Science without Borders: Career Opportunities in European Pharmaceuticals and Biotechnology

by John Timpone

Broken English is the language of international science," according to François Kourilsky, director general, Centre National de la Recherche Scientifique. Kourilsky should know. One tenth of the tenured faculty at the CNRS are foreign-born, as are fully a quarter of the new recruits. Like all science in Europe, biotechnology and pharmaceuticals have become world science, "a truly international, global endeavor," says Jean-Bernard Le Pecq, senior vice president of discovery research, Rhône-Poulenc Rorer, Paris, France.

For European research and discovery, these are incomparable years. "The European market slowed with the worldwide recession and is stuck at two percent, according to IMS International. Ernst & Young places the European biotech market at Ecu 5.1 billion today—but it is expected to reach Ecu 83.3 billion by the year 2000."
Most science employment is need-specific. The eight companies featured below—Bayer AG, SmithKline Beecham, Glaxo, Rhône-Poulenc Rorer, Xenova, Chiroscience, NeuroSearch, and MorphoSys—have needs that reflect both the macroclimate (cost-consciousness versus scientific explosion) and the microclimate (the personality and maturity of the individual company). Still, hiring officers largely agree that their greatest needs lie in five areas.

**Molecular Biology**

Martin Ferber, director of personnel, Pfizer Central Research, Europe, says, “The European industry sees an increasingly important part to be played by the new biological sciences. The next few years will see a significant contribution from molecular biologists—in fact, we’re already seeing breakthroughs that will have a profound impact on therapeutic directions.” Collins of Executive and Scientific Appointments calls molecular biology “a continuing area of growing demand,” while Larry Bothera, head of pharmaceuticals and health care for the search firm Macmillan Davies, sees “a fairly substantial move in all sectors towards a molecular approach.”

**Genomics**

“By far the most interesting scientific development of the past five years has been the Human Genome Project,” says John Montana, head of medicinal chemistry in the pharmaceutical R&D division at Chiroscience. “Coupled with improvements in molecular biology, genomics is now allowing us to identify the biological systems responsible for diseases such as multiple sclerosis and autoimmune disease.”

“Genetics is having a huge impact on everything we do,” says Jackie Hunter, director of neurology research, SmithKline Beecham, UK. An excellent example is apoptosis. Programmed cell death promises new therapeutic approaches to certain kinds of cancer and neurodegenerative disease. Montana of Chiroscience says, “Now we’ve been able to identify genes and systems responsible for certain enzymes involved in apoptosis. Identifying those enzymes allows us to target potential drugs that inhibit these systems. It’s a very, very exciting area, and the first of several that will emerge from the Human Genome study.”

Genomics has affected more than therapeutics alone. “People are talking about gene therapy a great deal,” says David Collingham, managing partner of the executive search firm Ruston Poole International. “But they’re also talking about gene probes. Diagnostics, an area much closer to market entry and much more practical right now. Diagnostics are very exciting in infectious diseases such as hepatitis B and C. That is because for these products there are fewer regulatory hurdles and quicker results.”

**Chemistry and Pharmacology**

Chemists and pharmacologists are still the mainstays of most pharmaceutical enterprises. If anything, the new fiscal restraint makes these people even more important, since it is they who formulate, test, and evaluate new drug candidates at the early stages of development. Companies wishing to save money will want people who can spot the not-cost-effective and good-but-not-good-enoughs early. And, as Bothera of Macmillan Davies says, “There’s always a need for organic synthetic chemists to make what the modelers design.”

Medicinal chemists are another mainstay in the interdisciplinary effort of drug discovery. “They can interact with scientists in process research and development, with toxicologists, molecular biochemists, and chemical engineers,” says Montana of Chiroscience, “to learn how to develop and process large quantities of these agents.”

**Pharmaco-economics**

Wanted: experienced scientist, expert in drug design and development, with powerful credentials in market analysis. Object: To focus on each new drug candidate and determine whether its probable profits will justify the costs of development.

In the new atmosphere of cost-awareness, drug companies need such prognosticators. “It’s getting harder and harder to justify the traditionally astronomical cost of development,” says one director of R&D. “Companies now want to know, and know early, whether it’s worth it to pursue a new drug lead. They’re hoping to avoid regulatory failures down the line.” Countries such as France and Australia already require companies to show that their drugs are not only physiologically effective but also cost-effective. More and more, the pharmaco-economist is being asked both to predict the future and to help it happen.

**Downstream Science**

“The research side of pharmas and biotechs has always been successful,” says Collins of Executive and Scientific Appointments. “Now the downstream side must handle that success.” Companies are hiring a growing number of chemists, biophysicists, and chemical engineers in the areas of preclinical and clinical research, process development, and manufacturing, areas that will continue to grow as biotechnology companies bring products to the development stage.
"Both disciplines are drawn from studied observations and are performed in an atmosphere of high uncertainty, totally dependent on the strength of human imagination." — Dr. Gwyn Morgan, SmithKline Beecham Pharmaceuticals Research and Development

The creation of great science depends on giving the finest scientific minds an arena in which to dare, explore and express themselves through the stimulation of peer collaboration and the support of a worldwide network of technology and data.

This is the environment of SmithKline Beecham Pharmaceuticals Research and Development. Our history has been marked by pioneer discoveries including the phenothiazine tranquilizers, the H2-receptor antagonists for gastrointestinal diseases, the identification of the 6-APA nucleus for beta-lactam antibiotics, the creation of the semi-synthetic penicillins, the first successful development of the β-lactamase inhibitors to circumvent bacterial resistance and the development of the world’s first commercially available, genetically engineered human vaccine against hepatitis B. These accomplishments have been recognized by the award of a Nobel Prize and fourteen Queen’s Awards in the U.K. since 1966.

We look to the future with great optimism and the opportunity to explore the yet unrevealed panorama of challenges in our quest for superior therapeutics. If you feel strongly about pursuing your career in a progressive environment, please send your resume to: SmithKline Beecham Pharmaceuticals, Research & Development, Dept. S11/25/94, P.O. Box 401, Conshohocken, PA 19428. An Equal Opportunity Employer, M/F/D/V.
Frank Morich
Head of Worldwide R&D
Bayer AG,
Leverkusen, Germany

At Bayer, we view ourselves as increasingly international. Our traditional strengths have included cardiovascular drugs—nifedipine, for example—and anti-infectives, such as the fluoroquinolone antibiotic ciprofloxacin. We'll continue to work in these areas. But in one way or the other, biotechnology is the direction the industry is taking. Recently, Kogenate®, a recombinant factor VIII, was approved in Europe, Japan, and the states. In light of the strong interest in signal transduction and disturbed signal transduction in cancer, we have concluded a five-year agreement with Onyx Pharmaceuticals to study the ras pathway and identify therapeutically significant targets. Within Bayer, we have built a unit specifically for recombinant protein research; as a separate company, it would rank with the largest biotechs in the world.

Over the last five years, we have had a wave of hirings in molecular biology. In our research center in West Haven, Connecticut, the last building finished happens to be a chemistry institute, so we're hiring many organic chemists there now. In Japan, we're looking for pharmacologists.

Outlooks and Insights at NeuroSearch
GLOSTROP, DENMARK— Jørgen Buus Lassen, president and CEO of NeuroSearch A/S, says, "I have been in this business for 25 years, and I know that you have to hire a very experienced staff ready to make a new drug. Many new companies don't have that." NeuroSearch, founded in 1989, has put together expertise in CNS research and biopharmaceutical management, with results that belie its five years of age.

"We have established a number of programs on the cellular mechanism involved in CNS dysfunctions," says Buus Lassen. "We have synthesized between 2,000 and 3,000 novel compounds that may correct such dysfunctions. We are now starting our first development programs. As soon as we have a marketable compound, we plan to collaborate with established companies for production and marketing." Programs include glutamate (AMPA) antagonists (for treatment of acute and chronic neurodegenerative diseases), dopamine uptake inhibitors (for parkinsonism, depression, and cocaine addiction), calcium channel blockers (for neurodegenerative diseases), potassium channel blockers (for stroke and smooth muscle spasms), NO-modulators (for Alzheimer's disease and smooth muscle spasms), and GABA modulators (for anxiety and epilepsy).

NeuroSearch has benefited from the strong neuroscience tradition in and around Copenhagen. "Much of the pioneering work has been done here," says Buus Lassen. At Nils Diemer's laboratory at the University of Copenhagen, Jørgen Drejer demonstrated increased glutamate release after artificially induced brain ischemia in rats. Drejer is now director of the NeuroSearch cell biology laboratories.

NeuroSearch is looking for the best cellular biologists, pharmacologists, and synthetic chemists. The NeuroSearch philosophy is to bring medicinal chemistry into each major program. "That's why we have been successful in obtaining results with fewer toxic effects," Buus Lassen says. "We are also looking to supplement our preclinical staff with a clinical research director."

A bright outlook, one like Jørgen Buus Lassen's, is also an asset. "The treatment of CNS dysfunction has been a very complex, difficult area," he says. "It has been especially complicated to get rid of all the side effects, even in very successful drugs, and several companies have given up their CNS projects. But we and other companies have very promising molecules. We now have good insights into the central dysfunctions leading to nerve cell death, and we have a number of programs, including drugs in advanced preclinical studies. I'm very optimistic."

From left to right: Jørgen Buus Lassen of NeuroSearch; Autoradiographic image of 3H AMPA binding in the rat brain; The Chiroscience board of management

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Worldwide, chemistry and pharmacology are probably our most looked-for disciplines. We'll always need such people.

The future will see an evolution for many of the larger pharmaceutical companies. As with the Merck purchase of Medco, no one can afford to ignore the generic market any longer. While some companies will attempt a niche strategy, others will try to stay with their proven strengths. We'll still have companies totally committed to innovation. But I'm not sure every company can sustain such a commitment. The financial demands on R&D are growing at a frightening pace.

On the whole, I don't think that the situation in Europe is very much different from that in the United States. In the present climate, the pharmaceutical industry will continue to be under pressure, and the best way to react is to become better.

Science with a Switch: Chiroscience
CAMBRIDGE, ENGLAND— Chiroscience Limited is the world's leading chiral technology company, focusing exclusively on single isomer compounds for the pharmaceutical industry. Not only is Chiroscience a chemical supplier, a problem-solver, and a leading research company—but also it supplies partners with the chiral building blocks with which to create future drugs.

John Padfield, CEO, says, "We've had a chance to learn from the U.S. experience. One major lesson is that no one company can do everything. That's why we can say to our pharmaceutical partners, 'Why do it yourself? Why not come to us?'

A good example is the partnership between Chiroscience and Menarini, one of Italy's largest pharmaceutical companies. Following evidence that a single isomer version might have medical benefits, the two companies joined forces to produce a chiral variation on the NSAID ketoprofen. The result was desketoprofen, now close to market in Europe. Other allies include Abbott, Wellcome, and Glaxo.

When asked about future employment opportunities, John Montana, head of the medicinal chemistry division of pharmaceutical R&D, points to the growing importance of molecular biology and genetics, as well as the combination of these fields with computer science. "We're looking for medicinal chemists, organic synthetic chemists, biologists, molecular biologists, and experts in analytical science." Those with specialties in chiral
chemistry, including chiral pool, resolution, and asymmetric methods, are of interest. Experience in polarimetry, gas and liquid chromatography, and x-ray crystallography is much valued.

"Portability is now a given in international science," says Padfield. "As UK and European scientists, we've very much used to working across borders of every sort." Montana adds, "We have exceptionally good relations with academic science. The academy is looking more now to industry for funding, and their research thus becomes much more focused in industrial terms."

Chiroscience has created more than 25 collaborations with both European and United Kingdom universities in projects involving synthetic organic chemistry, analytical sciences, biology, and drug design. "The future for this industry looks very good indeed," says Padfield. "Closer collaboration between government, industry, and the academy, especially in the UK, is helping that future along. There is a tremendous depth of science in Europe."

**Genetics, Biotech, and International Research at SmithKline Beecham**

**HARLOW, ENGLAND—** Jackie Hunter is the director of neurology research at SmithKline Beecham, UK. Her department focuses on migraine, stroke, pain, and cognitive disorders. SmithKline Beecham has important programs studying schizophrenia, depression, anxiety, and Alzheimer's disease.

"Genetics and biotechnology are definitely the major areas of interest today," Hunter says. SmithKline Beecham recently joined forces with Human Genome Sciences to sequence as many portions of the human genome as possible in the next four years to identify sequences of relevance for designing novel therapies. "This approach has already been extremely productive with Alzheimer's," she says. "We now know that if you have the apoE4 isoform of the apoE gene, you are at a greater risk of developing Alzheimer's than people with the apoE2 isoform. This leads us to a way of screening Alzheimer's patients and targeting drug trials much more effectively."

Hunter would like to see genetic breakthroughs with Alzheimer's equaling those in cystic fibrosis and hypertension: "If we could fully understand the genetic control of proteases involved in processing the beta-aminoid peptide involved in Alzheimer's, we could possibly design a way to correct that process genetically." The growing emphasis on human specific receptors will also accelerate the development of techniques such as antisense and increase the need for functional studies of human tissue.

Hunter says that pharmacology, biochemistry, and behavioral pharmacology are areas of particular need. "And molecular biology has become a core science." Hunter's advice: "Have some molecular biology in your background, as well as computer and information skills. The main thing is to be able to process large quantities of information—and always to expect change. That's the name of the game here."

So is international science. Melanie Graper, human resources director for discovery, describes SmithKline Beecham's European University Links Program, which offers three-month and six- to 12-month work placements to outstanding science students at European universities. "We have a committee of scientists who select and act as liaisons for these universities," Graper says. Target fields include chemistry, biochemistry, biology, microbiology, pharmacology, safety assessment, and pharmaceutical research and development. Participating universities this year were Louvain-la-Neuve in Belgium, Tübingen in Germany, Leiden in the Netherlands, Milan in Italy, and Zurich in Switzerland. "In the longer term, we'll be extending our graduate recruitment activities throughout Europe," Graper says. "This fits into our culture of going global. You can't really do research in a vacuum."

**The Evolution of MorphoSys**

**MUNICH, GERMANY—** MorphoSys is a European company that started in an American fashion—as a good idea arising in an academic setting. The field is protein engineering, where many companies are looking for the best ways to recycle promising proteins through continuous structural "mutations" until those proteins reach their most effective form. MorphoSys offers new ways of creating and searching protein collections. Simon Moroney, a New Zealander and CEO of MorphoSys, says, "We use our proprietary technology to make a large collection of versions of a particular protein, search for improved versions, and recycle this program again and again." The dividends: Accelerated discovery and production of therapeutically important compounds.

Andreas Plückthun, professor of biochemistry at the University of Zurich and founder and scientific advisor at MorphoSys, says, "The real incentive for starting the company was seeing other people do it, especially in the states and in England, and the question arose: Why not? It's still extremely uncommon in Germany and Switzerland, whereas in the states it's quite common and becoming more so in England. It's a question of attitude, culture, risk-taking, and the financial market."

"The revolution in antibody engineering—and protein engineering in general—has been very exciting," says Moroney. "Things are moving rapidly: You have phage display, mutagenesis, optimization in peptides and other proteins." That means that MorphoSys has very specific requirements for the ideal employee. "What is most important," says Plückthun, "are scientists highly competent in molecular biology, but who also have an appreciation of structure. They have to understand the protein they're going to produce, while thinking about engineering that protein."

