/Equal Opportunity Institution.

FACULTY POSITION ANATOMY AND CELL BIOLOGY UNIVERSITY OF NORTH DAKOTA School of Medicine and Health Sciences

Applications are invited for a tenure-track position at the **ASSISTANT/ASSOCIATE PROFESSOR** level to begin July 1, 1998. This position requires expertise in human histology and developmental anatomy, and cell biology. The successful candidate will be expected to contribute equally to team-taught courses in those fields and contribute to graduate and medical student education. Candidates must have a Ph.D., M.D., or equivalent with at least two (2) years of postdoctoral training. Research experience is preferred in cell and developmental biology, molecular biology, and/or related fields. The successful applicant will be expected to carry on a vigorous research program supported by extramural funds. Review of applications will begin on November 3, 1997, and continue until the position is filled. Candidates should send a curriculum vitae, descriptions of research and teaching experience, and names of three (3) individuals willing to serve as references to: **Dr. Mark D. Olson, Search Committee Chair, Department of Anatomy and Cell Biology, Box 9037, University of North Dakota School of Medicine and Health Sciences, Grand Forks, ND 58202.** *The University of North Dakota is an Equal Opportunity/Affirmative Action Employer and invites applications from all qualified individuals.*

FACULTY POSITION OPEN MOLECULAR GENETICS

Iowa State University seeks an **ASSISTANT** or **ASSOCIATE PROFESSOR** (75 percent research, 25 percent instruction) in the Animal Science Department. The candidate is expected to establish a vigorous, extramurally-funded research program in the areas of molecular genetics and gene expression in beef cattle, and to collaborate in ongoing basic research in the genetics of growth and development in animals. Candidates must have a Ph.D. in animal genetics, molecular genetics, or a closely related field. The ability to effectively communicate and collaborate with colleagues in research, teaching, and outreach activities is essential. Applicants should submit a complete résumé of their education, professional experience, list of publications, graduate and undergraduate transcripts, and the names and addresses of at least five individuals willing to provide letters of reference to: **Dr. Dennis Marple, Head, Department of Animal Science, 4 Kildee Hall, Iowa State University, Ames, IA 50011-3150.** Application deadline is November 14, 1997, or until the position is filled. *Iowa State University is an Equal Opportunity/Affirmative Action Employer.*

Since 1992, Ontogen has established itself as a leader in the development of automated organic synthesis technologies. Our mission is to utilize modern tools of chemistry and biology to discover and develop small molecule therapeutics. Our research facility is located 30 miles north of San Diego in Carlsbad, CA. We currently have the following opening:

Research Scientist

Ph.D. in Enzymology, Biochemistry, Pharmacology or a related discipline with 2-4 years of post doctoral/industrial experience required. This position also requires the ability to characterize the activity of small molecule enzyme inhibitors using enzyme kinetics and other biochemical techniques. The successful candidate will also be expected to develop, validate and automate enzyme assays for high throughput screening of chemical compound libraries. A working knowledge of protein purification is preferred. Excellent written and oral communication skills, flexibility, and the ability to work well in a multi-disciplinary team are also preferred.

Ontogen offers competitive compensation and benefits packages including a stock option plan. Qualified candidates are invited to send or fax resumes to:
Ontogen Corporation, HR-BI02, 6451 El Camino Real, Carlsbad, CA 92009; Fax: (760) 930-0200.
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MANAGER Outside U.S. Sales & Channels

Eastman Kodak Company, recognized worldwide as an innovative leader in imaging technology, currently has a rewarding opportunity for an individual to develop sales and channel strategies/tactics throughout the Asia Pacific region and Europe for Kodak Scientific Imaging Systems. The experienced sales professional we seek will have direct responsibility for supervision and development of professional sales personnel. Extensive travel is required.

Qualifications include a minimum of a BS in Biochemistry or Molecular Biology. Practical experience in scientific sales, marketing and business management is highly desirable. Knowledge of and experience with traditional (photographic) scientific imaging and digital imaging would be most beneficial. In addition, candidates should possess computer proficiency (MAC and PC). Fluency in English is required. Speaking one or more of the following languages would be preferred (Japanese, Chinese, French, German).

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Megabios Corp. provides proprietary gene delivery systems and preclinical development expertise to create gene-based therapeutics for the treatment and prevention of genetic and acquired diseases. Our continued growth has created several employment opportunities for qualified candidates. All **Megabios** programs are aimed at utilizing gene therapy technology and Megabios' proprietary non-viral delivery systems.

Scientist, Tumor Biologist

As a key member of our Animal Resources Group, you will assume a pivotal role in expanding the current tumor biology capabilities. Responsibilities include coordinating with senior investigators to expand current tumor biology models, developing and coordinating new *in vivo* tumor models aimed at utilizing gene therapy technology, interpreting data for efficacy and pharmacokinetic studies, and coordinating junior researchers. Qualifications include a D.V.M. or Ph.D. in biology, pharmacology, tumor biology, or related field and 3+ years' research or postdoctoral experience. Knowledge of animal handling and surgical techniques for rodents required. Experience with angiogenic models and heterotopic implants preferred. Job code: ARGTM/BLW.

Scientist, Fermentation

We are looking for a hands-on scientist to perform fermentation development to support the production of plasmid DNA for use in gene therapy. Responsibilities may include optimizing the plasmid, the *E. coli* host, and the growth conditions for plasmid yield. Other duties include developing and implementing a scaleable pharmaceutical process. Experience at large scale fermentation, computer controlled bioreactors, and gene therapy a plus. A Ph.D. in microbiology, biochemistry, chemical engineering, or equivalent is desired, plus two or more years' postdoctoral experience in either academia or industry. Job code: FDP/LB.

All positions require excellent written and verbal skills and the ability to work within a fast-paced, team environment.

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POSITIONS OPEN

CHAIR PATHOLOGY AND LABORATORY MEDICINE

The University of Texas M. D. Anderson Cancer Center is seeking a Chair for a new combined Division containing the Departments of Pathology and Laboratory Medicine. The Chair will be responsible for surgical pathology, cytopathology, electron microscopy, flow cytometry, hematopathology, histopathology, immunocytochemistry, molecular pathology, neuropathology, clinical and special chemistry, cytogenetics, hematology laboratory, histocompatibility, laboratory information systems, microbiology/virology, transfusion medicine/blood bank, experimental laboratory medicine, and satellite laboratories. Innovative research and molecular diagnostics are included to provide the most comprehensive and sophisticated pathology services.

Applicants should have an M.D. degree and should be certified in anatomic or clinical pathology by the American Board of Pathology or have equivalent qualifications. Applicants should have a recognized professional status with significant accomplishments in pathology, and in leadership and administrative responsibilities at a large academic medical center. Candidates must satisfy academic requirements for professorial rank. Dedication to the pursuit of excellence in patient care, research, education, and prevention as it relates to diagnosis, monitoring, and therapy of the cancer patient is essential. Curricula vitae from interested candidates will be accepted until December 1, 1997, or until the job is filled.

Qualified applicants should submit a curriculum vitae to:

James D. Cox, M.D.
Chairman, Search Committee for Chair
Pathology and Laboratory Medicine
The University of Texas
M. D. Anderson Cancer Center
1515 Holcombe Boulevard, Box 97
Houston, TX 77030

Women and minorities are encouraged to apply. Equal Employment Opportunity/Affirmative Action, smoke-free environment.

MRI FACULTY POSITION SUNY STONY BROOK

The Magnetic Resonance Research Center, part of the Department of Radiology at Stony Brook, invites applications for a researcher at the level of **ASSISTANT PROFESSOR**. Our research center is currently equipped with two whole-body MRI scanners. As well, we have access to a high-field imaging unit in the Chemistry department which is used for small animal and *in vitro* work. Current activities in the department include: diffusion/perfusion imaging for stroke management, functional imaging, and imaging of hyperpolarized noble gases. The position will involve work in the development of new techniques in MRI, especially in the areas of neuro and cardiac imaging. The candidate will have a Ph.D., preferably with postdoctoral experience as well, with extensive research experience in a clinical MRI setting. Candidates with previous experience in DWI and MRI will be given priority for this position. Salary will be commensurate with qualifications. Applicants should send a curriculum vitae to: Dr. Mark Wagshul, SUNY, Stony Brook, Department of Radiology, HSC, L-4, Stony Brook, NY 11794-8460. Three letters of recommendation should also be sent to the same address. An Affirmative Action/Equal Opportunity Employer and Educator.

SENIOR FACULTY POSITION BIOMEDICAL ENGINEERING

The College of Engineering at University of California-Davis invites applications for a senior-level tenured faculty position in biomedical engineering. We seek a visionary leader working at the interface among biology, medicine, and engineering. This person will be expected to play a major role in shaping the new Division of Biomedical Engineering. A Ph.D. degree is required. Teaching and research interests in biochemical/biotechnology, bioinformatics and computational molecular biology, biomedical imaging, biomaterials, or soft tissue mechanics are sought. Applicants should forward a résumé and summary of teaching and research plans, plus names of three references to: James F. Shackelford, Associate Dean, College of Engineering, Dean's Office, University of California, One Shields Avenue, Davis, CA 95616-5294 by November 1, 1997. E-mail: jfshackelford@ucdavis.edu; website: <http://www.engr.ucdavis.edu>. The position will remain open until filled. The University of California is an Affirmative Action/Equal Opportunity Employer.

POSITIONS OPEN

FACULTY POSITIONS BIOCHEMISTRY AND MOLECULAR BIOLOGY

Applications are invited for tenure-track faculty positions in the Department of Biochemistry at the rank of **ASSISTANT PROFESSOR**. Candidates with excellent training and accomplishments at the postdoctoral level in eukaryotic molecular biology will be considered.

For one of the positions, we are seeking an exceptional candidate who employs innovative approaches to investigate fundamental problems in plant biochemistry and molecular biology. For the second position we will consider outstanding candidates in any area of biochemistry and molecular biology that complements our existing research programs (e.g., protein structure and function, gene regulation, signal transduction). Applicants whose research is in eukaryotic biochemistry or who have expertise in physical biochemistry will be given priority.

The successful candidates are expected to develop vigorous independent research programs and to be active and effective teachers in the curricula offered by the Department of Biochemistry, which include undergraduate, graduate, and Medical School courses.

Purdue University offers stimulating research environment that encourages cooperative interactions and provides excellent facilities for research in biochemistry, molecular biology, and structural biology. Competitive start-up funds and generous laboratory space are available.

Applicants should include complete curriculum vitae, the names and addresses of three individuals who can supply letters of reference, and a two-page summary of research interests. The screening of applications will begin immediately and will continue until the positions are filled.

Biochemistry Search Committee
Department of Biochemistry
Purdue University
West Lafayette, IN 47907-1153 USA

Purdue University is an Affirmative Action/Equal Opportunity Employer.

TWO FACULTY POSITIONS DEPARTMENT OF BIOCHEMISTRY AND BIOPHYSICS IOWA STATE UNIVERSITY

The Department seeks to fill two tenure-track appointments at the level of **ASSISTANT PROFESSOR**. Successful applicants will be expected to develop independent research programs that emphasize biochemical and/or biophysical aspects of important biological problems. Interest in graduate and undergraduate teaching also is required. Departmental areas of research focus are detailed at website: <http://molebio.iastate.edu/bbhtml/homepage.htm>.

Applicants should send a curriculum vitae and description of research accomplishments and interests, and have three letters of recommendation sent to:

Faculty Search Committee
Donald Graves, Chairman
Department of Biochemistry and Biophysics
1210 Molecular Biology Building
Iowa State University
Ames, IA 50011

To ensure full consideration, all materials should be received by December 15, 1997. Iowa State University is an Affirmative Action/Equal Opportunity Employer. Applications from women and minority candidates are especially encouraged.

BIOCHEMISTRY FACULTY POSITION UNIVERSITY OF MISSISSIPPI

The Department of Chemistry solicits applications for a tenure-track position at the level of **ASSISTANT PROFESSOR**. Applicants must have a Ph.D. degree in chemistry or biochemistry, postdoctoral experience, and the ability to establish an active and nationally competitive research program. Applicants must be committed to teaching excellence at undergraduate and graduate levels. Interests in all areas of biochemistry will be considered; however, investigators working in areas of structural biochemistry using optical and NMR methods are especially encouraged. Applicants should submit a curriculum vitae, a brief description of ongoing and future research plans, and should request that three letters of recommendation to be sent to: Professor Charles Hussey, Department of Chemistry, University of Mississippi, University, MS 38677. Closing date November 30, 1997. Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

TWO FACULTY POSITIONS IN MICROBIOLOGY DEPARTMENT OF BIOLOGY Indiana University, Bloomington

The Department of Biology seeks to fill two tenure-track positions in microbiology. These may be filled at any level, from **ASSISTANT** to **FULL PROFESSOR**. We invite applications from candidates working on any microbial system, prokaryotic, eukaryotic, or viral, and in any research area, including but not limited to microbial biochemistry, genetics, genomics/informatics, pathogenicity, evolution, and ecology. Significant space and a generous start-up package will be provided to the successful candidate.

These hirings are part of a major expansion of the Department of Biology into a newly renovated building in 1999, which will involve multiple hirings over the next few years in the areas of microbiology, biochemistry, cell and developmental biology, molecular evolution, and ecology. We therefore welcome applications and inquiries from two-career couples in biology, at any level, including those with partners in fields other than microbiology.

Junior candidates should send a curriculum vitae, a statement of research (past, present, and planned), and representative publications, and arrange to have three (or more) letters of recommendation sent to: Dr. Carl Bauer, Chair, Microbiology Search Committee, Department of Biology, Indiana University, Bloomington, IN 47405. Senior candidates should send a letter of interest and curriculum vitae. Review of applications will begin November 15 and will continue until suitable candidates are identified.

For more information about our department, see our website: <http://www.bio.indiana.edu>. Indiana University is an Affirmative Action/Equal Opportunity Employer. Women, minority candidates, and couples are encouraged to apply.

TENURE-TRACK FACULTY POSITION WAYNE STATE UNIVERSITY SCHOOL OF MEDICINE Department of Neurology

The Department of Neurology at Wayne State University School of Medicine is seeking an outstanding individual for a tenure-track position holding an M.D. or M.D.-Ph.D. degree with board certification in neurology. The successful candidate will have a strong record of independent research productivity and extramural support. Faculty rank, laboratory facilities, and financial support will be dependent upon prior experience and credentials. Applicants whose research complements and extends existing research strengths in the cellular and molecular aspects of CNS or PNS neuronal or glial plasticity and injury are especially encouraged to apply. Approximately 75 percent of the individual's time will be directed toward basic research efforts with the remaining time devoted to medical student teaching, administration, and clinical assignments. Please send a curriculum vitae, a summary of research interests, and three references to: Robert P. Lisak, M.D., Professor and Chair, Department of Neurology, 6E UHC, Wayne State University School of Medicine, 4201 St. Antoine, Detroit, MI 48201. Wayne State University is an Equal Opportunity/Affirmative Action Employer.

BIOLOGY FACULTY POSITIONS GEORGIA STATE UNIVERSITY

The Department of Biology at Georgia State University invites applications for anticipated tenure-track positions in **NEUROENDOCRINOLOGY, CELL BIOLOGY/PHYSIOLOGY**, and **MICROBIAL PATHOGENESIS**. Applicants at the Assistant Professor level will be expected to establish independent, vigorous, externally funded research programs. Applicants at more senior levels should have well-established, externally funded research programs. We are particularly interested in individuals whose research complements existing research strengths and who employs molecular and cellular approaches. Successful candidates will participate in instruction at the undergraduate and graduate M.S./Ph.D. levels. The Department has excellent core research facilities. Applications including curriculum vitae, reprints, statement of research plans, and three letters of recommendation should be sent by November 1, 1997, to: Chair of Search Committee, Department of Biology, P.O. Box 4010, Georgia State University, Atlanta, GA 30302-4010. Georgia State University, a unit of the University System of Georgia, is an Equal Employment Opportunity/Affirmative Action Employer.

**ASSISTANT PROFESSORS
DEPARTMENT OF MICROBIOLOGY
THE OHIO STATE UNIVERSITY
COLUMBUS, OH 43210**

Applications are invited for tenure-track Assistant Professor positions in the Department of Microbiology. Two vacancies will be filled by September 1998, and additional positions will be filled the following year. Candidates must have postdoctoral experience, ideally with expertise and research interests in topics of current, practical importance that are not now studied in the Department. Preference will be given to candidates employing molecular and biochemical approaches to investigate mechanisms of microbial pathogenesis, intracellular infection, the immune response, microbial biodiversity, metabolic pathway engineering, fermentation technologies, or bioinformatics. Very competitive salaries, excellent research space, and start-up resources are available. Successful applicants will be expected to establish a productive, externally-funded research program, and to participate in teaching at both the undergraduate and graduate student levels. To guarantee full consideration, applicants should submit a curriculum vitae, a summary of future research plans, and the names of three referees by November 15, 1997, to: **Dr. John N. Reeve, Chair, Department of Microbiology, The Ohio State University, 484 W. 12th Ave., Columbus, OH 43210.**

The Ohio State University is an Equal Opportunity/Affirmative Action Employer, and qualified members of underrepresented groups, veterans and individuals with disabilities are encouraged to apply. The Department's website: <http://www.biosci.ohio-state/~microbiol>.

**UNIVERSITY OF CALIFORNIA
SANTA BARBARA**

**SCHOOL OF ENVIRONMENTAL
SCIENCE & MANAGEMENT**

Faculty Position in Applied Ecology

The UCSB School of Environmental Science and Management invites applications for a tenure-track faculty position in Applied Ecology at the Assistant Professor level.

We seek a research ecologist working on applied problems. The applicant's research should concern dynamical ecological systems and should be highly quantitative. The successful applicant will be expected to develop a vigorous program of high-quality research at UCSB. Teaching will be at the graduate level and will include quantitative courses related to ecological aspects of environmental problems. We offer the master's degree and, pending approval, the PhD, and we plan a certificate for mid-career professionals. Our first students enrolled in Fall 1996. For more information about the School visit our website (www.esm.ucsb.edu).

For primary consideration apply by October 15, 1997. Thereafter positions are open until filled. Start date is July 1, 1998. The PhD is normally required at the time of appointment. Applicants should send a curriculum vitae, the names and addresses of four references, a statement of research and teaching interest and reprints of no more than five publications to Search Committee, School of Environmental Science and Management, University of California, Santa Barbara, CA 93106-5131; 805-893-7363; Fax 805-893-7612; email: search@esm.ucsb.edu.

The University of California is an Equal Opportunity/Affirmative Action Employer. We encourage all qualified applicants to apply, including minorities, women, and persons with disabilities.

RESEARCH UPDATE

American Cyanamid Company, a subsidiary of American Home Products, a Fortune 100 company, is seeking a Research Associate to join our Molecular Genetics Screen Design team.

Yeast Molecular Biologist

Here at our campus like facility in Princeton, our objective is to design and develop yeast mechanism-based screens, which are implemented on high throughput robotics systems, for discovering new crop protection and pharmaceutical products. As a key member of our R&D team, you will contribute to the research of a laboratory and collaborate with other laboratories involved in various aspects of the research.

To qualify, you must possess a MS in Biology with experience in yeast genetics, molecular biology, biochemical assays, and standard computer applications. In addition, you must possess a flexible and self-motivated approach to science, an interest in contributing to scientific reports and meetings, and the ability to work well in a team setting.

We offer a competitive salary and excellent benefits, including a 401(k) savings plan. Please forward your resume and salary requirements to: Employment Office, Dept. KK/JH, American Cyanamid Company, Agricultural Research Center, P.O. Box 400, Princeton, NJ 08543-0400. An equal opportunity employer m/f/d/v.



Research Investigator

DRUG METABOLISM/PHARMACOKINETICS

Chicago Area

TAP Pharmaceuticals has created success for more than 20 years by combining the strengths of two internationally prominent pharmaceutical companies. We offer you the opportunity to have an immediate impact in an evolving and highly advanced research area.

The successful candidate will be responsible for the design, implementation and interpretation of ADME and PK studies with pharmaceuticals. This individual will serve as liaison with contract laboratories performing *in vivo* and *in vitro* biotransformation studies, developing analytical methods for the quantitation of drugs and metabolites, and analyzing biological samples. The selected individual will also independently perform PK analyses of data from clinical studies and supervise PK projects conducted at contract labs.

To qualify, you should have a Ph.D. or equivalent and appropriate experience in drug metabolism research. Expertise in PK is highly desirable. You should be effective in a team environment and have strong verbal/written communication skills.

TAP Holdings invites you to learn more about the exceptional career environment and lifestyle available at our headquarters in suburban Chicago. Equal Opportunity Employer.

Please forward resume to: Human Resources, Dept. RI, TAP Holdings, 2355 Waukegan Road, Deerfield, IL 60015. Fax: 847-317-5799. E-mail to: nolan@megsinet.com.



TAP HOLDINGS INC.
parent of TAP Pharmaceuticals Inc.

POSITIONS OPEN

CHAIR, DEPARTMENT OF MOLECULAR PHARMACOLOGY AND TOXICOLOGY

The University of Southern California, School of Pharmacy invites applications and nominations for the position of Chair of the Department of Molecular Pharmacology and Toxicology. Located on the Health Sciences campus of USC, the School of Pharmacy is the leading school in the development of modern pharmacy education, having pioneered the direction of clinical pharmacy and now of pharmaceutical care. Its graduate programs enjoy close collaboration with the School of Medicine, the Norris Cancer Center, the Institute of Genetic Medicine, and with other units in the health sciences.

The Department consists of 16 faculty members and offers a well established graduate program within Molecular Pharmacology and Toxicology and participates in the interdepartmental Ph.D. program in biomedical and biological sciences. The faculty in the Department have strong and well funded research programs in oxidative mechanisms of signal transduction, transcriptional and translational mechanisms of gene regulation, and molecular and behavioral neuropharmacology. The department is expected to provide leadership in the education of pharmacists, graduate students, postdoctorals, and other health professionals. Candidates must have a Ph.D. or equivalent, in pharmacology or in a related discipline, an outstanding research record, and demonstrated administrative skills.

Submit a letter of interest, curriculum vitae, and names of five references to:

Dr. Alex Sevanian, Chair, Search Committee
Department of Molecular Pharmacology
and Toxicology
University of Southern California
School of Pharmacy
1985 Zonal Avenue, Room 612
Los Angeles, CA 90033
Telephone: 213-342-1417
FAX: 213-224-7473
E-mail: asevan@hsc.usc.edu

FACULTY POSITIONS

The Department of Cell Biology and Physiology of the University of Pittsburgh School of Medicine invites applications for two tenure-track faculty positions. We seek individuals trained in the techniques of cell and molecular biology, who are prepared to initiate independent research programs. As to research areas, one position will emphasize work on ion channels, signal transduction, and/or epithelial cell biology, and the other, development and cellular differentiation with emphasis on the use of model systems. Extensive opportunities exist for collaborative interactions and research funding concerning the cell and molecular biology of epithelial tissues and reproductive systems. Generous salary, space, and transitional laboratory support is available. Information on the department is available at [website: www.cbp.pitt.edu](http://www.cbp.pitt.edu).

Applicants should have the Ph.D. and/or M.D. degree and postdoctoral training. Send curriculum vitae, brief summary of research interests, and names of three references to: Raymond A. Frizzell, Ph.D., c/o Wendy Bell, Department of Cell Biology and Physiology, University of Pittsburgh School of Medicine, S362 Biomedical Science Tower, 3500 Terrace Street, Pittsburgh, PA 15261.

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

FACULTY POSITION IN DRUG DELIVERY OF BIOMACROMOLECULES

The Department of Pharmaceutical Sciences at the University of Nebraska Medical Center is seeking applicants for a tenure-leading faculty position at any rank. Applicants whose research is at the interface of biotechnology and drug targeting/delivery, such as delivery of genes or peptides, and outstanding scientists from related fields, are encouraged to apply. The successful candidate is expected to establish an externally funded research program, develop multidisciplinary collaborations, and teach in professional and graduate programs. The position is available immediately and will remain open until filled. Send curriculum vitae, research plans, and names of three references to: Alexander Kabanov, Ph.D., Dr.Sc., University of Nebraska Medical Center, 600 South 42nd Street, Omaha, NE 68198-6025. E-mail: akabanov@mail.unmc.edu. The University of Nebraska is an Equal Opportunity/Affirmative Action Employer and encourages applications from women and minorities.

POSITIONS OPEN

FACULTY POSITIONS BIOCHEMISTRY AND MOLECULAR BIOLOGY

The Department of Biochemistry and Molecular Biology at the University of Texas-Houston Medical School invites applications for two tenure-track positions at the rank of ASSISTANT PROFESSOR. Applicants with excellent training and accomplishments in the broad area of biochemistry and molecular biology will be considered. We are seeking outstanding scientists who are addressing important biological questions at the level of basic mechanisms. Areas of emphasis include gene targeting in mice, structural biology, and eukaryotic molecular biology. A generous start-up package and competitive salary are provided with each position. The selected candidates will be expected to develop vigorous independent research programs and to teach in the curriculum for graduate and medical students.

The University of Texas-Houston Medical School is located within the Texas Medical Center and provides an exceptional research environment with a variety of core facilities, research centers, and graduate training programs.

Submit a curriculum vitae, the names and addresses of three individuals who can supply letters of reference, and a summary of future research plans to: Julia E. Lever, Ph.D., Chairman, Search Committee, Department of Biochemistry and Molecular Biology, University of Texas-Houston Medical School, P.O. Box 20708, Houston, TX 77225-0708. The deadline is November 1, 1997. Additional information about the department can be found at our website: <http://www-bmb.med.uth.tmc.edu>.

Equal Opportunity Employer. Women and minorities are encouraged to apply.

FACULTY POSITION ANATOMY AND CELL BIOLOGY UNIVERSITY OF NORTH DAKOTA School of Medicine and Health Sciences

Applications are invited for a tenure-track faculty position at the ASSISTANT/ASSOCIATE PROFESSOR level to begin July 1, 1998. The position requires teaching expertise in human gross anatomy, and individuals with experience in an integrated patient-centered medical curriculum will be given high consideration. The successful candidate will also contribute to graduate-level courses in the department. Candidates must have a Ph.D., M.D., or equivalent and at least two (2) years of postdoctoral training. Research areas are unrestricted but candidates with expertise in cell, molecular, or developmental biology will be preferred and the successful applicant will be expected to carry on a vigorous extramurally funded research program. Review of applications will begin on November 3, 1997, and will continue until the position is filled. Candidates should send a curriculum vitae, a description of teaching and research experience, and names of three references to: Dr. Edward C. Carlson, Search Committee Chair, Department of Anatomy and Cell Biology, Box 9037, University of North Dakota School of Medicine and Health Sciences, Grand Forks, ND 58202. The University of North Dakota is an Equal Opportunity/Affirmative Action Employer and invites applications from all qualified individuals.

DEPARTMENT OF PSYCHIATRY FACULTY POSITION TENURE-TRACK

The Department of Psychiatry at the Uniformed Services University of the Health Sciences is seeking to fill a tenure-track research and teaching position (ASSISTANT/ASSOCIATE PROFESSOR). The Department is comprised of twenty full-time faculty and seeks an individual with research interests to complement ongoing neuroscience research in: neurobiology of stress, anxiety (particularly acute stress responses, PTSD, and dissociation); psychiatric responses to traumatic events; neurochemical and behavioral correlates of drugs and drug abuse; psychoimmunology. Individuals who hold M.D. or Ph.D. degrees and have active research interests that complement or expand upon the above areas are invited to apply. Send curriculum vitae, description of current and anticipated research interests, and three references to: Uniformed Services University of the Health Sciences, ATTN: Harry C. Holloway, M.D., Department of Psychiatry, 4301 Jones Bridge Road, Bethesda, MD 20814-4799. The University is an Affirmative Action/Equal Opportunity Employer.