With a core group of 16 scientists, 10 of them PhDs, MorphoSys is now assembling an international constellation of clients, collaborators, and investors. Munich is located in a land—Bavaria—whose rules and regulations are especially sympathetic to entrepreneurial science. In such a promising setting, Moroney is acutely aware of using science to improve on nature. "In nature, proteins are only as good as they have to be. We're not constrained in that regard. Here, we're trying to make them as good as they can be."

**New Targets at Xenova**

**SLOUGH, ENGLAND—** Xenova Group plc is a biopharmaceutical company specializing in new small molecule drugs derived from natural resources such as microorganisms and plants. With one of the world's largest collections of microorganisms for drug discovery, Xenova is exploring promising leads in areas such as cancer, CNS, cardiovascular disease, and immune-inflammatory disease. The following is a dialogue between Alan Garmonsway, head of human resources, and Trevor M. Twose, director of corporate planning and development.

**TT:** The buzzwords here and throughout the industry include genomics, molecular medicine, DNA-based diagnostics, high-throughput screening, and, in general, new approaches to drug discovery through new molecular targets.

**AG:** Our main hiring interests were, from the beginning, in microbiology, biochemistry, and analytical chemistry, followed later by molecular biology,
medicinal chemistry, and pharmacology. As we find successful compounds, however, we are developing our preclinical elements. That means we’re also looking for the excellent scientist who can also handle resources and partnerships.

**TT:** Europe is a long way from being a federal state. But we see few barriers to developing the kind of partnerships we need to grow. We already are working with Genentech, Genzyme, Warner-Lambert, Suntory, and others on important projects.

**AG:** Larger pharma are beginning to realize the excellent synergistic opportunities with biotech. Lately, a number of CEO’s have been saying quite publicly that they want to start outsourcing their research. That’s great for biotech companies. On the other hand, most companies in the biotechnology industry lack many of the downstream elements, production especially. We’ve adopted the virtual organization model, using contract research organizations and hired consultants. That affects our employment outlook. We want people for whom specialist science is a true calling. Have they done independent research and done it well? Then further, Can they integrate that science into a multidisciplinary company, and with other companies as well?

**TT:** Then we look for ability to lead and manage partnerships and collaborations. If there’s a skills shortage, it’s in the experienced specialized scientist with established skills in the industry. Part of the problem, once you’ve found them, is prizing them out of the larger companies and getting a cultural fit in a smaller company.

I doubt we’ve ever seen such a promising time for discovering new drugs and new technologies. You’re seeing the growth of combinatorial resource companies, peptide library companies—it’s an exciting time.

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**“Find the New Ways”: the Progress of Rhône-Poulec Rorer**

**PARIS, FRANCE**—It has become a familiar story over the last five years. Two pharmaceutical giants merge, weather the recession, and set out for the promised land of gene and cell therapy.

In 1990, Rhône-Poulec merged with Rorer Group Inc. to create Rhône-Poulec Rorer Inc. (RPR).

“We reorganized our research, concentrated into fewer fields to be competitive, and decided that as quickly as possible, we should create a division dealing solely with gene therapy,” says Jean Bernard Le Pecq, senior vice president of discovery research. “Before, the industry was driven by chemistry, and that will continue. But now, you will need a very strong interaction between chemistry and biology. And the scientists we are looking for will also need a strong interaction between these two fields.”

Sylvain Visconti, senior vice president of European strategy and development, says the decision is nothing less than “to be among the world pioneers, to invest in new technologies and reorganize our R&D efforts towards them as well as our traditional strengths.”

Those strengths have been in oncology and antibiotics. Granocyte®, a recombinant granulocyte colony stimulating factor for the treatment of chemotherapy-induced neutropenia, is currently being launched in Europe. Further, Taxotere®, an antitumor agent derived from the needles of the European yew tree, is showing promise in clinical trials. “Oncology is a very slow-moving field, with only one really interesting drug every 10 years,” says Le Pecq. “Taxotere® is truly a step forward that may put us at the forefront of world oncology research.” RPR also has products in development for AIDS, cardiovascular disease, asthma, and inflammation.

“We’re hiring an increasing number of people in R&D,” says Visconti. “We need both people highly specialized in the new technologies, and people who understand the interface of science and business.” Chemists are needed not only for classical drug design but also for the new approaches—peptide-mimetic drug design and the creation of molecular libraries.

“Our biologists will define physiologic targets and their relevance to pathology,” says Le Pecq. “Both chemists and biologists will help find ways to increase efficiency. Chemists and biologists everywhere should be thinking in these directions. Find the new ways.”

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**Riding the Information Wave at Glaxo**

Colin Dykes, section head of molecular genetics for Glaxo Research and Development, UK, puts it simply: “Glaxo’s role is to discover novel medicines for common diseases. My part is to make sure we utilize the flood of information and new technology from genomic research to move us towards that goal.”

Melanie Lee, research associate and leader of the receptor biology thematic research group, concurs: “We’re responding to this tremendous technological advance to bring drug development into a new era. That demands united multidisciplinary teams. Working together, molecular biologists, pharmacologists, chemists, protein biochemists and more must combine their repertoire of skills to make powerful and effective drug discovery teams.”

Glaxo’s human genetics program is studying disease pedigrees, in search of the mutations responsible for different categories of disease. “I talk to my equivalents at other companies, as well as to academic scientists, trying to establish common ground,” Dykes says. “With the current information overload, the best way to make progress in these areas—for example, a project to map cDNA’s and match them to chromosomal loci—is collaboration among industry, government, and the academy.”

When speaking of exciting recent developments, Dykes and Lee list high-throughput DNA sequencing; gene therapy; generation of single-chain antibodies from recombinant libraries; targeting DNA molecules to particular cell types using viral vectors; receptor-mediated targeting; long-range PCR; fluorescent ligand development; and efficient and versatile expression systems. Molecular biology is growing fast at Glaxo, but, as Lee says, “It’s not so much superseding as blending with the other sciences, creating a culture in which we can discover new targets for our drugs.”

Both agree that the present-and-future scientist must be both brain and ballerina. “We value the multidisciplined, innovative scientist with good interpersonal skills and the ability to work in a high-pressure environment,” Lee says. “You need the ability to switch between wide-ranging, innovative thought and tightly focused work,” says Dykes, “prosecuting mercilessly to its conclusion.” Lee’s enthusiasm speaks for them both: “I just love working here because the emerging science is so exciting.”

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John Timpane, PhD, writes frequently about the worldwide biotechnology and pharmaceutical industries.
**POSITIONS OPEN**

**BEHAVIORAL AND SYSTEMS NEUROSCIENCE**
**RENEWED FACULTY RECRUITMENT**
Center for Behavioral Neuroscience
SUNY at Stony Brook

The Center for Behavioral Neuroscience (CBN) is a newly established facility dedicated to collaborative, multidisciplinary research on the functional organization of the nervous system. CBN invites applications for tenure-track position at the ASSISTANT PROFESSOR level. Existing CBN faculty have strong interests in learning, memory and aging and new faculty will be selected to complement strengths in the Center.

Applicants should have the Ph.D. and/or M.D. degree, substantive postdoctoral training, and a proven record of research accomplishment. The successful applicant will establish an independent funded research program and will participate in the training of graduate students. Researchers with interest in the functional organization of systems involved in vision, memory and emotion, or in human neuroscience, including functional imaging, are particularly encouraged to apply.

Closing date for applications is January 5, 1995. The appointment is expected to begin in September 1995.

For consideration, applicants should submit a current curriculum vitae, a description of research directions and name, address and telephone numbers of three references to: Search Committee, Center for Behavioral Neuroscience, SUNY at Stony Brook, Stony Brook, New York 11794-2975.

State University at Stony Brook is an Equal Opportunity/Affirmative Action Employer.

**ASSISTANT PROFESSOR BEHAVIORAL BIOLOGY**

The Department of Psychology of the University of Toronto invites applications for a tenure-stream faculty appointment at the rank of ASSISTANT PROFESSOR in behavioral neuroscience beginning July 1995. The candidate should have a Ph.D. in the relevant area and broad training in neurosciences with a research program that focuses on understanding behavioral processes. Successful applicants are expected to conduct independent research and teach at the undergraduate and graduate levels. Salary will be commensurate with qualifications and experience.

Applications, including a curriculum vitae, statement of research and teaching interests, and three letters of recommendation should be sent to: John Yeomans, Department of Psychology, University of Toronto, Toronto, Ontario M5S 1A1 Canada. Application deadline is February 1, 1995.

In accordance with Canadian immigration requirements, this advertisement is directed to Canadian citizens and permanent residents of Canada. In accordance with its Employment Equity Policy, the University of Toronto encourages applications from qualified women and men, members of visible minorities, Aboriginal peoples, and persons with disabilities.

**ECOLOGIST.** Clark University seeks an ASSISTANT or ASSOCIATE PROFESSOR with broad interests in conservation biology and behavioral ecology. Responsibilities include an entry-level, interdisciplinary course on ecological systems, and courses in behavioral ecology and conservation biology within the Department of Biology and in the Environment, Technology and Society Program. The position requires the development of an active research program that involves instruction at the undergraduate and graduate levels. Postdoctoral research and significant teaching experience are required, and the successful candidate must demonstrate an interest in the development of management policies for natural populations are welcome. Send curriculum vita, a brief description of teaching and research interests, and the names and addresses of three references to: Chair, Ecology Search Committee, Department of Biology, Clark University, Worcester, MA 01610. Review of applications will begin December 15, 1994. Minorities and women are encouraged to apply. Clark University is an Equal Opportunity/Affirmative Action Employer.

**CONSERVATION BIOLOGY Faculty Position.** The Department of Biological Sciences invites applications for a tenure-track ASSISTANT PROFESSOR position, pending budget approval. A Ph.D. is required, postdoctoral experience is preferred, and the area of research specialization is open. Individuals with interests in biodiversity, population or community ecology, or ecosystem studies are especially encouraged to apply. Teaching responsibilities include conservation biology and course development in their area of specialization. The individual will also be expected to interact extensively with the University’s interdisciplinary graduate program in environmental studies. Salary is $34,000 for the academic year. The Department of Biological Sciences offers M.S. and Ph.D. degrees. Applicants should send curriculum vitae, statement of research interests and teaching experience, and the names, addresses and FAX numbers of three potential references by 1 January 1995 to: Jean Witkowski, Chair, Department of Biological Sciences, Ohio University, Athens, OH 45701. Ohio University is an Equal Opportunity/Affirmative Action Employer. Women and minority candidates are especially encouraged to apply.

**POSITIONS OPEN**

**MYCOLOGIST PLANT PATHOLOGIST.** The Department of Plant Pathology, University of California, Riverside, invites applications for an 11-month tenure-track position at the ASSISTANT PROFESSOR level. The position will be available starting July 1, 1995. The successful applicant will be expected to develop and solve problem-solving research program with fungi and fungal plant diseases. Areas of research may include, but are not limited to, organismal biology, genetics, epidemiology, population genetics, physiology, and ecology, depending on the applicant’s interests and expertise. Opportunities exist to work with a variety of crops including citrus, avocados, grapes, vegetables, ornamentals and turf and to develop innovative disease management procedures. Teaching undergraduate and graduate level courses in mycology, plant pathology or epidemiology will be required and the appointee will be expected to mentor graduate students. Applicants must have a Ph.D. degree in plant pathology and must possess a strong commitment to teaching excellence and a strong background or expertise in Molecular and Cellular Biology.

**FACULTY POSITION DEPARTMENT OF MOLECULAR AND CELLULAR BIOLOGY**

**UNIVERSITY OF ARIZONA**

As part of a continuing expansion, the Department of Molecular and Cellular Biology is seeking a new tenure-track faculty member at the ASSISTANT PROFESSOR level for appointment in 1995. Applicants with research interests in the molecular, cellular, or developmental biology of any organism including plants, animals, fungi, or bacteria will be considered. Successful candidates will be expected to establish a competitive research program and to teach both at the undergraduate and graduate levels. Send curriculum vitae, a one-to-two page statement of research interests, and have at least three supporting letters sent to: Professor Samuel Ward, Head, Department of Molecular and Cellular Biology, Life Sciences South Building, Room 444, University of Arizona, Tucson, AZ 85721 USA. Complete applications and supporting materials should be received by December 16, 1994, although applications will be accepted until filled. The University of Arizona is an Equal Employment Opportunity/Affirmative Action/ADA Compliance Employer. Women and minorities are encouraged to apply.
AQUATIC ECOLOGIST
ILLINOIS NATURAL HISTORY SURVEY

The Center for Aquatic Ecology (CAE) invites applications for a full-time tenure-track position in Aquatic Ecology beginning August 1995 or later. The successful candidate will join a dynamic group of ecologists and be expected to lead a broadly-based research program in aquatic and wetland ecology and conservation. The successful candidate must have a Ph.D. in an appropriate discipline, have an outstanding record of independent research, and be expected to develop a strong, externally funded research agenda. The center is housed in the Urbana-Champaign campus. The Center for Aquatic Ecology seeks to develop a broad range of questions and study a wide array of taxa in systems ranging from large rivers and the Great Lakes to boreal streams and temporary ponds. CAE scientists have full access to campus facilities and resources, and may hold affiliate appointments in universities, state, and federal agencies, and in the private sector. Applicants should address their letter of interest to: CAE Director, Natural History Survey, University of Illinois, P.O. Box 6799, Urbana, IL 61801. Telephone: 217-333-1382; FAX: 217-333-0494. Applications should be received by 15 January 1995 to ensure full consideration.

The Illinois Natural History Survey (INHS) is an Affiliated Unit of the University of Illinois at Urbana-Champaign. The INHS is an Equal Opportunity/Affirmative Action Employer.

UNIVERSITY OF MICHIGAN
INVERTEBRATE PALEOECOLOGY/GLOBAL CHANGE

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ENVIROMENTAL SCIENTIST
ILLINOIS BENEDICTINE COLLEGE

A full-time position in the Environmental Science/Geology Department at Illinois Benedictine College, Lisle, Illinois is available beginning August 1995. Applicants should have a masters degree in an environmental science-related field and teaching experience at the undergraduate level. Illinois Benedictine College is an Equal Opportunity/Affirmative Action Employer.

ASSOCIATE PROFESSOR—BIOPHYSICS
(Deadline Extended)

The Department of Physics, Illinois Benedictine College, Lisle, IL 60523, is hiring a full-time, permanent ASSOCIATE PROFESSOR for fall 1995. Ph.D. required with a research interest in molecular biophysics. Duties include: teaching introductory university physics for health science majors and biophysics, general biology laboratory instruction, and participating in faculty/student research programs in biophysics and molecular biology.

The College of Biological Sciences at Illinois offers a liberal arts college located in the research corridor of metropolitan Chicago with nationally recognized programs in the sciences. Initial research should address a relevant problem in the area of biophysics and a statement of teaching and research interests by December 30, 1994, to: Dr. Duane Buss, Chairman, Search Committee, Department of Biological Sciences, College of Biological Sciences, Illinois Benedictine College, Lisle, IL 60523. Telephone: 708-960-1500 x1562. Illinois Benedictine College is an Affirmative Action/Equal Opportunity Employer; women and minority candidates are especially encouraged to apply.
Tenure-Track And Postdoctoral Opportunities.

Listed below are a few of the outstanding opportunities for conducting research that are now available at the National Institutes of Health.