POSITIONS OPEN

FACULTY POSITION MICROBIOLOGY

The Department of Molecular Genetics, Biochemistry, and Microbiology invites applications or nominations for a TENURE-TRACK ASSISTANT PROFESSOR. We are especially interested in candidates with research strengths in the pathogenesis of retroviruses, e.g., HIV, or sexually transmitted organisms, e.g., *Chlamydia* or *Neisseria*, or in studies with yeast as an model organism. We seek an individual with the capability and desire to utilize genomics including information being generated by the human genome project. With 26 full-time faculty, we maintain strong active research programs in disciplines including molecular and cellular immunology, viral and microbial pathogenesis, differentiation, developmental and cancer biology, human genetics, structural biology, and membrane transport. We support an active graduate program and maintain core facilities accessible to all University faculty, for production of transgenic and knockout mice and DNA synthesis and sequencing. These opportunities are complemented by mouse physiology and pathology services in other departments and by the Barrett Cancer Center and the Cardiovascular Center providing a breadth of research opportunities unparalleled at most research institutions. Our program can be visited through our website: <http://ucmg65.med.uc.edu/>. Applicants should submit a curriculum vitae, brief description of research program, and the names of three qualified references to: Jerry B. Lingrel, Ph.D., Professor and Chair, Department of Molecular Genetics, Biochemistry, and Microbiology, University of Cincinnati College of Medicine, 231 Bethesda Avenue, Cincinnati, OH 45267-0524.

Affirmative Action/Equal Opportunity Employer.

CHAIR DEPARTMENT OF MOLECULAR GENETICS UNIVERSITY OF PITTSBURGH

Nominations and applications are requested for a chairperson to lead the growth and development of a new Department of Molecular Genetics in the School of Medicine and the Graduate School of Public Health. The ideal candidate will hold an advanced degree (Ph.D., M.D., or both) and will have a vigorous research program in the molecular analysis of human disease, bridging the basic and clinical sciences, with demonstrated leadership ability in fostering faculty development and graduate and medical student education. The new chairperson will be responsible for faculty recruitment and for interfacing the department with various University departments, institutes, and centers. This 12-month tenured Professor position will have a salary commensurate with the experience of the individual and can be occupied as soon as possible. To ensure full consideration, applications should be received by December 1, 1997.

Interested persons should submit a letter of intent and curriculum vitae to: Dr. Raymond A. Frizzell, Chairman of the Search Committee, Department of Cell Biology and Physiology, S362 Biomedical Science Tower (BST), 3500 Terrace Street, University of Pittsburgh School of Medicine, Pittsburgh, PA 15261. Telephone: 412-648-9362.

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

FACULTY POSITION FRED HUTCHINSON CANCER RESEARCH CENTER

The Fred Hutchinson Cancer Research Center (FHCRC) is seeking a FULL MEMBER specializing in yeast genetics and cell cycle or DNA repair. The successful candidate is expected to share the responsibility of Co-Director of The Seattle Project with Dr. Stephen Friend as well as maintain an independent research program. The Seattle Project is focused on developing genetic approaches both to identify new targets for cancer therapy, and to optimize current chemotherapeutic strategies. The position will have the opportunity for an affiliate appointment at the University of Washington.

Candidates should send a curriculum vitae, a concise statement of their research plans, and three letters of recommendation sent to:

The Seattle Project Co-Director Search Committee
Fred Hutchinson Cancer Research Center
1124 Columbia Street
Mailstop: M477
Seattle, WA 98104

FHCRC is an Equal Opportunity Employer committed to workforce diversity.

HUMAN GENETICS
DIVISION CHIEF
WASHINGTON UNIVERSITY SCHOOL OF MEDICINE



Washington University School of Medicine, seeking to build upon its established strengths in basic and clinical genetics and human genome research, has committed substantial resources to establish a new **Division of Human Genetics** within the **Department of Genetics**.

An outstanding Geneticist (Associate Professor or Professor) is being sought to head the Division and recruit three additional faculty members. The Division members will enjoy interactions in a collegial atmosphere with a diverse community of geneticists in several academic departments, including clinical geneticists, quantitative geneticists, population geneticists, genetic epidemiologists, geneticists studying fundamental processes in model organisms, and with faculty at the world-renowned Washington University Genome Sequencing Center.

The Division Chief we are seeking will have an outstanding record of accomplishment, and the desire and ability to play a leadership role in human genetics research and education at the University. Interested and qualified individuals are encouraged to send their curriculum vitae to the address below. Review of applications will begin Nov. 15, 1997. (Preliminary inquiries can be sent to <apply@genetics.wustl.edu>) **Dr. Robert Waterston, Division of Genetics Search Committee, Department of Genetics Box 8232, Washington University School of Medicine, 4566 Scott Ave., St. Louis, MO 63110**

UK UNIVERSITY
OF KENTUCKY

The Molecular & Cellular Biology Section of the T.H. Morgan School of Biological Sciences invites applications for a **TENURE-TRACK ASSISTANT PROFESSOR** position in **CHROMOSOME STRUCTURE AND DYNAMICS** for the Fall of 1998. We seek an individual using molecular genetic approaches to study chromosome structure and dynamics. Research areas of particular interest include telomere or centromere function, the role of chromatin domains in gene expression, and DNA sequence contributions to chromosome stability and evolution. Priority will be given to candidates using a well developed genetic system such as *Saccharomyces cerevisiae*, *Drosophila melanogaster*, or *Caenorhabditis elegans*. The new research program will complement existing strengths in gene regulation, viral replication and transcription, pre-mRNA splicing, signal transduction, developmental genetics, and cell growth regulation.

The Environmental & Evolutionary Biology Section of the T.H. Morgan School of Biological Sciences invites applications for a **TENURE-TRACK ASSISTANT PROFESSOR** position in **EVOLUTIONARY BIOLOGY** for the Fall of 1998. We seek an individual using genetic, phylogenetic, or developmental approaches to the study of evolution. We will consider candidates working on any type of organism (or theory), with preference given to those studying plants. The successful candidate will be expected to contribute complementary expertise and interact extensively with a strong, cohesive evolutionary ecology group (see <http://darwin.cee.uky.edu/cee>).

The T.H. Morgan School of Biological Sciences includes 30 faculty members within the Sections of Environmental & Evolutionary Biology, Molecular & Cellular Biology, and Organismal & Integrative Biology. The Morgan School is part of a broader community of more than 400 life sciences faculty members within the University main campus and in the adjacent medical school and agricultural campuses (see <http://www.uky.edu/ArtsSciences/Biology/>). Applicants for either position should be ready to establish an independent, nationally competitive research program and to participate in relevant undergraduate and graduate-level instruction. Excellent facilities and start-up support are available. *Women and members of minority groups are especially encouraged to apply.* Please forward CV, a statement of research interests, and three letters of recommendation to **CSD or EB Search Committee, School of Biological Sciences, University of Kentucky, Lexington, KY 40506-0225**. Review of applications will begin on October 24, 1997.

An Affirmative Action/Equal Opportunity Employer

POSTDOCTORAL POSITIONS

NEW ENGLAND BIOLABS, INC.

New England Biolabs, a world leader in the production of restriction endonucleases and other related products for the recombinant DNA field, seeks applicants for:

MOLECULAR BIOLOGIST: Postdoctoral position is available to study the molecular genome organization of the human filarial parasite *Brugia malayi*, a causative agent for filariasis (elephantiasis). As part of a world-wide consortium, your research will involve physical mapping, analysis of high density filter arrays of EST, cosmid and BAC libraries, STS mapping, contig generation, and analysis of stage-specific gene expression. Applicants should have a strong background in molecular biology and genomics. (Reference: Blaxter et al 1996, Molec. Biochem. Parasitology 77: 77-93). Send a resume and three references to: **Dr. Barton Slatko**.

POSTDOCTORAL FELLOW (Opioid Signaling Mechanisms): The Cell Signaling Laboratory has a position available to study Gi linked receptor signaling mechanisms. Projects involve molecular and biochemical analysis of intracellular signaling pathways and protein kinases mediating u-opioid receptor signaling to downstream transcription/translation factors. Minimum requirements include a Ph.D. degree in Molecular Biology, Biochemistry, Cell Biology, or a related field with some experience in the molecular biology of signal transduction and gene regulation. Experience with brain histological analysis would also be useful. Experience with basic techniques in molecular biology, protein phosphorylation and biochemistry are recommended. Send a resume and three references to: **Dr. Michael Comb**.

POSTDOCTORAL FELLOW (Intracellular Signaling Pathways): The Cell Signaling Laboratory has a position available to characterize signaling pathways regulating cell growth and survival. Projects involve biochemical analysis as well as molecular cloning of protein kinases and other signaling molecules using phospho-specific antibodies. Minimum requirements include a Ph.D. degree in Molecular Biology, Biochemistry, or Cell Biology with some experience in the molecular biology of signal transduction and gene regulation. Experience with basic techniques in molecular biology, protein phosphorylation and biochemistry are recommended. Send a resume and three references to: **Dr. Michael Comb**.

New England Biolabs, Inc.

32 Tozer Road

Beverly, MA 01915

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NEW ENGLAND
BioLabs Inc.

POSITIONS OPEN

The Department of Pharmacology and Toxicology at the Medical College of Virginia, Virginia Commonwealth University seeks applications for a **TENURE-TRACK FACULTY POSITION**. Rank will be based upon candidate's background and experience. The successful applicant will be expected to maintain an extramurally funded, nationally recognized research program and to contribute to departmental teaching programs, including a strong graduate program. Individuals with interest in and documented contributions to any area of toxicology relevant to biomedical research are encouraged to apply. Applicants who use cellular/molecular approaches to study questions in liver biology may also qualify for secondary appointment in the University's internationally recognized Liver Center. Other areas of particular interest include carcinogenesis, forensic toxicology, and neurotoxicology. This department is ranked among the top ten pharmacology departments nationwide based on NIH research support, and current research strengths include neuropharmacology, molecular pharmacology, and immunotoxicology. Required are a Ph.D. in a related field and/or M.D. and an excellent publication record. Submit curriculum vitae and names and addresses of three references by December 1, although the search will remain open until a suitable candidate is identified and the position filled. Address submissions to: **Chair, Search Committee, Virginia Commonwealth University, P.O. Box 980613, Richmond, VA 23298-0613**. Position description available. *VCU is an Equal Opportunity/Affirmative Action Employer and encourages women, minorities, and persons with disabilities to apply.*

FACULTY POSITION MOLECULAR ANTHROPOLOGY

The Biological Anthropology Program of the Department of Anthropology invites applications for a multiyear term appointment as an **ASSISTANT PROFESSOR**. Applicants should use molecular genetic methods to address issues of primate evolution, systematics, and/or behavioral ecology or of the evolution and extant variation of modern humans. The BioAnthro program is part of a larger group, the New York Consortium in Evolutionary Primatology (NYCEP), which has more than 25 faculty across five institutions engaged in research on the evolution, morphology, genetics, ecology, behavior, and conservation of primates (including humans). The faculty, students, and facilities available through the University and NYCEP provide a rich educational and research environment. The successful candidate will be expected to teach undergraduate and graduate courses, advise students at both levels, and engage in research, for which space will be provided in the Department's Genetics Lab. Interested applicants should submit a curriculum vitae, brief description of teaching and research interests, and three letters of reference to: **Dr. Don J. Melnick, Department of Anthropology, Columbia University, 452 Schermerhorn Extension, MC 5523, 1200 Amsterdam Avenue, New York, NY 10027-5537**. Deadline for applications: 1 November 1997.

Columbia University is an Equal Opportunity/Affirmative Action Employer.

FACULTY POSITION IN SCIENCE EDUCATION

The College of Science, San José State University seeks an **ASSISTANT or ASSOCIATE PROFESSOR**, tenure-track, to begin August, 1998. Experience in pre-college teaching and teacher preparation is required coupled with a doctorate in physics, chemistry, atmospheric sciences, geology, or related physical science. The candidate should have experience in effective use of new technology for instruction. Teaching will be at least fifty percent in the Science Education Program, including Secondary Science Methods and Student Teacher Supervision. Appointment and science teaching will be in the appropriate science department. Scholarship in physical science and/or teaching and learning, including research, publication, and external funding is expected. San José State University is a multicultural, metropolitan California State University in the Silicon Valley, with a wide array of academic programs for its diverse population of about 26,000 students. For additional information see website: <http://mastep.sjsu.edu>.

Curriculum vitae, statement of academic priorities including a description of pre-college teaching and Science Education interests, and three letters of reference must be received by November 14, 1997. Send to: **Dr. Jean Beard, College of Science, San José State University, San José, CA 95192-0099**. San José State University is an Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

ANATOMY FACULTY POSITION

The Department of Anatomy and Cell Biology has a tenure-track position available for appointment beginning on or before July 1, 1998. Applicants should hold a Ph.D., M.D., or equivalent degree. Appointment will be made at a level commensurate with the experience of the successful candidate. Candidates are expected to have a funded and established independent research program and be able to interact with other investigators in any of the following areas: neuroscience, cell biology, or molecular biology. Opportunity exists for interactions with the Oklahoma Center for NeuroSciences (OCNS) and the Oklahoma Medical Research Foundation (OMRF). Teaching responsibilities will be in the team-taught gross anatomy course for professional and graduate students. Candidates should have sufficient experience in teaching gross anatomy to assume an immediate and effective role in the course. Applicants should submit curriculum vitae, with an accompanying summary of past and proposed research interests, teaching experience, and names of three references.

Review of applicants begins October 1, 1997, and will continue until the position is filled.

Send all materials to:

**Raymond E. Papka, Ph.D.
Professor and Chairman
Department of Anatomy and Cell Biology
University of Oklahoma Health Sciences Center
P.O. Box 26901
Oklahoma City, OK 73190
Telephone: 405-271-2377
FAX: 405-271-3548
E-mail: raymond-papka@ouhsc.edu**

Equal Opportunity/Affirmative Action Employer.

ASSISTANT/ASSOCIATE PROFESSOR (Oral Anatomy/Cell Biology). The Department of Oral Health Sciences, in conjunction with the Department of Cell Biology and Anatomy in the Faculty of Medicine and Oral Health Sciences, University of Alberta invites applications for a tenure-track position at the Assistant/Associate Professor level. We are seeking an individual to enhance our research specific to the oral facial region. The faculty has current strengths in neurobiology, cell signaling, protein targeting and organelle biogenesis, and cell-cell interactions, which could be complemented by this candidate. Salary range: \$39,490 to \$70,124 per annum plus comprehensive benefits. The successful applicant will have a proven record of research achievement and will be eligible for funding by the Alberta Heritage Foundation for Medical Research. The chosen candidate will be expected to carry on an independent research program, but will also have the opportunity for collaborative interactions with multidisciplinary research groups within the University. A contribution to the Department's teaching program will also be expected. *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. Please send a curriculum vitae, a one-page statement of research interests, and have three to five letters of reference sent to: Dr. G. Wayne Raborn, Associate Dean and Department Chair, Oral Health Sciences, University of Alberta, Edmonton, Alberta T6G 2N8 Canada. Deadline for receipt of applications is November 15, 1997. 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.*

ASSISTANT/ASSOCIATE PROFESSOR IMMUNOLOGY

The Department of Medical Microbiology and Immunology, Creighton University School of Medicine, invites applications for a tenure-track position available in spring or summer 1998. The appointee is expected to conduct a vigorous independent research program and to have an interest and aptitude for teaching graduate students as well as medical, dental, and other allied health profession students. Laboratory space and start-up funding will be available. Applicants should send a curriculum vitae, a brief summary of research plans and teaching interests, and arrange to have at least three letters of recommendation sent to: **Roderick Nairn, Search Committee Chair, Department of Medical Microbiology and Immunology, Creighton University, 2500 California Plaza, Omaha, NE 68178**. Deadline for receipt of applications is December 15, 1997. Creighton University is an Affirmative Action/Equal Opportunity Employer.

POSITIONS OPEN

UNIVERSITY OF CALIFORNIA, SANTA CRUZ DEPARTMENT OF BIOLOGY TENURE-TRACK ASSISTANT PROFESSOR POSITIONS

The successful candidates will be expected to develop an extramurally funded research program and to teach at both the undergraduate and the graduate level.

Molecular cell biology: Applicants using molecular and genetic approaches to study the role of chromatin in transcription or other processes are encouraged to apply. Minimum qualifications: Ph.D. or equivalent in biology or a related field, postdoctoral research experience, and university teaching experience or demonstrated potential for university teaching. Provision #278.

Neurobiology: Applicants using molecular, genetic, or biochemical approaches to investigate fundamental problems in cellular and developmental aspects of neurobiology are encouraged to apply. Minimum qualifications: Ph.D. or equivalent in biology or a related field, postdoctoral research experience, and university teaching experience or demonstrated potential for university teaching. Provision #415.

Environmental toxicology: Applicants focusing on fundamental molecular, biochemical, or physiological mechanisms underlying the role of microorganisms as pathogens and/or their role in the synthesis or degradation of environmental toxins are encouraged to apply. The successful candidate, who initially will be a member of the Department of Biology, will be the fifth appointment in a proposed Environmental Toxicology Program composed of a scientifically diverse faculty and will be expected to participate in the development of a new graduate program in Environmental Toxicology. Minimum qualifications: Ph.D. or equivalent in microbiology, biology, biochemistry, toxicology, pharmacology, or a related field, and achievements in or demonstrated potential for university research and teaching. Postdoctoral experience is preferred. Provision #492.

Positions available fall 1998, subject to final budgetary approval. Applicants should submit a curriculum vitae, a brief description of research and teaching interests, copies of reprints, and arrange for three confidential letters of recommendation to be sent to:

**Search Committee
Department of Biology
225 Sinsheimer Laboratories
University of California
Santa Cruz, CA 95064
Website: <http://www.biology.ucsc>**

Candidates applying for more than one of the positions above may submit one application, but must indicate in a cover letter which position(s) they are applying for in order to be considered for the separate positions. Please refer to the correct Provision # in your reply.

Closing Date: December 15, 1997.

Please note that the Biology Department is also conducting a recruitment for an Assistant Professor in RNA Structural Biology in conjunction with the Department of Chemistry and Biochemistry. See page 2064.

UCSC is an Affirmative Action/Equal Employment Opportunity Employer.

POSITIONS AVAILABLE

The Center for Cognitive Neuroscience and the Department of Psychology at Dartmouth College announces two openings in the area of human cognitive neuroscience starting in the fall of 1998. Candidates must be experienced in some aspect of cognitive neuroscience research and committed to excellence in teaching. Of the two openings, one is at the **ASSISTANT PROFESSOR** level, and one is **OPEN** as to rank. The Center will be in new facilities and will have a variety of brain imaging modalities including fMRI, ERP, and NIR. For candidates at the Assistant Professor level, postdoctoral training is highly desirable. A letter of application, curriculum vitae, and at least three letters of recommendation should be sent to: **Professor Michael S. Gazzaniga** at the address below. The review of applications will begin on October 15, 1997, and continue until the positions are filled. For further information, please contact:

**Professor Michael S. Gazzaniga
Chair, Search Committee
Center for Cognitive Neuroscience
Dartmouth College
6162 Silsby Hall
Hanover, NH 03755-3547**

Dartmouth College is an Equal Opportunity/Affirmative Action Employer and encourages applications from minorities and women.

BEYOND THE LIMITS OF INFORMATICS

INTEGRATION IS MORE THAN THE SUM OF ITS PARTS

SmithKline Beecham is a leader in life science research and informatics, thus harvesting the vast quantity and spectacular diversity of our scientific data and information into high-quality, high-density knowledge is a critical business need for our worldwide R&D organization. While current technology and off-the-shelf tools attempt to facilitate this endeavor, the reality is that they contribute to the problem of information overload as much as they alleviate it. Moving beyond this frontier, we have a breakthrough opportunity to use Intelligent Integration of Information (I3) technology to deliver tangible systems with impact and built on a solid platform of strategic cutting edge competencies. To realize this opportunity, we are building our Integration Sciences group with world-class expertise in **Knowledge Engineering, Interoperable Systems, Database Sciences, Mediator Technology, Intelligent UIs and Agents, and Information Visualization.**

Our long-term strategic commitment is to a multi-disciplinary effort in both Computer and Information Science and Technology and the relevant Life Sciences domains. To continue this effort, we are actively seeking the following professionals at all levels of expertise.

INFORMATION INTEGRATION (Job Code A7-II)

Integration Scientists

Individuals will undertake a program of innovative applied Computer Science and Information Technology research and development; carry out collaborative projects within SmithKline Beecham and with external colleagues; assess computational methods and tools; and design and develop systems and applications to support new strategic initiatives in integration science. Candidates should have an advanced degree in a computational, biological, chemical or medical science; and a record of significant accomplishment in research and development of advanced methods and systems applicable to the integration of complex information. We are also looking for Postdoctoral Fellows in Integration Science.

KNOWLEDGE ENGINEERING (Job Code A7-KE)

Knowledge Engineers

Principal responsibilities include undertaking an independent program of innovative applied knowledge engineering research and development; carrying out collaborative research within SmithKline Beecham and with external collaborators; developing knowledge bases; supporting new strategic initiatives in knowledge engineering; and providing expertise in one or more of the specialties listed below. Senior candidates should be doctoral candidates or recent PhDs in a biological or chemical science; and have research experience in molecular or cellular biology, bacteriology, medicinal or computational chemistry, pharmacology, or a closely related field. An unusually broad knowledge of one or more of these disciplines is a plus, as is interest in participating in the development of advanced knowledge-based systems to support drug discovery.

Scientific Knowledge Experts

We are also looking for associates who can provide domain expertise in molecular or cellular biology, bacteriology, medicinal or computational chemistry, pharmacology, or a closely related field. Responsibilities include locating, characterizing and documenting relevant information sources; consulting with laboratory scientists; and participating in testing, evaluation, and requirements analyses. Candidates should have a degree in a biological or chemical science and two or more years of relevant research and/or knowledge engineering expertise.

SOFTWARE ENGINEERING (Job Code A7-SE)

Principal, Senior and Junior Software Engineers

Senior level Software Engineers will design and implement I3 systems in collaboration with the colleagues described above. More junior positions will participate in designing, documenting, coding, debugging, testing, and enhancing I3 systems. Senior level candidates should have an advanced degree in computational science; experience in software development; technical leadership skills; experience in design and implementation in I3 or a closely related field; and demonstrated ability to provide innovative state-of-the-art technical solutions. Experience with one or more of the following is important: UNIX, C/C++, Java, database systems, object technology, KQML, XML, and CORBA. The ability to work effectively across multiple hardware/OS platforms is also desired.

If your area of expertise is not represented here, but your skills are world-class, please feel free to tell us how you can contribute to our objectives.

Located in state-of-the-art research facilities in suburban Philadelphia and in the United Kingdom, SmithKline Beecham offers a competitive compensation/benefits/relocation package and a stimulating work environment. Qualified candidates should forward resume and salary requirements, indicating desired Job Code to: SmithKline Beecham Pharmaceuticals, Job Code _____, PO Box 2646, Bala Cynwyd, PA 19004. **Indicating Job Code is essential.** To apply online or for more information on SmithKline Beecham, visit our Web site at www.sb.com/ait. We are an Equal Opportunity Employer, M/F/D/V.



SmithKline Beecham
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POSITIONS OPEN

UNIVERSITY OF CALIFORNIA, SANTA CRUZ RNA STRUCTURAL BIOLOGY ASSISTANT PROFESSOR

The Department of Biology and the Department of Chemistry and Biochemistry at the University of California, Santa Cruz, invite applications for a position at the Assistant Professor level. We are interested in outstanding candidates whose research centers on the application of NMR spectroscopy and/or X-ray crystallography to the study of RNA structure and function, including RNA-protein interactions. This person will be affiliated with the Center for the Molecular Biology of RNA and will complement existing faculty in both departments whose interests include RNA processing, translation, mRNA stability and structure, ribonucleoprotein assembly, RNA-protein recognition, the mechanism of action of functional RNAs and RNA structural studies. Department affiliation will be decided in consultation with the successful candidate. Research facilities include a Varian Unity Plus 500 MHz NMR spectrometer, X-ray diffraction facilities, and ancillary computational equipment. The successful candidate will be expected to mount a vigorous, externally funded research program, and contribute to teaching at the graduate and undergraduate levels.

Rank: Assistant Professor

Minimum qualifications: Ph.D. or equivalent in biology, chemistry, biochemistry, biophysics, or related field, postdoctoral research experience, and university teaching experience or demonstrated potential for university teaching.

Position available: Fall 1998, subject to final budgetary approval.

Apply to: Applicants should submit a curriculum vitae, a brief description of research and teaching interests, reprints, and arrange for three confidential letters of recommendation to be sent to:

RNA Search Committee
Department of Biology
225 Sinsheimer Laboratories
University of California
Santa Cruz, CA 95064

Website: <http://www.biology.ucsc.edu>

or

<http://www.chemistry.ucsc.edu>

Please refer to Provision #269 in your reply.

Closing date: December 1, 1997.

UCSC is an Affirmative Action/Equal Employment Opportunity Employer.

MOLECULAR/CELL BIOLOGIST

The Department of Biology at Randolph-Macon College invites applications for a tenure-track appointment as **ASSISTANT PROFESSOR** to begin September, 1998. We seek a broadly trained individual in the fields of molecular/cell biology and molecular genetics to develop an undergraduate program in these areas aimed at preparing students for postgraduate education (including medical school) and positions in industry. Start-up money will be available, but the successful candidate will be expected to pursue grant support. The individual filling this position must have a Ph.D., be an excellent teacher, and be committed to mentoring undergraduate students in research. Postdoctoral research experience is desirable. Send letter of application, curriculum vitae, statement of teaching and research goals, graduate and undergraduate transcripts, and three letters of recommendation to: **Sharon Burton, Secretary, Biology Search, Randolph-Macon College, P.O. Box 5005, Ashland, VA 23005-5005.** All applications, including recommendation letters, must be received by 14 November 1997. Inquiries concerning this position may be made to the Search Committee Chair, **Dr. Russell Shea, at Telephone: 804-752-7336; e-mail: rshea@rmc.edu.** To find out more about Randolph-Macon College see our website: www.rmc.edu. Randolph-Macon College is an Equal Opportunity Employer.

The Department of Biochemistry, Duke University Medical Center invites applications for a faculty position at the level of **ASSISTANT PROFESSOR**. We are especially interested in candidates with experience in the field of biological NMR as applied to fundamental problems of enzymology, protein structure, or nucleic acid biochemistry. Send résumé, summary of research interest, and three letters of reference to: **Christian R. H. Raetz, Chairman, Department of Biochemistry, Duke University Medical Center, Durham, NC 27710.** Consideration of applications will commence in November 1997. Duke University is an Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN



ARIZONA STATE UNIVERSITY BIOLOGY AND SOCIETY ARIZONA STATE UNIVERSITY MAIN CAMPUS

The Department of Biology invites applications for a tenure-track faculty position at the **ASSISTANT PROFESSOR** level. The successful candidate will participate in our new Biology and Society program and must have a strong record of professional experiences, interests, and abilities that, while based in the biological sciences, are broadly interdisciplinary and integrate perspectives from both life sciences and either social sciences or history/philosophy/ethics of biology. The position begins August 15, 1998, and requires the establishment of a productive research program at Arizona State University, and participation in the department's teaching programs. Ph.D. required at time of appointment.

The Biology and Society program is based in the Department of Biology and supports faculty and students interested in interdisciplinary study of the interactions between human society, the living world, and life sciences, especially as these interactions occur in the biomedical, evolutionary, and ecological sciences. The program's offerings and requirements are coordinated with relevant departments and centers at ASU.