Tenure-Track Positions

Associate Professor Equivalent

Cell Interactions in 3-D Systems
Joshua Zimmerberg, MD, PhD

Position available to develop an independent research program on cell interactions in three dimensional systems. Individuals of the highest caliber with broad research interests in cell behavior including cell locomotion, cell fusion, cell adhesion and inter-membrane contacts in a complex micro environment and with substantial experience in cell biology, biophysics and microscopy should apply. Candidates should be capable of developing new experimental systems and new methods to study normal and pathological cell interactions within tissues. Applicants must have an MD and/or PhD degree and at least five years of postdoctoral experience including the supervision of more junior fellows. Laboratory of Theoretical and Physical Biology (OE-61), NICHD, Building 10, Room 10D14, 10 CENTER DRIVE MSC 1855, BETHESDA MD 20892-1855.

Ecotysis and Viral Fusion
Joshua Zimmerberg, MD, PhD

Position available to develop an independent research program that will complement ongoing research on ecotysis and viral fusion. Particular preference will be given to those individuals interested in the mechanisms of lipid bilayer rearrangements in biological fusion. Candidates should have broad expertise in electrophysiological and biophysical techniques and experience in work with model membranes (planar lipid bilayers and liposomes). Applicants must have at least five years postdoctoral experience which includes supervision of more junior fellows. Laboratory of Theoretical and Physical Biology (OE-61), NICHD, Building 10, Room 10D14, 10 CENTER DRIVE MSC 1855, BETHESDA MD 20892-1855.

Postdoctoral Positions

Developmental Biology
Igor B. Dawid, PhD

The molecular basis of vertebrate embryogenesis, in particular mesoderm induction and axis formation, and the early differentiation of the nervous system, is being studied in Xenopus laevis and in the zebrafish. A major focus is on the regulation and function of LIM class homeobox genes in pattern formation. Experience in molecular and/or developmental biology is preferred. Laboratory of Molecular Genetics (OE-61), NICHD, Building 6B, Room 413, 10 CENTER DR MSC 2790, BETHESDA MD 20892-2790.

Developmental Gene Expression and Chromatin Structure
Ann Dean, PhD

Embryonic globin gene expression is being studied, especially as it relates to chromatin structure. Approaches include in vitro and in vivo analysis of functional promoter and enhancer elements, in vitro transcription of DNA templates assembled into nucleosomes, and structural studies using minichromosomes. Applicants should have training in molecular/cell biology and an interest in the role of chromatin structures in the molecular basis of development. Laboratory of Cellular and Developmental Biology (OE-61), Building 6, Room B1-08, 6 CENTER DR MSC 2715, BETHESDA MD 20892-2715.

Ion Homeostasis and Cell Injury
Elizabeth Murphy, PhD

Changes in ion transport and homeostasis appear to be involved in apoptotic cell death. Studies focus on measuring changes in intracellular calcium, pH, sodium and magnesium in isolated cells using fluorescent indicators in cells stimulated to undergo apoptosis. Alterations in signal transduction pathways which are responsible for the ionic alterations are also under study. Applicants must have experience in ion measurements using fluorescent indicators or experience with cell culture or molecular biology and have less than five years of postdoctoral experience. Laboratory of Molecular Biophysics (OE-61), NIEHS, P.O. Box 12233, MD 17-05, Research Triangle Park, NC 27709.

Retroviral Entry Mechanisms
Maribeth V. Elden, PhD

The receptors for the amphotropic murine leukemia viruses (AMuLVs) and gibbon ape leukemia viruses (GaLVs) have been recently shown to function as cellular phosphate transporters. A position is available to investigate the process of retroviral entry by characterizing the regions of these viruses involved in the process of infection and the regions of their receptors that are critical for receptor/transporter function. Applicants must have less than five years postdoctoral experience. Laboratory of Cell Biology (OE-61), NIMH, Building 36, Room 2D10, 36 CONVENT DR MSC 4068, BETHESDA MD 20892-4068.

Additional Postdoctoral Fellowship Opportunities

For an on-line listing of additional postdoctoral openings, you may access the NIH EDNET Bulletin Board POSTDOC conference via Internet (wybfur.eunigh.gov) or modem (1,301-402-2221 or 1,800-358-2221) with parameters set at "7,EVEN,1". When connected to NIH, type in "7,100" for terminal emulation, "F5E" for initials, and "AJL1" for account number.

The Postdoctoral Research Fellowship Opportunities catalog, which describes intramural laboratories at the NIH, is also available by request. An electronic version of the catalog may be accessed via the Internet using either the Gopher Information System (gopher.nih.gov) or the World Wide Web (http://www.nih.gov). When connected, select Research Opportunities at the NIH Office of Education. If you would like to request a catalog or have further questions, please contact the Office of Education, Building 10, Room 1C129, 10 CENTER DR MSC 1158, BETHESDA MD 20892-1158, 301-496-2427, Fax 301-402-0463.

To Apply

If you hold a doctoral degree (e.g., PhD, MD/PhD, MD, DO, DDS, DMD or DVM) accompanied by previous laboratory research experience, and would like to be considered for one of these positions, please send a cover letter, curriculum vitae, bibliography, and statement of research interests to the address listed with each position. In addition, please arrange to have letters of recommendation sent from three scientists who can provide an evaluation of your qualifications.
The Volpe National Center for Complex Systems at Brandeis University invites applications for a tenure-track ASSISTANT PROFESSORSHIP in Computational Neuroscience. This position is part of a new Center for Theoretical and Computational Neuroscience founded by a grant from the Alfred P. Sloan Foundation. We are interested in theorists with strong interests and demonstrated commitment to research relevant to neuroscience. Candidates are expected to have Ph.D.'s (or the equivalent) in Mathematics, Physics, Computer Science or another quantitative discipline. The successful candidate will be appointed in an appropriate department. Applications should be sent to the appropriate chair, Department of Neuroscience, Brandeis University, 415 South Street, Waltham, MA 02254. The successful candidate will be expected to have a strong teaching record and the ability to recruit students. The Volpe Center seeks to attract a diverse body of faculty. Women and minorities are encouraged to apply.

NORTH CAROLINA STATE UNIVERSITY
Two Assistant Professorships in Invertebrate Zoology

The Department of Genetics at North Carolina State University invites applications for two tenure-track AS-SISTANT PROFESSOR appointments. Molecular Genet- ics: Specific area of research and organism studied are open. Applicants should submit curriculum vitae, a descrip- tion of research plans and teaching interests and arrange to have three references sent to: Dr. Steven Spiker, Chair, Molecular Evolution Search Committee. Vertebrate Molecular Evolution: Applicants with expertise in molecular evolution/population genetics should submit curriculum vitae, a description of research plans and teaching interests, transcripts of graduate work, reprints and the names and addresses of three references to: Dr. William R. Atchley, Chair, Molecular Evolution Search Committee. Applicants should have a Ph.D. or equivalent degree and postdoctoral experience. The successful candi- dates are expected to participate in departmental teaching, develop a externally funded research pro- gram, train graduate students, interact with research facul- ty and participate actively in the operations of the de- partment. Applications should be sent to the appropriate search committee chair, Department of Genetics, North Carolina State University, Raleigh, NC 27695-7614. The deadline is January 15, 1995. North Carolina State University is an Equal Opportunity/Affirmative Action Employer.

ASSISTANT PROFESSOR OF BIOLOGY

Hamline University invites applications with teaching and postdoctoral experience for a tenure-track appoint- ment as ASSISTANT PROFESSOR OF BIOLOGY, to begin on September 1, 1995. Our program emphasizes un- dergraduate research opportunities, especially cross-disci- plinary efforts, and its interests, and are strong. The successful candidate will develop an externally funded research program in animal biology suitable for undergraduate student inquiry and research. Faculty in a variety of disciplines in projects involving computational analysis and/or modeling is preferred. Send curriculum vitae, all academic transcripts, selected research papers, statement of teaching and research philosophy, and three letters of recommendation to: Dr. John Brennan, Department of Biology, Ham- line University, 4500NSE Third Avenue, St. Paul, Minnesota 55104. Review of applications will begin on January 10, 1995. Hamline University is an Affirmative Action/Equal Oppor- tunity Employer and encourages applications from women and minority candidates.

OPPORTUNITY/AFFIRMATIVE ACTION EMPLOYER

THE UNIVERSITY OF ACRON

Positions OPEN

BRANDEIS UNIVERSITY
Theoretical/Computational Neuroscientist

The Volpe National Center for Complex Systems at Brandeis University invites applications for a tenure-track ASSISTANT PROFESSORSHIP in Computational Neuroscience. This position is part of a new Center for Theoretical and Computational Neuroscience founded by a grant from the Alfred P. Sloan Foundation. We are interested in theorists with strong interests and demonstrated commitment to research relevant to neuroscience. Candidates are expected to have Ph.D.'s (or the equivalent) in Mathematics, Physics, Computer Science or another quantitative discipline. The successful candidate will be appointed in an appropriate department. Applications should be sent to the appropriate chair, Department of Neuroscience, Brandeis University, 415 South Street, Waltham, MA 02254. The successful candidate will be expected to have a strong teaching record and the ability to recruit students. The Volpe Center seeks to attract a diverse body of faculty. Women and minorities are encouraged to apply.

YALE UNIVERSITY
School of Forestry and Environmental Studies
EcoLogist Position

The Yale School of Forestry and Environmental Studies seeks to fill a faculty position at the ASSISTANT PRO- FESSOR level. We seek a candidate with research inter- ests that can best be combined with professional activities in one or more of the following areas: aquatic biology, field studies, and techniques in molecular biology. Responsibilities include teaching in the department's core curriculum, an advanced undergraduate course, and a graduate course in an area of specialty; directing Mas- ters' theses; and establishing an externally funded re- search program. Involved in an environmental education/field research program in conjunc- tion with the Cuyahoga Valley National Recreation Area and an urban research program in organismal biology being planned with a nearby university.

The University of Akron is the third largest state uni- versity in Ohio with an enrollment over 26,000 students. It is situated in an urban setting near many and diverse cultural and recreational opportunities.

Review of applications will begin 2 January 1995 and will continue until the position is filled. Interested candidates are invited to submit a curriculum vitae, a statement of teaching/experience interests, and three references to: Dr. Jerry Sinner, Chair, Department of Biological Sciences, The University of Akron, Akron, OH 44325-3908.
National Institute on Aging
National Institutes of Health

Postdoctoral Positions in Vascular Smooth Muscle Cell Signal Transduction

A postdoctoral position is available for research in one of the following two areas:

1) The regulation of vascular smooth muscle migration with particular emphasis on elucidating the changes in intracellular signalling pathways that account for the increased migration of smooth muscle cells in and from aging animals;

2) The intracellular signalling pathways associated with activation of the cytokine-like receptor(s) for advanced glycation endproducts and the role of these pathways during vessel injury and aging.

Women, minorities and persons with disabilities who meet the eligibility requirements are encouraged to apply. Salary will be commensurate with qualifications and experience.

Mail CV by 12-30-94 to National Institute on Aging, Gerontology Research Center, 4940 Eastern Avenue, Baltimore, MD 21224, Attention: Edward G. Lakatta, M.D., Chief, Laboratory of Cardiovascular Science.

For further information, contact Edward G. Lakatta, M.D. at (410) 558-8202.

NIH is an Equal Opportunity Employer

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The Hipple Cancer Research Center announces new postdoctoral fellowships in two divisions.

- Biological Response Modifiers
  - Head: Dr. Sohan L. Gupta, Wallace Chair for Cancer Research
  - Subject: interferon mechanism of action on tumor cells
  - Requirements: Ph.D. in biochemistry or molecular biology, experience in working with nucleic acids and molecular biology techniques

- Biology of Cancer Metastasis
  - Head: Dr. Emilio Barbera, Senior Cancer Scientist
  - Subject: the molecular and cellular mechanisms of metastasis
  - Requirements: Ph.D. in immunology, experience in T cell anergy and molecular biology methods

Send your curriculum vitae and the names of at least three referees to:

Diane M. Smith
Hipple Cancer Research Center
4100 S. Kettering Blvd., Dept. S-100
Dayton, Ohio 45439-2092

The Hipple Cancer Research Center provides a creative environment, is affiliated with area universities and hospitals and is supported by private philanthropy and NCI peer-reviewed grants and contracts.

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RESEARCH COMPUTING

Sr. Scientist...With responsibility for designing and developing computer systems for scientific data, you will work with R&D scientists to determine requirements and implement systems. You will also provide leadership to project teams, write status reports to users and management, and work with a variety of other scientific data management tools.

We require an MS in Science or Engineering with a minimum of 8 years experience including at least 4 years of experience in software analysis, design, and development in a scientific environment. We also require knowledge of programming languages such as C or Fortran, as well as knowledge of relational databases. Working knowledge of Macintosh or other PCs is a plus. [Reply to Job# PH149384].

Associate Scientist...You will provide programming support on software development teams, and apply scientific and mathematical data analysis techniques to pharmaceutical data. You will also learn to use and apply new computer technology to support R&D.

We require an MS in Science or Engineering along with a minimum of 2 years experience in software system development in a scientific research environment. We also require programming skills in Fortran and C, as well as experience with CASE tools, 4th generation languages, and project management tools. Experience with VAX/VMS or Macintosh software development is a plus. [Reply to Job# HD49386].

Associate Scientist...You will plan, develop, and implement the R&D end user training program. This will include curriculum design, development and scheduling; training on and development of courseware; monitoring consulting services; and managing training-related projects.

We require an MS in Education along with 8+ years of training/educational experience, 2+ years of training program management experience, and 2+ years of computer software/hardware experience. [Reply to Job # SB49418].

Abbott provides an excellent salary and benefits package including profit sharing and a stock retirement plan. We are located in an attractive suburban area, approximately 30 miles north of Chicago. For confidential consideration, please send a resume and salary history (including appropriate Job#) to: Linda DeLavallade, D-583, AP6B, Abbott Laboratories, One Abbott Park Rd., Abbott Park, IL 60064. Abbott is an Affirmative Action Employer/Smoke-Free Environment.

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PLANT BIOCHEMIST
The Institute of Biological Chemistry at Washington State University invites applications for a tenure-track position at the ASSISTANT PROFESSOR level. The position is 100% research with a 12-month appointment beginning September 1, 1995. Teaching is required for the first year. Applicants must have a Ph.D. or equivalent, postdoctoral experience, and an established record of research using biochemical and molecular approaches to plant biology and genetics. The ability and commitment to build a strong, well-funded program of international stature is essential. The Institute provides an excellent research environment with more than 100 scientists, expansive growth facilities, modern equipment, and access to specialized methods and analytical services. Candidates should submit a current curriculum vitae, a statement of research interests, and a description of future plans. In addition, applicants should arrange for three letters of reference to be sent to: Dr. John Brace, Search Committee Chair, Institute of Botany, Biological Chemistry, 467 Clark Hall, Washington State University, Pullman, WA 99164-6340. Telephone: 509-335-2393, FAX: 509-335-7643, E-MAIL: browse@WSUVM1. Deadline: December 12, 1994, or until a suitable candidate is identified. An Equal Opportunity Employer/Affirmative Action/ADA.

PLANT EVOLUTIONARY ECOLOGIST
The Department of Biology at the University of Missouri-St. Louis announces a tenure-track faculty position at the ASSISTANT PROFESSOR level in plant evolutionary ecology. Preference will be given to applicants whose research includes a quantitative genetic or theoretical approach. Teaching responsibilities would include introductory biology for majors, biometry, and a graduate course in applicant's area of specialization. Applicants should have teaching experience in one or more of these courses. A letter of application, curriculum vitae, statements of research and teaching interests, selected reprints, and names for three letters of reference should be sent by December 1, 1994, to: Search Committee Chair, Department of Biology, University of Missouri-St. Louis, 8001 Natural Bridge Road, St. Louis, MO 63121-4499. The University of Missouri-St. Louis is an Affirmative Action/Equal Opportunity Employer committed to excellence through diversity.

DEPARTMENT OF BIOLOGY
VASSAR COLLEGE
CELL BIOLOGIST—We seek a cell biologist who is committed to undergraduate education to fill a temporary (one year) position at the rank of ASSISTANT PROFESSOR beginning August 1995. A Ph.D. is required. Postdoctoral work and teaching experience are desirable. The successful candidate will be expected to teach (i) the introductory course in cellular biology, (ii) an upper level course, and (iii) an upper level research course. The teaching load for the position is two courses per year. Applicants should have a Ph.D. or equivalent with at least three years of postdoctoral experience. Academic rank is to be commensurate with qualifications and experience. The successful candidate will be expected to establish and maintain an active research program in the area of cell division or cell cycle and participate in medical school and graduate education in neuroscience, anatomy or pharmacology. Applicants should send an introductory letter; names, addresses and telephone numbers of three references; and copies of most significant recent publications by January 15, 1995, to: Dr. Lawrence C. Finster, Chair, Search Committee, Department of Cell and Neurobiology, Vassar College, Box 209, Poughkeepsie, NY 12601 by 31 December 1994. Affirmative Action/Equal Opportunity Employer. Women and minorities are encouraged to apply.

ASSISTANT/ASSOCIATE PROFESSORS
NEUROSCIENCES
The Department of Biology at the University of California, Riverside invites applications for a tenure-track position at the ASSISTANT/ASSOCIATE PROFESSOR level in the biology of the nervous system. The position is available beginning August 1, 1995. Applicants should have received a Ph.D. or equivalent in a relevant biological science. The successful candidate will be expected to establish and maintain an active research program in the area of cell division or cell cycle and participate in medical school and graduate education in neuroscience, anatomy or pharmacology. Applicants should send an introductory letter; names, addresses and telephone numbers of three references; and a copy of recent publications (maximum 10 pages) by January 15, 1995, to: Dr. Maria A. Barone, Search Committee Chair, Department of Biology, University of California, Riverside, Riverside, CA 92521. Affirmative Action/Equal Opportunity Employer. Women and minorities are encouraged to apply.

BIOLOGICAL SCIENCES: Bryology and General Botany
The University of California at Berkeley invites applications for a Biologic Animate Professorship in Bryology and General Botany. A Ph.D. in botany is required. The position will be available beginning September 1, 1995. The University of California is an Affirmative Action/Equal Opportunity Employer. Women and minorities are encouraged to apply.

CHEMISTRY
The University of Colorado at Boulder invites applications for an ASSISTANT PROFESSOR position in the area of Inorganic Chemistry. The position is available beginning September 1, 1995. Applicants should have a Ph.D. in one of the areas of specialty in the above area and should have demonstrated a strong capability for research and teaching. Applications are invited from women and minorities. The University of Colorado is an Affirmative Action/Equal Opportunity Employer. Women and minorities are encouraged to apply.

DEPARTMENT OF BIOLOGY
MOUNT WASHINGTON COLLEGE
ANIMAL BIOLOGY
The Department of Biology at Mount Washington College invites applications for a tenure-track position at the ASSISTANT PROFESSOR level in the area of animal ecology or physiology. The position is available beginning August 1995. The successful candidate will be expected to establish and maintain an active research program in the area of animal ecology or physiology and participate in medical school and graduate education in neuroscience, anatomy or pharmacology. Applicants should send an introductory letter; names, addresses and telephone numbers of three references; and copies of most significant recent publications by January 15, 1995, to: Dr. Robert C. Jones, Search Committee Chair, Department of Biology, Mount Washington College, 1 Mount Washington College Road, North Conway, NH 03860. Affirmative Action/Equal Opportunity Employer. Women and minorities are encouraged to apply.

DEPARTMENT OF BOWmans
STULL UNIVERSITY
COLLEGE OF NATURAL RESOURCES AND SCIENCES
Three Tenure-Track Faculty Positions are available in the Department of Biological Sciences beginning fall 1995. The successful candidate will be expected to establish and maintain an active research program in the area of specialty as indicated below and to participate in undergrad- uate education. A Ph.D. is required for the position. Applicants should send a curriculum vitae, a statement of research interests, and at least three letters of recommendation by January 15, 1995, to: Dr. David Nyffeler, Search Committee Chair, Department of Biological Sciences, Bucknell University, Lewisburg, PA 17837. Bucknell University is an Affirmative Action/Equal Opportunity Employer. Women and minorities are encouraged to apply.

DEPARTMENT OF BIOLOGY
SUNY AT ALBANY
Molecular Neurobiology
The Department of Biology at the University at Albany invites applications for a tenure-track position at the ASSISTANT PROFESSOR level in the area of molecular neurobiology. A Ph.D. and postdoctoral training in the area of molecular neurobiology are required. The successful candidate will be expected to establish and maintain an active research program in the area of molecular neurobiology and to participate in medical school and graduate education in neuroscience, anatomy or pharmacology. Applicants should send an introductory letter; names, addresses and telephone numbers of three references; and copies of most significant recent publications by January 15, 1995, to: Dr. J. Robert M. Dumas, Search Committee Chair, Department of Biology, University at Albany, SUNY, State University of New York, 1400 Broadway, Albany, NY 12222. SUNY at Albany is an Affirmative Action/Equal Opportunity Employer. Women and minorities are encouraged to apply.

DEPARTMENT OF BIOLOGY
UNIVERSITY OF WASHINGTON
Molecular Biology
The Department of Biology at the University of Washington invites applications for a tenure-track position at the ASSISTANT PROFESSOR level in molecular biology beginning Fall 1995. A Ph.D. is required. Applicants should send a curriculum vitae, a statement of research interests, and at least three letters of recommendation by January 15, 1995, to: Dr. David Nyffeler, Search Committee Chair, Department of Biological Sciences North Dakota State University College of Arts and Sciences, Fargo, ND 58102. North Dakota State University is an Affirmative Action/Equal Opportunity Employer.

VERTEBRATE PHYSIOLOGIST
The Department of Biological Sciences at the University of Illinois invites applications at the ASSISTANT PROFESSOR level. Applicants should have a Ph.D. in physiology and have demonstrated research potential through postdoctoral experience and recent publications. Individuals with interests in neuro- endocrine physiology are especially encouraged to apply. The position is available beginning August 1, 1995. Applicants should send a curriculum vitae, a statement of research interests, and at least three letters of recommendation by January 15, 1995, to: Dr. John J. Rinehart, Search Committee Chair, Department of Biological Sciences, University of Illinois, Urbana, IL 61801-2906. University of Illinois is an Affirmative Action/Equal Opportunity Employer.

POSITIONS OPEN
HUMBOLDT STATE UNIVERSITY
COLLEGE OF NATURAL RESOURCES AND SCIENCES
Three Tenure-Track Faculty Positions are available in the Department of Biological Sciences beginning fall 1995. The successful candidate will be expected to establish and maintain an active research program in the area of specialty as indicated below and to participate in undergrad- uate education. A Ph.D. is required for the position. Applicants should send a curriculum vitae, a statement of research interests, and at least three letters of recommendation by January 15, 1995, to: Dr. David Nyffeler, Search Committee Chair, Department of Biological Sciences North Dakota State University College of Arts and Sciences, Fargo, ND 58102. North Dakota State University is an Affirmative Action/Equal Opportunity Employer.
National Institutes of Health • National Institute of Allergy and Infectious Diseases • Division of Acquired Immunodeficiency Syndrome

CHIEF

drug development and clinical sciences branch therapeutics research program

location: Bethesda, Maryland Announcement No.: AI-94-0089

the division of AIDS, Therapeutics Research Program, NIAID/NIH, is seeking a Chief for its newly established Drug Development and Clinical Sciences Branch. This individual is responsible for providing overall leadership for, and the general guidance, in the areas of preclinical development of experimental therapies: identification, validation, and standardization of immunologic and virologic markers; quality assurance programs and accreditation policies for immunology, virology, and pharmacology laboratories, and; initiative development to support immunology, virology, pharmacology, and drug development laboratory research as they relate to the DAIDS/NIAID HIV research agenda. The Division plans and directs a national and international extramural research program into the causes, diagnosis, prevention, and treatment of HIV and its associated sequelae.

Desirable qualifications include a Ph.D. and/or M.D. degree, extensive postgraduate research experience in the areas of virology, immunology, and/or pharmacology. Demonstrated ability to direct biomedical research efforts, strong management skills, broad knowledge of both basic and clinical research aspects of infectious diseases and an understanding of the policies, procedures, and mechanisms used within the Institute, DHHS, and PHS for accomplishing research through extramural activities. U.S. citizenship is required. NIH is an Equal Opportunity Employer. Position targeted for EEO recruitment efforts.

This is a GM-15 Civil Service position. A recruitment or relocation bonus of up to 25% of base pay may be available. Physicians may be eligible for a Physician's Comparability Allowance of up to $20,000 per year.

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

Persons interested in this position may contact Mr. Thomas Voskuhl, Associate Director for Program Operations, DAIDS, at 301-496-0545 or submit an SF-171 (Application for Federal Employment) and a curriculum vitae by December 31, 1994 to: Ms. Sheila Conner, NIAID Personnel Office, Solar Building, Room 4B15, 6003 Executive Boulevard, Rockville, MD 20852-7260 (301-402-0087).

State University of New York at Buffalo Department of Biochemistry

The Department of Biochemistry invites applications for tenure-track Assistant, Associate or Full Professor levels for TWO twelve-month, state-funded, tenure-track positions. Applicants should have a Ph.D. or M.D. degree and at least-doctoral experience. Although applicants from all areas of biochemistry or molecular biology are encouraged to apply, we are especially seeking candidates with expertise in molecular mechanisms of regulation in eukaryotic systems. Entry-level candidates should have demonstrated outstanding research ability and show promise for contributing to departmental and interdisciplinary training programs for graduate and professional students. Senior-level candidates should have an established, nationally recognized research program supported by major extra-mural funding. The Medical School enjoys interdisciplinary interactions with faculty throughout the University. The basic science departments in the Medical School are undergoing substantial expansion in faculty, concomitant with the opening in the summer of 1995 of a new 120,000 square-foot research building. A major structural biology program has also been initiated. These developments present an opportunity for determined scientists to advance their research goals in an exciting environment. Send a complete Curriculum Vitae, a statement of research interests and future plans, reprints of recent publications and the names, addresses and Fax numbers of at least three references to: Faculty Search Committee, Biochemistry Department, 146 Farber Hall, State University of New York, 3435 Main Street, Buffalo, NY 14214-3000. Screening will begin immediately. To be assured of full consideration, applications should be received by February 1, 1995. The State University of New York is an Equal Opportunity/Affirmative Action Employer.
FACULTY POSITION IN VASCULAR BIOLOGY

Applications are invited for a tenure-track position at the ASSISTANT/ASSOCIATE PROFESSOR level to join a core faculty forming a Program in Vascular Biology at the University of Connecticut Health Center School of Medicine. This is a multidisciplinary program that aims to bridge problems in advanced basic science problems in vascular biology. Preference will be given to applicants (Ph.D. or M.D.) with strong records in areas of endothelial or vascular biology using modern approaches. The successful candidate will be expected to develop an independent, externally funded research program, and participate in the teaching program. To apply, send curriculum vitae, detailed description of research interests, and the names of three individuals who might write in their behalf before January 15, 1995, to: Dr. Barbara E. Ehlert, Chair, Search Committee, Department of Physiology, University of Connecticut Health Center School of Medicine, 263 Farmington Avenue, Farmington, CT 06030-3505.

PLANT BIOLOGIST

A tenure-track position as ASSISTANT PROFESSOR is available 16 August 1995 in the Department of Biology at Marquette University. Applicants should have a minimum of one year of postdoctoral experience. The successful candidate must develop an independent research program that attracts extramural support and complement existing research programs in molecular or developmental biology, genetics, microbiology, or ecology. Teaching responsibilities include upper-division and graduate-level courses. A detailed description of proposed research should be sent to: Dr. Stanislaw C. Hartman, Department of Chemistry, Boston University, Boston MA 02215. Boston University is an Equal Opportunity/Affirmative Action Employer. We seek actively to attract women and minorities to our faculty.

BIOLOGY, TENURE-TRACK: Assistant/Associate Professor, Ursuline College. To begin fall 1995. Re- quired: Ph.D.; good communication skills; willingness to teach in collaborative setting at small liberal arts college. Must be able to teach courses in Applied Biology, Plant Science, Ecology. Preferred: Expertise and teaching experience in botany, ecology, freshwater biology; administrative interest (department chair rotates); experience incorporating computer-based learning, data analysis, simulations into course; extramural funds. Salary: high $20,000 (10 month contract). Send letter of interest, curriculum vitae, and three letters of reference to: Dr. Laurence Mazza, Chair, Division of Science, Ursuline College, 2550 Lander Road, Pepper Pike, OH 44124. Deadline: December 20, 1994. Ursuline College is an Equal Opportunity Employer/Minorities/Female/Disabled/Veterans.

The University of Vermont College of Medicine is seeking both applications and nominations for outstanding candidates for the position of PROFESSOR and CHAIR of the Department of Molecular Physiology and Biophysics. Current strengths of the Department exist in the study of biophysical structures and mechanisms of macromolecules and membrane control of smooth, cardiac, and skeletal muscle at the tissue, cellular and molecular level. Ph.D. or equivalent required. Candidates should have a demonstrated record of: leadership, excellence in teaching, and productivity in research, as demonstrated by publications.

Applications will be accepted until the position is filled. Review of the candidates will begin by 15 January 1995. Curriculum vitae and a letter of interest should be sent to:

Chair, Department of Physiology Search Committee
Chair, Department of Neurology
University of Vermont College of Medicine
E-109 Given Building
Burlington, VT 05405

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

CHAIRPERSON

WAYNE STATE UNIVERSITY
DEPARTMENT OF ANATOMY AND CELL BIOLOGY

The School of Medicine at Wayne State University (WSU) invites applications and nominations for the positions of CHAIR of the Department of Anatomy and Cell Biology. The department has strong research programs in the areas of vision and neuroscience. During fiscal years 1993-1994, the department generated net $2.7 million in research funding, which was expected to attract an individual who will complement and/or enhance our areas of expertise. Candidates should have a distinguished record of scientific achievement, proven administrative and leadership skills, and a commitment to quality teaching in the anatomical disciplines.

Applicants should submit a statement of interest, a curriculum vitae and a brief list of references no later than December 1, 1994, to: Gary W. Abrams, M.D., Chair, Search Committee, Kresge Eye Institute, 4717 St. Antoine, Detroit, MI 48201.

Wayne State University is an Equal Opportunity/Affirmative Action Employer. Wayne State University—People working together to provide quality service. All buildings, structures and vehicles at WSU are smoke-free.