Please submit a curriculum vitae; selected reprints; a statement of teaching experience, interests, and philosophy; statement of research accomplishments and future plans; and three letters of recommendation to: **Chair, Biology and Society Search Committee, Department of Biology, Arizona State University, Tempe, AZ 85287-1501. FAX: 602-965-2519; e-mail: biology@asu.edu.** Reference letters must be sent directly to the committee chair by mail, e-mail, or FAX. Applications from two individuals wishing to share this appointment will be considered. Application deadline is 1 November 1997, with applications reviewed weekly thereafter until the position is filled. *Arizona State University is an Affirmative Action/Equal Opportunity Employer.*

ASSISTANT PROFESSOR DEPARTMENT OF MICROBIOLOGY AND IMMUNOLOGY Medical College of Ohio

Applications are invited for a tenure-track, full-time faculty position from individuals who have a doctoral degree, postdoctoral experience, and record of research productivity. The successful candidate is expected to develop an independent, extramurally-funded research program and participate in teaching. We are particularly interested in applicants who are focused on microbial pathogen-host interactions at the cellular level. Competitive salary, space, and start-up funds will be provided. Applicants should send a statement of research goals with representative reprints, a curriculum vitae, and three letters of recommendation to: **Garry T. Cole, Ph.D., Chairman, Department of Microbiology and Immunology, Medical College of Ohio, 3055 Arlington Avenue, Toledo, OH 43614-5806.** Deadline is November 1, 1997. Visit our website: <http://www.mco.edu:80/micro/index.html>. *Affirmative Action/Equal Opportunity Employer.*

ASSISTANT/ASSOCIATE PROFESSOR NEUROSCIENCE

The Florida State University Department of Psychology, Program in Neuroscience invites applications for two tenure-track positions, one at the Assistant or Associate Professor level and a second at the Assistant Professor level. Applicants in all areas of neuroscience are encouraged to apply. Some preference will be given to candidates with expertise that amplifies or complements existing strengths in developmental and regenerative plasticity, sensory processes, and regulatory processes. Candidates should demonstrate a strong commitment to undergraduate and graduate teaching and a potential for developing a funded independent research program. Send curriculum vitae, a statement of research goals, and the names of three references by December 1 to: **Neuroscience Search Committee, 209 Psychology Building, Florida State University, Tallahassee, FL 32306-1270.** For information about the Department and the Neuroscience Program, see website: <http://www.psy.fsu.edu>. *Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

TENURE-TRACK ASSISTANT PROFESSORS: MOLECULAR MICROBIOLOGIST AND EUKARYOTIC MOLECULAR-GENETICIST University of Wisconsin-Parkside Kenosha, Wisconsin

University of Wisconsin-Parkside Biological Sciences Department, a UW-System Center of Excellence, anticipates recruitment for two positions and seeks candidates desiring a balance of research and teaching starting in fall, 1998.

Applicants for positions must have a Ph.D. with postdoctoral experience and proven competence in applying the techniques of molecular biology to their area of research. The successful candidates will be expected to participate in the graduate and undergraduate programs. Teaching assignments may include graduate and upper division undergraduate courses, laboratory modules on molecular biology techniques, and an introductory course for majors or non-majors.

One position is for a Molecular Microbiologist and the other is for a Eukaryotic Molecular-Geneticist. Please indicate for which position you wish to be considered.

The University of Wisconsin-Parkside is located in the Chicago-Milwaukee corridor. The 14-person department offers excellent undergraduate options/concentration in general biology, pre-health, and molecular biology and a M.S. in applied molecular biology. All faculty have active research programs. Collaborations are encouraged.

Send a letter of interest, curriculum vitae, a statement of your academic goals, and representative publications to: **Dr. Eugene Goodman, Chair, Search Committee, Department of Biological Sciences, University of Wisconsin-Parkside, P.O. Box 2000, Kenosha, WI 53141-2000. Telephone: 414-595-2422/2327; FAX: 414-595-2056.** Applications are due by November 14, 1997. *The University of Wisconsin-Parkside is an Equal Opportunity/Affirmative Action Employer.*

PHYSIOLOGICAL PLANT ECOLOGIST

The Biology Department of Gustavus Adolphus College invites applications for an **ASSISTANT PROFESSOR**, tenure-track position in physiological plant ecology starting late August, 1998. A Ph.D. is required; demonstrated teaching ability and postdoctoral research experience are desirable. Teaching responsibilities will include: (1) team-teaching the ecology and evolution portions of an introductory biology course and a mid-level ecology, evolution, and behavior course, (2) teaching an upper-level ecology course, (3) developing an upper-level plant physiology course with an ecological emphasis, and (4) regular January term offerings of choice. The successful candidate will be expected to develop an active research program involving undergraduates and also to secure extramural funding. The Biology Department contains new and renovated facilities to support both teaching and research endeavors, including a greenhouse with dedicated research and teaching modules, four Conviron growth chambers, a fully equipped physiological ecology lab and GIS. The college offers an interdisciplinary major in environmental studies in which participation is possible. Candidates should submit a letter of application stating qualifications, a statement of teaching philosophy and research interests, curriculum vitae, undergraduate and graduate transcripts (photocopies acceptable), and three letters of recommendation to: **Colleen Jacks, Chair, Biology Department, Gustavus Adolphus College, 800 West College Avenue, St. Peter, MN 56082.** Application review begins November 15 and continues until the position is filled.

Gustavus Adolphus College is a highly selective liberal arts school located 75 miles south of the Twin Cities. It is the policy and practice of Gustavus Adolphus College to provide Equal Educational and Employment Opportunities for all. We specifically encourage applications from women, minorities, and persons with disabilities.

UNIVERSITY OF FLORIDA seeks a **RESEARCH ASSISTANT PROFESSOR** for the Department of Medicine, Division of Pulmonary Medicine. Ph.D. degree in molecular biology with three years of postdoctoral experience. This position will conduct research involving molecular mechanisms of oxidant-induced thyrotoxin and thyrotoxin reductase genes in lung cells. Salary and benefits commensurate with experience. Recruiting deadline: October 9, 1997. Anticipated starting date: October 20, 1997. Please reply with curriculum vitae to: **Runi Foster, M.D., Clinical Assistant Professor, Division of Pulmonary Medicine, Box 100225 JHMH, Gainesville, FL 32610.** An Affirmative Action/Equal Opportunity Employer.

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SENIOR RESEARCH SCIENTISTS CELL PHYSIOLOGY (Job Code SW81/83)

Requires a Ph.D. and at least 4
years' postdoctoral experience.

RESEARCH SCIENTISTS PROTEIN ENGINEERING GENE DISCOVERY (Job Code SW101/102)

Requires a Ph.D. and at least 3
years' postdoctoral experience.

SENIOR ASSOCIATE RESEARCH SCIENTISTS MOLECULAR BIOLOGY GENE EXPRESSION (Job Code SW140)

Requires an M.S. in Molecular
Biology or B.S. with 4+ years'
experience.

Please forward your resume,
WHICH MUST INCLUDE JOB
CODE OF INTEREST, to: **Human
Resources, Bayer Corporation,
Pharmaceutical Division, P.O.
Box 1986, Berkeley, CA 94701.**
No agencies or phone calls please.
For more information on Bayer, search:
<http://www.careermosaic.com/cm/bayer/>

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TECHNICAL FIELD REPRESENTATIVE

The Jackson Laboratory has an opening for a Technical Field Representative to cover the Eastern region. The Representative will make direct contact with scientific and business professionals in medical research institutions, pharmaceutical companies and biotechnology companies. Candidates must have a BS or MS in Biological Sciences, prior experience in a research setting, and 1-3 years' experience in biomedical sales or marketing. The candidate must be a self-starter with superb time-management and communication skills. Extensive travel is expected.

TECHNICAL SERVICES MANAGER

Primary responsibilities of the position include: responding to technical inquiries from users of Jax Mice, supervision of two technical service representatives, preparation of technical literature on Jax Mice and maintenance of a user support computer database. The Technical Service staff work in close cooperation with and supplement customer support provided by Customer Service and Field Development personnel. Applicants should hold a Ph.D. in the life sciences, preferably in a discipline involving animal science, genetics or molecular biology. A working knowledge of laboratory mice, husbandry, breeding and characteristics of mutant and inbred strains is highly desirable. Supervisory experience in managing science professionals in a technical services environment is essential, as is the ability to write technical literature and communicate clearly verbally and in writing. Understanding of computer systems and databases also required.



**The
Jackson
Laboratory**

Please send resume to: **Human Resources, The Jackson Laboratory, 600 Main
Street, Bar Harbor, Maine 04609; (207) 288-6104; e-mail jobs@aretha.jax.org**

The Jackson Laboratory is an Equal Opportunity/ Affirmative Action Employer



The Endowment for SCHOLARS

in Biomedical Research at

The University of Texas Southwestern Medical Center

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

For detailed information about currently available faculty positions, please access our web page: <http://www.swmed.edu>

Or contact

John Perkins, Ph.D.

Endowed Biomedical Scholars Program

UT Southwestern Medical Center

5323 Harry Hines Boulevard

Dallas, Texas 75235-9004

Telephone: (214) 648-2174

FAX: (214) 648-2102

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"Virtual Researcher"

CaP CURE, the world's largest private funder of research to find cures or controls for prostate cancer, seeks a post-doctoral candidate or individual with similar background/qualifications to do virtual research.

The successful candidate will report to the Chief Operating Officer and acquire specialized information about prostate cancer epidemiology, treatments, clinical trials, research and health care funding patterns, etc.; write grant proposals to foundations and corporations for partnership activities; and work closely with the Managing Directors of the CaP CURE Gene & Family Studies and Therapy Consortia to accelerate genomics research and clinical trials. Candidates should have a strong research-oriented, scientific background and be able to develop clear, persuasive written materials quickly. Relevant computer software literacy is a must. Salary is competitive and commensurate with experience.

For more information, or to submit a curriculum vitae, please contact:

Richard N. Atkins, M.D.

Executive Vice President and Chief Operating Officer

CaP CURE, 1250 Fourth Street, Suite 360, Santa Monica, California 90401

Phone: 1-800-757-CURE Fax: 310-458-8074

e-mail: atkins.cure@mcimail.com

POSITIONS OPEN

ASSISTANT PROFESSORS DEPARTMENT OF BIOCHEMISTRY AND MOLECULAR GENETICS University of Colorado Health Sciences Center

We are continuing a phase of rapid expansion, and several positions will be filled over the next few years. We are seeking applications for faculty positions in biochemistry. We are especially interested in candidates with expertise in structural biology, peptide structure and function, mechanistic enzymology, or nucleic acid chemistry. Candidates should have a strong record of research accomplishments, and will be expected to pursue a vigorous, independent research program. Teaching interests and expertise should be suitable for a Biochemistry Department. Applications should include a curriculum vitae and a statement of research plans. Candidates should also arrange to have three letters of recommendation forwarded to:

Dr. Tom Blumenthal, Chairman
Department of Biochemistry and
Molecular Genetics
Campus Box B-121
University of Colorado
Health Sciences Center
4200 East Ninth Avenue
Denver, CO 80262

For full consideration completed applications should be received by December 15, 1997.

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

BOTANISTS TWO ASSISTANT PROFESSORS TENURE-TRACK POSITIONS

Grand Valley State University has experienced steady enrollment growth for 10 years; each year the Biology Department added new faculty and has more openings for fall 1998. Two positions are in plant biology. We seek people broadly trained in botany with expertise in some aspect of anatomy, development, ethnobotany, genetics, morphology, or systematics to complement interests of existing faculty and who demonstrate dedication to undergraduate teaching. Ph.D. completed before fall 1998 is required. Responsibilities include: teaching introductory biology and upper-level botany courses, developing and teaching new courses in areas of expertise, conducting scholarly activity, and being involved in community service. Other assignments include advising majors and serving on committees. Research that can involve undergraduates is encouraged. A complete application consists of a letter of application, curriculum vitae, unofficial transcripts, a statement outlining your expectations and goals as an undergraduate teacher, a statement of potential research projects, and three letters of recommendation. Applications must be postmarked by November 14, 1997. Submit materials to: **Dr. John P. Shontz, Chair, Botany Search Committee, Department of Biology, Grand Valley State University, Allendale, MI 49401.** E-mail: shontzj@gvsu.edu; website: www.gvsu.edu. *Grand Valley State University is an Affirmative Action/ADA and Equal Opportunity Employer. Women and minorities are encouraged to apply.*

BIOLOGY/AQUATIC SCIENTIST MCGILL UNIVERSITY

Tenure-track ASSISTANT PROFESSOR position in the area of aquatic sciences. Preference will be given to candidates who combine a fundamental and applied approach to their research and who will complement a research group with strength in limnology, ecotoxicology, marine science, fish ecology, and conservation. The applicant must be prepared to teach aquatic biology and participate in the development of the newly established McGill School of the Environment. The expected start date is July 1, 1998. The deadline for applications is December 1, 1997. Applications, including a curriculum vitae, a statement of research interests, and three letters of reference, should be sent to: **Dr. Donald L. Kramer, Chair, Department of Biology, McGill University, 1205 Docteur Penfield Avenue, Montreal, Quebec H3A 1B1 Canada.** E-mail: don_kramer@macdon.mcgill.ca. *In accordance with Canadian immigration requirements, this advertisement is directed in the first instance to Canadian citizens and permanent residents. McGill University is committed to equity in employment.*

POSITIONS OPEN

INVERTEBRATE ZOOLOGIST ASSISTANT PROFESSOR, TENURE-TRACK

Grand Valley State University has experienced steady enrollment growth for 10 years; each year the Biology Department added new faculty and has more openings for fall 1998. One position is in invertebrate zoology. We seek someone broadly trained in zoology with specialization in some aspect of the ecology, evolution, morphology, or systematics of invertebrates to complement interests of existing faculty, and who demonstrates dedication to undergraduate teaching. A Ph.D. completed before fall 1998 is required. Teaching responsibilities will include invertebrate natural history, introductory biology, and other established courses. The opportunity exists to develop courses in area of specialization. Other responsibilities include scholarly activity, community service, advising majors, and serving on committees. Preference will be given to those with expertise in the biology of freshwater invertebrates, demonstrated success in teaching, and research involving undergraduate students. Applications must be postmarked by November 10, 1997, and must include a letter of application, curriculum vitae, copies of all transcripts, statements outlining expectations and goals as an undergraduate teacher and the research you would like to pursue, and three letters of recommendation. Submit materials to: **Dr. Michael P. Lombardo, Chair, Invertebrate Zoologist Search Committee, Department of Biology, Grand Valley State University, Allendale, MI 49401-9403.** E-mail: lombardm@gvsu.edu; website: www.gvsu.edu. *Grand Valley State University is an Affirmative Action/ADA and Equal Opportunity Employer. Women and minorities are encouraged to apply.*

ASSISTANT PROFESSOR INDUSTRIAL HYGIENE OCCUPATIONAL/ENVIRONMENTAL HEALTH SCIENCES

Applications are sought for a tenure-track academic year faculty position in the ABET-accredited Industrial Hygiene program of the Purdue University School of Health Sciences. The successful applicant is expected to have a strong commitment to teaching in the professional and graduate programs, and to establish a vigorous, extramurally funded, laboratory- or field-based research program. Applicants with outstanding credentials may be considered for higher faculty rank. The applicant should be able to complement current interests in the School which include indoor air quality, bioaerosols, pulmonary aerosol deposition, toxicology, exposure assessment, and nonionizing radiation. Collaborative opportunities exist in health physics, epidemiology, ergonomics, environmental engineering and agricultural safety and health. The candidate must have a doctorate in industrial hygiene or a related field. Please send curriculum vitae, including a list of any previous funding, a statement of research interests, and the names, addresses, and telephone numbers of three references to: **Dr. Frank S. Rosenthal, Chair, Search Committee, School of Health Sciences, Purdue University, West Lafayette, IN 47907.** Telephone: 765-494-0812; FAX: 765-496-1377. *Purdue University is an Equal Opportunity/Affirmative Action Employer. Minority and female candidates are encouraged to apply.*

UNIVERSITY OF WASHINGTON BOTHELL, WASHINGTON

BIOLOGIST/ECOLOGIST sought by Liberal Studies Program to develop and teach innovative courses in science, technology, and the environment concentration, and to carry on research in ecology or other biological subdisciplines. We expect to appoint at tenure-track ASSISTANT PROFESSOR level; Ph.D. required by appointment. Candidate must be able to teach basic scientific concepts and scientific method and to relate scientific thinking both to technology and to policy development, in a concentration closely integrated with the humanities and social sciences. We are searching for an exceptional teacher-scholar who is willing to contribute to creating our young and evolving institution. Send curriculum vitae, sample syllabus, research prospectus, and have three reference letters sent by November 21, to: **Ms. Lorraine Hillas, Program Coordinator, Liberal Studies Program, University of Washington, Bothell, 22011—26th Avenue S.E., Bothell, WA 98021.** Questions to Search Committee Chair, **Dr. Dan Jaffe,** e-mail: djaffe@u.washington.edu. Further details at website: <http://www.washington.edu/admin/eoo/ads/libstboth11.nov21.7.html>. *Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

PAIN SCIENTIST UNIVERSITY OF FLORIDA

The University of Florida College of Dentistry and the University of Florida Brain Institute invite applications for a tenure-track position at the level of ASSISTANT or ASSOCIATE PROFESSOR. The applicant should have a background or strong interest in sensory neurobiology, behavioral science, or health services research related to pain and be willing to participate in multidisciplinary grants and other collaborative efforts to study the mechanisms, pathophysiology, impact, or management of chronic pain. The successful applicant could provide expertise in a new area or extend existing pain research programs. It is expected that the applicant will have established, or will develop, an externally funded research program and contribute to teaching in the College of Dentistry. Candidates should have a Ph.D. and/or D.M.D./D.D.S. or equivalent and, preferably, at least two years of postdoctoral or equivalent experience. Competitive salary support and start-up funds will be provided.

Applications, including a curriculum vitae, statement of research interests, representative publications, and a list of at least three references should be sent to: **Dr. Marc Heft, Box 100416, Health Science Center, University of Florida, Gainesville, FL 32610-0416.** Applications will not be considered after January 1, 1998. *The University of Florida is an Equal Opportunity/Affirmative Action Institution. The selection process will be conducted under the provisions of Florida's "Government in the Sunshine" and Public Records laws. Search applications, résumés, and other documents related to the search will be available for public inspection.*

PLANT REPRODUCTIVE DEVELOPMENT MICHIGAN STATE UNIVERSITY

The Department of Horticulture is recruiting for a tenure-track research (75 percent) and teaching (25 percent) ASSISTANT PROFESSOR position in plant reproductive development. Research may be applied or fundamental, but should address issues important to Michigan's fruit industry, e.g., flower bud formation, pollination and fruits set, abscission, fruit development, maturation, and quality. Teaching includes a graduate course in reproductive development and contributing to undergraduate physiology courses. A Ph.D. in horticulture, plant physiology, or related field is required. Developing an externally funded, nationally recognized research program is expected. Postdoctoral experience is preferred. A record of research productivity in plant physiology, biochemistry, molecular biology, or genetics, that indicates the application of those disciplines to one or more of the above research areas is highly desirable. Please send curriculum vitae, graduate transcripts, description of research/teaching interests, and list of at least three references (names, addresses, telephone numbers) to: **Dr. Randy Beaudry, Search Committee Chair, Horticulture, PSSB, Michigan State University, East Lansing, MI 48824-1325.** Telephone: 517-353-3769; FAX: 517-335-0249; e-mail: beaudry@pilot.msu.edu. Applications will be accepted through December 31, 1997, or until a qualified applicant is identified. *Michigan State University is an Affirmative Action/Equal Employment Opportunity Institution.*

ANIMAL DEVELOPMENTAL BIOLOGIST

The Department of Biology, College of Charleston, invites applications for a tenure-track position at the ASSISTANT PROFESSOR level to begin August, 1998. Candidates must possess a Ph.D. and a strong commitment to teaching and research. We are particularly interested in candidates who use molecular or genetic approaches to problems in animal development. The College of Charleston is a public liberal arts institution of 10,000 students. The College's primary aims are teaching and research excellence. The Department of Biology offers programs leading to a B.A. or B.S. in biology, a B.S. in biology with emphasis in molecular biology, a B.S. in marine biology, a M.S. in marine biology, and a M.S. in environmental studies. Information on the Department can be found at website: <http://www.cofc.edu/~biology/biology.htm>. Applicants should submit a curriculum vitae, statement of teaching and research interests, copies of relevant publications, and three letters of reference to: **Chair, Department of Biology, Developmental Biologist Search Committee, College of Charleston, Charleston, SC 29424.** All application materials should be received by December 1, 1997. *The College of Charleston is an Equal Opportunity/Affirmative Action Employer and encourages applications from women and minorities.*

FACULTY POSITION IN MOLECULAR NEUROSCIENCE

WASHINGTON UNIVERSITY Department of Anatomy and Neurobiology

We seek an individual taking innovative approaches to fundamental questions in molecular, cellular, or developmental neuroscience for a tenure track faculty position in the Department of Anatomy and Neurobiology at Washington University School of Medicine. The department houses 21 active research labs in neurobiology, and it is part of a much larger interdepartmental neuroscience program. The department has state-of-the-art facilities for automated DNA sequencing, confocal microscopy, image processing, and a transgenic mouse facility. Both the department and the neuroscience program offer numerous opportunities for scientific interactions and collaborations. We encourage applications at senior as well as junior faculty levels.

Applicants should send a curriculum vitae, synopsis of research interests, and names (incl. addresses, phone/fax/email) of three references to: Dr. David Van Essen, Head, Anatomy and Neurobiology, Box 8108, Search Committee A, Washington University School of Medicine, 660 S. Euclid Ave., St. Louis, MO 63110, by December 31, 1997. *Affirmative Action/Equal Opportunity Employer. Applications from minorities and women are encouraged.*

FACULTY POSITION IN SYSTEMS NEUROSCIENCE

WASHINGTON UNIVERSITY Department of Anatomy and Neurobiology

We seek an individual whose research focusses on non-human primates and who is taking innovative approaches to important questions in systems neuroscience for a tenure track faculty position in the Department of Anatomy & Neurobiology at Washington University School of Medicine. We are particularly interested in applicants working on sensory processing, motor control, or cognitive function and whose research includes a strong computational aspect. Excellent laboratory space is available in a new state-of-the-art primate facility. Our emphasis is on an Assistant Professor appointment, but we will also consider an appointment at a more senior level. The department houses 21 faculty who are actively involved in neurobiological research, and it is part of a much larger interdepartmental neuroscience program. The new primate facility is in close proximity to a new Imaging Center containing superb PET and MRI research facilities. Both the department and the neuroscience program offer numerous opportunities for scientific interactions and collaborations.

Applicants should send a curriculum vitae, synopsis of research interests, and names (incl. addresses, phone/fax/email) of three references to: Dr. David Van Essen, Head, Anatomy and Neurobiology, Box 8108, Search Committee B, Washington University Sch Med, 660 S. Euclid Ave., St. Louis, MO 63110, by December 31, 1997. *Affirmative Action/Equal Opportunity Employer. Applications from minorities and women encouraged.*

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User Support Specialist

Supporting users of proprietary software (both internal and pharmaceutical partners), you will resolve technical problems interacting with engineering, QA, and documentation. BS or MS and minimum two years' experience with UNIX, MAC or Win95/NT, minimum travel. Interest or experience in Biology required. **JOB CODE 0997-S-USG**

Sr. Quality Assurance Engineers

We have multiple openings for individuals qualified to design and execute automated and manual tests in SmallTalk, Visual C++ and perl for scientific applications. These positions are also responsible for developing SQL testing queries and maintaining a testing database. Requires a BSCS, or a biology major with substantial computer experience. Must have 5+ years' of SQA and programming experience with an O-O or database product, and familiarity with two of the following: Sun, Mac, NT 4.0 or Win95. Must also have working knowledge of one of the following: OTF, TestKit, WinRunner, X-Runner, Visual Test or QA Partner. An interest in molecular biology or genetics is necessary. **JOB CODE 0997-S-QAG**

All candidates must have outstanding communication skills, coupled with an interest and the ability to work in an interdisciplinary team environment.

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POSITIONS OPEN

MICROBIAL GENETICIST POSITION

The Department of Plant and Microbial Biology and the Agricultural Experiment Station at the University of California, Berkeley, have an opening for a tenure-track **ASSISTANT PROFESSOR** or tenured **ASSOCIATE PROFESSOR** position (nine-month appointment) starting July 1, 1998. Applications are invited from outstanding individuals whose research is directed toward microbial genetics and/or the development of new microbial genetic systems, prokaryote or eukaryote (other than yeast). The successful candidate is expected to develop and teach an undergraduate lecture or laboratory course in microbial genetics, to contribute to teaching at the graduate level, and develop a strong and independent research program. Applicants must have a Ph.D. degree and at least two years of postdoctoral experience. A curriculum vitae, a statement of current and future research interests, a statement of teaching experience and/or goals, and names of three references, should be sent by December 1, 1997, to:

Chair, Microbial Geneticist Search Committee
Department of Plant and Microbial Biology
111 Koshland Hall
University of California
Berkeley, CA 94720-3102

Applications submitted after the deadline will not be accepted.

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

ASSISTANT PROFESSOR

The Department of Biological Sciences, University of Iowa, invites highly qualified applicants for a tenure-track position at the Assistant Professor level for a **POPULATION ECOLOGIST**. Required qualifications include: a Ph.D. degree; significant publication record in leading scientific journals; evidence of the ability to develop an internationally visible, independent research program with an emphasis on the evolutionary ecology of animal populations; teaching qualifications commensurate with departmental needs. Teaching duties will include participation in introductory biology or animal behavior and an advanced course in an area of interest. Strong preference will be given to candidates with postdoctoral experience. Applicants should send a curriculum vitae, reprints, and a statement of research and teaching interests, and have three letters of recommendation sent to: **Dr. Steve Hendrix, Ecology Search Committee, Department of Biological Sciences, University of Iowa, 138 Biology Building, Iowa City, IA 52242-1324**. Applications will be reviewed starting December 1, 1997. For more information about the department, university, and region, visit website: <http://www.uiowa.edu>. The University of Iowa is an Affirmative Action/Equal Opportunity Employer. Women and minority candidates are especially encouraged to apply.

ASSISTANT PROFESSOR VIROLOGY

MOREHOUSE SCHOOL OF MEDICINE (MSM)

Scientists with research expertise in an area of contemporary virology with relevance to medicine are invited to apply for a regular faculty position in the Department of Microbiology and Immunology. Candidates must have postdoctoral training and have demonstrated the ability to direct an independent research program and to obtain extramural funding. MSM is a young institution, dedicated to the training of underrepresented minorities in medicine and graduate biomedical sciences, and to excellence in biomedical research. State-of-the-art research facilities plus individual start-up support will be available to the successful applicant. This position offers the opportunity for full and rewarding scholarly growth at a rapidly developing institution. Applicants should submit a curriculum vitae, statement of research background and goals, and names of three references to: **Gordon B. Bailey, Chair, Department of Microbiology and Immunology, Morehouse School of Medicine, 720 Westview Drive S.W., Atlanta, GA 30310**. E-mail: bailey@link.msm.edu; FAX: 404-752-1179. Underrepresented minorities and women are particularly encouraged to apply.

Biology. James Madison University. **ASSISTANT PROFESSOR**. Rolling contract. Start January 1998. Teach non-majors in integrated science sequence; participate in designing and delivering new curriculum; conduct undergraduate and M.S. research. Apply by: October 24, 1997, for full consideration. See website: <http://www.jmu.edu/biology/jobs.html> or Telephone: 540-568-1221 for specific job and application requirements. Affirmative Action/Equal Opportunity Employer.

POSITIONS OPEN

ASSISTANT PROFESSOR OF NEUROPHARMACOLOGY UNIVERSITY OF WASHINGTON

Applications are invited for a tenure-track appointment in the Department of Pharmacology, joint with the Department of Psychiatry and Behavioral Sciences. A Ph.D. or M.D. degree and two years of postdoctoral research experience are required. All areas of neuropharmacology will be considered, but individuals integrating molecular/genetic methods with behavioral or systems studies are particularly encouraged to apply. The successful candidate will be expected to develop an outstanding independent research program, teach an undergraduate neuropharmacology course, and participate in graduate student training in the Department of Pharmacology and the Graduate Program in Neurobiology and Behavior. Additional information may be obtained at website: <http://weber.u.washington.edu/~phcol/>. Applicants should send their curriculum vitae and a specific statement of research plans, and should arrange for three letters of recommendation to be submitted before December 15 to: **Neuropharmacology Search Committee, Department of Pharmacology, Box 357280, University of Washington, Seattle, WA 98195**.

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

COMPARTIVE PHYSIOLOGY BUCKNELL UNIVERSITY

Applications are invited for an entry-level tenure-track position as **ASSISTANT PROFESSOR** in whole-animal comparative physiology. Ph.D. required. Annual teaching responsibilities will include participation in a core course in organismal biology for majors, upper-level courses in area of specialty, and possibly a course for non-majors. The successful candidate will be provided lab space and establish an active research program involving undergraduates for which start-up funds are available. Cover letter addressing teaching philosophy and research goals, curriculum vitae, and three letters of recommendation should be submitted to:

**Dr. Mitchell I. Chernin, Chair
Department of Biology
Bucknell University
Lewisburg, PA 17837
E-mail: chernin@bucknell.edu
Telephone: 717-524-1124
FAX: 717-524-3537**

Website: <http://www.bucknell.edu/departments/biology/>

Review of applications will begin on November 1, 1997, and the search will remain open until the position is filled. Bucknell University encourages applications from women and members of minority groups. Equal Employment Opportunity/Affirmative Action.

ANATOMY FACULTY POSITION CASE WESTERN RESERVE UNIVERSITY SCHOOL OF MEDICINE

The Department of Anatomy seeks candidates for a tenure-track position at the level of **ASSISTANT** or **ASSOCIATE PROFESSOR**, with an effective date of July 1, 1998. Candidates must have a Ph.D. or equivalent degree and must have demonstrated potential to develop an independent research program, and be able to contribute to graduate and medical teaching in gross anatomy, histology, or embryology.

Send credentials to: **Dr. Joseph C. LaManna, Department of Anatomy, Case Western Reserve University, 10900 Euclid Avenue, Cleveland, OH 44106-4930**. An Equal Opportunity/Affirmative Action Employer.

ASSISTANT PROFESSORS (TWO) BIOLOGY—TENURE-TRACK

Cell/developmental biology (V-23) and genetics (V-24). Both require teaching B.S. and M.S. courses in general and specialty area, developing active research program involving students with pursuit of funding, and Ph.D. in a biological science. TEM and/or SEM experience helpful. Screening begins immediately and continues until positions are filled. Send résumé, statement of teaching philosophy, research interests, transcripts, and three letters of reference to: **Dr. Bonnie Lustigman, Biology Department, Montclair State University, Upper Montclair, NJ 07043**. Equal Opportunity/Affirmative Action Employer. Positions subject to available funding.

POSITIONS OPEN

THE UNIVERSITY OF WESTERN ONTARIO

The Department of Zoology, The University of Western Ontario, seeks a **COMPARATIVE ANIMAL PHYSIOLOGIST** to fill a tenure-track position at the **ASSISTANT PROFESSOR** level, beginning 1 July 1998. A minimum of two years of postdoctoral experience in physiology/biochemistry is required. The Department of Zoology offers courses in support of the B.Sc. Biology Program, and Honors Programs in zoology, biology, cell biology, genetics, and ecology and evolution. The successful candidate will be expected to teach introductory and advanced courses in the undergraduate program, and develop an independent research program. Applications and three letters of reference should be sent to: **Dr. J. S. Millar, Chair, Department of Zoology, The University of Western Ontario, London, Ontario N6A 5B7 Canada** by November 30th, 1997.

Positions are subject to budget approval. In accordance with Canadian Immigration requirements, this advertisement is directed to Canadian citizens and permanent residents of Canada. The University of Western Ontario is committed to employment equity, welcomes diversity in the workplace, and encourages applications from all qualified individuals including women, members of visible minorities, aboriginal persons, and persons with disabilities.

EVOLUTIONARY BIOLOGIST UNIVERSITY OF GEORGIA

Applications are invited for a tenure-track position at the level of **ASSISTANT PROFESSOR** in the Department of Genetics, University of Georgia. We are seeking an Evolutionary Biologist working at the interface of genetics and ecology. The successful candidate is expected to establish an independent research program, direct graduate student research, and assist in undergraduate and graduate teaching. Applications must include a curriculum vitae, reprints of selected publications, and statements of research and teaching interests. Applicants must also arrange to have four letters of reference sent directly to the search committee. To be assured of consideration, applications must be received by December 2, 1997. Send materials to: **Dr. Michael L. Arnold, Chair, Evolutionary Biology Search Committee, Department of Genetics, Life Sciences Building, University of Georgia, Athens, GA 30602-7223**. For additional information concerning this position, the Department of Genetics, and the surrounding area, see website: <http://www.genetics.uga.edu>. The University of Georgia is an Equal Opportunity/Affirmative Action Institution. Women and minorities are encouraged to apply.

POSITION ANNOUNCEMENT

BIOLOGY, ASSISTANT PROFESSOR. The Department of Biology at Shippensburg University invites applications for a tenure-track position starting August 1998. The successful candidate will be required to have completed a Ph.D. and have two years of teaching experience. Primary teaching responsibilities will include immunology, microbiology, and introductory biology. An ability to teach hematology and/or virology is preferred. A strong commitment to undergraduate teaching is essential. A demonstration of teaching effectiveness will be required as part of the interview process. Scholarly activity will be expected in the area of the candidate's specialty. Applicants must send curriculum vitae, copies of transcripts (both graduate and undergraduate), a statement of teaching philosophy and research interests, and three letters of reference to: **Chair, Microbiology Search Committee, Department of Biology, Shippensburg University, 1871 Old Main Drive, Shippensburg, PA 17257-2299**. Review of applications will begin October 16, 1997, and continue until position is filled. Shippensburg University is committed to Equal Employment Opportunity. Women, persons of color, veterans, and the disabled are encouraged to apply.

The Department of Chemistry of The University of Chicago invites applications from outstanding individuals for the position of **ASSISTANT PROFESSOR OF CHEMISTRY**. This search is in the areas of theoretical, physical, inorganic, organic, and polymer chemistry. Postdoctoral experience is preferred. Applicants should submit a curriculum vitae, a list of publications, and a succinct outline of their research plans. Candidates should arrange for three letters of recommendation to be sent directly to: **James R. Norris, Jr., Chairman, Department of Chemistry, The University of Chicago, 5735 South Ellis Avenue, Chicago, IL 60637**. Deadline for application materials is October 31, 1997. An Equal Opportunity/Affirmative Action Employer.

INSECT ECOLOGIST

We seek a scientist with experience in biological control of weeds, or the ecology of invasions, and a good publication record to join a multi-disciplinary team conducting research in these fields.

Research leadership skills and an ability to build well-focused research programmes is required. Applicants with PhD or equivalent, several years post-doctoral experience, and good quantitative skills are sought.

For further information contact Pauline Syrett at address below or e-mail syrettp@landcare.cri.nz

Closing date for applications is Monday 20 October 1997.

For job description and application form contact: Steve Watts, Human Resources, PO Box 69, Lincoln, Canterbury, New Zealand, telephone 0-3-325 6700, fax 0-3-325 2418, e-mail watts@landcare.cri.nz

République Française

The State of France and the Ile-de-France and Paris Region
are issuing a call for proposals for
four International Research Chairs to be called
"Blaise PASCAL"

Each Chair, for 12 months full time, possibly distributed over 2 years, is intended for a foreign scientist of high level in exact, natural, or social science, with a scientific project. It will allow the beneficiary to enjoy a cultural and scientific support, equipments, and functional means, in one or several centers for superior education or research, in Paris/Ile-de-France.

- The total financial amount allocated to each project (including salaries) reaches 1,3 MF (around US\$208,000.00 social security contributions, taxes, subsistence allowance spending, and administrative costs to be deducted*).
- The beneficiaries will have to teach about 10 lectures. A public seminar will conclude the project.
- Proposals should describe the scientific project, detailing its needs, and should indicate the accomodating establishment.
- A multi-disciplinary jury, associated with Institut de France, will select the candidates, according to the scientific interest of the project and the quality of the project file.

Proposals should be sent, at the latest on 31 December, 1997, to the following address:

Fondation de l'Ecole normale supérieure
Chaires Internationales de Recherche "Blaise PASCAL"
45 rue d'Ulm, F-75230 PARIS Cedex 05

(Information: W. Mercouroff, Ens, 33 (0) 1 44 32 31 85,

Fax 33 (0) 1 44 32 31 83

e-mail: vladimir.mercouroff@ens.fr

*For information, social security contributions on salaries are about 80% of the net salary; the current VAT rate is 20.6%.

Matrix Medical Research Scientist

Matrix Medical is seeking a research scientist to direct a program on the development of a living skin equivalent. The program concerns the development of a hybrid construct by growing keratinocytes and fibroblasts on a degradable polymeric scaffold to treat patients with burn wounds, ulcers, etc. The candidate will lead a team of three people initially and will have as a major objective to work towards a clinical trial in 1998. The candidate should have a Ph.D. in one of the biomedical sciences and have expertise in tissue engineering, preferably with skin. Matrix Medical is a venture-capital-backed, fast growing biomedical company focused on integrating biotechnology and material science.

Candidates should send their curriculum vitae to:

Prof. Dr. C.A. van Blitterswijk

Matrix Medical

Prof. Bronkhorstlaan 10

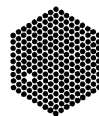
3723 MB, Bilthoven

The Netherlands

Tel: 31-302280277

FAX: 31-302288430

E-mail: Blitterswijk@rullf2.leidenuniv.nl text



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Detlef Krömker	Howard S Bilofsky
Chris Jones	John Wise
Michael Berman	Alan Robinson

For further information and registration details, please refer to

<http://www.ebi.ac.uk/fiv97/>

Alternatively contact: Chris.Jones@ebi.ac.uk or FAX: +44 (0)1223 494470. EMBL Outstation - European Bioinformatics Institute, Wellcome Trust Genome Campus, Hinxton, Cambridge, UK, CB10 1SD.

POSITIONS OPEN

The College of Pharmacy at Washington State University invites applications for a full-time, tenure-track faculty position at the rank of **ASSISTANT/ASSOCIATE PROFESSOR**. Applicants must have a Ph.D. and extensive training and research experience in molecular biology, a minimum of two to three years of postdoctoral training, and must possess excellent writing and oral communicating skills. The successful candidate will be expected to develop and sustain an independent extramurally funded research program. In addition, she/he will be expected to participate in the teaching of students in the professional and graduate programs. Salary: Commensurate with experience. Application deadline is October 30, 1997. Applications must include a curriculum vitae, statement of research and professional goals. Please indicate rank applying for (Assistant or Associate) and provide the names, addresses, telephone numbers, and e-mail addresses of three individuals who would provide letters of reference.

Send applications to: **Darrell A. Jackson, Ph.D., Search Committee Chair, College of Pharmacy, Washington State University, P.O. Box 646510, Pullman, WA 99164-6510.** Washington State University is an Equal Employment Opportunity/Affirmative Action Employer and Employer. Protected group members are encouraged to apply.

UNIVERSITY OF CALIFORNIA, SAN FRANCISCO CARDIOVASCULAR RESEARCH INSTITUTE

Up to two **TENURE-TRACK ASSISTANT PROFESSOR** positions with access to graduate programs and a joint appointment in a basic science department will be offered.

Individuals working in areas related to cardiovascular biology, including but not limited to angiogenesis, endothelial, smooth muscle, or leukocyte biology, cardiac, vascular, or pulmonary development, or mouse or human genetics related to the cardiovascular system, will be considered. Candidates should hold an M.D. or Ph.D. degree and will be expected to establish a dynamic research program and to actively contribute to CVRI training programs. By October 30, 1997, submit a curriculum vitae, summary of research accomplishments, description of future research plans, major publications, and three to five letters of recommendation to: **Regis B. Kelly, Ph.D., Chair, Search Committee, CVRI, University of California, San Francisco, CA 94143-0130.** The University of California, San Francisco is an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.

ECOLOGIST

The Department of Zoology at the University of Washington is seeking applications for a tenure-track faculty position at the **ASSISTANT PROFESSOR** level. We are particularly interested in candidates that use experimental approaches to understand multispecies systems. While we have a strong preference for research programs that focus on marine organisms, we will consider applications from individuals studying other environments. Successful candidates will be expected to contribute to undergraduate and graduate teaching and to establish externally funded research. Ph.D. required by date of appointment. Send curriculum vitae, a description of research and teaching interests, and names of three references to: **Dr. R. T. Paine, Chair, Department of Zoology, Box 351800, University of Washington, Seattle, WA 98195-1800.** Priority will be given to applications received before December 1, 1997. The University of Washington is building a culturally diverse faculty and strongly encourages applications from women and minority candidates. The University is an Equal Opportunity/Affirmative Action Employer.

ASSISTANT PROFESSOR UNIVERSITY OF CALIFORNIA— SANTA BARBARA Department of Chemistry/Program in Biochemistry and Molecular Biology

Tenure-track opening in biochemistry. Ph.D. required. Candidates with outstanding research and teaching potential at the graduate and undergraduate levels are invited to apply. Expertise sought in: catalytic mechanisms, protein or RNA folding and design, combinatorial approaches, novel biomolecules, or macromolecular assembly processes.

Send curriculum vitae, selected reprints, two-page research plan, and three letters of recommendation to: **Chair, Biochemistry Search Committee, Department of Chemistry, University of California, Santa Barbara CA 93106-9510.** Applications received by December 1, 1997, given preference. Position open until filled. UCSB is an Equal Opportunity Employer.

POSITIONS OPEN

ASSISTANT PROFESSOR CANCER BIOLOGY PRINCETON UNIVERSITY Department of Molecular Biology

The Department of Molecular Biology at Princeton University invites applications for a tenure-track position at the Assistant Professor level in the broad area of cancer biology; i.e., signal transduction pathways, cell cycle regulation, cancer genetics, genomics, or gene regulation. Candidates must have an M.D. or Ph.D. degree or equivalent and several years of postdoctoral experience.

Qualified applicants should send a curriculum vitae, a summary of research interests, and three letters of reference to:

Cancer Biology Search Committee Department of Molecular Biology Princeton University Princeton, NJ 08544

Application deadline: December 15, 1997.

Princeton University is an Equal Opportunity/Affirmative Action Employer.

The University of California, San Diego, Department of Chemistry and Biochemistry invites applications for a tenure-track and tenured faculty position in biochemistry, with a preference at the **ASSISTANT** and **ASSOCIATE PROFESSOR** level. Candidates must have a Ph.D. and a demonstrated ability for creative research and teaching at the undergraduate and graduate levels. The committee is interested in receiving applications from individuals using chemical and biochemical approaches to solve biological problems. Salary commensurate with qualifications and based on University of California pay scale. Positions subject to availability of funds. Candidates should send a curriculum vitae, a list of publications, reprints of up to five representative papers, a summary of research plans, and names and addresses of three references to: **Chair, Biochemistry Search Committee 3-394, University of California, San Diego, Department of Chemistry and Biochemistry—0332, La Jolla, CA 92093-0332.** The deadline for applications is October 15, 1997, but until positions are filled all applications received will be assured full consideration. The University of California is an Equal Opportunity/Affirmative Action Employer.

ECOLOGY/BIOLOGICAL SCIENCES

ASSISTANT PROFESSOR, tenure-track position starting August, 1998. Ph.D. required; broad training/experience in biology and undergraduate education in the liberal arts. Teaching responsibilities (two courses per semester) will include participation in general biology, courses in ecology, evolution, and marine/invertebrate biology for majors, specialty course for M.S. candidates, and environmental issues for non-majors. Strong commitment to undergraduate teaching and research. Send statement of teaching and research interests, curriculum vitae, transcripts, and three letters of reference to: **Dr. Paul A. Richmond, Chair, Department of Biological Sciences, University of the Pacific, Stockton, CA 95211.** Our website: <http://www.uop.edu/cop/>. Review will begin December 1, 1997. An Equal Opportunity/Affirmative Action Employer.

BRADLEY UNIVERSITY DEPARTMENT OF BIOLOGY TWO POSITIONS 1998-99 Academic Year

Genetics (preferably molecular) and vertebrate biology (preferably physiology)

CHAIRPERSON—Associate Professor (either specialty)

ASSISTANT PROFESSOR—(either specialty)
See our website: <http://www.bradley.edu/personnel> for details or submit applications to: **Dr. John DePinto, Bradley University, Peoria, IL 61625.**

ASSISTANT/ASSOCIATE PROFESSOR

The Department of Neurological Surgery at the Medical College of Ohio seeks a Neuroscientist, Neuropharmacologist, or Neurophysiologist with an interest in the somatosensory system to pursue the study of chronic pain. Candidates should have a Ph.D. and will be expected to establish an externally funded research program. Applications should include a curriculum vitae and a summary of research interests. Send to: **Jeffrey A. Brown, M.D., Professor and Chairman, Department of Neurological Surgery, Medical College of Ohio, Dowling Hall, 3065 Arlington Avenue, Toledo, OH 43614-5807.**

POSITIONS OPEN

ASSISTANT PROFESSOR OF SCIENCE

Fairhaven College/Western Washington University is accepting applications for full-time, tenure-track Assistant Professor of Science in a critical, liberal arts context. Ph.D. or equivalent required. Applicants should have demonstrated successful teaching in interdisciplinary curriculum, including active, participatory learning, and the ability to teach scientific concepts and methods to non-majors and upper division courses for students developing interdisciplinary degree programs in science. Ability to teach in other areas such as humanities, mathematics, or philosophy will be also considered. Review of completed applications begins on October 15, 1997. No new applications will be considered after November 30, 1997. Send a cover letter, résumé, short essay on philosophy of teaching and learning, and three letters of reference to: **Georgia Garr, Office of the Dean, Fairhaven College, Western Washington University, Bellingham, WA 98225-9118. Telephone: 360-650-3680.** WWU/Fairhaven College is an Affirmative Action/Equal Employment Opportunity Employer.

MICROBIAL SYSTEMATIST. The Biology Department of Loyola University of Chicago invites applications for a tenure-track **ASSISTANT PROFESSOR** position beginning August 1998. The candidate should have a Ph.D., postdoctoral experience, and be able to teach a general microbiology course, a course in the candidate's specialty area, and one of the department's required courses. The successful candidate is expected to establish a vigorous, independent research program involving systematics of lower eukaryotes, prokaryotes, or viruses. The candidate should submit an application letter, curriculum vitae, statements of research and teaching interests, and arrange that three letters of recommendation be submitted to: **Microbial Systematist Search Committee, Biology Department, Loyola University of Chicago, 6525 North Sheridan Road, Chicago, IL 60626.** All materials should be submitted by November 1, 1997. The Department of Biology's website: <http://www.luc.edu/depts/biology/>. Loyola University is an Affirmative Action/Equal Opportunity Employer.

FISHERIES BIOLOGY

The Division of Biology at Kansas State University invites applications for a tenure-track position at the **ASSISTANT PROFESSOR** level, beginning in the 1998-99 academic year. A strong, extramurally funded research program and active participation in undergraduate and graduate teaching is expected. A Ph.D. or equivalent is required and postdoctoral training and teaching experience are desirable. The Division has an excellent record of fisheries and ecology training and research. Further information on the Division and the position can be found at website: <http://www.ksu.edu/biology>. Applicants should submit a curriculum vitae, selected reprints, and a summary of research interests, and have three letters of reference sent to: **Dr. Walter Dodds, Chair, Fisheries Search Committee, Division of Biology, Ackert Hall, Kansas State University, Manhattan, KS 66506-4901.** Applications should be received by 5 November 1997. Kansas State University is an Equal Opportunity/Affirmative Action Employer, and encourages diversity among its employees.

CALIFORNIA INSTITUTE OF TECHNOLOGY invites applications for a tenure-track position as **ASSISTANT PROFESSOR** in the field of inorganic chemistry. The initial appointment will be for four years. Outstanding candidates with a Ph.D. and a strong commitment to research and teaching excellence are encouraged to apply. Submit curriculum vitae, publication list, a description of proposed research, and three letters of recommendation to: **Professor J. K. Barton, Inorganic Chemistry Search Committee, M/C 127-72, California Institute of Technology, Pasadena, CA 91125.** Applications should be received by November 15, 1997. The California Institute of Technology is an Equal Opportunity/Affirmative Action Employer. Women, minorities, veterans, and disabled persons are encouraged to apply.

The Department of Psychology, Northwestern University, invites applications for a tenure-track **ASSISTANT PROFESSORSHIP** in the area of cognitive neuroscience to begin September 1998. Qualifications include outstanding research and teaching ability. Candidates should send a statement of research (program/plans), curriculum vitae, copies of recent publications, and three letters of recommendation to: **Cognitive Neuroscience Search Committee, Department of Psychology, Northwestern University, Evanston, IL 60208-2710 USA.** Affirmative Action/Equal Opportunity Employer. Applications from women and minority candidates are especially welcome.

CELLULAR AND VIRAL IMMUNOLOGY:
BARBARA REHERMANN

Postdoctoral position to study the immunopathogenesis of hepatitis B and C (helper and CTL response, viral mechanisms of escape from immune surveillance). Experience in cellular and molecular immunology, especially in animal models, antigen processing or signal transduction strongly preferred.

IRON METABOLISM AND TOXICITY:
CAROLINE PHILPOTT

Postdoctoral position to study the effects of excess iron uptake in human cells and yeast. We utilize a genetic model of iron intoxication in yeast to investigate the mechanism by which excess iron leads to cell cycle arrest and DNA damage. Research efforts will be expanded to include the human disease of iron overload, hemochromatosis. Experience in yeast genetics and/or molecular biology required.

Candidates should have a Ph.D. with less than 5 years of postdoctoral experience. Application should be sent to:

LIVER DISEASES SECTION, NATIONAL INSTITUTE OF DIABETES, DIGESTIVE & KIDNEY DISEASES, NATIONAL INSTITUTES OF HEALTH, BLDG. 10, ROOM 9B16, 10 CENTER DRIVE, BETHESDA, MD 20892-1800; FAX: 301-402-0491.

NIH is an Equal Opportunity Employer



**St. Jude Children's
Research Hospital**

ALSAC • Danny Thomas, Founder

Postdoctoral Position Bacterial Metabolism and Genetics

A postdoctoral position is available in the laboratory of Dr. Charles Rock to investigate the molecular biology and biochemistry of fatty acid and phospholipid synthesis in bacteria. Areas currently under investigation include transcriptional regulation, identification of protein-protein interactions, 3-dimensional structure determination and drug discovery. Applicants should have a recent Ph.D. degree, and a strong background and interest in cell and molecular biology. Please send a curriculum vitae, a brief statement of research interests and the names of three individuals that can be contacted for letters of recommendation to: **Dr. Charles O. Rock, Biochemistry Department, St. Jude Children's Research Hospital, 332 N. Lauderdale, Memphis, TN 38105. E-mail: charles.rock@stjude.org.** Equal Opportunity/Affirmative Action Employer.



Opportunities in CNS research

Hoffmann-La Roche, one of the world's leading pharmaceutical companies, has a long tradition of successful and innovative CNS research. As part of an expanding commitment in this area, Roche's preclinical CNS department in Basel, Switzerland, is looking for talented, motivated and energetic individuals to fill the following positions:

Group leader – molecular neurobiology

We are seeking an individual with an excellent scientific record in the molecular biology of neuronally important proteins, receptors, ion channels, etc. and/or experience in molecular genetics of the nervous system. Experience in gene transfer technologies or neurodevelopment would be an advantage.

The successful candidate will head his/her own research group in addition to organising the work of several molecular biology laboratories.

Project leader – schizophrenia research

We have an opening for a scientist with a PhD or MD and several years' experience to head our research in schizophrenia. The successful candidate will have a solid background in schizophrenia research, including a good understanding of genetics, molecular biology and pharmacology, and the skills needed to lead and motivate a team of high-caliber scientists. The appointee will be given considerable freedom to determine the direction of research. As the position will include responsibility for major collaborations with other institutions, excellent communication skills are vital.

Who to contact

If you are interested in any of these challenging positions and your training and experience fit the relevant profile, please send your application together with full supporting documentation to F. Hoffmann-La Roche Ltd, Human Resources Department, CH-4070 Basel, Switzerland, Attn. Mr. W. Aschwanden, quoting reference As364. For further information, please contact Dr. G. Kilpatrick, Tel: +41 61/688 82 90.

Pharmaceuticals

POSITIONS OPEN

UNITED STATES-ISRAEL BINATIONAL SCIENCE FOUNDATION

The United States-Israel Binational Science Foundation (BSF) was established by the two governments in order to promote and support cooperation in scientific research.

The BSF supports cooperative research projects of mutual interest to the United States and Israel, concerned with science and technology for peaceful purposes. Basic and applied research projects are considered.

Currently, the BSF supports research projects in the following broad areas: health and life sciences, natural sciences, energy and the environment, and social and behavioral sciences.

Applications should reach the BSF office not later than November 15 of each year.