CHAIR, DEPARTMENT OF PHYSICS
BOSTON COLLEGE

Boston College invites applications for the position of PROFESSOR and CHAIR of the Department of Physics. A distinguished professor with a proven record of professional accomplishment and a commitment to excellence in both undergraduate and graduate education is sought to guide the future development and expansion of the department. Candidates must have outstanding leadership abilities. Since strengthening scholarly research is among the highest priorities of the university, a demonstrated record of research and research funding is vital for the successful candidate. With highly competitive undergraduate and graduate programs and one of the most rapidly growing endowments in the United States, Boston College is in a unique position to offer this exciting and challenging career position. The Physics Department, with a present faculty of 10, offers B.S., M.S. and Ph.D. degrees in physics. The current faculty strengthens in solid state physics, but this could be augmented by adding new areas of specialization. The Chair will have the opportunity to profoundly influence all aspects of the development of the department including the planning for the upcoming expansion and renovation of facilities as well as the addition of several new faculty positions over the next few years at both junior and senior levels. Boston College is a liberal arts university in the Jesuit tradition that enrolls 14,500 undergraduate and graduate students at its attractive suburban campus six miles west of the center of Boston. Nominations and applications with appropriate supporting material should be sent to: Professor Christopher Hepburn, Chair, Physics Search Committee, c/o Office of the Dean, College of Arts and Sciences, Gasson Hall, Boston College, Chestnut Hill, MA 02167. Email: hepbumc@bc.edu. The deadline for application is January 13, 1995. However, the review of applications will begin December 9, 1994. Boston College is an Equal Opportunity, Affirmative Action Employer. Women and minority group members are encouraged to apply.

CHIEF OF GERONTOLOGY

The Portland, Oregon, Department of Veterans Affairs Medical Center, a Dean's hospital and closely affiliated with Oregon Health Sciences University, is seeking a distinguished academic leader to serve as CHIEF of the section of gerontology. Candidates should be experienced academic physicians with an excellent record of research, clinical and teaching skills and administrative accomplishments.

The appointment will be at the level of Associate Professor or Professor based on the candidate's qualifications. The position is available immediately. Kenneth Brummel-Smith, M.D., P.O. Box 1034, Attleboro, MA 02703, inquires. Applicants may be subject to drug testing. Interested Affiliates Medical Center is an Equal Opportunity Employer.
National Institutes of Health
National Institute on Aging
Postdoctoral Fellowship Positions

The Laboratory of Biological Chemistry located at the Gerontology Research Center in Baltimore, Maryland is seeking a postdoctoral fellow (Ph.D. or M.D.) interested in studying the regulation of chondrocyte gene expression using model systems related to chondrogenesis and cartilage repair. The project will focus on the characterization of chondrocyte nuclear factors that interact with previously identified regulatory sequences in the collagen II gene. The candidate should have training in cellular and molecular biology and have an interest in degenerative diseases of aging. Starting salary will be commensurate with qualifications and experience. For more information contact Dr. Walter E. Horton, Jr. at (410) 558-8154. Interested candidates should submit curriculum vitae, bibliography, reprints, summary of research interests and names of three references to: National Institute on Aging, Attn: Walter E. Horton, Jr., Gerontology Research Center, 4940 Eastern Avenue, Baltimore, MD 21224.

NIH is an Equal Opportunity Employer.

DIRECTOR,
STATEWIDE AIR POLLUTION RESEARCH CENTER
University of California, Riverside

Applications and nominations are invited for the position of Director of the Statewide Air Pollution Research Center (SAPRC) of the University of California, Riverside. The SAPRC is an Organized Research Unit within the University of California system, with responsibilities for research, and through appointments with academic departments, teaching at the undergraduate and graduate level. SAPRC’s research mission has historically focussed upon atmospheric processes, including the chemical processes involved in the formation of air pollution and subsequent reactions in air, plants, and other life forms.

Candidates should have a record of outstanding, internationally recognized research productivity in the general area of atmospheric processes and air pollution in the atmosphere, viewed in the broadest sense. Thus, we will also consider individuals with environmentally-related research accomplishments (e.g. research programs dealing with biogenic or anthropogenic chemical emissions, physical and chemical removal and transformation processes, and effects of chemicals and particles emitted or formed in the atmosphere on human health, vegetation, soil and water systems, and visibility).

It is expected that the successful candidate will hold a Ph.D. in Chemistry, Engineering, Physics, or a closely related field and have a research emphasis in the study of atmospheric processes. He or she will be expected to maintain an active and highly visible research program while providing leadership as Director of SAPRC. In keeping with the policy of integrating SAPRC research programs with the academic research and instruction activities of the campus, the Director also will hold a 50% tenured appointment at the Professor level in an appropriate academic department, where he or she will participate in the undergraduate and graduate instructional programs. A commitment to excellence in both teaching and research and a vision of the interconnections between SAPRC and academic programs in Chemistry, Environmental Science, Environmental Toxicology, and Environmental Engineering are especially important.

Evaluations of applications will begin January 15, 1995, but applications and nominations will be accepted until the position is filled. Applicants should send a complete resume and a statement of research interests, in addition to the names of five individuals who may be contacted for letters of reference to:

SAPRC Search Committee Chair
Office of the
Executive Vice Chancellor
University of California, Riverside
Riverside, CA 92521-0403

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

Gracey B. Kerr Endowed Chair in Biochemistry

The Department of Chemistry and Biochemistry, The University of Oklahoma, Norman Campus, seeks an outstanding individual to occupy the GRACEY B. KERR ENDOWED CHAIR in Biochemistry. Candidates must have a demonstrated record of research in any area of biochemistry, a strong record of research achievements, and a demonstrated commitment to undergraduate and graduate education. The successful candidate must qualify for a tenured professor appointment in the department. The Kerr Chair will occupy an actively renewed research space and will have continuing discretionary research funding. A Kerr Chair is responsible for providing academic leadership, fringe benefits, and start-up package will be offered. Applicants should submit a complete curriculum vitae including salary history, a description of teaching experience, a description of current research activities with plans for future work, and the names, addresses, telephone and fax numbers of three individuals who are willing to supply letters of reference. Review of applications will begin 15 January 1995 and continue until an appointment is made. Application materials should be sent to: Dr. David A. Young, Dean and Chair, Gracey B. Kerr Endowed Chair Search Committee, College of Arts and Sciences, University of Oklahoma, 601 Elm, Room 1100, Norman, OK 73019-1322. The University of Oklahoma is an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply. OU has a policy of being responsive to the needs of dual career couples.

EMORY UNIVERSITY

Dean of the Graduate School of Arts and Sciences

Emory University invites applications and nominations for the position of DEAN of the Graduate School of Arts and Sciences. Emory University currently enrolls approximately 10,000 students in nine schools, taught by 1,700 full-time instructional faculty, of whom 700 are graduate faculty. The Graduate School of Arts and Sciences enrolls 1,500 students and awards Master's and doctoral degrees in 23 fields of study. The Dean is responsible for providing academic leadership in all aspects of the graduate program, and representing graduate studies within the administration of the University. Candidates must have a record of teaching and scholarly engagement and a commitment to the academic excellence of the graduate school. The successful candidate will begin reviewing applications on January 1, 1995. Applicants should supply a letter detailing their interest and pertinent experience, together with a curriculum vitae. Applications and letters of nominations should be sent to: Professor Thomas S. Burns, Chair, Graduate School Search Committee, Department of History, Bowden Hall, Emory University, Atlanta, GA 30322. The search committee will begin reviewing applications December 15, 1994. Emory is an Affirmative Action/Equal Opportunity Employer.

CHAIR

Department of Genetics and Developmental Biology

University of Connecticut Health Center, School of Medicine

Applications are requested for the CHAIR of a newly created basic science department. The ideal candidate will be actively engaged in a research program in genetics or developmental genetics, and have the academic background required to ensure vigorous growth of a well-supported department. It is intended that the department should have a significant focus in mammalian genetics. Applications should include complete curriculum vitae and should be submitted by March 1, 1995 to: Ms. Deborah Woodbury, Department of Physiology, University of Connecticut Health Center, Farmington, CT 06030. An Affirmative Action/Equal Opportunity Employer. Minorities/Female/Disabled/Veterans.

MANSFIELD UNIVERSITY

SEeks to fill a full-time, TENURE-TRACK POSITION in Biology (Majors in Biology, Microbiology, and Physiology). Dedication to teaching of paramount importance. To apply submit a letter of intent, resume, transcripts, and three letters of recommendation. Applicants should be notified by March 1, 1995, to Position F-223, G-1 Alumni Hall, Mansfield University, Mansfield, PA 16933. An Affirmative Action Employer who encourages the applications of women, minorities, physically and mentally challenged.

ENDOWED EMINENT SCHOLAR

Faculty Postdoctoral Sciences

Georgia Tech in Atlanta

The Georgia Institute of Technology invites applications and nominations for an endowed, TENURE-TRACK FACULTY POSITION in Atmospheric Sciences. The position is endowed with a three million endowment to fund in part the Georgia Research Alliance, and appointment as FULL PROFESSOR in the School of Earth and Atmospheric sciences. In addition to his or her academic duties, the scholar will play a leadership role in linking environmental research to regional policy-making and economic development. The successful candidate is expected to have a record of scientific excellence, creativity, and leadership commensurate with an academic appointment at the highest level. Internationally recognized in one or more areas of the atmospheric sciences are invited to apply, especially those individuals with demonstrated ability to interact between the environmental policy-making community and the scientific community. Applications and inquiries should be forwarded to: Dr. William L. Chameides, Chair, Eminent Scholar Search Committee, College of Arts and Sciences, Georgia Institute of Technology, Atlanta, GA 30332-0340. Email: wcham@eas.gatech.edu. Telephone: (404) 894-1106. The Search Committee will be beginning the screening and interviewing candidates on January 15, 1995, and continue until the position is filled. Georgia Institute of Technology is an Equal Opportunity/Affirmative Action Employer and a Unit of the University System of Georgia.

MOLECULAR BIOLOGIST

Ohio Wesleyan University, a selective private college of 1,800 students, announces a TENURE-TRACK POSITION in Molecular Biology beginning August 1995. Ph.D. required, expertise in the study of biomolecules in a variety of modern laboratory techniques, and commitment to quality teaching of undergraduates at introductory to graduate level. The successful candidate is expected to work effectively with undergraduate research projects. Facilities include new SEM, PCR thermal cycler, BRL, vertical PAGE apparatus and power supply, PCR and sequencers. Additional support could be obtained by application for internal grants. The Ohio Wesleyan University has established research in signal transduction, cyclic nucleotide modulation and function of oncogenes. Successful candidates will be Board-certified/Board-eligible in Medical Oncology. Gene therapy is an area of interest. The region of Delaware, Pennsylvania, and New Jersey is a large tertiary care center providing comprehensive care for approximately 300 million people. Applications are invited to mail their curriculum vitae to 717-271-6988. An Equal Opportunity Employer.

UNIVERSITY OF CALIFORNIA AT BERKELEY

The Department of Psychology will be recruiting for five (5) positions over the next two years. During 1994-95, we are recruiting for (1) a senior level position in Cognitive Neuroscience in the position of the Biological/Neuroscience area; broadly defined. Both appointments will be effective July 1, 1995. For the latter position, all levels of appointment will be considered and our interests include, but are not limited to, behavioral neuroscience, cognitive neuroscience, behavior genetics, and neurophysiology. Skills and interests in teaching methodology and quantitative courses would be an asset for both positions. The specific areas and levels for the other three positions are yet to be determined. Applications for the stated positions must be postmarked by February 15, 1995, and are to include a curriculum vitae, selected reprints, and three letters of recommendation, sent to: Search Committee, Department of Psychology, 231 Tolman Hall, University of California, Berkeley, CA 94720-1650. Candidates should specify whether they wish to be considered for the Cognitive, Biological/Neuroscience, or both areas. California is an Equal Opportunity/Affirmative Action Employer.

HUMAN HEALTH AND ENVIRONMENTAL POLICY

The School of Public Affairs at the University of Maryland, College Park (UMCP) seeks applicants for a tenure/TENURE-TRACK POSITION at the assistant/associate professor level in Human Health and Environmental Policy broadly defined. A Ph.D./J.D., and/or equivalent and demonstrated interest and ability in analyzing public policy, required. For guaranteed consideration, resumes should be received by January 22, 1995, by: Peter G. Brown, Environmental Programs, School of Public Affairs, UMCP. Applications from women and minority candidates are especially encouraged.

MEDICAL ONCOLOGY

Geisinger Medical Center/Weis Center for Research is seeking a recently trained PHYSICIAN to practice medical oncology and do basic research in molecular genetics. This position is 50% clinical medicine and 50% research. Research time is protected and funded by an endowment. Research funds include budgeted monies for supplies and equipment. Both salary and a research support could be obtained by application for internal grants. The Weis Research Center has well established research in signal transduction, cyclic nucleotide modulation, and function of oncogenes. Successful candidates will be Board-certified/Board-eligible in Medical Oncology. Gene therapy is an area of interest. The region of Delaware, Pennsylvania, and New Jersey, is a large tertiary care center providing comprehensive care for approximately 300 million people. You can enjoy the advantages of living in a small town with low crime, good schools, and affordable housing costs while still practicing medicine and developing a research laboratory in a large urban-style academic medical center. Please send your curriculum vitae along with all inquiries to: Geisinger, Albert M. Bernath, M.D., Medical Oncology MO-75, 100 North Academy Ave. Danville, PA 17821. Applications may be faxed to 717-271-6988. An Equal Opportunity Employer/Male/Female/Disabled/Veterans.

FACULTY POSITION IN PHARMACOLOGY

The Department of Pharmacology is reopening its search to fill a full-time, TENURE-TRACK faculty position. Applicants are sought with active research programs in any aspect of pharmacology or related disciplines and should have demonstrated record of successful publication and extramural funding. In addition to maintaining a vigorous research program, particular attention will be given to the candidate of individuals who have interest and enthusiasm for teaching medical and graduate pharmacology. Salary and position will be based upon individual qualifications and experience. Candidates should send curriculum vitae, a brief statement of research interests and accomplishments, a record of grant funds, and a list of at least three references. Applications should be sent to: Professor Lynn C. Yeoman, Chairman, Faculty Search Committee, Department of Pharmacology, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030-3498. Baylor College of Medicine is an Equal Opportunity/Affirmative Action Employer.

Applications are invited for two Breast Cancer FACULTY POSITIONS with emphasis on translational research: One Ph.D. with molecular biology experience and one M.D. with clinical/laboratory interests, including cancer prevention and/or therapy.

Applications should submit a curriculum vitae and statement of research interests to: Dr. Hyman Muss, Comprehensive Cancer Center, Wake Forest University, Winston-Salem, NC 27157.
Postdoctoral Positions in BRCA1 Research

For more than 115 years, scientists at Eli Lilly and Company have been developing novel, high quality pharmaceutical products. With a current yearly investment of over $900 million in R&D programs, our continued success in reducing the time required to get new drug candidates to market requires the finest scientific talent available.

The Cancer Research Division at Eli Lilly and Company seeks outstanding and motivated individuals for postdoctoral positions within its breast cancer research group. The individuals we seek will be involved in projects focused on biological characterization of the newly-identified BRCA1 gene product (Science 266:66, 1994). Qualified candidates should have proven experience in either molecular biology, cancer or developmental biology. Individuals having considerable expertise with the yeast two-hybrid system, expression cloning and/or transcription factors are strongly encouraged to apply.

The Cancer Research Division is comprised of a group of highly interactive scientists. Successful candidates will complement ongoing research activities and will have opportunities to collaborate with different laboratories. Postdoctoral fellows are strongly encouraged to publish and to present their findings at national scientific meetings.

Qualified applicants should submit a letter of application along with their curriculum vitae, official transcripts and three letters of reference to: Albert L. Peyton, Ph.D., Corporate Recruitment SC/1125, Eli Lilly and Company, Lilly Corporate Center, Indianapolis, IN 46285.

Eli Lilly and Company is an equal opportunity employer committed to diversity in the workplace.

Director of Drug Safety Research
Upjohn Laboratories
Japan

The Upjohn Company, a multinational, research-based pharmaceutical company, is seeking a Director to lead the pathology, toxicology, safety, pharmacology and research animal support functions. This opportunity is in our modern, well-equipped, preclinical and pharmaceutical development laboratory located in a research park and university community in Tsukuba, Japan.