More information can be obtained from: **BSF Office: P.O.B. 7677, Jerusalem 91076, Israel. Website: <http://www.bsf.org.il>.**

UNIVERSITY OF FLORIDA seeks an **ASSISTANT/ASSOCIATE PROFESSOR** in the Department of Medicine, Division of Endocrinology. M.D. degree, Board Certified in internal medicine, Board Eligible in endocrinology and metabolism. This position will develop a research program in diabetes or diabetes-related areas. The projected establishment of a Diabetes Center of excellence at the University of Florida in the immediate future provides an opportunity for clinical involvement and collaboration in clinically based studies. This position will also be involved in teaching activities for the Division. Salary and benefits commensurate with experience. Recruiting deadline October 9, 1997. Anticipated starting date: October 20, 1997. Apply with curriculum vitae to: **Desmond Schatz, M.D., Associate Professor, Division of Endocrinology, Box 100277 JHMC, Gainesville, FL 32610. An Affirmative Action/Equal Opportunity Employer.**

X-RAY CRYSTALLOGRAPHER, ASSISTANT or ASSOCIATE PROFESSOR, tenure-track. The new Center for Pharmaceutical Biotechnology invites applications in protein X-ray crystallography. Ph.D. and postdoctoral experience required. Responsibilities include developing a strong, externally funded research program, and teaching in graduate and professional programs. Successful candidate will have appointments within the Center and a College basic science department, and extensive collaborative opportunities in a major health sciences center. Forward curriculum vitae, description of research interests, and three reference letters to: **Dr. M. Johnson, Director, Center for Pharmaceutical Biotechnology, College of Pharmacy, University of Illinois at Chicago, Molecular Biology Research Building, 900 South Ashland—m/c 870, Chicago, IL 60607-7173.** For fullest consideration, submit full application by 31 October 1997. *Affirmative Action/Equal Opportunity Employer.*

COGNITIVE PSYCHOLOGIST

Bowling Green State University (BGSU) tenure-track position for fall, 1998, in computational psychology/neural networks; **ASSISTANT PROFESSOR** rank preferred, but all applicants considered. Ph.D. in psychology or related area and specialization in the application of computational and/or neural network methods to problems in cognition and/or cognitive neuroscience are required. *Candidates must be eligible to work in the U.S.* Send curriculum vitae, three current letters of reference, statements of research interests and teaching philosophy, and transcript showing highest degree by November 28, 1997, to: **Faculty Search Committee: Cognitive Psychology, Psychology Department, BGSU, Bowling Green, OH 43403. BGSU is an Affirmative Action/Equal Employment Opportunity Employer; women, minorities, veterans, and persons with disabilities are encouraged to apply.**

ZOOLOGY

Tenure-track faculty position to begin August 1998 (January 1998 if possible). Ph.D. in any area of invertebrate zoology required, teaching experience preferred. First screen October 15, 1997. Submit letter of intent (which should include a statement of teaching philosophy, details of teaching experience and research interests), curriculum vitae, transcripts showing degrees awarded, and a list of at least three references, to: **Human Resources #184, Utah Valley State College, 800 West 1200 Street, Orem, UT 84058.** For more information, Telephone: 801-222-8207; website: www.uvsc.edu; e-mail: bartlena@uvsc.edu. *Affirmative Action/Equal Opportunity Employer.*

POSITIONS OPEN

CULTURAL ECOLOGY

Albright College announces the establishment of the Christian A. Johnson Center for Interdisciplinary Studies, which includes a **TENURE-TRACK POSITION** in cultural ecology, to begin August 1998. Responsibilities include teaching three courses per semester. We seek a gifted teacher and active researcher to bring leadership and vision to define and coordinate a new combined concentration in cultural ecology, taking into account related programs already in existence at Albright, and in cooperation with other departments. The successful candidate will work with faculty and students in a wide variety of disciplines, including biology, history, philosophy, political science, psychobiology, psychology, and sociology, helping to clarify the interactions between the human species, human institutions, and ecological systems. Candidates could be grounded in fields as diverse as epidemiology, geography, or demography, but should be prepared to offer introductory anthropology courses. We seek a person of broad training and sympathies willing to work flexibly across disciplines in the context of a liberal arts institution. Requirements: Ph.D. or other appropriate doctoral-level degree; teaching experience preferred; evidence of scholarly promise required. Send cover letter detailing teaching philosophy and research interests, curriculum vitae, three letters of recommendation to: **Office of Human Resources, Albright College, P.O. Box 15234, Reading, PA 19612-5234.** Review of applications will begin November 7, 1997. Albright College is a private, four-year liberal arts college of 1,100 students located in eastern Pennsylvania, 70 minutes from Philadelphia, three hours from New York and Washington, D.C. *Albright College is an Affirmative Action/Equal Employment Opportunity/Americans with Disabilities Act Employer and is actively committed to diversity within its community.*

CALIFORNIA LUTHERAN UNIVERSITY FLETCHER JONES ENDOWED CHAIR IN BIOLOGY

California Lutheran University invites applications for the newly established Fletcher Jones Chair in Biology endowed by the Fletcher Jones Foundation and to begin in the fall of 1998. The University seeks applicants in the field of developmental biology with strengths in genetics, biochemistry, molecular biology, or cell biology. The appointment will be made at the **ASSOCIATE or FULL PROFESSOR** level. Demonstrated excellence in undergraduate teaching and in research is required. Responsibilities include teaching one course with laboratory each semester, directing the Senior Research program, and sustaining a personal program of research involving undergraduates. Send letter of application, curriculum vitae, and names of references to: **Dr. Pamela Jolicoeur, Provost, California Lutheran University, 60 West Olsen Road, Thousand Oaks, CA 91360.** Review of applicants will begin on December 1 and continue until the position is filled. *Equal Opportunity Employer.*

IMMUNOLOGIST COLUMBIA UNIVERSITY College of Physicians and Surgeons Department of Microbiology

Applications are invited for a tenure-track faculty position in immunology at the level of **ASSISTANT PROFESSOR**. Candidates should be qualified to establish strong independent research programs in cellular or molecular immunology. This position comes with a generous start-up package that includes access to state-of-the-art core transgenic, flow cytometry, and molecular embryology facilities as well as a multidisciplinary immunology training program. Applicants should send a curriculum vitae, statement of research interests, and three letters of reference to: **Dr. Gerald Siu, Chair, Immunology Search Committee, Department of Microbiology HHSC 639, College of Physicians and Surgeons, Columbia University, 701 West 168th Street, New York, NY 10032.**

Columbia University is an Equal Opportunity/Affirmative Action Employer.

RESEARCH ASSISTANT in tissue culture/biochemistry. B.S. degree required/with tissue culture experience. Studies will be in the areas of metal carcinogenesis and the biochemistry and molecular biology of cell matrix components. Send curriculum vitae and three letters of recommendation to: **Thomas Meehan, Department of Biopharmaceutical Sciences and Division of Toxicology, Box 0446, University of California, San Francisco, CA 94143.**

POSITIONS OPEN

DIRECTOR OF THE HENRY HOOD RESEARCH PROGRAM HUMAN GENETICS/MOLECULAR MEDICINE

The Pennsylvania State University College of Medicine is seeking an outstanding scientist working in the area of human genetics or molecular medicine to serve as Director of the Henry Hood Research Program that is housed primarily in the Sigfried and Janet Weis Center for Research located in Danville, Pennsylvania. Effective July 1, 1997, the Henry Hood Research Program has been incorporated into the College of Medicine as part of the agreement to merge the clinical enterprises of The Milton S. Hershey Medical Center and The Geisinger Clinic to create the new Penn State Geisinger Health System. The Weis Center for Research, a research building dedicated in 1987, includes 65,000 square feet of laboratories, conference areas, offices, and informal meeting rooms. The Center presently has generous and fully equipped laboratory and office space for its 7 Professors, 11 Assistant Professors, 13 Instructors, 15 Postdoctoral Fellows and 30 Research Technicians who are working in the area of molecular medicine. It additionally has 8,000 square feet of space available to the new Director to initiate a program in human genetics. The new Director will have the opportunity to recruit three senior faculty in the Henry Hood Research Program, to coordinate the emerging initiatives in human genetics at the College of Medicine and the University Park campus of The Pennsylvania State University, and to facilitate clinical research in human genetics within the Penn State Geisinger Health System. Substantial resources are available for start-up funds for the new director and the new recruits as well as for support of salary, personnel, supplies, and equipment for each of the new and existing positions. The successful applicant will have academic credentials fulfilling the regulations of The Pennsylvania State University for appointment at the Professorial level. Priority will be given to applicants who can relate basic research to clinical problems, and therefore an M.D. or M.D.-Ph.D. degree(s) will be a definite asset but not an absolute requirement.

Reply with curriculum vitae to: **Leonard S. Jefferson, Ph.D., Chair, Search Committee, Senior Associate Dean for Research and Graduate Studies, The Pennsylvania State University College of Medicine, P.O. Box 850 (H175), Hershey, PA 17033-8500.** *We are an Equal Opportunity/Affirmative Action Employer and encourage minority and female applicants to apply.*

TWO POSITIONS ASSISTANT CURATOR OF ICHTHYOLOGY ASSISTANT CURATOR OF HERPETOLOGY

The Natural History Museum of Los Angeles County seeks an Assistant Curator to direct its research and collections program in fishes and another Assistant Curator for amphibians and reptiles. The museum has major collections in both disciplines (see website: <http://www.nhm.org/lacmnh>); and seeks individuals who will develop strong collection-based research programs in phylogenetic systematics using morphological and/or molecular data sets. Requirements: Ph.D. in biology with a strong research orientation and broad expertise in the biology of extant fishes or amphibians and reptiles. The successful candidates will be expected to establish a field program, contribute to the museum's public programs (education and exhibits), and become successful in obtaining grants to assist in the support of their research and the museum's collection. Applicants should send a curriculum vitae, statement of interest, and the names and addresses of three references by 07 November 1997 to: **Dr. John E. Heyning, Natural History Museum, 900 Exposition Boulevard, Los Angeles, CA 90007.** *The Museum is an Equal Opportunity Employer.*

TRANSGENIC MOUSE/EMBRYONIC STEM CELL TECHNOLOGIST

The University of Chicago is seeking an experienced Transgenic Technologist with a minimum of two years of experience in the field. Responsibilities include: microinjection of DNA into fertilized mouse eggs; surgical implantation of eggs into pseudopregnant mice; ES cell injection experience desirable.

Minimum two-year commitment.

Submit résumé, letter of intent, and three references to: **Linda Degenstein, The University of Chicago, 5841 South Maryland, MC1028, Chicago, IL 60637.** E-mail: lddeg@midway.uchicago.edu.

The University of Chicago is an Equal Opportunity Employer.

MARKET DEVELOPMENT MANAGER

High Throughput Screening

Nalge Nunc International, a leading manufacturer of plastic labware, has created a new position in our Nunc Brand Marketing Department located in Naperville, IL. The Market Development Manager for High Throughput Screening will be responsible for coordinating marketing & sales activities for products developed and sold for High Throughput applications.

The ideal candidate should have sales and marketing experience, as well as an understanding of High Throughput screening applications. A Bachelor's degree in a life science is required. 25%-40% travel is required.

We provide an excellent salary and benefits package. Mail or fax your resume to: **Maria Dallanis, Human Resources, NALGE NUNC INTERNATIONAL, 2000 North Aurora Road, Naperville, IL 60563-1796. Fax: (630) 416-4848. EOE.**



Nalge Nunc International



PREDOCTORAL AND POSTDOCTORAL TRAINING PROGRAMS

RESEARCH PROGRAMS

Genome Organization
Developmental Biology
Metabolic Diseases
Neurogenetics
Genetics of Complex Traits
Cancer Genetics
Immunology/Hematology
Bioinformatics
Heart Disease/Obesity

The Jackson Laboratory: a unique research environment with unparalleled mouse resources.

Letters of inquiry should include: curriculum vitae, statement of research interests, list of publications, and names of three references. (Predoctoral programs are in conjunction with the University of Maine and Yale University.) To apply or request further information, contact: **Suzanne Serreze, The Jackson Laboratory, 600 Main St., Bar Harbor, ME 04609-1500. Phone: 207/288-6420; FAX: 207/288-6079; email: sbs@jax.org; website: <http://www.jax.org>. EE/AA Employer.**

Pharmaceuticals

Opportunities in CNS research

Hoffmann-La Roche, one of the world's leading pharmaceutical companies, has a long tradition of successful and innovative CNS research. As part of an expanding commitment in this area, Roche's preclinical CNS department in Basel, Switzerland, is looking for talented, motivated and energetic individuals to fill the following positions:

Postdoctoral scientists – molecular pharmacology

Two two-year postdoctoral positions are available to study the molecular pharmacology of peptide neurotransmitters and their receptors. Projects will include pharmacological analysis of peptide receptors using second messenger and reporter gene systems and studies of overexpression of peptide transmitters in transgenic animals. The successful candidates will have a PhD and a good knowledge of basic molecular biology and pharmacology techniques.

Postdoctoral scientist – behavioural pharmacology

A two-year postdoctoral position is available to study the role of novel neuropeptides in anxiety states in animals and to explore innovative aspects of the neuropathology of anxiety disorders. The successful candidate will have a PhD with a solid background in state-of-the-art analysis of animal behaviour, particularly patterns of anxiety. Experience in stereotaxic microsurgical techniques is essential. The project will require neuroanatomy support so a knowledge of in-situ hybridisation and immunohistochemical techniques would be an advantage.

Postdoctoral scientist – neurodegenerative diseases

A position is available in a laboratory working on molecular mechanisms of ischaemia-induced cell death, with special emphasis on ischaemic tolerance. A person with expertise in in-situ hybridisation, immunocytochemistry and Western and Northern blotting would be suitable for this position. The successful candidate will be encouraged to publish his or her work and will be interacting with a motivated team looking at various aspects of ischaemia-induced cell death and therapeutic intervention.

Who to contact

If you are interested in any of these challenging positions and your training and experience fit the relevant profile, please send your application together with full supporting documentation to F. Hoffmann-La Roche Ltd, Human Resources Department, CH-4070 Basel, Switzerland, Attn. Mr. W. Aschwanden, quoting reference As362. For further information, please contact Dr. G. Kilpatrick, Tel: +41 61/688 82 90.

POSITIONS OPEN

OLD DOMINION UNIVERSITY COLLEGE OF SCIENCES Hydrogeology, Remote Sensing, and Environmental Geochemistry

Old Dominion University seeks individuals to join its expanding multidisciplinary research and teaching activities in environmental sciences. An exciting opportunity exists to fill three tenure-track positions in hydrogeology, remote sensing, and environmental geochemistry. Those selected will join collaborative efforts in environmental sciences and/or marine sciences, taking advantage of opportunities afforded by the Chesapeake Bay region. New faculty will collaborate with existing research efforts in geological sciences, oceanography, biology, chemistry, geography, engineering, and at nearby NASA Langley Research Center and the Virginia Institute of Marine Sciences. Applicants must have the Ph.D. degree and a strong academic background in geology, and will be expected to mount an externally supported program of research. Teaching responsibilities to be covered across the multiple appointments include mineralogy, petrology, stratigraphy, hydrogeology, remote sensing, and structural geology. Teaching opportunities in other disciplines are also available.

Applicants should submit a curriculum vitae, description of research and teaching activities, and the names, addresses, and telephone numbers of three references to: Ms. Phyllis Brown, Recruitment Administrator, Office of the Dean, College of Sciences, Old Dominion University, Norfolk, VA 23529-0163. E-mail: pfbl100u@eagle.cc.odu.edu. Review of applications will begin January 1, 1998, and will continue until the positions are filled. Appointments will begin on July 25, 1998. Old Dominion University is an Affirmative Action/Equal Opportunity Employer and requires compliance with the Immigration Reform and Control Act of 1986. We encourage applications from women and minorities.

EARTH AND ATMOSPHERIC SCIENCES AT GEORGIA TECH ATMOSPHERIC CHEMISTRY POSITIONS

We invite highly qualified candidates to apply for up to two tenure-track faculty positions that will complement our existing program and enhance interactions among faculty within the School. Applicants should have an earned Ph.D. and be quantitative scientists with broad interests in earth system science. Successful candidates will develop strong independent research programs and participate in both the graduate and undergraduate education programs. The Atmospheric Chemistry positions will focus on individuals having strong experimental backgrounds. Of special interest will be those involved in the development and application of advanced instrument technology for airborne field measurements. Measurements of tropospheric trace gases and aerosols that can support current local, regional, and global modeling efforts will be given the highest consideration. Both junior and senior positions will be considered.

Applicants should send a résumé, selected reprints, a statement of professional research and teaching goals, plus the names, addresses, e-mail, and telephone numbers for three persons whom we may contact for references, to:

Douglas Davis

Search Committee

School of Earth and Atmospheric Sciences
Georgia Institute of Technology
Atlanta, GA 30332-0340

We anticipate that these positions will become available in 1998-99. Candidate evaluations will begin October 1, 1997, and continue through December 1, 1997.

Georgia Tech is an Equal Opportunity/Affirmative Action Employer and a Unit of the University System of Georgia.

RESEARCH FELLOW DIABETES/ENDOCRINOLOGY

City of Hope National Medical Center's newly funded program to discover novel methods of preventing immune-mediated pancreatic islet cell damage or dysfunction, is seeking a Research Fellow with a Ph.D. The studies will involve use of both biochemical and molecular techniques, including gene therapy approaches using ribozymes. Experience working with rodent, porcine, or human islets would be helpful. Send résumé, references, and salary history to: City of Hope, HR/SCI, 1500 East Duarte Road, Duarte, CA 91010. E-mail: tbohn@smtplink.coh.org; FAX: 626-301-8448. Visit our website: www.cityofhope.org. Equal Opportunity Employer.

POSITIONS OPEN

SCIENTIFIC REVIEW ADMINISTRATOR

Opening Date: September 22, 1997

Closing Date: October 20, 1997

Announcement Number: CA-97-1956

GS-601-13/14

The Grants Review Branch, Division of Extramural Activities of the National Cancer Institute (NCI), National Institutes of Health, is seeking an individual to join a multidisciplinary group of Scientific Review Administrators to manage the initial peer review of research grant applications submitted to the NCI. These activities are based in Rockville, Maryland, a suburb of Washington D.C., but some travel (site visits) will be involved. Candidates should have independent research experience in current methods in cancer prevention and control, cancer epidemiology or genetics, or cancer cellular or molecular biology. Candidates should also be familiar with the NIH grant application, review, and support process. *Candidates must be United States citizens.* The salary range for the position is \$54,629 to \$83,922. To obtain information about the application process or documents required for consideration for this position, candidates may contact the National Cancer Institute, Office of Human Resources and Consulting Branch, Telephone: 301-402-2789. To obtain a FAX of this information, Telephone: 1-800-728-5627 or 301-594-2953 and enter FAX ID#1879. Selection for this position will be based on merit, with no discrimination for nonmerit reasons such as race, color, gender, national origin, age, religion, sexual orientation, or physical or mental disability. The NCI/NIH is an Equal Opportunity Employer.

VACUUM SCIENTIST (RESEARCH ASSOCIATE II)

Vacuum Scientist at the Laboratory of Nuclear Studies, Cornell University, to join the Vacuum Group responsible for maintaining and improving the vacuum systems of the high energy particle accelerators, consisting of the CESR electron-positron storage ring and its injectors (a Synchrotron and a Linac). Website: <http://www.lns.cornell.edu/>. The ultra-high vacuum system of CESR is being upgraded, presenting a considerable challenge and an opportunity to participate in the design and fabrication of a system using innovative UHV concepts. The Laboratory maintains a well-equipped Vacuum Laboratory with a staff of trained vacuum technicians. The responsibilities of the position include: research into materials, processes, and equipment for improving the vacuum systems for high beam current operation; design and assembly of laboratory apparatus and evaluation of new design concepts, surface preparation, etc.; and generally assisting in improving accelerator performance, including further training of technicians. A Ph.D. or Master's degree with equivalent experience in vacuum science is required. Experience with accelerator or other large vacuum systems is highly desirable. Complete job description provided on request. Contact: Dr. N. B. Mistry, Newman Laboratory, Cornell University, Ithaca, NY 14853-5001, Attn: Vacuum Scientist Search. E-mail: search@lns62.lns.cornell.edu; FAX: 607-254-4552; Telephone: 607-255-4951. Cornell University is an Affirmative Action/Equal Opportunity Employer.

NEUROSCIENCE PROGRAM UNIVERSITY OF ROCHESTER

This Program seeks to hire tenure-track faculty with M.D.-Ph.D. or Ph.D. degrees at a junior (having at least two to three years of postdoctoral training) or mid-career level. The University of Rochester has recently initiated a new Neuroscience Program. Individuals with interests in systems neuroscience, behavioral neuroscience, molecular bases of developmental and/or aging of the brain, and neurodegenerative diseases are of particular interest, although all outstanding candidates will be considered. The successful candidate will be expected to develop an active externally funded research program, as well as to participate in graduate teaching and education. Salary will be commensurate with experience and qualifications. Review of applications will begin on October 1, 1997. Applicants should send curriculum vitae, three references, and a statement of research and teaching interests to: Dr. Howard Federoff, Department of Neurology, Box 673, University of Rochester, Rochester, NY 14642. Equal Opportunity Employer.

POSITIONS OPEN

McLaughlin
Research

1520
23rd Street South
Great Falls, Montana
59405

Institute
for
Biomedical Sciences

MAMMALIAN GENETICIST

Unique opportunity for research programs with an emphasis in mammalian genetics. McLaughlin Research Institute is a small nonprofit organization and offers a non-bureaucratic, interactive research environment. The Institute is housed in a spacious new research building with an excellent mouse facility that includes a transgenic service. Applicants should have an NIH-supported research program, or be highly likely to obtain independent support. Developmental biologists, molecular geneticists, neurogeneticists, and others developing mouse models for human disease are particularly encouraged to apply.

Applications, including names of individuals we may contact for references, should be addressed to:

George A. Carlson, Ph.D.

Director, McLaughlin Research Institute

1520 23rd Street South

Great Falls, MT 59405

For additional information contact George Carlson, Bill Crain, Doug Coffin, or John Mercer at MRI, or any of the following members of our Scientific Advisory Committee: Irv Weissman, David Baltimore, David Cameron, Neal Copeland, Jeff Beltinger, Leroy Hood, or Nancy Jenkins.

An Equal Opportunity/Affirmative Action Employer.

RESEARCH ASSOCIATES

Deborah Research Institute has two full-time Research Associate positions in the Laboratory of Molecular Biology. One position will involve overseeing experiments regarding (1) the identification of novel regulatory elements and transcription factors involved in cardiac Hsp27 gene expression in cardiac myocytes and/or (2) identification of roles played by Hsp27 in cardiac myocyte biology. The second position will involve investigations into mechanisms of vascular smooth muscle cell and vascular pathophysiology with emphasis on signal transduction and/or gene expression. Candidates are expected to collaborate with ongoing programs within the department, as well as establish independent, externally funded programs. Applicants will have obtained a Ph.D. or equivalent in biochemistry, cell or molecular biology, and will have experience in molecular biological research. Experience in cell culture is desired. *Individuals must meet all requirements to work within the United States.* Please forward a current curriculum vitae and names and addresses of three references to: Rebecca Stewart, Deborah Research Institute, 20 Pine Mill Road, Browns Mills, NJ 08015. Equal Opportunity Employer.

BIOLOGIST TENURE-TRACK

A tenure-track position in developmental and/or invertebrate biology is available beginning in August 1998. Faculty members will be expected to teach courses within their discipline as well as to participate in an introductory biology sequence. Candidates are expected to be broadly trained in biology, to have an appreciation for the liberal arts tradition in education, and to be able to develop a strong research program involving undergraduates. The University, with an undergraduate enrollment of 1,200, has a highly selective program and is located on a forested 10,000-acre campus on Tennessee's Cumberland Plateau. Screening of applicants will begin on November 15. Send statement of teaching and research interests, curriculum vitae, unofficial transcripts, and three letters of reference to: Dr. Nancy J. Berner, Search Committee, Department of Biology, The University of the South, Sewanee, TN 37383. E-mail: nberner@sewanee.edu. Further information available at our website: <http://biology.sewanee.edu>. The University of the South is a Title IX/Section 504/ADA/Equal Opportunity Employer.

HEALTH RESEARCH ANALYST

ECRI, a nonprofit health research agency, seeks doctoral-level SCIENTISTS with life science or clinical epidemiology training and a voracious reading ability to evaluate clinical literature and critique new health technologies. Excellent analytical, statistical, and science-writing skills essential. Experience in meta-analysis helpful. This is a full-time in-house position. Send FAX or résumé to: Department CT, ECRI, 5200 Butler Pike, Plymouth Mtg., PA 19462. FAX: 610-834-1275. Equal Opportunity Employer/Affirmative Action.

BROADEN YOUR SCIENTIFIC REACH

WITH PARKE-DAVIS.

ASSOCIATE/ SENIOR ASSOCIATE SCIENTIST

The Molecular Biology Department of the Parke-Davis Pharmaceutical Research Division of Warner-Lambert Company has an immediate opening for an experienced Associate/Senior Associate Scientist to join our team in Ann Arbor, MI.


You will conduct research in the area of antibacterial drug discovery. Using a background in molecular biology, microbiology, genetics, biochemistry and bioinformatics, you will identify and characterize molecular targets. You will also work closely with our Infectious Disease group in discovering and understanding the mechanism of action of new antibacterial compounds. A MS or BA/BS with relevant experience in one of the above disciplines with a strong microbiology background is preferred.

Broaden your scientific career at Parke-Davis. Interested individuals mail, fax or e-mail your resume* to: **Parke-Davis Pharmaceutical Research, Human Resources Department, Job Code: RJB-97312, 2800 Plymouth Road, Ann Arbor, MI 48105. Fax: (313) 998-3394. E-mail: resume@aa.wl.com**

*Submit resume on laser-quality white paper, with legible 10 point or larger type, and avoid boldface, italics, borders, etc.

 **PARKE-DAVIS**

Equal opportunity in action. Smoke-free work environment.

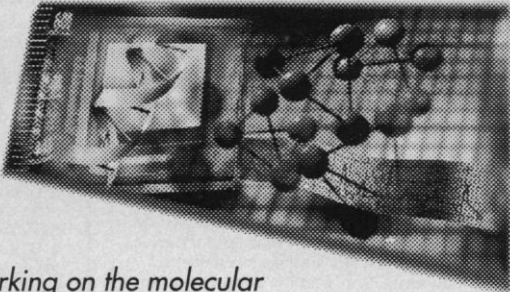
 **BRACCO
RESEARCH
USA**

Bracco Research USA Inc., the U.S. Research and development labs of Bracco S.p.A., one of the world's leaders in contrast media for *in vivo* diagnostics, has an opening for a junior-level biologist in our Princeton, NJ laboratories. In this position, the successful candidate will work on the development of targeted contrast agents for Nuclear Medicine, ultrasound or MRI, used in the detection of lesions involving the vascular endothelium. The successful candidate will join an established program involving combinatorial chemistry and screens together with more traditional drug development processes to identify leads and bring them to clinical trials. Relevant equipment includes cell culture facilities, a 2T MRI imaging System and a clinical grade SPECT gamma camera.

The successful candidate will have a Ph.D. in vascular biology, 1-3 years postdoctoral research experience and will ideally have experience with primary cultures of human vascular endothelial cells and an interest in angiogenesis, atherosclerosis, or inflammation.

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

**Catherine Berle, Bracco Research USA, Inc.,
305 College Road East, Princeton, NJ, 08540
FAX: 609-514-2446**



Working on the molecular level to conquer, treat, or prevent debilitating diseases.


DRUG DISCOVERY RESEARCH AT SCHERING-PLOUGH

At the Schering-Plough Research Institute, scientists are discovering innovative therapeutic agents that challenge humankind's most debilitating diseases. If you want to be on the cutting edge of pharmaceutical discovery, become part of an advanced multidisciplinary research group.

ASSOCIATE SCIENTIST High Throughput Screening

We seek a talented Biochemist to join a team of professional scientists involved in automated high throughput screening for novel therapeutic entities. To qualify, you will need a BS in Biochemistry or a related discipline and 4-7 years of experience or an MS and 2-4 years of experience. Background must include development of quantitative enzyme and/or receptor binding assays using modern assay technologies. Knowledge of laboratory equipment, automation and computers is very helpful. Excellent organizational and communications skills are essential.

We offer an excellent compensation package including a competitive salary and comprehensive benefits. For prompt, confidential consideration, we invite you to apply on-line at <http://www.sp-research.com> or send a scannable resume and cover letter, original copy only, referencing Dept. DD97-RB-PC, to: Human Resources-PC, Schering-Plough Research Institute, 2015 Galloping Hill Road, K-15, Kenilworth, NJ 07033-0539. We are an equal opportunity employer. *We regret we are unable to respond to each resume. Only those selected for an interview will be contacted.*

 **Schering-Plough
Research Institute**

Using Science for Human Advantage

POSITIONS OPEN

DEPARTMENT OF FORESTRY UNIVERSITY OF KENTUCKY

New tenure-track position in terrestrial restoration ecology, 80 percent research, 20 percent instruction. Successful candidate will initiate a research program examining ecosystem dynamics in degraded natural forests using an integrated approach to ecosystem restoration. Must have research experience focusing on restoration of forests to productive, healthy ecosystems. A geographical focus of research will be the mixed-mesophytic forests and other natural communities of eastern Kentucky. Possible approaches to restoration might include forest stand dynamics, soil productivity, and ecosystem processes. Instructional responsibilities will be to the graduate program in the Department of Forestry and the undergraduate program in Natural Resources Conservation and Management. Curriculum vitae; transcripts; brief statements of research and instruction interests, teaching philosophy, and career goals; and three letters of recommendation should be submitted by December 31, 1997, to:

Dr. Mary A. Arthur, Chair
Terrestrial Restoration Ecology Search Committee
Department of Forestry
University of Kentucky
Lexington, KY 40546-0073

The University of Kentucky is an Affirmative Action/Equal Employment Opportunity Employer. Individuals from underrepresented groups are encouraged to apply.