Qualifications include advanced biomedical training (DVM, PhD or equivalent), documented expertise in toxicology and/or pathology, experience in preclinical safety testing and registration of pharmaceutical compounds, and management skills. Fluency in Japanese and English is highly desirable.

Upjohn offers a competitive compensation and benefits package commensurate with the responsibilities of the position and the qualifications of the incumbent. For confidential consideration please send your curriculum vitae to: The Upjohn Company, Corporate Recruiting, Ad #237, 7000 Portage Road, Kalamazoo, Michigan 49001. We are an Equal Opportunity Employer with a commitment to workplace diversity.

Advancing Science... Enhancing Life

St. John's University

College of Pharmacy and Allied Health Professions

St. John's University invites applications and nominations for the position of Dean of the College of Pharmacy and Allied Health Professions. The Dean reports directly to the Provost, serving as the chief academic and budgetary officer of the College with responsibility for all of its academic programs.

St. John's University founded in 1870 by the Vincentian Community, is a Doctoral I University comprised of 8 schools and colleges. With more than 18,000 students, St. John's University is the largest Catholic University in the nation, offering more than 100 undergraduate and graduate majors. The University is located in a pleasant residential section of Queens, New York, approximately 10 miles from midtown Manhattan. The University is committed to academic excellence in teaching and scholarly research and to a core curriculum in the liberal arts and sciences.

At the baccalaureate level, the College of Pharmacy and Allied Health Professions seeks to prepare students to meet the present and future demands for pharmacists, physician assistants, medical technologists, toxicologists, and pathologist assistants. At the graduate level, the M.S., Ph.D. and two-year post baccalaureate Pharm.D. degrees are offered. The College currently has 43 full-time faculty, 25 adjunct faculty and utilizes the support of more than 300 pharmacy preceptors and affiliate allied health faculty practicing in approximately 125 affiliated training sites located in New York, New Jersey and Connecticut. The College has a strong basic science program supported by extramural funding.

The individual for this position will provide the leadership and vision necessary to support, expand and advance the College's educational, clinical and research programs within the context of the University's mission.

The successful candidate should possess the following qualities:

• the capacity to provide leadership in a competitive metropolitan learning environment
• an ability to integrate a dynamic and creative basic science and pharmacy practice faculty
• the desire to motivate, support and encourage faculty in the areas of scholarly achievement, research, development of innovative teaching methodologies, and strategic planning
• a commitment to academic excellence through a process of ongoing needs assessment
• a willingness to participate in and support the capital development of the University
• a sensitivity to the multicultural diversity of the University community
• a willingness to represent the College in professional activities

Candidates should possess the following credentials:

• the first professional degree in pharmacy and professional experience outside the academic setting
• an earned doctorate with a distinguished record of teaching, research and servicequalifications consistent with the requirements for the rank of full professor
• established excellence in interpersonal and administrative skills
• participation and achievement in professional organizations and grantmanship

Applications should include a brief statement of interest, a curriculum vitae, the names, titles, addresses and telephone numbers of 3 to 5 references. Screening of applications will begin January 3, 1995, with the anticipation of a July 1, 1995, appointment.

The position has a salary range commensurate with qualifications and experience. Send application or nomination to:

Dr. William P. Gingerich, Dean
Graduate School of Arts and Sciences • Chair, Search Committee
St. John's University • 8000 Utopia Parkway • Jamaica, New York 11439
St. John's University is an Equal Opportunity/Affirmative Action Employer.
POSTDOCTORAL AND PREDOCENTOR POSITIONS

Sloan Clinical Neurobiology
University of California, San Francisco (UCSF)

The newly formed Sloan Center for Theoretical Neurobiology at UCSF solicits applications for pre- and postdoctoral fellowships, with the goal of bringing theoretical approaches to bear on neuroscience. Applicants should have a strong background and education in a theoretical discipline, such as physics, mathematics, or computer science, and a commitment to a future research career in neurobiology. Prior biological or neuroscience training is not required. The Sloan Center will offer opportunities to combine theoretical and experimental approaches to understanding the operation of the intact brain. The research undertaken by the trainees may be theoretical, experimental, or a combination.

The resident faculty of the Sloan Center are Allison Doupe, Stephen Lisberger, Michael Merzenich, Kenneth Miller, Roger Nicoll, Christoph Schreiner, and Michael Stryker. All have research programs in systems and integrative neuroscience. In addition, there will be a series of visiting faculty. These include Lawrence Abbott, Brandeis University; William Bialek, NEC Research Institute; Sebastian Seung, ATT Bell Labs; David Sparks, University of Pennsylvania, and others to be named.

To apply, please send a curriculum vitae, a statement of previous research and research goals, up to three relevant publications, and two letters of recommendation sent to: Steve Lisberger, Sloan Center for Theoretical Neurobiology at UCSF, Department of Neurology and Neurological Science, University of California, San Francisco, CA 94143-0444. UCSF is an Equal Opportunity/Affirmative Action Employer.

THE NEUROSCIENCE INSTITUTE

LA JOLLA

Behavior and Neural Development

Applications are invited for the POSTDOCTORAL POSITIONS in the area of neuroscience that studies the neural correlates of species behavioral differences in birds. Applicants with a background in any area of developmental or experimental neurobiology will be considered. Fellows will be expected to focus on their own research interests and on their qualifications and experience. Submit a curriculum vitae, statement of research interests, and names of three references to: The Neuroscience Institute, 3377 North Torrey Pines Court, La Jolla, CA 92037. FAX: 619-554-9159; Email: balaban@nisi.edu.

POSTDOCTORAL RESEARCH ASSOCIATE

FISHERIES OCEANOGRAPHY

The Pelagic Fisheries Research Program (PFPR), a cooperative among the John A. and Cari McMillan Lounsbury Foundation, the University of Washington, and the University of British Columbia, is seeking a Postdoctoral Research Associate to study the full suite of ocean phenomena affecting pelagic species. Responsibilities include development and application of ocean models and/or satellite data to improve understanding of these species’ distributions. The successful applicant will be expected to publish their results in peer-reviewed journals and present them at national and international meetings. Please submit a curriculum vitae and a statement of research interests to: Dr. John H. Bruton, Department of Zoology, University of British Columbia, Vancouver, BC, Canada V6T 1Z4. Applications should be submitted by December 23, 1994.

POSTDOCTORAL POSITION

SPIROCHETE GENETICS

Health Research, Inc., seeks a POSTDOCTORAL POSITION to work within the New York State Department of Health, Asbestos Initiative, to study the molecular aspects of spirochete motility and pathogenesis. The NIH-funded project is focused on the identification and characterization of motility genes of Treponema phagedenis and Treponema pallidum, the causative agents of syphilis. Their primary interest is in genes that govern the motility of these unique organisms. The lab is fully equipped and is supported with extensive core facilities in Genetics, Immunology, Biochemistry, and Computer Sciences. Doctorate or equivalent degree required. Experience in molecular biological techniques would be highly beneficial. Candidates should send a curriculum vitae, statement of research interests and career goals, and names of three references to: Ronald J. Limberger, Ph.D., W165, Aerodox Institute, NYS Department of Health, P.O. Box 22002, Albany, NY 12201-2002, or Email: Ron.Limberger@waldsworth.org.

POSTDOCTORAL POSITION

BIODIVERSITY/ENVIRONMENTAL CHANGE

A 12 month position available immediately for a recent Ph.D. to conduct experimental studies of the functional significance of biodiversity in changing environments. We seek an individual interested in using aquatic protists in laboratory microcosms to explore population, community, and ecosystem processes. Previous experience with protists is desirable, but not necessary. All requirements for the position will be met within the time of appointment. Send curriculum vitae, statement of research interests, and names of three references to: Dr. Peter Morin, Department of Biology, University of New Hampshire, 5 Lincoln Laboratory, Rutgers, The State University of New Jersey, Piscataway, NJ 08855-1059. Rutgers is an Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL POSITION

MOLECULAR GENETICS OF HYPERSENSITIVITY

Available for the identification of genes controlling blood pressure in genetically hypertensive rats. Techniques include library construction and screening, cloning, RFLP analysis, PCR, DNA sequencing, linkage analysis, positional cloning and construction of congenic strains. Applicants must have a Ph.D. Experience in molecular biology and/or genetics is desirable. Send curriculum vitae to: Dr. John J. Fung, Department of Physiology and Molecular Medicine, Medical College of Ohio, P.O. Box 10008, Toledo, OH 43699. An Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL POSITION

TO STUDY THE MOLECULAR MECHANISMS INVOLVED IN EPIDEMIC GROWTH FACTOR RECEPTOR-MEDIATED SIGNALING IN CARCINOMA CELLS

The John A. and Cari McMillan Lounsbury Foundation (JALLF) seeks applicants for the position of Postdoctoral Fellow to study the molecular mechanisms involved in the activation of receptor-mediated signaling in carcinoma cells. The successful applicant will be expected to publish their results in peer-reviewed journals and present them at national and international meetings. Please submit a curriculum vitae and a statement of research interests to: Dr. Sunny K. Patel, Department of Pharmacology, University of Toronto, Toronto, Ontario, Canada M5G 1X8. Applications should be submitted by December 23, 1994.

POSTDOCTORAL POSITION

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POSTDOCTORAL POSITION

POSTDOCTORAL POSITION available immediately for studies in the ecology of Alzheimer’s Disease (AD) and other neurodegenerative disorders. This position is a part of a large interactive group that has been in the forefront of unraveling the genetic epidemiology of AD. The lab utilizes genetic and molecular techniques to elucidate additional AD genes, examination of interaction between known AD loci, and developing new methods of screening for disease genes in complex disorders. 

Prerequisites: Ph.D. in genetics or biostatistics with a strong background in the other.

Contact: Dr. Margaret A. Percivac-Vance
Division of Neurology
Duke University Medical Center
Durham, NC 27710
919-684-6274

POSTDOCTORAL POSITIONS are available to study the control mechanisms of gene expression and signal transduction of two human cytokines, interleukin (IL)-9 and IL-11. Candidates with background in molecular biology, virology, or biochemistry will be considered. We are interested in understanding the role of these factors, should send curriculum vitae and addresses of three references to: Dr. Yu-Chung Yang, Departments of Medicine (Hematology/Oncology) and Biochemistry/Molecular Biology, Wolfer Oncology Center, Indiana University School of Medicine, 722 West Washington Street, Indianapolis, IN 46202. Telephone: 317-274-7512; FAX: 317-274-7592.

POSTDOCTORAL POSITIONS

Four to five positions are available immediately to work on: 1. The photoinduced toxicity of priority pollutants, primarily PAHs, to animals, plants and microbes; and 2. UV-B impacts on plants. Both projects will be carried out at the biochemical, cellular, and tissue levels. Send curriculum vitae and the names of three references to: Dr. Bruce Greenberg, Department of Biology, University of Waterloo, Waterloo, ON N2L 3G1 Canada. Telephone: 519-888-4567 x3209; FAX: 519-746-0616; E-mail: greenber@biology.watson.uwaterloo.ca. These appointments are for one-year terms with extensions possible based on the availability of funds.

POSTDOCTORAL POSITIONS

The Interferon System; Tumor Suppressor Genes

Applicants are invited for the exploration of the mechanisms of the antiproliferative and antiviral activities of interferon and other interferon-activatable genes. Applicants should be proficient in NTA techniques.

Send resume and three references to: Dr. Peter Lengyel, Department of Molecular Biophysics and Biochemistry, C-16 STIM, Yale University School of Medicine, 333 Cedar Street, New Haven, CT 06520-8024 USA.

POSTDOCTORAL POSITION VERTEBRATE DEVELOPMENT

Immediate opening to explore the vertebrate alcohol/retinol dehydrogenase gene family, including studies on gene regulation, retinoid acid synthesis during embryogenesis, role of alcohol dehydrogenase in alcohol-related tumors.

Contact: Dr. Gregg Duester, La Jolla Cancer Research Foundation, 19091 North Torrey Pines Road, La Jolla, CA 92037.

POSTDOCTORAL POSITION

MOLECULAR BIOLOGY

A POSTDOCTORAL POSITION is available to study the molecular biology of breast cancer. This position focuses on the function of breast cancer-related suppressor genes and the effect of mutations in these genes. Experience in molecular biology required. Preference will be given to candidates with experience in expression cloning and structure-function analysis. Send curriculum vitae, description of past experience and names and addresses of three references to: Barbara L. Weber, M.D., Departments of Medicine and Genetics, University of Pennsylvania, 1009 BB 1, 422 Curie Boulevard, Philadelphia, PA 19104. Fax: 215-746-7617.

An Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL FELLOWSHIP

CEREBRAL MICROVASCULAR DISEASE/BLOOD-BRAIN BARRIER

UCLA Brain Research Institute and Neuropsychiatry.

NRSA Institutional Training Program supports POSTDOCTORAL RESEARCH FELLOWSHIP (one year) in cerebral microvascular disease, including age-related changes, vascular dementia, blood-brain barrier. Background in morphologic techniques, immunohistochemistry, and molecular biology preferred. Competitive salary commensurate with postdoctoral experience. Applicants must be U.S. citizens or permanent residents of U.S. and/or Ph.D. Position available late 1994/early 1995. Send curriculum vitae, representative publications and names of references to: Dr. Harry V. Vinters, Department of Pathology, UCLA Medical Center, CHS 18-170, Los Angeles, CA 90024-1732. An Equal Opportunity Employer.

POSTDOCTORAL POSITIONS IN

MOLECULAR AND CELLULAR BIOLOGY

To study the bombesin-like peptides (BLP). Projects include 1) Cloning of new bombesin-like peptides and their receptors; 2) Characterization of the role of BLP in neuroendocrine development; 3) Characterization of the role of BLP in fertilization and the acrosome reaction. Methods include PCR cloning, expression cloning, protein purification, and single cell imaging. Applicants should have a background in molecular biology, neurobiology, lung development or signal transduction and cloning, preferably in animal systems. Send curriculum vitae and the names of three references to: Elliot Spindel, M.D., Ph.D., Division of Neuroscience, Oregon Regional Primate Research Center, 505 NW 185th Avenue, Beaverton, OR 97006, An Equal Opportunity Employer.

POSTDOCTORAL POSITION available immediately for NIH-supported project on the role of the secreted Topoplaxa gondii nodule transcrip- tosephate hydratase, using recently developed molecular techniques. Practical experience in molecular biology required.

Send curriculum vitae and addresses of three references to: Dr. Keith Joiner, Chief, Section of Infectious Diseases, LCI 808, S33 Cedar Street, P.O. Box 20822, Yale University School of Medicine, New Haven, CT 06520-8022. Telephone: 203-785-4140; FAX: 203-785-3864. Yale University is an Equal Opportunity Employer. Women and minorities are encouraged to apply.

POSTDOCTORAL POSITION available immediately to study gene expression from recombinant La Crosse-Sindbis virus in vertebrate and invertebrate systems. Send curriculum vitae and the names of three references to: Dr. Eric W. Tripplett by mail (Agronomy Department, University of Wisconsin, Madison, WI 53706) or E-mail: tripplett@ mac.wisc.edu, or FAX: 608-262-5217.

POSTDOCTORAL POSITIONS

In Molecular and biocatalytic Immunology

Employ pH-dependent cytosolic and lysosomal proteinases (granzymes) in cell killing. Experience in protein purification or molecular biology desired. One position available immediately. Send curriculum vitae, names of three references to: Dorothy Hudig, Ph.D., Cell and Molecular Biology Program, MS 320, University of Nevada, Reno, NV 89557. Affirmative Action/Equal Opportunity Employer.

POSTDOCTORAL POSITION available to work on mechanisms of chromosome synopsis and segregation during meiosis in yeast. Experience in genetics and molecular biology required. Send curriculum vitae and the names of three references to: Nancy Hollingsworth, Department of Biochemistry/Cell Biology, SUNY Stony Brook, Stony Brook, NY 11794-5215. SUNY Stony Brook is an Affirmative Action/Equal Opportunity Employer and Educator.

Research Scientist

Stanford University Biochemistry

The Department of Biochemistry is seeking four Research Scientists and/or Postdoctoral Fellows to work in an exciting interdisciplinary project at the Stanford Center for DNA Sequence and Technology. The immediate goal is to improve DNA sequencing, and to participate in the development of new technologies and instrumentation for large scale automated sequencing. This post is included in these technologies is a collaboration with Affymetrix for the analysis of sequence data by hybridization to arrays of immobilized oligonucleotides (DNA chip). These technologies will also be applied to work on sequence analysis to investigate many aspects of biological function. The Center consists of an interdisciplinary team of 25 scientists and engineers committed to improving efficiency of sequencing, sequence analysis and new applications using whole genome sequences.

Qualifications include: Ph.D. or postdoctoral training in biochemistry, chemistry, chemical engineering, physics, electrical and mechanical engineering, mathematics or computer science. The candidate should have some knowledge of functional molecular biology, and good computer skills. Must possess a wide range of scientific and technical interests, the ability to solve scientific and technical problems, and the ability to apply them to fundamental biological problems related to human health. Must work effectively as a group member and in cooperation with a diverse group of dedicated scientists and engineers. Must comply with government regulations and university procedures regarding health and safety procedures.

Send curriculum vitae and references to Ronald W. Davis, Ph.D., Stanford Center for DNA Sequence and Technology, Department of Biochemistry, 855 California Avenue, Menlo Park, CA 94304.

Coordinator of Undergraduate Studies in Zoology

Tenure-track Assistant or Associate Professor position open Fall 1995 for a Coordinator of Undergraduate Studies to teach the Introductory Zoology course and supervise academic advising of undergraduates. Introductory Zoology is a large lecture course for majors and non-majors. Teaching will generally include one course a semester and potentially several courses in the candidate’s specialty will be provided. A research program is also expected. Preference given to candidates with interest in teaching and interests support the undergraduate curriculum in cell and developmental biology, genetics, physiology, or anatomy.

AQUATIC ECLOGIST

Tenure-track Assistant Professor position open Fall 1995 for an aquatic ecologist, working on biological aspects of freshwater systems. Successful candidate will strengthen our graduate program in ecology, evolution, systematics, and animal behavior and should be interested in faculty interests in these areas. Access to facilities at the OU Biological Station on Lake Texoma will also be provided. The position is open to all qualified individuals and will generally be one course a semester to include limnology, general ecology, and graduate courses in the candidate’s specialty. A course at the introductory level may be an occasional responsibility.

Candidates must have Ph.D. with proven record of excellent teaching and research abilities (demonstrated by publications and presentations) and preference for excellence in teaching. Screening begins 15 January 1995 and will continue until positions are filled. Send vitae, four letters of recommendation, and copies of publications and reprints, summary of teaching experience and description of research interests to: Dr. James N. Thompson, Jr., Chair, Department of Zoology, University of Oklahoma, Norman, OK 73019.

AN EQUAL OPPORTUNITY/AFFIRMATIVE ACTION EMPLOYER. OU HAS A POLICY OF BEING RESPONSIVE TO NEEDS OF DUAL-CAREER COUPLES.

SCIENCE • VOL. 266 • 25 NOVEMBER 1994 1437
POSTDOCTORAL POSITION OPEN

**Department of Molecular and Immunology**
University of British Columbia

Two positions are available in a collaborative project with J. A. Hoch, Scripps Research Institute, to study the structure and function of the *Baxillus subtilis* response regulator, SpoOA. The work will utilize a range of available bioinformatics tools in accordance with Canadian immigration requirements, priority will be given to Canadian citizens and permanent residents.

Send curriculum vitae with names of references to: G. Spiegelman, Department of Microbiology and Immunology, University of British Columbia, Vancouver, B.C. V6T 1Z4, Canada. FAX: 604-822-0441; email: spies@unixg.ubc.ca.

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**POSTDOCTORAL POSITIONS IN BIOMOLECULAR NMR**

Two POSTDOCTORAL POSITIONS are open in the areas of multidimensional NMR and biochemical studies of DNA polymerase β, y-resolvase and related DNA recombines, and other nucleic acid interactive proteins. Applicants should have experience in NMR techniques and a biochemical background. Research facilities include a biochemistry and a molecular NMR laboratory equipped with new 4-channel 600 MHz and 500 MHz NMR spectrometers, and a molecular graphics/workstation/simulations curriculum vitae. Applicants should send three references to: Dr. Greg Mullen, Department of Biochemistry, UCONN Health Center, Farmington, CT 06032. Initial review will be upon receipt of application. Applications are reviewed on a continuing basis.

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**POSTDOCTORAL POSITIONS IN HUMAN GENOME RESEARCH**

PH.D./M.D. POSITIONS to isolate and characterize genes associated with breast cancer, Wilms' tumor, leukemias, retinopaths, and deafness. Also, positions available in biological and computational mapping of human chromosome 11. Experience in molecular genetic and genome technology is required. Please send curriculum vitae, a research description and future interests and names and telephone numbers of three references to: Thomas B. Shows, Ph.D., Chair, Department of Human Genetics, Roswell Park Cancer Institute, Buffalo, NY 14263. Roswell Park is a Minority/Female/Disabled/Veteran Employer.

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**POSTDOCTORAL CLINICAL RESEARCH FELLOWSHIPS**

At Harvard Medical School, Consolidated Department of Psychiatry, NIMH-funded POSTDOCTORAL FELLOWSHIPS are available for independent research under supervision of experienced clinical researchers in biological and social/developmental fields, including seminar courses at nearby medical schools. Applicants are encouraged to visit the program in person, and apply for a position in any of the fields. Successful applicants will be expected to have a Ph.D., M.D., or equivalent, and have completed their training within the last 5 years. Interested candidates should send a curriculum vitae, letter of interest, and three letters of reference to: PhD/MD Program, 665 Huntington Avenue, Boston, MA 02115. 617-734-0031. Minority applicants encouraged.

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**POSTDOCTORAL FELLOWSHIP AT THE SANTA BARBARA INSTITUTE**

The Santa Fe Institute (SFI) has an opening for one or more POSTDOCTORAL FELLOWS in its Simulation, Adaptive Computation and Complex Systems Programs beginning in September 1995. These fellowships will last for one year, with the possibility of renewal for a second year.

The Simulation, Adaptive Computation, and Complex Systems Programs are interdisciplinary efforts focusing on adaptive evolutionary systems. Researchers with interests in adaptive systems and on computational aspects of their study. The programs include adaptive computation and artificial intelligence; the development of general-purpose simulation software and a development of organization modeling and analytic object libraries; and the theory of complex systems. They overlap strongly with SFI research on economics as a complex adaptive system, the physics of information, modeling the immune system, the evolution of culture, and artificial life.

Candidates should have a Ph.D. (or expect to receive one before September 1995) and should have background in computer science, mathematics, economics, theoretical physics or chemistry, game theory, cognitive science, or other relevant fields. Evidence of previous research experience and publications is helpful.

Applicants should submit a curriculum vitae, list of publications, and statement of research interests, and arrange for three references to be sent. Incomplete applications will not be processed.

All application materials must be received by February 1, 1996. Review will continue until suitable candidates are found. Applications sent by electronic mail to: postdoc@santafe.edu. SFI is an Equal Opportunity Employer.

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**POSTDOCTORAL FELLOWSHIPS**

(Re-advertised), School of Ocean and Earth Science and Technology, University of Hawaii, extramural funds. Available immediately, September 30, 1995; renewal dependent upon continuation of funding and participation. Postdoctoral research involves high-resolution measurements and processing of seismic reflection data using digital signal processing techniques. Experience in data analysis and computer skills helpful.

Send applications to: Postdoctoral Committee, Santa Fe Institute, 1399 Hyde Park Road, Santa Fe, NM 87501. Applications may also be sent by electronic mail to: postdoc@santafe.edu.

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**ALZHEIMER’S RESEARCH PROGRAM**

This project will undertake research on the simulation of the bacterial genetics and adaptive response of the bacterium *Bacillus* subtilis. The project will involve the use of molecular biology and evolutionary theory to study the mechanism of initiation and regulation of DNA replication in *B. subtilis*. Send curriculum vitae, brief description of prior research experience, and the names of three references to: Dr. Garret M. Ihler, Department of Medical Biochemistry and Genetics, Texas A&M University Health Science Center, College Station, TX 77843-1114. Equal Opportunity/Affirmative Action Employer.

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**ASSISTANT RESEARCH SCIENTIST**

POSTDOCTORAL FELLOWSHIP FOR ALZHEIMER’S RESEARCH PROGRAM

Department of Neurology, University of Kuopio, Kuopio, Finland, is seeking POSTDOCTORAL FELLOWS. We need an innovative scientist with skills in molecular biology, immunohistochemistry and in situ hybridization techniques. In situ hybridization is an innovative method by which the nonhuman primate brain is reviewed. The Neuroscience Center of 50 people in Kuopio has excellent facilities, up-to-date equipment, and 15 years of experience in Alzheimer’s research. Our Alzheimer’s Research Program is supported by the Academy of Finland. Salary will be accorded to an adequate degree. Further information: Hilkka Soininen, M.D., telephone: 358-71-15248; fax: 358-71-162048; internet: Hilkka.Soininen@uku.fi.

Send curriculum vitae, statement of your research interests, list of publications, and names of three references to: Dr. Paukko Riekkinen, Department of Neurology, University of Kuopio, P.O. Box 1627, 70211 Kuopio, Finland.

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**UCLA GLOBAL CHANCE PROGRAMS & FELLOWSHIPS**

The UCLA Consortium for Global Change and Regional Impacts has established a continuing series of doctoral fellowships awarded on a competitive basis for the period of December 1994 to December 1995. Fellowships are available to students who have demonstrated potential in their chosen field of study. Applications are reviewed on a continuing basis.

Applicants should submit a curriculum vitae, list of publications, and statement of research interests, and arrange for three letters of recommendation to be sent. Incomplete applications will not be processed. All application materials must be received by February 1, 1995. Review will continue until suitable candidates are found. Applications sent by electronic mail to: postdoc@atmos.ucla.edu; 310-206-9386. An Equal Opportunity/Affirmative Action Employer.

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**ASSISTANT RESEARCH SCIENTIST**

POSTDOCTORAL FELLOWSHIP IN BIOCHEMISTRY

School of Biological Sciences
University of Missouri-Kansas City

Positions are available immediately to study structural determinants of recognition in (1) gene regulatory complexes and (2) viral assemblies. Background in either biochemistry/biophysics of nucleoproteins or spectroscopy of molecular assemblies is preferred. English proficiency is required. Applications should include curriculum vitae and names and addresses of three references to: Dr. Patricia Morris, The Population Council, Center for Biomedical Research, 1230 York Avenue, New York, NY 10021. Email: p-morris@popcrb.rocket.

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**ASSISTANT RESEARCH SCIENTIST**
**In-vivo Synaptic**  
**Neurophysiology with PET**  
**Montreal Neurological Institute**  
**McGill University**

The Montreal Neurological Institute invites applications for a tenure-track position at Assistant or Associate Professor level. We are seeking an individual with expertise in the use of PET to study receptor/transmitter mechanisms underlying human neuropathology and normal brain function. The successful candidate would be expected to develop a strong independently-funded research program as well as fulfilling the responsibilities of a senior team member within a larger group of PET researchers.

The MNI has a well-established Neuroimaging group with numerous links to the clinical/basic research groups in the McGill and Montreal academic communities, a new 8-target medical cyclotron and an extensive image analysis environment. Candidates should submit a curriculum vitae, a brief statement of research interests and arrange for three letters of reference to:

Dr. Alan Evans  
Chairman  
Synaptic Neurophysiology Search Committee  
Montreal Neurological Institute  
3801 University Street  
Montreal, Quebec, Canada H3A 2B4

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**Manager of Fermentation**

Duties are: to directly supervise production technicians in the BUC area, including Wellferon 60 liter reactor, Gel preparation and Sendai preparation; responsible for large scale production of Wellferon, for the timely and efficient delivery of quality Sendai to the production area, for the timely and efficient make up of gel for the production areas, including monitoring of gel quality, inventory and replacement, and all process data management; assist in preparation of manufacturing specifications; adhere to government (U.S., U.K. & Spain) and company mandated regulatory, health and safety procedures; technical problem solving; assist in technology transfer projects; manage manufacturing related or expansion projects; generate documentation and maintain production logs; participate in training of workers and hiring process of quality technicians; conduct performance appraisals; prepares reports; assists in maintenance of working cell bank. Special requirements: Must have an M.B.A. or equivalent, a Bachelor's degree in Virology or related field, five years of experience in pharmaceutical/biotech manufacturing, experience with large scale mammalian cell culture operations, pharmaceutical validation requirements, BUC(s), Gel preparation, Sendai, senior purification, clean room operating procedures, combination of multiple interferons, and manufacturing related computer systems, and knowledge of FDA, GMP, GLP and CPMP regulations.

Position located in West Greenwich, Rhode Island. Salary $80,000.00 per annum; 40 hours per week. Send resume only to:

**Research Associates**

At Amgen, you'll discover a research environment that emphasizes collaboration, intellectual honesty, scientific integrity, and a supportive culture. This unique approach has helped us grow into a global biotechnology leader in just thirteen years.

**PHARMACEUTICS**

Two positions are available for Biopharmaceutical Chemists to formulate protein drug candidates. Both positions require 2+ years' experience and a BS in Chemistry, Biochemistry, Pharmaceutical Chemistry, or related field. Experience with proteins and HPLC is highly desired. Knowledge of protein conformation, folding, and other physical properties is important. Excellent communication skills and the ability to work in a team environment are essential. (Job Code: OXP-SC-2108-S)

**PROTEIN STRUCTURE**

This position requires either 5 years' experience (with a BS) or 2 years' experience (with a MS) in broad aspects of Protein Chemistry but specifically in protein identification and characterization. Candidates must demonstrate ability in electrophoresis (both 1D- and 2D-PAGE) and related techniques, HPLC, and amino acid sequence analysis of proteins. (Job Code: OXP-SC-1876)

At Amgen, you'll find our approach to scientific research as rewarding as it is effective. We offer a highly competitive compensation and benefits package that includes a retirement and savings plan, an on-site fitness center, and three weeks' vacation. Please mail your resume/c.v. to: Amgen Inc., Staffing, Job Code (see above), Amgen Center, Thousand Oaks, CA 91320-1789. Principals only, please. EEO-Affirmative Action Employer M/F/D/V. We recognize that diverse perspectives are a key factor in the process of discovery.
Bracco Research USA, the U.S. research and development labs of Bracco s.p.a., one of the world's largest in vivo diagnostics companies, has an opening in the Chemical and Biological Evaluation department for a CELL BIOLGIST. You would be a member of a multidisciplinary team evaluating the performance of in vivo diagnostic agents. You will have a Ph.D. in cell biology with at least two years of experience. You should have a good knowledge of mammalian cell culture techniques and an interest in the new forms of drug discovery. Bracco Research USA offers a competitive salary and a generous benefits package including a company matching 401k plan. Please send a letter of introduction and your resume to: J. Dalton, Bracco Research USA, P.O. Box 5225, Princeton, NJ 08543-5225. Bracco Research USA is an Equal Opportunity Employer.