RESEARCH PLANT MOLECULAR BIOLOGIST

The U.S. Plant, Soil and Nutrition Laboratory, USDA-ARS, Ithaca, New York, has an opening for a Plant Molecular Biologist to conduct research aimed at improving the nutritional quality and health promoting properties of plant foods. Research program will address nutritionally important inorganic and organic constituents of plant foods such as essential mineral nutrients, anti-cancer compounds and antioxidants, and compounds that promote or inhibit utilization of important mineral and non-mineral nutrients. Research can also deal with the genetic/molecular control of toxic mineral accumulation in plant foods and plant responses to mineral stress. The Laboratory is located on the Cornell University campus; thus the researcher will have access to resources and facilities afforded by a major research university. *Candidates must be U.S. citizens and have knowledge of plant molecular biology, genetics, and plant physiology, as well as skill in molecular biological and molecular genetic techniques.* Salary is \$44,953 to \$60,583. For application procedures, call Dina Marinos at Telephone: 607-255-8488. Applications must be marked ARS-D7N-0167 and postmarked by October 10, 1997. *USDA-ARS is an Equal Opportunity Employer.*

EARLY RETIREMENT BIOLOGY ANY FIELD

Two-year position open for two persons in any field of biology who have accepted early retirement packages and wish to continue their research. A grant from the Howard Hughes Medical Institute provides laboratory and office space, an allotment for equipment and supplies, a modest stipend, and funds for three undergraduate Research Assistants. Emeriti Scientists to be on campus daily during summer term and weekly during regular academic year. For information contact: **Dr. Carol Rouzer, Program Director, Western Maryland College, Westminster, MD 21157.** Telephone: 410-857-2492; e-mail: crouzer@wmdc.edu. Applications should include letter, curriculum vitae, and names of three references; review will begin October 30, 1997. Western Maryland College is a selective liberal arts institution located near both Baltimore and Washington.

BIOLOGY. One-year position in biology (January 1998 to December 1998). Ph.D. preferred. Successful applicant will teach a seminar in an area of expertise, genetics with lab, and a non-majors course in the spring. The latter two courses will be taught the following fall semester. Whitman has a strong commitment to excellence in undergraduate teaching, research, and student advising. Send curriculum vitae, three letters of recommendation, transcripts, and statement of teaching and research interests to: **Dr. Kendra J. Golden, Biology Department, Whitman College, Walla Walla, WA 99362.** Telephone: 509-527-5210 or 509-527-5255; FAX: 509-527-5904; e-mail: golden@whitman.edu. Closing date: October 15, 1997. Further information about Whitman College website: <http://www.whitman.edu>. *Equal Opportunity Employer.*

POSITIONS OPEN

STUDY DIRECTOR VIRUS CLEARANCE EVALUATION

MA BioServices, Inc (MA) is a rapidly growing international provider of biological safety testing services to the pharmaceutical, personal care, and biotechnology industries.

Candidates should possess a wide range of experience with different animal viruses. We seek a qualified individual with a Ph.D. in virology and two-plus years of experience since postdoctoral. Prior supervisory experience or management training is a must. Experience with GLP and/or cGMP, end point assays, and protein purification techniques highly desirable.

We seek enthusiastic team players and offer an excellent compensation package including stock options, annual merit bonus, a matching 401(k) program, and company-paid employee medical benefits. For consideration please forward a résumé with salary history and ad code "P3sd2" to the Human Resources Department:

MA BioServices, Inc
9900 Blackwell Road
Rockville, MD 20850
FAX: 301-738-1033

Equal Opportunity Employer/minorities/females/disabled/veterans.

PLANT MOLECULAR MARKER GENETICIST. Garst Seed Company, a division of Advanta, is seeking a Ph.D.-level scientist to develop new molecular marker technologies. The primary responsibilities of this position are to research and develop new molecular marker tools, keep current on new technological developments, and bring creativity to molecular marker development. This position reports to a Research Manager. Successful candidates will have one to two years of postdoctoral experience with a strong background in genetic marker technology. Experience and knowledge of RFLP, AFLP, RPD, and SSR technologies and of PCR techniques are required. A thorough education and understanding of Mendelian and molecular genetics is required. Additional experience with state-of-the-art concepts in genomic and cDNA library construction, DNA isolation and sequencing, map-based cloning, and knowledge of MapMaker software would be advantageous.

To apply, please send résumé to: **Human Resources—Job Openings, Garst Seed Company, P.O. Box 500, Slater, IA 50244.** FAX: 515-685-5053; e-mail: aginfo@netins.net. *Garst is an Equal Opportunity and Affirmative Action Employer.*

CALIFORNIA STATE UNIVERSITY— MONTEREY BAY ECOLOGICAL AND NATURAL RESOURCE ECONOMICS/ENVIRONMENTAL POLICY

One Tenure-Track Vacancy
(Rank-Open #MBSTT-9708)
One Multi-Year Lectureship
(Full-Time #MBSML-9709)

Priority filing date: October 10, 1997, at 5:00 p.m. Positions open until filled. For complete job description and application information view the California State University-Monterey Bay website: <http://www.monterey.edu> or e-mail: faculty_recruitment@monterey.edu or write: **Faculty Recruitment Office, California State University-Monterey Bay, 100 Campus Center Seaside, CA 93955-8001.** Telephone: 408-582-3569.

Affirmative Action/Equal Employment Opportunity/ADA Employer.

ASSISTANT RESEARCH PHYSIOLOGIST position in the University of California-San Diego's (UCSD) Department of Medicine. Ph.D. in physiology or related field required. Experience in aerosol deposition in the human lung, the effects of gravity on this, computational fluid dynamics, and modeling, experimental design, and performance in humans is essential, and in the administration NASA research on research aircraft is preferred. FAA Class II Medical Certificate required. Salary commensurate with experience and qualifications, based on established UCSD salary scales for the Research Scientist series. Send curriculum vitae and names of three references by October 16, 1997, to: **Dr. G. Kim Prisk, Division of Physiology, Department of Medicine, University of California-San Diego, 9500 Gilman Drive, Department 0931, La Jolla, CA 92093-0931.** E-mail: kprisk@ucsd.edu. *Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

ECOSYSTEM ECOLOGIST DESERT RESEARCH INSTITUTE RENO, NEVADA University and Community College System of Nevada

ASSISTANT PROFESSOR. Requires Ph.D.; experience in terrestrial ecosystem response to perturbations, funding acquisition, presenting, publishing research, collaborating on diverse research issues. Salary depends on qualifications; benefits package excellent. Details at website: <http://www.dri.edu> (Positions Available). Send letter, curriculum vitae, and three references to: **Human Resources, Desert Research Institute, 755 East Flamingo Road, Las Vegas, NV 89119.** Questions? Call **Dr. J. Coleman, Telephone: 702-673-7322.** *DRI is an Affirmative Action/Equal Opportunity Employer who hires only U.S. citizens and those authorized to work in the United States.*

DEVELOPMENTAL NEUROBIOLOGY POSITION AT PENN

Applications are invited for a tenure-track faculty position in the area of developmental neurobiology at the University of Pennsylvania School of Medicine. Promising researchers using vertebrate systems to study fundamental developmental processes in the nervous system are encouraged to apply. Generous start-up funds are available. The appointment will be made in the Departments of Neuroscience or Neurology. Applicants should send a curriculum vitae, a brief statement of research interests, and have at least two letters of recommendation sent to: **Chair/Developmental Neurobiology Search Committee, 215 Stemmler Hall, Philadelphia, PA 19104-6074.** *Women and minorities are encouraged to apply. University of Pennsylvania is an Equal Opportunity Employer.*

APICULTURE EXTENSION EDUCATOR DYCE LABORATORY FOR HONEY BEE STUDIES Cornell University, Ithaca, New York

Develop Apiculture Extension Program, including Master Beekeeper Program. Bachelor's required, Master's preferred. Five years of experience managing at least 75 colonies. Competent with word processing and desktop publishing. Experience with program development in an agricultural area desired. Travel required. One year with reappointment based on funding. Salary \$28,000 to \$32,000 plus benefits. Send cover letter, résumé, two reprints, and three references to: **N. W. Calderone, Department of Entomology, Comstock Hall, Cornell University, Ithaca, NY 14853.**

FISHERIES LABORATORY MANAGER. Master's in an environmental science, with fisheries science preferred, and working experience beyond the Master's. Knowledge of techniques to age fish and conduct stock assessments necessary for performance of the job. General experience in analytic laboratory procedures highly desirable. Successful applicant will manage a laboratory that provides routine aging of Virginia's marine fishes. Coordinates graduate student use of the laboratory, attends regional fisheries meetings, and works closely with director to provide stock assessment advice in marine fisheries. Submit résumé and names of three references to: **The Old Dominion University Research Foundation, P.O. Box 6369, Norfolk, VA 23508.** *Affirmative Action/Equal Opportunity Employer.*

SALES/MARKETING POSITION. Analytical Biological Services Inc. (ABS) is a rapidly growing company that supplies pharmaceutical companies throughout the world with custom bioreagents (e.g., enzymes, receptor preparations, RNA) and cell culture services. A position is available to enhance our customer service and marketing efforts. Candidates should have a broad scientific background in the biological/pharmaceutical sciences, Ph.D. preferred. Intelligence and a willingness to help others, not high-pressure selling techniques, are essential. Previous sales and marketing experience is not required. Competitive compensation, 401(k) plan with employer contributions, and medical benefits are provided. Please send résumé to: **Regina Lendero, ABS Inc., 701-4 Cornell Business Park, Wilmington, DE 19801.**

RESEARCH ASSOCIATE. Position available immediately for applicant with experience in expressing and recording ion channels from *Xenopus* oocyte and cell lines. Experience in molecular biology is a plus. Send résumé and names of three references by FAX to: **Dr. Mohamed Boutjdir, Division of Cardiology (IIIA), Veterans Administration Medical Center, 800 Poly Place, Brooklyn, NY 11209.** FAX: 718-630-3796.

PROTEIN DESIGN LABS

Protein Design Labs' interdisciplinary approach to drug discovery integrates computer-based design with molecular biology, immunology and protein chemistry. We have the following opportunities available.

SENIOR SCIENTIST/ ASSOCIATE DIRECTOR

You will lead and recruit a staff of scientists to set up a robotics-based high throughput screening lab, including supporting informatics systems. In addition, you will establish and run high throughput assays, develop processes, and evaluate/purchase lab equipment.

The successful candidate must have a Ph.D. in Biology or related discipline, post-doctoral experience, and 3+ years' experience in assay development and high throughput screening in a biotechnology or pharmaceutical company. A familiarity with various computer applications is required, as are managerial/project experience and good verbal/written communication skills.

Experience in developing ELISA, receptor binding, enzymatic and cell-based assays based on luminescence, radioactive isotopes, and fluorescence readouts for HTS is desirable, as is demonstrated expertise in data management and robotics. Job Code 364

SCIENTIST/STAFF SCIENTIST Preclinical

We seek a proven team player to design experimental protocols and select methods and techniques to perform pharmacological, pharmacokinetic, and safety experiments that support preclinical development of monoclonal anti-cell adhesion antibodies.

You will set up in-house and contract animal models of acute and chronic inflammation; design protocols, develop assays and techniques, and conduct experiments; and conduct pharmacokinetic studies in order to establish optimum and safe dosage forms. In addition, we will rely on you to set up and operate laboratory equipment; make detailed observations and document lab procedures; compile and summarize data; prepare analyses, reports, and graphs; and provide training to staff.

The successful candidate will have a Ph.D. in Life Sciences along with a proven background in pharmacology, immunology and cell biology with experience in *in vivo* and *in vitro* pharmacology. Position also requires 2-8 years' postdoctoral experience in industry and/or academics and the ability to investigate, create, and develop new methods and technologies for project advancement. Job Code 305

PDL's fast-paced, highly challenging environment offers exceptional professional opportunities, competitive salaries and a comprehensive benefits package. Please send your resume to: Protein Design Labs, Inc., Human Resources, Job Code _____, 2375 Garcia Ave., Mountain View, CA 94043, fax 650/962-0437. EOE.



BIOPHYSICAL FACULTY POSITION THE UNIVERSITY OF TEXAS MEDICAL BRANCH GALVESTON, TEXAS

In continuing development of Structural Biology at the University of Texas Medical Branch, we are pleased to announce a tenure-track faculty opening at the Assistant Professor level.

Nuclear Magnetic Resonance Spectroscopy - We seek candidates with strong backgrounds in NMR spectroscopy who make extensive use of NMR to solve important biological problems. The successful candidate is to establish an independent research program that may involve determination of macromolecular structures and/or innovative application of NMR spectroscopy in the study of biological macromolecules. The NMR facility at UTMB consists of new 400, 600, and 750 MHz Varian Spectrometers housed in a newly renovated building.

Candidates must have outstanding potential in research with a record and stature in their field of expertise. They are expected to attract funding from national agencies and to fully participate in teaching and service with the Department of Human Biological Chemistry and Genetics. Affiliations with The Sealy Center for Structural Biology, other UTMB Centers, and relevant Departments are possible.

Structural Biology currently consists of 10 biophysical faculty members in areas of NMR spectroscopy, X-ray crystallography, computational biology, and biophysical chemistry with facilities directed by **Drs. David Gorenstein, Werner Braun, Robert O. Fox, and James Lee**, respectively. Structural Biology received financial support from UTMB and endowed support from the Sealy Center for Structural Biology. Facilities consist of a newly renovated building and additional laboratories, along with excellent computational, NMR, crystallographic, and biophysical equipment.

Applications should include a complete curriculum vitae, a description of research interests, and names and addresses of at least three references. Review of applications will begin October 15 and continue until the position is filled. Applications should be addressed to: **Dr. James C. Lee, Structural Biology Search Committee, Department of Human Biological Chemistry and Genetics and The Sealy Center for Structural Biology, University of Texas Medical Branch, Galveston, Texas 77555-1055.**

UTMB is an Equal Opportunity M/F/V/D Affirmative Action Employer.

UTMB hires only individuals authorized to work in the United States.

DEAN College of Science & Mathematics University of South Carolina

The University of South Carolina, Columbia, invites applications and nominations for the position of Dean of the College of Science & Mathematics.

The Dean of the College of Science & Mathematics is responsible for providing leadership and helping focus the research, teaching, and service missions of the College, for representing the College to a wide range of campus and professional constituencies, and for administration of the College's activities and budget. The Dean serves on the Council of Academic Deans, and reports to the Executive Vice President for Academic Affairs and Provost.

The College offers Bachelor's, Master's, and doctoral degrees in eight disciplines including: biological sciences, chemistry and biochemistry, computer science, geological sciences, marine science, mathematics, physics and astronomy, and statistics. Additionally there are a number of specialized research centers within the college including the Belle Baruch Institute for Marine Science and the Center for Science Education. The College currently enrolls approximately 2,400 FTE students, including 650 graduate students. The College has approximately 170 tenure-track faculty members.

The University, founded in 1801, is the flagship campus of a nine-campus, fully-accredited, state-supported system. The University of South Carolina Columbia has strong undergraduate and graduate programs and highly regarded professional schools including: medicine, engineering, pharmacy, public health, law, social work, library and information science, nursing, education, criminal justice, journalism and mass communications, and business administration. About 26,000 students are enrolled on the Columbia campus and more than 40,000 throughout the system. The University's Graduate & Professional Program is the 8th largest in the nation.

The City of Columbia is the state capital and has a metropolitan area population of almost a half a million. Columbia is a center of financial, transportation, and industrial development in the state. The community has a rich historical and cultural tradition, and is located within easy driving distance of both the mountains and coastal beaches.

The Qualifications of the successful candidate should include:

- A record of achievement commensurate with appointment as a tenured full professor;
- A clear commitment to academic excellence in undergraduate education, graduate education, and scholarly research;
- Proven administrative experience, a high standard of professional integrity, and a strong sense of professional ethics;
- An ability to articulate effectively the College's mission to the students, faculty, alumni, external funding sources, and other legislative decision-making bodies;
- A demonstrated ability to promote externally funded research.
- A demonstrated commitment to cultural diversity and equal opportunity.

Applications and Nominations are invited for this position. Salary is fully competitive. The Committee will begin reviewing applications and nominations on November 1, 1997. Appointment is expected to begin on July 1, 1998. Applicants should send a letter of application, a complete resume, and names of three references. Applications and nominations should be sent to: **Craig Rogers, Chair, Science and Mathematics Dean Search Committee, Office of the Provost, 102 Osborne Administration Building, University of South Carolina, Columbia, SC 29208. Phone: (803) 777-4259 FAX: (803) 777-9502.** Additional information may be obtained about the College of Science & Mathematics @ website <http://www.cosm.sc.edu>

The University of South Carolina is an Equal Opportunity Employer and specifically invites and encourages applications from women and minorities.

POSITIONS OPEN

POSTDOCTORAL RESEARCH AT THE WASHINGTON UNIVERSITY SCHOOL OF MEDICINE Center for Cardiovascular Research

An NIH-funded Postdoctoral position is available for training in molecular and cellular biology of the cardiovascular system. Applicants may choose to undertake research in any of several laboratories in the Center for Cardiovascular Research. The training program benefits from the large multidisciplinary effort in the Center, which involves graduate students, postdoctoral trainees, and experienced faculty members with appointments in the Departments of Pharmacology and Molecular Biology, Cell Biology, and Pathology. The position is open to candidates holding an M.D., Ph.D., and/or D.V.M. degrees with interest and experience in molecular biology, biochemistry, or cell biology. *Because funding for this position will be provided by a National Institutes of Health training grant, United States citizenship or permanent residency status is required.* Interested individuals should send a curriculum vitae, a summary of research interests and experience, and the names and addresses of three references to: **Ms. Becky Leonard, Center for Cardiovascular Research, Washington University School of Medicine, 660 South Euclid Avenue, Campus Box 8086, St. Louis, MO 63110.** Questions may be addressed to **Ms. Leonard** via e-mail: bleonard@ingate.wustl.edu; FAX: 314-362-0186. *Women and minority applicants are encouraged to apply.*

MOLECULAR NEUROBIOLOGIST

The Department of Neurobiology at Duke University Medical Center is recruiting a junior-level, tenure-track faculty member with a strong background in molecular neurobiology. Our goal is to attract a candidate whose research will complement existing departmental strengths in neuronal signaling, gene expression, ion channel function, and synaptic plasticity. Women and minorities are especially encouraged to apply. Applications should be addressed to: **George Augustine, Chairman, Molecular Neurobiologist Search Committee, Department of Neurobiology, Box 3209, Duke University Medical Center, Durham, NC 27710.**

The Biology Department, Saint Anselm College, invites applicants for a non-tenure-track position, **ASSISTANT PROFESSOR** rank, beginning August 1998. Preference given to applicant dedicated to teaching and research with experience in freshwater aquatic systems, especially plants. Teaching duties include environmental biology of plants, environmental science, and introductory biology. The successful candidate will support the College's Catholic liberal arts mission. Send curriculum vitae, statement on teaching and research plans, and three letters of recommendation no later than November 15, 1997, to: **Dr. Daniel J. Lavoie, Chair, Biology Department, Saint Anselm College, 100 Saint-Anselm Drive, Manchester, NH 03102-1310.**

VIROLOGY LABORATORY SUPERVISOR

Seeking experienced candidate to set up and supervise new Diagnostic Virology Laboratory in Pittsburgh, Pennsylvania. This testing facility will be part of a rapidly growing biotechnology company. M.D., Ph.D., or equivalent experience desired. Compensation commensurate with experience.

Send curriculum vitae and three (3) references to: **P.O. Box 8272, Pittsburgh, PA 15218.** FAX: 412-687-6679.

Full-time **SCIENTIFIC ADVISOR POSITION** available in a biotechnology patent law firm for an individual with a Ph.D. in molecular biology or biochemistry. We seek a highly motivated individual with a strong, broad-based technical background who is committed to becoming a patent agent. The successful candidate should be willing to train for one year in San Diego, California. Excellent communication skills also required. Send curriculum vitae and a statement of interest to: **Campbell & Flores LLP, 1111 Third Avenue, Seattle, WA 98101.**

RESEARCH TECHNICIAN

Immediate opening at Johns Hopkins University School of Medicine in a lab focused on understanding ion channel function. In addition to excellent organizational skills, ideal candidate will have two-plus years of experience with molecular biology protocols. This is an enthusiastic and intellectually stimulating work environment for the motivated technician. FAX résumé to: **Dr. D. T. Yue** at FAX: 410-955-0549. *Equal Opportunity Employer.*

POSITIONS OPEN



MAYO CLINIC ARIZONA TWO POSTDOCTORAL POSITIONS ASTHMA/ALLERGIC DISEASE

Our laboratory has two Postdoctoral positions available immediately to study molecular mechanisms of eosinophil activation and recruitment in mouse models of allergic inflammation. Ongoing projects focus on transgenic (*J. Exp. Med.* 185: 2143, 1997; *J. Immunol.* 158:1332 1997) and gene knockout models of eosinophil effector function, as well as chemically induced models of asthma, ocular conjunctivitis, and allergic skin disease. The successful applicants will join an established, interactive team with the specific goal of understanding the role of eosinophils and eosinophil granule proteins in human diseases. Applications are invited from individuals with a Ph.D., M.D., or D.V.M. degree and research laboratory experience in molecular biology or immunology. Previous mouse experience is not required but is an asset.

The Mayo Clinic Arizona offers competitive stipends commensurate with experience starting at \$27,400 and an excellent benefits package. Please send curriculum vitae and names of three references to: **Dr. James J. Lee, Department of Biochemistry and Molecular Biology, S.C. Johnson Medical Research Building, Mayo Clinic Arizona, 13400 East Shea Boulevard, Scottsdale, AZ 85259.** E-mail: jlee@mayo.edu; FAX: 602-301-7017. Further information is available at website: <http://www.mayo.edu>.

PREDOCTORAL AND POSTDOCTORAL POSITIONS IN THE MINNESOTA PAIN RESEARCH TRAINING PROGRAM

The Academic Health Center (AHC) at the University of Minnesota has both Predoctoral and Postdoctoral Fellowships available for individuals training in the integrative study of pain, inflammation, and wound healing. Fellows will work collaboratively with at least two mentors chosen from a field of more than 30 NIH-funded investigators who are associated with the Training Program. The emphasis will be on developing novel and interdisciplinary approaches for understanding the mechanism and potential for developing new therapies in the field of pain, inflammation, and wound healing. The AHC has state-of-the-art facilities for the generation of transgenic animals, pharmacology, confocal imaging, electrophysiology, cell and molecular biology, and clinical studies. Faculty in the Training Program are actively involved in one or more of these disciplines. As many as seven new Fellows will be accepted into this NIH-sponsored program this year. We are looking for highly motivated, innovative students who are interested in working in an interdisciplinary environment and who ultimately desire a career in academia or industry. Send curriculum vitae and three letters of recommendation to: **Dr. Patrick Mantyh, Director, Minnesota Pain Research Training Program, Department of Preventive Sciences, 18-104 Moos Tower, University of Minnesota, School of Dentistry, 515 Delaware Street S.E., Minneapolis, MN 55455.** *The University of Minnesota is an Equal Opportunity Educator and Employer.*

POSTDOCTORAL FELLOW/SCIENTIST MOLECULAR BIOLOGY

Kirkegaard & Perry Labs., a biotech reagents supply company in Gaithersburg, Maryland has an opening for a Postdoctoral Fellow Scientist in the Research and Development Department. This position reports to the Senior Scientist/Group Leader for Molecular Biology and will contribute to KPL's molecular biology program. Prospective candidates should have a Ph.D. in biochemistry or molecular biology and will have a thorough understanding of all major molecular biology techniques. The successful candidate will have a proven record of productivity in academic and/or industrial settings. Please send résumés to: **Human Resources, KPL, 2 Cessna Court, Gaithersburg, MD 20879.** FAX: 301-948-5815. *KPL is an Equal Opportunity Employer and offers an excellent benefits package.*

POSITIONS OPEN

POSTDOCTORAL POSITIONS AVAILABLE DEPARTMENT OF PHYSIOLOGY AND BIOPHYSICS

University of Colorado Health Sciences Center

Postdoctoral positions are available immediately to join ongoing projects with the following faculty members:

Yiannis Koutalos: Sensory signal transduction—electrophysiology experience required.

S. Rock Levinson: Expression and regulation of sodium channel isoforms in the peripheral nervous system; mechanisms of sodium channel gating—experience with immunological techniques and/or electrophysiology required.

Sukumar Vijayaraghavan: Function and regulation of central nervous system nicotinic receptors—experience with electrophysiology, imaging, or biochemistry required.

Adam Zweifach: Physiology of target cell killing by cytotoxic T lymphocytes—electrophysiology experience required.

Further information about the faculty and the Department can be found at the following website: <http://www.uchsc.edu/sm/physiol/index.htm>. Send curriculum vitae and references to the appropriate faculty at: **Department of Physiology and Biophysics, Box C240, University of Colorado Health Sciences Center, 4200 East 9th Avenue, Denver, CO 80262.**

Equal Employment Opportunity/Affirmative Action.

Several **POSTDOCTORAL POSITIONS**, for one or two years, are available on an interdisciplinary "Integrative Photosynthesis Training Grant" supported by the U.S. National Science Foundation beginning September, 1997. These are open to U.S. citizens or permanent residents of the United States of America. Immediate hiring is to study: (1) the molecular mechanism by which photosynthetic organisms cope with excess light; this research will involve biophysical, molecular engineering and biochemical studies on the mechanism of photoprotection in plant, algae, and cyanobacteria; it will be done under the joint collaboration of **Dr. Govindjee** and **Dr. Tony Crofts**; (2) the short-term regulation of Rubisco and alternate electron sinks with particular emphasis on plants tolerant of high light and temperature; this work will be done under the joint collaboration of **Dr. John Cheeseman**, **Dr. Archie Portis**, and **Dr. Evan Delucia**.

Applications must include a curriculum vitae; list of research publications; a statement of research interests and experience. Applications, marked as **Govindjee-Crofts** or **Cheeseman-Portis-Delucia** position, and three letters of recommendations should be sent to: **Dr. Colin Wright, Director, Integrative Photosynthesis Training Grant, Department of Plant Biology, University of Illinois-Urbana-Champaign, 190 ER Madigan Laboratory, 1201 West Gregory Drive, Urbana, IL 61801.** *The University of Illinois is an Equal Opportunity Educator and Employer and specifically encourages applications from women and minorities.*

Two **POSTDOCTORAL ASSOCIATES** sought to examine the response of peatlands to climate change. The first position involves experimental and/or modeling approaches to plant community response to climate change, with a base location at the University of Notre Dame. The second position involves quantification of heat and energy budgets in the context of whole-ecosystem response to climate change, with a base location at Michigan Technological Institute. Experience with biometeorology and instrumentation, along with quantitative skills and computer applications, are desirable. Contact **Scott Bridgman** at e-mail: bridgman.1@nd.edu; Telephone: 219-631-4921 for the first position and **Jiquan Chen** at e-mail: jq@mtu.edu; Telephone: 906-487-3432 for the second position. Closing date October 22.

NIH-funded **POSTDOCTORAL POSITION** in **NEUROBIOLOGY** available to study the circadian pacemaker in the rodent suprachiasmatic nucleus. The project uses electrophysiological recording and fluorescent imaging of suprachiasmatic nucleus neurons and slices to examine basic mechanisms of the mammalian biological clock and its aging. Experience in one of these experimental approaches or in biological rhythms is required. Extensive interactions with two neighboring circadian laboratories ensures a stimulating environment and broad training in neuroscience and brain aging. The position is available immediately. Please send cover letter, curriculum vitae, and three references to: **Douglas McMahon, Ph.D., Department of Physiology, University of Kentucky, Lexington, KY 40536-0084.** FAX: 606-323-1070; e-mail: dgmcm1@pop.uky.edu.

CARDIOVASCULAR PHARMACOLOGY

SmithKline Beecham is at the forefront of cardiovascular research and innovation in drug discovery. The Cardiovascular Pharmacology department is housed in state-of-the-art laboratories in Upper Merion, Pennsylvania where research in cardiac and vascular biology are pursued. Our efforts will continue to result in breakthrough discoveries with 21st century technology. Outstanding opportunities for unique discoveries based on the Human Genome Database places this position at the forefront of drug discovery and development worldwide.

THROMBOSIS SCIENTIST

An exciting opportunity is available for an experienced scientist to establish research in thrombosis in view of discovery of novel anti-thrombotic agents. The incumbent will pursue drug discovery efforts at the molecular, biochemical, *in vitro* and *in vivo* levels. The position has opportunity for supervision of several staff associates devoted to the thrombosis program. The selected individual must have a PhD or MD/PhD in biological sciences (such as molecular biology, biochemistry, physiology and pharmacology) with 3-5 years of experience in thrombosis research. In particular, experience in biochemistry of coagulation factors, relevant assays, kinetics and protein biochemistry are of significant advantage. Expertise in *in vivo* models of thrombosis as well as pharmaceutical drug discovery are desired. Refer to Job Code H7-0506.

GROUP LEADER

There is also an excellent opportunity for a leading scientist to join the strategic initiative within Cardiovascular Pharmacology and establish independent basic research incorporating functional genomics, transcription regulation and gene profiling toward novel therapeutic opportunities. Specific areas of interest include atherosclerosis, vascular and cardiac remodelling and matrix formation, smooth muscle/endothelial cell biology and vascular function. We are seeking an independent, accomplished individual with strong molecular biology techniques and strategies and special emphasis on transcription regulation/factors. The selected individual will be a recognized leader in the scientific community with a PhD in biological sciences and a least 10 years of experience with a successful record in a pharmaceutical or academic research organization. Refer to Job Code H7-CVLH.

Both positions require excellent oral and written communication ability, including computer skills for laboratory and internet. Of particular importance is a significant record of publications in high quality, peer-reviewed journals, presentations at professional symposia and/or grant support, as well as proven supervisory skills.

SmithKline Beecham offers a competitive compensation/benefits package and an environment in which to grow and excel. For confidential consideration, please send a resume and salary requirements to: SmithKline Beecham Pharmaceuticals, Job Code _____, P.O. Box 2645, Bala Cynwyd, PA 19004. Indicating Job Code is essential. For more information on SmithKline Beecham, visit our Web site at www.sb.com/careers. We are an Equal Opportunity Employer, M/F/D/V.



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Pharmaceuticals

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Working on the molecular
level to conquer, treat, or
prevent debilitating diseases.

INFECTIOUS DISEASES DISCOVERY RESEARCH

AT SCHERING-PLOUGH

At the Schering-Plough Research Institute, scientists are discovering innovative therapeutic agents that challenge humankind's most debilitating diseases. If you are seeking an opportunity to be on the cutting edge of exploratory pharmaceutical discovery, become part of an advanced multidisciplinary research group focused on the study of microbial genetics.

ASSOCIATE SCIENTIST Microbial Genetics

An excellent opportunity is available for a versatile, organized and highly motivated scientist to join an interdisciplinary team involved in Actinomycete molecular biology and the production of secondary metabolites. To qualify, you will need a BS degree in Molecular Biology or related discipline and 4-7 years of experience or an MS degree and 2-4 years of experience. Background must include expertise in microbial genetics as well as a solid knowledge of molecular biology and biochemical techniques. Familiarity with secondary metabolite production and actinomycete biology is helpful. Demonstrated ability to work both independently and as an effective team member is critical.

We offer an excellent compensation package including a competitive salary and comprehensive benefits. For prompt, confidential consideration, we invite you to apply on-line at <http://www.sp-research.com> or send a scannable resume and cover letter, original copy only, referencing Dept. DD9715/TH-PC, to: Human Resources-PC, Schering-Plough Research Institute, 2015 Galloping Hill Road, K-15, Kenilworth, NJ 07033-0539. We are an equal opportunity employer. We regret we are unable to respond to each resume. Only those selected for an interview will be contacted.



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POSITIONS OPEN

DISTINGUISHED POSTDOCTORAL FELLOWSHIPS IN BIOMEDICAL ENGINEERING

Johns Hopkins University Biomedical Engineering Department invites applications for the Distinguished Postdoctoral Fellowships. This program is funded by the Whitaker Foundation. It aims to promote an interdisciplinary approach to the study of complex biomedical systems, and provide the very best of the recently graduated Ph.D.'s an opportunity to perform independent research in a supportive environment. Each recipient will be sponsored by two faculty from any of the following areas of concentration in biomedical engineering: biomedical imaging, biomaterials cardiovascular systems, molecular and cellular systems, sensors and instrumentation, systems neurobiology, tissue engineering, and theoretical and computational biology. Salary of the fellows will be \$30,000 per year, with additional funds to cover health insurance. The duration of the fellowship is two years. Interested applications should submit a curriculum vitae, two letters of reference, and a two-page description of their research interests and previous work to: Dr. Murray Sachs, Director, Department of Biomedical Engineering, 720 Rutland Avenue, Baltimore, MD 21205. Deadline for receipt of applications is December 15, 1997. For more information, see website: <http://www.bme.jhu.edu>.

POSTDOCTORAL FELLOW

Postdoctoral position is available starting January 1st, 1998, to study voltage-gated potassium channels expressed on hippocampal inhibitory interneurons and pyramidal neurons. Experiments will combine transient transfections and electrophysiological recording of known subunit combinations with experiments performed in patches excised from single hippocampal inhibitory neurons. This study will correlate K⁺ channel subunit expression using immunohistochemical techniques with physiological data obtained from electrophysiological recordings. Experiments involving K⁺ channel knock-outs in transgenic mice are also anticipated. Applicants should have a Ph.D. or M.D. in the neurosciences with less than five years of postdoctoral experience. Previous electrophysiological experience and expertise in transient expression of ion channels in cell lines is preferred. Send curriculum vitae, description of research experience, and three letters of reference to: Dr. Chris J. McBain, Laboratory of Cellular and Molecular Neurophysiology, NICHD, Room 5A72, Building 49, 49 Convent Drive, MSC 4495, Bethesda, MD 20892-4495. Telephone: 301-402-4778; FAX: 301-402-4777; e-mail: chrismcb@codon.nih.gov. The National Institutes of Health is an Equal Opportunity Employer.

TRANSFUSION MEDICINE POSTDOCTORAL RESEARCH FELLOWSHIP UNIVERSITY OF PENNSYLVANIA

University of Pennsylvania seeks Postdoctoral (M.D. or Ph.D.) Fellows who desire research careers in the expanding, multidisciplinary field of transfusion medicine. The program offers a stimulating environment, with varied basic science and applied research opportunities, and is supported by senior faculty in the Departments of Pathology and Laboratory Medicine, Hematology/Oncology section of Medicine, and Human Genetics, conducting research related to cell membrane (RBCs, white cells, platelets) structure and function, immunobiology of autoimmune and neoplastic disorders, hematopoiesis, and pathophysiology of coagulation disorders. Fellows will conduct independent research for two years under the direction of one mentor, with opportunities for collaborative, interlaboratory projects. Send curriculum vitae, statement of interest, and names and numbers of three references to: Peg Flynn, Pathology and Laboratory Medicine, University of Pennsylvania School of Medicine, 284 John Morgan Building, 36th and Hamilton Walk, Philadelphia, PA 19104-6082. Affirmative Action/Equal Opportunity Employer.

POSTDOCTORAL POSITIONS available in immunology to study class switch recombination in Ig transgenic mice (M. Bosma) and the molecular basis for the leaky scid phenotype and its association with T-cell lymphoma (D. Wiest and M. Bosma). Applicants with strong background in immunology preferred. Send curriculum vitae and names of references to: M. Bosma, Immunology Working Group, Fox Chase Cancer Center, 7701 Burholme Avenue, Philadelphia, PA 19111. E-mail: mj_bosma@fccc.edu. Equal Opportunity Employer.

POSITIONS OPEN

RESEARCH ASSOCIATE OR POSTDOCTORAL CARDIOVASCULAR THROMBOSIS RESEARCH Johns Hopkins University

Positions immediately available to study the role of integrins in vascular thrombosis: mechanisms of arterial thrombosis in women (*Throm Haemost* 77:748, 1997), functional consequences of integrin polymorphisms (*NEJM* 334:1090, 1996), platelet cellular and molecular biology, and integrin gene regulation. An excellent career opportunity in a dynamic group of investigators studying important and exciting aspects of vascular thrombosis. Applicants should have strong background in molecular and cell biology. Send curriculum vitae and names of three U.S. references to: Paul F. Bray, M.D., Ross 1015, Johns Hopkins University, 720 Rutland Avenue, Baltimore, MD 21205. Telephone: 410-955-7417; e-mail: pfb@welchlink.welch.jhu.edu. An Affirmative Action/Equal Opportunity Employer.

MOLECULAR BIOLOGY

POSTDOCTORAL/RESEARCH ASSOCIATES to join group studying RNA-protein interactions that control translation and mRNA localization, transacting factors that regulate meiotic and postmeiotic transcription, gene targeting of isozymes and models for infertility, and the use of structure-based drug design to develop novel contraceptives.

Send résumé and names and addresses of three references to: Norman B. Hecht, Ph.D., Center for Research on Reproduction and Women's Health, University of Pennsylvania, 778 Clinical Research Building, 415 Curie Avenue, Philadelphia, PA 19104.

POSTDOCTORAL POSITIONS AT HARVARD MEDICAL SCHOOL

Postdoctoral positions are available for Ph.D. or M.D.-Ph.D. to investigate the role of novel tyrosine phosphatases and tyrosine kinases in breast cancer cells. A working knowledge of the molecular and cellular biology of signaling pathways and/or breast cancer biology is essential. FAX or mail curriculum vitae and three letters of reference to: Dr. Hava Avraham, Beth Israel Deaconess Medical Center, Division of Experimental Medicine, HIM 322, 4 Blackfan Circle, Boston, MA 02115. FAX: 617-975-5240.

POSTDOCTORAL POSITION DARTMOUTH MEDICAL SCHOOL DEPARTMENT OF BIOCHEMISTRY

A Postdoctoral position in molecular and cellular biology of metalloproteinase gene expression is available, to begin during the 1997-98 academic year. Our laboratory focuses on the mechanisms controlling the over-expression of the gene for Matrix Metalloproteinase-1 (collagenase-1), an enzyme that plays a key role in remodeling the extracellular matrix in arthritis, where it causes irreversible destruction of joints, and in cancer, where it contributes to tumor invasion and metastasis. Emphasis is on novel mechanisms that regulate collagenase transcription in a cell-type specific manner, and on the integration of the molecular biology of gene expression with cell biology, e.g., *in vivo* and *in vitro* models of invasion. The laboratory has nine individuals, including three Postdoctoral Fellows, and three graduate students who participate in a doctoral program of ~75 students and 30 Postdoctoral Fellows.

Send letters of inquiry and curriculum vitae to: Prof. Constance Brinckerhoff, Ph.D., Department of Biochemistry, Dartmouth Medical School, Hanover, NH 03755. E-mail: constance.e.brinckerhoff@dartmouth.edu. Affirmative Action/Equal Opportunity Employer. Women and minorities are encouraged to apply.

Two **POSTDOCTORAL POSITIONS** are available to study the regulation of p53-dependent transcription. A Ph.D. degree with a strong background in molecular biology is required. Self-motivated individuals with training in transcription regulation, protein/DNA interaction, and protein purification are especially encouraged to apply. Applicants should send a curriculum vitae and three references to: Dr. Xuan Liu, Department of Biochemistry, University of California, Riverside, CA 92521. E-mail: xuan.liu@ucr.edu.

POSITIONS OPEN

POSTDOCTORAL FELLOW IN MOLECULAR BIOLOGY YALE UNIVERSITY SCHOOL OF MEDICINE Trauma and Critical Care Section

The Trauma and Critical Care Section, Yale University School of Medicine invites applications for Postdoctoral Fellow in an expanding NIH-funded laboratory involved in the cloning of new genes in acute lung injury.

The competitive candidate for this position must be a highly motivated individual and must have a Ph.D. degree, a large repertoire of molecular biology techniques including extensive experience in gene cloning and recombinant protein expression, innovative research productivity, and excellent written/oral communication skills. Applicants with previous postdoctoral experience are preferred.

A letter of application, curriculum vitae including a list of publications, and three letters of reference should be sent to: Reuven Rabinovici, M.D., Professor and Chief of Trauma and Surgical Critical Care Section, Department of Surgery, Yale University School of Medicine, 333 Cedar Street LH118, New Haven, CT 06520. FAX: 203-785-3950. The deadline for application is November 1, 1997.

POSTDOCTORAL FELLOW IN DNA REPAIR MECHANISMS JOHNS HOPKINS UNIVERSITY Department of Biochemistry

The laboratory of Lawrence Grossman is in need of a Postdoctoral Fellow with experience in enzymology of nucleic acids interested in studying the mechanism of repair enzyme complex translocation along DNA in search of damaged sites. It is anticipated that the stoichiometry of such movement will be studied using techniques and equipment necessary to studying the kinetics and energetics of linear movement. Send curriculum vitae and recommendations from three individuals to:

Dr. Lawrence Grossman
Department of Biochemistry
615 North Wolfe Street
Baltimore, MD 21205
E-mail: lg@welchlink.welch.jhu.edu
FAX: 410-955-2926
Telephone: 410-614-4226

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

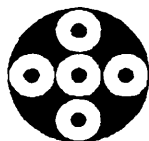
POSTDOCTORAL POSITIONS IN URBAN ECOLOGY AT ARIZONA STATE UNIVERSITY

(Four) Postdoctoral positions for a long-term study of a southwestern urban ecosystem. Applicants should have interests and experience in interdisciplinary studies of urban ecosystems, especially: landscape modeling, integrated watershed biogeochemistry, terrestrial ecology, and integrated social-ecological science. Positions begin after 15 October 1997. Send letter explaining interest in the position and relevant expertise, curriculum vitae, addresses (including e-mail) of three references, and reprints (no more than three) to: Brenda Shears, Post-Doc Search, Center for Environmental Studies, Box 873211, Arizona State University, Tempe, AZ 85287-3211. Applications due October 15 and the 15th and 30th of each month thereafter, until filled. For inquiries, job descriptions, required and desired qualifications contact: Brenda Shears at Telephone: 602-965-0870; e-mail: brenda.shears@asu.edu. Positions contingent upon funding. Affirmative Action/Equal Opportunity Employer.

POSTDOCTORAL POSITIONS ALBERT EINSTEIN COLLEGE OF MEDICINE Department of Molecular Pharmacology and Albert Einstein Cancer Center

Postdoctoral positions are available to participate in molecular and cellular studies on caveolae, caveolins, and signal transduction. We are also interested in the role of caveolae in human diseases, including cancer, diabetes, and heart disease. A background in molecular biology, cell biology, and protein chemistry are preferred. The Albert Einstein College of Medicine is located in a pleasant residential area with easy access to Manhattan or Westchester County. Applicants should send a curriculum vitae and the names of two references to: Dr. Michael P. Lisanti, Department of Molecular Pharmacology, Albert Einstein College of Medicine, Jack and Pearl Resnick Campus, 1300 Morris Park Avenue, Bronx, NY 10461. FAX: 718-430-8830. Equal Opportunity Employer.

SENIOR SCIENTIST, MOLECULAR PHARMACOLOGY



Tanabe Research Laboratories, USA, Inc., located in San Diego as a subsidiary to Tanabe Seiyaku, is a progressive drug discovery company dedicated to the design and synthesis of small molecules for development as anti-inflammatory and cardiovascular therapeutics.

TRL is currently seeking an innovative research scientist to design, develop, and manage a range of assays in molecular pharmacology. The successful candidate will have appropriate quantitative skills to rigorously analyze a wide range of drug or protein receptor interactions plus computer programming expertise to provide data management methods to support these screens.

A Ph.D. in biochemistry/molecular pharmacology is preferred with experience in one or more of the following: quantitative analyses of receptor/ligand interactions relevant to different cell signalling mechanisms, enzyme kinetics, and mechanisms. Additionally, 5 years industrial experience or equivalent are required in invention, design, and implementation of novel, high-throughput screening assays to identify potential new leads in diverse small molecule libraries. The individual will be experienced in evaluating novel technologies and in converting assays to robotic format, as well as familiarity with state-of-the-art detection methods and analytical instrumentation used in these screens. Strong interpersonal and communication skills are necessary to function effectively as part of a highly interactive and creative team of biologists and chemists.

TRL offers a highly competitive salary and a comprehensive benefits package including a strong 401(k) program plus medical/dental/vision and life insurance coverages. If you're interested in working in a state-of-the-art facility as part of a highly motivated group of scientific professionals, submit your résumé along with a cover letter and the names of three references to: **Tanabe Research Laboratories, Attn.: L. Smith, 4540 Towne Centre Court, San Diego, CA 92121** or FAX: (619) 558-0650 or e-mail: lsmith@trlusa.com.

DIRECTOR CENTER FOR CONSERVATION BIOLOGY

UNIVERSITY OF CALIFORNIA, RIVERSIDE

Applications are invited for a senior faculty position in the College of Natural and Agricultural Sciences, University of California, Riverside. The Director of the Center for Conservation Biology is to be filled at an open level with departmental affiliation linked to the appointee's area of expertise. The position is available July 1, 1998 and carries a 100% instruction and research appointment. We seek an internationally recognized scholar to develop an active research and teaching program in support of conservation biology as well as to lead and develop research opportunities for the Center. Duties will include identification of gaps in the scientific information needed to make effective decisions about conservation-related issues and to develop mechanisms for funding the acquisition and use of that information through interaction with UCR faculty and external agencies. The Director will also work with Center faculty and Technical Committees to design appropriate research strategies, to solicit proposals from appropriate scientists, and to coordinate the implementation and review of the resulting research. Areas of research emphasis may include, but are not limited to: ecological, evolutionary, systematic, or ecosystem focus that interfaces with critical issues in conservation and/or restoration biology. Curriculum vitae, a list of four references, and a summary of research, teaching, and administrative goals should be sent to: Search Committee, Director, Center for Conservation Biology, College of Natural and Agricultural Sciences, University of California, Riverside, CA 92521. Review of applications will begin November 30, 1997 and will continue until the position is filled. The University of California is an Affirmative Action/Equal Opportunity Employer.



groundbreaking research

leading edge

Alzheimer's disease
Parkinson's disease
NIDDM



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THE BIGGEST BREAKTHROUGHS

Join us on the leading edge
of mitochondrial research

Take a professional step forward with MitoKor. We are a leading pharmacogenomics company focused on developing metrics and therapeutics for diseases related to abnormalities in the mitochondrial genome. We invite you to participate in our groundbreaking research targeted toward Alzheimer's disease, Parkinson's disease and diabetes mellitus (NIDDM). We are actively seeking outstanding individuals for postdoctoral fellowships in the following areas:

- MOLECULAR BIOLOGY
- BIOCHEMISTRY
- CELLULAR BIOLOGY/PHYSIOLOGY
- BIO-ORGANIC CHEMISTRY

The selected candidates will have strong interest and experience in one or more of the following areas: insulin secretion/beta-cell function, apoptosis, free radical biochemistry, mammalian gene expression, functional genomics, differential display, cellular energetics/physiology.

MitoKor offers excellent opportunities with competitive compensation and a comprehensive benefits package as well as exceptional resources and facilities. For immediate consideration, please send or fax your resume to: MitoKor, 11494 Sorrento Valley Road, San Diego, CA 92121. Fax: (760) 741-3737. EOE.



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POSITIONS OPEN

POSTDOCTORAL FELLOWS. Positions available immediately. Studies involve the actions of drugs of abuse. The areas of research are: (1) the mechanisms involved in the role of opioids and related neuropeptides in brain antinociception; (2) the role of opioids, related neuropeptides, and cytokines in temperature regulation. An interest and background in these areas is desirable. Ability to do rat brain surgery and *in vivo* microdialysis is essential for one of the positions. One of the positions is part of a training program entitled "Drugs of Abuse and Neuropeptides" from the National Institute on Drug Abuse. The interdisciplinary program includes faculty from Pharmacology, Immunology, and Psychology. Trainees will become familiar with a broad range of techniques: pharmacological, biochemical, immunological, molecular and behavioral. *Must be U.S. citizen or hold a green card for the training grant position.* If interested, send curriculum vitae to: **Dr. Martin W. Adler, Department of Pharmacology, Temple University School of Medicine, 3420 North Broad Street, Philadelphia, PA 19140. FAX: 215-707-1904.** Temple University is an Equal Opportunity/Affirmative Action Employer and strongly encourages applications from women and minorities.

POSTDOCTORAL POSITION IN MEDICAL AND MOLECULAR PARASITOLOGY

As of January 1, 1998, New York University Medical Center will have a position available on a NIH training grant exclusively for a U.S. citizen or permanent resident. Research to be pursued on one of the following microbial organisms: *Plasmodium*, *Trypanosoma*, *Amoeba*, or *Pneumocystis*. Approaches include molecular and cell biology; vaccine development against malaria; ligands and receptors for parasites; mosquito-plasmodium interactions; T-cell-mediated and humoral immunity against parasitic and viral infections; biochemistry, cell biology, and chemotherapy of *Pneumocystis* infections; genetics and cell biology of *Amoeba* and *Trypanosoma*. Send curriculum vitae and two letters of recommendation urgently by FAX to: **Dr. Ruth S. Nussenzweig, Professor and Chair, New York University Medical Center at FAX: 212-263-8116.**

POSTDOCTORAL FELLOWS NEUROIMMUNOTOXICOLOGY

Individuals with a Ph.D., M.D., or D.V.M. are eligible. Research projects are designed to link the disciplines of neuroscience, immunology, and toxicology. Applicants must be permanent residents or citizens of the United States of America, be interested in research bridging at least two of these disciplines, and be willing to commit to a two-year program. Program support from NIEHS and Wadsworth Center (starting stipend \$25,000). Compensation provided through Health Research Inc. Send curriculum vitae and three reference letters to: **Dr. David A. Lawrence, Wadsworth Center, P.O. Box 509, Albany, NY 12201.** For more information visit website: <http://www.wadsworth.org/educate>. The Wadsworth Center and Health Research Inc. are Affirmative Action/Equal Opportunity Employers.

POSTDOCTORAL FELLOW, University of California, San Francisco (UCSF). Postdoctoral position available immediately to study molecular aspects of central nervous system plasticity in alcohol and drug abuse. Ongoing studies include gene expression/identification by subtractive cloning or high-density gene array technologies, transcriptional regulation, and signal transduction. Experience in molecular or cell biology is required. Applicants must have a Ph.D. in biochemistry, molecular biology, or related field. Send curriculum vitae, brief summary of research experience, and three letters of reference to: **Michael F. Miles, M.D., Ph.D., University of California, San Francisco, Department of Neurology, Building 1, Room 101, 1001 Potrero Avenue, San Francisco, CA 94110.** Affirmative Action/Equal Opportunity Employer.

POSTDOCTORAL POSITION IN RADIATION BIOLOGY is available immediately to study thymidine kinase expression and brain tumor radioresistance. See: *Cancer Res.* 54:5614-5617, 1994. Experience in radiobiology, neurobiology, apoptosis, DNA repair, or intracellular nucleotide metabolism desirable. Interested applicants should send a curriculum vitae and names of three references to: **Dr. Timothy J. Jorgensen, Department of Radiation Medicine, Georgetown University Medical Center (TRB/E212A), 3970 Reservoir Road N.W., Washington, DC 20007-2197.** E-mail: jorgensent@odrge.odr.georgetown.edu.

POSITIONS OPEN

YALE UNIVERSITY SCHOOL OF MEDICINE

POSTDOCTORAL POSITION available to study molecular mechanisms of inflammation in asthma including signal transduction mechanisms in T cells using *in vitro* and transgenic approaches (Zhang et al., *J. Biol. Chem.* 272:21597, 1997; Ray et al., *J. Biol. Chem.* 272:20191, 1997). Ph.D. with experience in molecular biology and protein biochemistry is required. Please send curriculum vitae and names and addresses of three references to: **Anuradha Ray, Ph.D., Department of Medicine/Pulmonary Section, Yale University School of Medicine, 333 Cedar Street, LCI 105, New Haven, CT 06520.** Equal Opportunity Employer.

POSTDOCTORAL POSITION STRUCTURAL PLASTICITY OF ASTROCYTES

NSF-funded research on astrocytes in the activated adult central nervous system with emphasis on the role, extent, and underlying mechanisms of astrocytic structural plasticity. Experimental methods include *in situ* hybridization, immunocytochemistry, EM, confocal microscopy, protein biochemistry, and intracellular dye injections. Ph.D. required. Applications accepted until position is filled. Send curriculum vitae, letter of research interests, and the names of three references to: **A. K. Salm, Ph.D., Department of Anatomy, West Virginia University School of Medicine, Morgantown, WV 26506-9128.** West Virginia University is an Equal Employment Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.

POSTDOCTORAL POSITIONS (TWO) in *in vivo* NMR. The Pennsylvania State University College of Medicine, Department of Radiology. Positions available immediately for individuals with interest/experience in *in vivo* NMR spectroscopy/imaging. The successful candidates should have an interest in neonatal brain metabolism or in the behavior of rf magnetic field in tissue. Experience in biochemistry, physiology, computer programming, or rf electronics is highly desirable. Submit letter of application, curriculum vitae, and the names of at least three references to: **Dr. Michael B. Smith, Center for NMR Research, Department of Radiology, Department of Science, Hershey Medical Center, P.O. Box 850, Hershey, PA 17033.** Affirmative Action/Equal Opportunity Employer.

POSTDOCTORAL POSITION available for a prokaryotic molecular biologist to develop bacterial strains for the production of amino acids and vitamins. Archer Daniels Midland (ADM), with 13 billion dollars in total sales, is a major producer of amino acids and vitamins for use in animal feeds. ADM has the newest and largest state-of-the-art fermentation facility in the world and is committed to further expansion in the area of fermentation products. Applicants must have experience in bacterial genetics and physiology, and hands-on knowledge of the latest recombinant DNA techniques. Starting salary will be \$45,000. *Must be a U.S. citizen or a permanent U.S. resident.* Send résumé to: **Thomas P. Binder, Ph.D., Archer Daniels Midland Co., Fermentation Research, 1001 Brush College Road, Decatur, IL 62526.**

POSTDOCTORAL POSITION HARVARD MEDICAL SCHOOL, CHILDREN'S HOSPITAL

Immediately available to study the biochemistry, cell biology, and molecular genetics of serine proteinase inhibitors (serpins) implicated in apoptosis, tumor cell invasion, and intracellular protein processing. Send curriculum vitae and names, addresses, and telephone numbers of three references to: **Gary A. Silverman, M.D., Ph.D., Harvard Medical School, 300 Longwood Avenue, Enders 970, Boston, MA 02115.** FAX: 617-355-7677; e-mail: silverman_g@al.tch.harvard.edu.

POSTDOCTORAL POSITION

Microbiologist with experience in molecular biology and epidemiology of tuberculosis. Position scheduled to open September, 1998. \$30,000 starting salary. Submit curriculum vitae and names and addresses of three references, by November 15, 1997, to: **Don Cave, Ph.D., 151/LR, McClellan Veterans Administration Hospital, 4300 West 7th Street, Little Rock, AR 72205.**

POSITIONS OPEN

POSTDOCTORAL POSITION available in an NIH-funded study of dynamic events in signaling by the EGF receptor, a collaborative project of the Beechem, Beth, and Staros/Guyer laboratories, employing optical and magnetic resonance spectroscopies, biochemistry, and molecular biology. For further information, check our individual pages on our website: <http://www.molbio.vanderbilt.edu/biophys>. Applicants must be training grant-eligible (U.S. citizens or permanent residents). To apply, send a letter of application, a curriculum vitae, and preprints and reprints, and have three letters of recommendation sent to: **Professor James V. Staros, Department of Molecular Biology, Vanderbilt University, Box 1820 Station B, Nashville, TN 37235.** Vanderbilt University is an Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL POSITION

Available immediately to study the targeting of proteins to the chloroplast thylakoid membrane. The successful applicant will have the opportunity to study a unique collection of targeting mutants with a combination of biochemical and genetic methods. A background in membrane protein biochemistry is preferred. Send or e-mail a curriculum vitae, including the names, telephone numbers, and e-mail addresses of three references to: **Mary Rigby, Institute of Molecular Biology, 1229 University of Oregon, Eugene, OR 97403-1229.** E-mail: mary@prospero.uoregon.edu. The University of Oregon is an Equal Opportunity, Affirmative Action Institution committed to cultural diversity and compliance with the Americans with Disabilities Act.

POSTDOCTORAL POSITION

Immediate opening for **POSTDOCTORAL RESEARCH ASSOCIATE** to study either of the following: biochemistry of cell death regulators in inflammatory cells; immune dysfunction in cytokine-transgenic mice. Background in either biochemistry or cellular immunology is required. Stipend \$29,000 to \$35,000. Send curriculum vitae and names of three references to: **Michael B. Prystowsky, M.D., Ph.D., Interim Chairman, Department of Pathology, Albert Einstein College of Medicine, Jack and Pearl Resnick Campus, 1300 Morris Park Avenue, F538, Bronx, NY 10461.** FAX: 718-430-8541; e-mail: prystows@ecom.yu.edu. An Equal Opportunity Employer.

POSTDOCTORAL POSITION in cellular and molecular immunology immediately available to determine the parameters that mediate the T-cell-independent humoral immune response to extracellular bacteria and/or viral pathogens *in vivo*. Experience in basic immunology and molecular methodologies required or immunohistochemistry preferred but not necessary. Send résumé and at least two references to: **Clifford M. Snapper, M.D., Department of Pathology, Uniformed Services University of the Health Sciences, 4301 Jones Bridge Road, Bethesda, MD 20814-4799.** E-mail: snapper@usuhb.usuhs.mil; FAX: 301-295-1640. Uniformed Services University of the Health Sciences is an Equal Opportunity Employer.

POSTDOCTORAL POSITION available for a recent Ph.D. in biochemistry or related field with experience in protein chemistry and/or molecular biology and an interest in the enzymology of transmembrane signal transduction. Projects involve the determination of structure/function relationships for nucleotide binding domains of adenyl cyclase isozymes and of the enzymes involved in the synthesis and degradation of nucleoside 3'-polyphosphates. Send curriculum vitae and the names of three references to: **Roger A. Johnson, Ph.D., Department of Physiology and Biophysics, SUNY/Health Sciences Center, Stony Brook, NY 11794-8661.** E-mail: rjohnson@ccmail.sunysb.edu. An Affirmative Action/Equal Opportunity Employer.

POSTDOCTORAL POSITION IN INTRACELLULAR SIGNALING. Position available to study MAP or S6 kinase pathway regulation in mammalian cells or developing *Artemia*. Background in signaling using either molecular cloning or biochemical approaches optimal. Send inquiry and three references by FAX as soon as possible to: **Dr. T. W. Sturgill, Howard Hughes Medical Institute, University of Virginia, Markey Center for Cell Signaling, Box 577, Charlottesville, VA 22908 USA.** Website: <http://www.med.virginia.edu/inter-dis/signaling/celsig00.html>; FAX: 804-924-9659. The University of Virginia is an Equal Opportunity/Affirmative Action Employer.

HEALTH SCIENTIST ADMINISTRATOR NATIONAL INSTITUTE ON AGING

The Biology of Aging Program, National Institute on Aging, National Institutes of Health, Public Health Service, is seeking a Health Scientist Administrator to serve as Head for the Office of Biological Resources and Resource Development. The selected candidate will manage and further develop a research program on the use of animal models in aging research and develop animal model resources for use by investigators of aging. The position also includes management of contracts for supplying rodents and cell cultures to investigators conducting aging research. The applicant must have a Ph.D. in some field of biology, and must have research experience in animal models and genetics and, additionally, must have research experience in either cell biology or molecular biology. The salary range is \$54,629 - \$83,922.

U.S. citizenship is required. For a complete faxed vacancy announcement call 1-800-728-5627, ID# 1209. Send a resume and/or the Optional Application for Federal Employment (OF-612), or the Application for Federal Employment (SF-171) to: **CHRISTINE HARTZ, NIA PERSONNEL OFFICE, BUILDING 31, ROOM 2C02, 31 CENTER DRIVE MSC 2292, BETHESDA, MD 20892-2292. TELEPHONE: (301) 496-5460.**

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The Science of Agricultural Genetics

POST-DOCTORAL ASSOCIATE

(Job #CP-801) **Discovery Research**

A Post-doctoral position in molecular pathology is available to conduct an investigation directed toward understanding disease resistance mechanisms. Target areas include molecular plant/pathogen interactions, defense responsiveness, and signal transduction. The candidate should have strong knowledge and bench experience in cDNA library construction and gene isolation, PCR technology, plant transformation, and transgene expression analysis. Expertise in molecular technologies and plant pathology is desired. Familiarity with various DNA sequence programs is highly desirable. This position requires a recent Ph.D. in molecular biology/plant pathology or a related field. Ability to work independently with strong interpersonal and communication skills is necessary. Application deadline: October 26, 1997.

RESEARCH ASSOCIATE

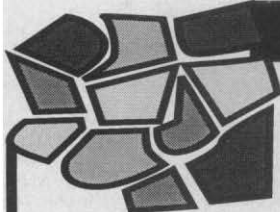
(Job #AB-801) **Analytical Biochemistry — Protein Analysis**

This person will join a lab that is responsible for analysis of proteins in transgenic and non-transgenic crop plants. Specifically, the focus of the position is to support various projects in the Trait and Technology Development Group by providing analytical protein services. The successful candidate will be responsible for ensuring that the routine analysis work is reliably completed in a timely fashion. Results will be subjected to quality control measures and communicated in a logical manner to collaborators and other Analytical Protein Biochemistry Group Members. A high degree of interaction with people from different disciplines is required. This person will be responsible for an independent research project as well as expected to contribute to Analytical Protein Biochemistry discussions regarding assay development and validation. Minimum requirements are a B.S. in biology, biochemistry or closely related field and 1-2 years of protein analysis experience. Experience with protein analysis/biochemistry is essential, immunoassay experience is very desirable. Competence in statistics and MS Office software is required. Application deadline: October 17, 1997.

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POSITIONS OPEN

POSTDOCTORAL POSITION UNIVERSITY OF CHICAGO

A Postdoctoral position is available to work in a laboratory whose current research involves studies on the evolution of arthropod pattern formation. Projects include analysis of gene regulation during segmentation, neurogenesis, and body patterning in a number of animal species. Methods for experimentally manipulating gene expression in a wide variety of phyla are also under development. Qualified candidates should possess a Ph.D.

Please send your curriculum vitae and three letters of recommendation to: **Nipam H. Patel, University of Chicago, MC1028 N-101, 5841 South Maryland Avenue, Chicago, IL 60637.** Equal Opportunity Employer.

An NIH-funded **POSTDOCTORAL POSITION** is available in neuroscience to study cellular mechanisms of regeneration in lesioned and grafted hippocampus. Current research strategies include infusion of neurotrophic factors, and fetal and stem cell transplantation following unilateral kainic acid lesions of the hippocampus. Experience in stereotactic rodent surgery, neural transplantation, immunocytochemistry, tract-tracing methods, neural tissue culture, and molecular biological techniques is desirable. Send résumé, three references, and cover letter to: **Dr. Ashok K. Shetty, Division of Neurosurgery, Box 3807, Duke University Medical Center, Durham, NC 27710.**

INDIANA UNIVERSITY CANCER CENTER

Applications are being accepted for a **POSTDOCTORAL POSITION**, available immediately, to study the role of nuclear hormone receptors and the transcription factor NF- κ B in breast cancers. The ideal candidate should have a strong background in molecular biology, cell biology, and protein chemistry. Please forward résumés to: **Becky Lawrence, Indiana University Cancer Research Institute, R4 170, 1044 West Walnut Street, Indianapolis, IN 46202.** Indiana University is an Affirmative Action/Equal Opportunity Employer. Women and minorities are encouraged to apply.

POSTDOCTORAL POSITION BAYLOR COLLEGE OF MEDICINE

A Postdoctoral position is available immediately for structure/function studies for a variety of proteins/enzymes associated with signal transduction, mRNA modification, protein splicing, bacterial and viral pathogens, and active transport. Candidates should have expertise in X-ray crystallography.

Please send curriculum vitae and three letters of recommendation to: **Dr. F. A. Quiocho, Baylor College of Medicine, Houston, TX 77030.** E-mail: xray@dino.qci.bioch.bcm.tmc.edu. Equal Opportunity Employer.

POSTDOCTORAL POSITION available immediately in a NIH-funded laboratory to study IGF biology. Research focus is the acid labile subunit (ALS) of the circulating 150 kDa IGF binding complex. Research projects include: (1) transcriptional regulation of the ALS promoter; (2) study of an ALS gene knockout model. Expertise in the biology, biochemistry, and molecular biology of IGF preferred. Send curriculum vitae and names of three references to: **Y. Boisclair, Ph.D., Department of Animal Science, Cornell University, 259 Morrison Hall, Ithaca, NY 14853-4801.** E-mail: yrb1@cornell.edu.

POSTDOCTORAL POSITION available to study cell cycle, apoptosis, and terminal differentiation in murine skeletal growth plate. Studies will focus on the control and functional consequences of these fates in individual growth plate cells. Applicants must possess a strong background in molecular and cell biology. Please submit a curriculum vitae and three references to: **Dr. William Horton, Director of Research, Shriners Hospital for Children, 3101 S.W. Sam Jackson Park Road, Portland, OR 97201.** FAX: 503-221-3451; e-mail: wah@shcc.org. Also see website: www.shcc.org/research/wah.

POSTDOCTORAL FELLOW position available immediately to study signal transduction mechanisms of secretion/exocytosis in neurons and beta cells. Background in molecular biology and/or biochemistry required. Please send curriculum vitae, statement of research interests, and names of three references to: **Dr. Bryan Wolf, University of Pennsylvania, Department of Pathology, 230 John Morgan, Philadelphia, PA 19104.** E-mail: wolfb@mail.med.upenn.edu. An Affirmative Action/Equal Opportunity Employer.

POSITIONS OPEN

POSTDOCTORAL POSITIONS PHYSIOLOGICAL GENETICS/ NEURODEGENERATION/GLAUCOMA

We are using a combination of gene targeting and other genetic approaches to understand the genetic and pathologic basis of elevated intraocular pressure and glaucoma. Glaucoma is a neurodegenerative blinding disease (typically caused by high intraocular pressure) that may involve apoptosis, excitotoxic death, and oxidative stress. Please send curriculum vitae, a two- to three-page summary of research interests, list of publications, and three letters of reference to: **Dr. Simon John, The Jackson Laboratory, 600 Main Street, Bar Harbor, ME 04609 USA.** Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL FELLOWSHIP YALE UNIVERSITY SCHOOL OF MEDICINE

Available immediately in one of three areas: bone biology and disease, epithelial-mesenchymal interactions in organogenesis, or developmental neurobiology. This training program is NIH-supported and requires U.S. citizenship or permanent residency. Send a curriculum vitae and the names of three references to: **William Philbrick, Ph.D., Yale University School of Medicine, Box 208020, New Haven, CT 06520-8020.** FAX: 203-785-6015. E-mail: william.philbrick@yale.edu. Yale University is an Equal Opportunity Employer.

POSTDOCTORAL ASSOCIATE SIGNAL TRANSDUCTION

Position available immediately for a recent Ph.D. for projects concerning mechanisms of signal propagation from receptor tyrosine kinases to the serine-threonine kinases AKT2, which is over-expressed in some human cancers and can transform mammalian cells *in vitro*. Previous experience in signal transduction required. Submit curriculum vitae and names of three references to: **Joseph R. Testa, Ph.D., Fox Chase Cancer Center, 7701 Burholme Avenue, Philadelphia, PA 19111.** Equal Opportunity Employer.

POSTDOCTORAL POSITION VIRUSES AND THE CELL CYCLE

Postdoctoral position available immediately to study simian virus 40 tumor antigens, with particular emphasis on their stimulation of cell cycle progression. Skills in tissue culture, molecular biology, and protein biochemistry required. Send letter of interest and curriculum vitae with names, e-mail addresses, or telephone numbers of three references to: **Dr. Kathleen Rundell, Lurie Cancer Center, Olson 8450, Northwestern University, 303 East Chicago Avenue, Chicago, IL 60611.** E-mail: krundell@nwu.edu.

POSTDOCTORAL POSITION available to study the regulation of GLUT4 vesicle trafficking by diet and ethanol. Interested candidates with a strong background in cellular and molecular biology should send a curriculum vitae, description of research experience, and contact information for three references to:

Dr. Laura E. Nagy
Department of Nutrition
School of Medicine
Case Western Reserve University
Cleveland, OH 44106
E-mail: len2@po.cwru.edu

POSTDOCTORAL POSITION TRIPLET REPEAT GENETICS

One position is available for a project on the instability of triplet repeats in yeast (*MCB 17:3382*) as a model for human genetic diseases. The ideal candidate will be productive, self-motivated, and experienced with yeast. Send curriculum vitae and names of three references to: **Robert Lahue, Eppley Institute, University of Nebraska Medical Center, FAX: 402-559-4651; e-mail: rlahue@mail.unmc.edu.** Affirmative Action/Equal Employment Opportunity Employer.

POSTDOCTORAL POSITION available to investigate the role of transcriptional regulation in neuronal development using transgenic and knockout mice. Experience in cell and molecular biology or neuroscience required. **Dr. Claudia Kappen, Department of Biochemistry and Molecular Biology, Mayo Clinic Arizona, 13400 East Shea Boulevard, Scottsdale, AZ 85259 USA.** E-mail: kappen@mayo.edu. Mayo Clinic Arizona is an Affirmative Action Employer and Educator.

POSITIONS OPEN

Mayo POSTDOCTORAL FELLOWSHIP. Neurobiology of aging—Mayo Clinic Jacksonville is seeking applicants for a Postdoctoral Fellowship to study gene expression in the aging brain. The research in this laboratory addresses mechanisms of differential vulnerability of central cholinergic neurons in aging, particularly with respect to oxidative stress. Ongoing projects include studies of mRNA and protein for candidate genes, using methods of *in situ* hybridization histochemistry, immunocytochemistry, RT/PCR, differential display, and Western blotting. Applicants with graduate-level training in molecular neuroscience or biochemistry, and having an interest in aging research, should send their résumé and addresses of three references to: **Dr. Michael McKinney, Ph.D., Mayo Clinic Jacksonville, 4500 San Pablo Road, Jacksonville, FL 32224.** Mayo is an Affirmative Action/Equal Opportunity Educator and Employer.

POSTDOCTORAL FELLOWSHIP available immediately to study the regulation of DNA repair and recombination genes in response to DNA damage and during competence development in *Bacillus subtilis*. Experience in protein biochemistry and molecular biology preferred. This position is in a well-funded lab at a premier undergraduate college and would provide excellent training for anyone interested in pursuing a career in teaching and research at a predominantly undergraduate institution. Candidates should send curriculum vitae and three references to: **Professor Charles M. Lovett, Department of Chemistry, Williams College, Williamstown, MA 01267.** E-mail: clovett@williams.edu. Williams College is an Equal Opportunity Employer/Affirmative Action Employer.

POSTDOCTORAL POSITION PROTEIN-TYROSINE PHOSPHATASES AND INSULIN SIGNALING Thomas Jefferson University

NIH-funded project to study PTPases in insulin action using recombinant proteins, cellular transfection, transgenic models, and clinical materials from human subjects. See *JBC* 272:448; *JCI* 95:2806. Send curriculum vitae with statement of research interests and career goals with names of three references to: **Dr. Barry J. Goldstein, Thomas Jefferson University, Room 349, 1020 Locust Street, Philadelphia, PA 19107.** FAX: 215-923-7932. Equal Opportunity Employer.

BETH ISRAEL DEACONESS MEDICAL CENTER HARVARD MEDICAL SCHOOL

POSTDOCTORAL POSITION available January 1, 1998, to study the regulation of genes in the endothelium using *in vitro* and *in vivo* model systems. Experience in molecular biology and transgenic/knockout techniques is preferred. Send curriculum vitae and names of three references to: **Dr. William Aird, Molecular Medicine RW-663, Beth Israel Deaconess Medical Center, 330 Brookline Avenue, Boston, MA 02215.** FAX: 617-667-2913; e-mail: waird@bidmc.harvard.edu. Equal Opportunity Employer.

POSTDOCTORAL FELLOWSHIPS IN CANCER RESEARCH UNIVERSITY OF ROCHESTER School of Medicine and Dentistry

The University of Rochester Cancer Center invites applications for Postdoctoral positions in an NCI-supported research training program in the general areas of signal transduction and growth regulation, developmental therapeutics, immunology and immunotherapy, viral and molecular genetics, and prevention and control research. Projects include mechanisms of oncogene function and metastasis, gene therapy for cancer, growth factor and hormonal regulation of gene expression, cancer immunotherapy, disease modeling in transgenic mice, investigation of cell cycle regulation, drug inhibition of cell growth, photodynamic therapy, mechanisms of drug and radiation resistance, control of DNA synthesis and repair, and protein synthesis in tumor viruses and cells. Translational research projects focus on organ site cancers, e.g., prostate, breast, lung, ovary, genito-urinary. Please send résumé and three letters of reference to: **Dr. Russell Hilf, Training Program, University of Rochester Cancer Center, 601 Elmwood Avenue, Box 704, Rochester, NY 14642 USA.** E-mail: sbraun@cc.urmc.rochester.edu.

U.S. citizenship or permanent residency required. Members of underrepresented minority groups are particularly encouraged to apply. The University of Rochester is an Equal Opportunity Employer.

POSITIONS OPEN

POSTDOCTORAL FELLOW THE UNIVERSITY OF IOWA DEPARTMENT OF NEUROLOGY Laboratory of Molecular and Cellular Neuroscience

Postdoctoral Fellowship position is available immediately to study molecular mechanisms of CAG/glutamine repeat neurodegenerative diseases with an emphasis on transgenic and *in vitro* models of polyglutamine-mediated aggregation and neurotoxicity. (See *Neuron* 19:333-344, 1997.) Candidates should have a recent Ph.D. degree and experience in cell and molecular biology. Send curriculum vitae, summary of research interests, and the names of three references to: **Henry L. Paulson, M.D., Ph.D., Department of Neurology, University of Iowa College of Medicine, Iowa City, IA 52242. E-mail: hpaulson@blue.weeg.uiowa.edu.**

POSTDOCTORAL RESEARCH ASSOCIATE. Position available immediately to study the biochemical and molecular mechanisms of drug resistance in tumor cells. Experience in enzymology, tissue culture, and molecular biology techniques required. Candidates must have a Ph.D. in biochemistry or a related science. Salary is commensurate with qualifications. Interested candidates should forward curriculum vitae and three letters of reference to: **Joseph G. Cory, Ph.D., East Carolina University School of Medicine, Department of Biochemistry, Greenville, NC 27858-4354.** Federal law requires proper documentation of identity and employability at the time of employment. It is requested that this documentation be included with application. *ECU is an Equal Opportunity/Affirmative Action Employer and welcomes applications from all qualified individuals.*

POSTDOCTORAL FELLOWS. Molecular Characterization of Opioid Receptors. Position available immediately. Research focuses on structure-activity relationship of opioid receptors at the molecular level. Highly motivated candidates with a strong background in protein chemistry, molecular biology, and/or receptor binding are encouraged to apply. Please send curriculum vitae, including names of three references, to: **Lee-Yuan Liu-Chen, Ph.D., Department of Pharmacology, Temple University School of Medicine, 3420 North Broad Street, Philadelphia, PA 19140.** Temple University is an Equal Opportunity/Affirmative Action Employer and strongly encourages applications from women and minorities.

POSTDOCTORAL POSITION to explore structural and functional properties of novel potassium channel we cloned that is expressed in brain and taste buds. Ph.D. and experience with molecular biology techniques required. Please send curriculum vitae, statement of research experience and interests, and names of three references to: **Dr. Ralph Puchalski, Monell Chemical Senses Center, Department of Pharmacology, University of Pennsylvania, 3500 Market Street, Philadelphia, PA 19104. FAX: 215-898-2084; e-mail: puchalsk@pobox.upenn.edu.** Equal Opportunity Employer.

RESEARCH BIOCHEMIST POSTDOCTORAL position available immediately for a Molecular Biologist/Enzymologist to study the nature of interprotein interactions between cyt P450 and its redox partners, cyt b5 and cyt P450 reductase. Mutant proteins will be generated and characterized to gain insight into their binding, structure, and function. Send résumé and three letters of reference to: **Dr. Waskell, Department of Anesthesia, University of California-San Francisco, Veterans Administration Medical Center, San Francisco, CA 94121.** Equal Opportunity Employer.

POSTDOCTORAL/RESEARCH BIOCHEMIST position available immediately to study protein-protein interactions by NMR. The structure and dynamics of the cyt b5-cyt c complex in solution will be evaluated. Experience with multidimensional NMR is essential, while protein purification is desirable. Send résumé and three letters of reference to: **Dr. Basus, Department of Pharmaceutical Chemistry, University of California-San Francisco, San Francisco, CA 94111. E-mail: basus@picasso.ucsf.edu.**

POSTDOCTORAL POSITION available immediately to study mechanism of retinal degenerations caused by genetic mutations and potential gene replacement therapies using viral vectors in animal models. Experience in molecular biology, biochemistry, transgenic or gene knockout techniques desired. Send curriculum vitae and references to: **Dr. Tiansen Li, Massachusetts Eye and Ear Infirmary, 243 Charles Street, Boston, MA 02114. FAX: 617-573-3216; e-mail: tli@meci.harvard.edu.**

POSITIONS OPEN

POSTDOCTORAL POSITIONS HARVARD SCHOOL OF PUBLIC HEALTH

PULMONARY BIOLOGY AND PATHOBIOLOGY research is supported by a NIH training grant. Areas of study include mediators and adhesion molecules involved in inflammation; the effects of inhaled particles and gases; lung infections; biomechanics of cells and tissue in normal and inflamed lungs; smooth muscle function in asthma; control of breathing; sleep-related breathing disorders; mechanisms of dyspnea and respiratory sensations; cardiovascular pathobiology as well as epithelial cell, macrophage, lymphocyte, and neutrophil lung biology. Cellular, molecular, bioengineering, and integrative approaches are employed. Please send curriculum vitae, a brief statement of goals, and names of three references to: **Joseph D. Brain, Director of the Lung Biology and Respiratory Disease Training Program, Physiology Program, Department of Environmental Health, Harvard School of Public Health, 665 Huntington Avenue, Boston, MA 02115. Telephone: 617-432-0926; FAX: 617-432-4710.** Further information available at website: <http://ppg-core.harvard.edu>. Telephone inquiries encouraged. *NIH support available for U.S. citizens and permanent residents. Minority applicants encouraged.*

ASM/NCID POSTDOCTORAL RESEARCH POSITIONS IN MICROBIOLOGY

Positions are available for Postdoctoral Scientists to conduct novel research with the overall objective of developing practical applications of microbiology, immunology, and epidemiology for diagnosis and prevention of infectious diseases. Associates will perform research in residence at the National Center for Infectious Diseases which is headquartered at the Centers for Disease Control and Prevention in Atlanta, Georgia. Deadline for applications is November 15, 1997.

Website: <http://www.asmsa.org/edusrc/edu23e.htm>

E-mail: fellowships-careerinformation@asmsa.org

POSTDOCTORAL POSITION(S) available immediately to study inner ear hair cell epithelial biology. Topics include differential control of hair cell ion channel gene expression and signal transduction mechanisms involved in receptor hair cell regeneration. Background in molecular biology and/or biochemistry required. Please send curriculum vitae, statement of research interests, and names of three references to: **Dr. J. Carl Oberholtzer, University of Pennsylvania School of Medicine, Department of Pathology, 266 John Morgan, Philadelphia, PA 19104.**

ANNOUNCEMENT

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This unique program offers the candidate with an earned doctorate in the sciences the opportunity to obtain the Doctor of Optometry (O.D.) degree in two calendar years. Employment opportunities exist in private practice, industry, education, and research. Contact: **Lawrence Shattuck, M.Ed., The New England College of Optometry, The Office of Admissions, 424 Beacon Street, Boston, MA 02115.**

TRAINING

POSTGRADUATE TRAINING. Veterinary Graduate Academic Fellowship in microbiology/immunology. Applicant must be a veterinarian and demonstrate teaching and research potential in pathogenic veterinary microbiology/immunology. Inquiries to: **N. J. MacLachlan, Chairman, Department of Pathology, Microbiology and Immunology, University of California, Davis, CA 95616-8732. Telephone: 916-754-9770; e-mail: njmaclachlan@ucdavis.edu.** Fellowship filing deadline December 1, 1997. *The University of California is an Affirmative Action/Equal Opportunity Employer.*

MEETINGS

COLLOQUIUM ON SCIENTIFIC ADVANCES AND THE FUTURE IN TOXICOLOGIC RISK ASSESSMENT. December 4-5, 1997, at the National Academy of Sciences, Washington, D.C. Celebrating the Fiftieth Anniversary of the National Research Council's Committee on Toxicology. Colloquium will cover recent developments in toxicology, mechanistic considerations in toxicologic risk assessment, risk characterization, and use of toxicologic data in risk management. For more information contact: **Ms. Linda Leonard, FAX: 202-334-1393; e-mail: lleonard@nas.edu.**

POSITIONS OPEN

LEUKEMIA RESEARCH FOUNDATION GRANTS

The Leukemia Research Foundation announces funds are available to support leukemia-related research. The goal of the grant program is to support new investigators; preference will be given to applicants proposing new lines of investigation. Currently two types of grants are being funded: research grants and Postdoctoral Fellowships. Grants and Fellowships are for a one-year period, and may be renewable for a second year. Deadline for receipt of completed grant applications is February 15, 1998.

Research grant policies: (1) Eligibility is restricted to investigators who are staff members of a university, hospital, or a nonprofit research institute. The applicant must be less than five years beyond the end of training at the time of the proposed starting date of the grant award. (2) Maximum budget request is \$35,000. The funds may not be used for salary support of the principal investigator.

Postdoctoral Fellowship policies: (1) Maximum budget request is \$23,000. The funds are used for the Fellow's salary support. (2) Eligibility is restricted to postdoctoral trainees with an M.D. or Ph.D. degree. The fellow must have no greater than three years of postdoctoral training (excluding medical residency) at the time of the proposed starting date of the grant award.

For further information and applications, contact:

**Hollis R. Brownstein, Chairman
Medical Advisory Committee
Leukemia Research Foundation, Inc.
4761 West Touhy Avenue, Suite 211
Lincolnwood, IL 60066
Telephone: 1-847-982-1480
FAX: 1-847-581-0779**

E-mail: hollis-1r@worldnet.att.net

If you prefer, our applications and guidelines will soon be available for downloading from our website: www.leukemia-research.org.

RESEARCH INQUIRIES INVITED

The Smokeless Tobacco Research Council, Inc. invites inquiries regarding grant applications.

The Council sponsors independent research into questions of smokeless tobacco and health. Research support is through a program of grants-in-aid.

Grant applications are evaluated by the Scientific Advisory Board to the Council and will be judged solely on the basis of scientific merit and relevance.

Deadlines for submission of grant applications are December 31, 1997, for July 1, 1998 funding and June 30, 1998, for January 1, 1999 funding. Address inquiries or requests for applications to:

**The Smokeless Tobacco Research Council, Inc.
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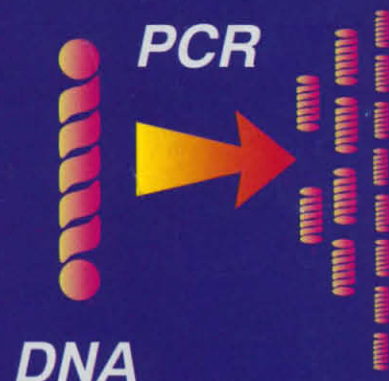
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