ASSOCIATE RESEARCH SCIENTIST. The Division of Pediatric Hematology/Oncology seeks a Ph.D. with experience in cell biology to participate in studies of red cell enzymes. Submit curriculum vitae and three references by FAX (212-305-5848) to: Sergio Piomelli, M.D., Columbia University, College of Physicians and Surgeons, 630 West 168th Street, New York, NY 10032. Columbia University is an Equal Opportunity/Affirmative Action Employer. We are particularly interested in women and minority candidates.

ASSISTANT RESEARCH SCIENTIST: OCULAR IMMUNOLOGIST. The Department of Ophthalmology, University of Florida, is seeking applications for a full-time Assistant Research Scientist. Candidate must have a Ph.D. in immunology or a related area and two years of postdoctoral experience in cellular immunology, autoimmune disease, and the visual system essential; experience with cancer-associated retinoviruses and retinitis is a plus. Must be able to collaborate with and complement expertise of existing personnel and establish an energetic grant-supported research program. Recruiting deadline December 31, 1994; anticipated start date February 1, 1995. Salary negotiable. Send letter of application, curriculum vitae and names and addresses of three references to: Paul A. Hargrave, Ph.D., Professor, Department of Ophthalmology, Box 100284 JHMHC, University of Florida, Gainesville, FL 32610-0284. The University of Florida is an Equal Opportunity/Affirmative Action Employer.

LECTURER IN BIOLOGICAL SCIENCES (Position No. P29010). The Department of Biological Sciences, University of Nevada, Las Vegas (UNLV), announces two positions for an on-tenure track faculty position as LECTURER in Biological Sciences. Responsibilities will include lecturing in and coordinating laboratory courses in biology. Experience in and commitment to undergraduate biology instruction is expected. Preference will be given to applicants with a Ph.D. degree in one of the life sciences. Salary is competitive and the position will begin in the fall semester 1995. Send curriculum vitae, a letter describing teaching philosophy and arranging three letters of recommendation to be sent to: Dr. Stanley Hillyard, Department of Biological Sciences, University of Nevada, Las Vegas, Box 454004, Las Vegas, NV 89145-4004. FAX: 702-895-3956. Review of applications will begin January 31, 1995, and will continue until the position is filled. UNLV is an Equal Opportunity/Affirmative Action Employer and employs only U.S. citizens and aliens authorized to work in the United States.


MOLECULAR RESEARCH INSTITUTE RESEARCH STAFF SCIENTIST POSITIONS

The Molecular Research Institute, a multidisciplinary research facility established by the University of California, Los Angeles (UCLA) through support from the National Institutes of Health, is offering positions for postdoctoral fellows and an associate professor in the following areas: (1) Investigate the structure and function of the immune system, particularly as it relates to human disease; (2) Investigate the structure and function of the immune system, particularly as it relates to human disease.

MOLECULAR BIOLOGY AND IMMUNOLOGY

Predoctoral and Postdoctoral Training in Virology

The Department of Microbiology and Immunology at UCLA School of Medicine invites applications for training positions in the following areas: (1) Animal blood products, including antigens, antibodies, and their associated enzymes; (2) Animal blood products, including antigens, antibodies, and their associated enzymes; and (3) Animal blood products, including antigens, antibodies, and their associated enzymes.

VASCULAR MEDICINE/BIOLOGY FACULTY POSITIONS

Harvard-Thorndike Laboratories

Baylor College of Medicine

Cardiovascular Division

The Cardiovascular Division at Beth Israel Hospital is inviting applications from M.D. or Ph.D. SCIENTISTS for faculty positions in our Program in Vascular Biology. These faculty positions will complement existing interests in thrombosis, angio genesis, and vascular repair; investigators working in these or related areas (e.g., vascular development, atherosclerosis) are particularly encouraged. The successful candidate will be expected to establish an independent laboratory supported by extramural funding. The research laboratories of the Program will be located in newly renovated laboratories that are part of the Harvard-Thorndike Laboratories of Beth Israel Hospital. The level of appointment and salary will be commensurate with experience.

Please send a detailed curriculum vitae, future research plans, relevant reprints, and names of references to: J. Anthony Ware, M.D., Cardiovascular Division, Beth Israel Hospital, 330 Brookline Avenue, Boston, MA 02215.

FLOW CYTOMETRY SPECIALIST: The Salk Institute is seeking a Flow Cytometry Specialist to be responsible for operation and maintenance of a Becton-Dickinson FACStar-plus cell sorter, a FACScan analytical cytometer, and an associated FACStarplus. A Macintosh Quadra, Sun Microsystems SPARC Station 2, Hewlett Packard ColorJet, and IBM PC 486 clone. The position would involve troubleshooting, experimental design and the interpretation of flow cytometry data. The ideal candidate will have one or more years experience, a strong background in cell biology and computer skills, a solid knowledge of cell biology, biophysics, and electronics. We are seeking a person who is able to function independently and who would be challenged by dealing with a diversity of operational and experimental problems in a small, primarily research-oriented flow cytometry facility. Those interested should send or receive a vitae, description of experience, and names of three references to: The Salk Institute, Department HR 2788, 10910 North Torrey Pines Road, La Jolla, CA 92037. The Salk Institute is an Affirmative Action Employer.

The Molecular Research Institute invites applications for a FELLOWSHIP POSITION, ranked to be determined (research track). A Ph.D. or M.D./Ph.D. degree, research experience in molecular biology, and strong commitment to independent research are essential. The program will provide current Mayo clinical and basic research programs that will offer research opportunities in the following areas: (1) Investigate the structure and function of the immune system, particularly as it relates to human disease; (2) Investigate the structure and function of the immune system, particularly as it relates to human disease.

MOLECULAR ONCOLOGY

A SCIENTIST with experience in molecular biology of cancer is sought to lead a basic and translational research program located in the Clinical Investigator Clinic, Jacksonville, FL. The program will complement current Mayo clinical and basic research programs including the genetics of gliomas and abnormal signal transduction. The position is accompanied by substantial space allocation in the recently completed 25,000-square-foot Birdsell research building and staff for a fully funded laboratory. These skills are required to successfully compete for extramural research funds and to assume a position of leadership in a research program. Respond to: Dr. Robert Whalen or Dr. Chris Thomas, Jacksonville, FL 32209. An Equal Employment Opportunity/Affirmative Action Employer.

SCIENCE • VOL. 266 • 25 NOVEMBER 1994
The University of Illinois
at Urbana-Champaign
Cell and Developmental Biologist
Assistant Professor

The Department of Cell and Structural Biology at the University of Illinois, Urbana-Champaign invites applications for a tenure track position as an Assistant Professor. Ph.D. scientists interested in establishing and running research program in cell, molecular, or developmental biology, in a young, expanding department are encouraged to apply. Responsibilities will include teaching cell or development biology. Position is full-time and available beginning in the 1995-1996 academic year. Salary commensurate with experience. Substantial start-up funds and laboratory facilities will be provided. The exceptional physical and intellectual resources of the University of Illinois, include: the Transgenic Animal Facility, Center for Electron Microscopy, Genetic Engineering Facility providing oligonucleotide and peptide synthesis and sequencing, Cell Science Laboratory-providing hybridomas and flow cytometry, and the National Center for Supercomputing Applications. Applicants should submit a curriculum vitae and a summary of research interests, and arrange to have three letters of reference sent to: Ann Zielinski, Search Coordinator, Department of Cell and Structural Biology, University of Illinois, 506 Morrill Hall, Urbana, IL 61801. Telephone: (217)333-6118.

To ensure full consideration, applications should be received by January 15, 1995. Interviews may be conducted before this date, but all applications received by then will be given full consideration. Final selection will not be made until after this date.

The University of Illinois is an Affirmative Action, Equal Opportunity Employer.

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SCIENTISTS/ SR. SCIENTISTS

Pharmacia Biotech Inc., Molecular Biology Reagents Division, is a leader in the research, production and marketing of molecular and cell biology products. We have immediate openings for Scientists for our R&D Staff.

These individuals will possess a PhD degree in Molecular Biology or related field, and be skilled in any or all of the following techniques or disciplines: amplification, sequencing, cloning and expression, molecular immunology, enzymes and protein biochemistry. In addition, experience leading project teams in product development activities in an industrial setting is highly desirable, combined with excellent interpersonal and communication skills.

We offer a competitive salary and comprehensive benefit package. For consideration, send CV/resume and salary history to: Manager, Human Resources, PHARMACIA BIOTECH INC., Molecular Biology Reagents Division, 2202 N. Bartlett Ave., Milwaukee, WI 53202. Equal Opportunity Employer M/F/D.V.

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Postdoctoral Research Fellowship

The National Institute on Aging, National Institutes of Health, Public Health Service is seeking a qualified molecular biologist for an Intramural Research Training Award (IRTA) Fellowship dedicated to research involving programmed cell death in the nervous system.

Areas of study include signal transduction and regulation of cell cycle. The candidate should have a Ph.D. or M.D. granted within the last five years, and experience in RT-PCR and PCR-based cloning techniques. Other desirable skills include mammalian cell culture, protein phosphorylation assays, and familiarity with automated DNA sequencing.

The position is located on the NIH campus in Bethesda, Maryland. Please send a cover letter and curriculum vitae to:

Herbert W. Harris, M.D., Ph.D., Laboratory of Neurosciences, National Institute on Aging, National Institutes of Health, 9000 Rockville Pike, Building 10, Room 10C120, Bethesda, Maryland 20892. Fax (301) 496-8970.

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Pharmacia Biotech

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RESEARCH SCIENTIST

Saint Francis Campus

Saint Francis Hospital and Medical Center Located in Hartford, Connecticut, is seeking candidates to join our Department of Research and our bone cell and molecular biology group. Candidates should have completed a doctoral degree and a postdoctoral fellowship and have prior experience in molecular biology. Candidates will be eligible for an appointment at the University of Connecticut School of Medicine. Senior postdoctoral fellows will also be considered. Interested candidates should send resume and references to:

Dr. Ernesto Canalis, Saint Francis Hospital and Medical Center, 114 Woodland St., Hartford, Connecticut 06105-1299, Fax: (203) 548-5415.

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SENIOR RESEARCH ASSOCIATE

Protein Biochemistry

Pioneer Hi-Bred International, Inc., a world leader in legume genetics, seeks a Senior Research Associate in Protein Biochemistry. Responsibilities include developing experimental strategies for optimizing the expression and targeting of proteins/peptides in plant cells, designing genes for engineered proteins, subsequent recombinant production and structure-function characterization for novel properties. EDUCATION EXPERIENCE: A BS degree in Biochemistry/Molecular Biology or equivalent, plus at least 4 years directly related lab experience in the application of molecular biology skills to understanding protein structure-function; or a MS degree plus at least 2 years of experience. Excellent interpersonal skills, high motivation level, familiarity with computers/computational skills and ability to work in a team environment are essential.

We offer excellent compensation, benefits and career growth potential, as well as excellent facilities and a highly cooperative research environment. Please send cover letter indicating job number and C.V. by December 25, 1994 to: Pioneer Hi-Bred International, Inc., Ms. Chris Fitch, Attn: Ms. Fitch Job #1037, Troul and Technology Development, Core Technology Department, 7300 NW 62nd Avenue, P.O. Box 1004, Johnston, IA 50131-1004. We are an Equal Opportunity Employer.
Molecular Diagnostics

Sr. Research Scientist

Bio-Rad Laboratories is a world leader in the fields of life science research products, clinical diagnostics and analytical instruments. Our continued growth has created a need for a dynamic scientific professional to work in our Molecular Diagnostics Division.

The successful candidate will have an MS or PhD in Molecular Biology or Biochemistry with 3+ years experience in nucleic acid technology and DNA amplification methodology. Experience in product development and strong writing skills desired.

For consideration, please send your resume to: Bio-Rad Laboratories, 2000 Alfred Nobel Dr., Dept. 638, Hercules, CA 94547. An EEO/AA Employer.

Bio-Rad Laboratories

ANNOUNCEMENT

PROGRAM ANNOUNCEMENT TO HOST SCIENTISTS & ENGINEERS FROM THE FORMER SOVIET UNION

The National Research Council's Cooperation in Applied Science and Technology (CAST) program invites applications from American scientists and engineers who wish to host colleagues from the Newly Independent States (NIS) of the former Soviet Union for joint research in applied scientific fields. This program is intended to support collaborative projects with a strong potential for commercial applications and/or potential to improve the quality of life in the U.S. and NIS. Of particular interest are projects that will enable NIS scientists and engineers who have worked in defense-related research to apply their skills to civilian activities. Incentive grants of up to $3,000 for travel and $1,000 per month for six to twelve months for living expenses will be provided. Of particular interest to the program are applications that demonstrate a strong commitment to the collaboration on the part of the U.S. host and/or host institution (e.g., matching funds, supplementary in-kind support). Proposals are invited in all branches of applied science and engineering. Special consideration will be given to American hosts who wish to collaborate with young NIS specialists.

Application Deadlines are as follows:


For more information and/or to receive an application packet, please contact the NRC Office for Central Europe and Eurasia. Address inquiries to: National Research Council; Office for Central Europe and Eurasia (F02014); 2101 Constitution Avenue, NW; Washington, DC 20418; Telephone: 202/334-3680; Fax: 202/334-2614; Internet: OCE@NOS.NAS.EDU.

Northern Arizona University Department of Biological Sciences

The Department of Biological Sciences at Northern Arizona University invites applications for 2 tenure-track Assistant Professors to commence August 1995 in the following areas: Developmental/Molecular Biology. Teaching may include undergraduate and graduate developmental biology, as well as participation in cell biology and physiology courses. Ph.D. required in area of application or in related field. Biology Education: Qualifications include a minimum of 3 years experience teaching at the middle school and/or secondary level and a doctorate in science education with emphasis in biology. Teaching responsibilities may include seminars and lectures in teaching biology for both pre-service and in-service teachers as well as in introductory biology, and/or content areas of expertise. Working individually with student teachers is also required. Starting at the associate professor level will be considered for the Biology Education position.

The Department of Biological Sciences enjoys a diversity of research interests that spans the general areas of cellular and molecular biology, ecology and behavior, and physiology. Numerous opportunities for collaborative research exist. The successful candidate should have a demonstrated competency in teaching. Preference will be given to candidates with postdoctoral experience. Candidates will be expected to establish a strong extramurally funded research program, collaborate with faculty in interdisciplinary research, and help direct biology graduate students. Applications should include a curriculum vitae, statement of research and teaching interests, and three letters of recommendation. Review of applications will begin January 1, 1995 and will continue until the positions are filled. Please forward application materials to: Biology Search Committee, Department of Biological Sciences, Box 5640, Northern Arizona University, Flagstaff, AZ 86011. Northern Arizona University is an Equal Opportunity/Affirmative Action Employer.

Computational Biologist Laboratory Production Manager

Optron Technologies, Inc., a growing biotechnology company, has an opening for a Laboratory Production Manager to oversee scale up and all ongoing production processes for newly developed product. Candidate will hire, train, and supervise production staff. Position will interact on a regular basis with R & D for process refinement. Experience in recombinant DNA techniques required. M.S. or Ph.D. in molecular biology and a minimum of 4 years management experience required. Superior organizational and interpersonal skills are a must. Optron offers a highly competitive salary and benefits package. Resumes only to:

Optron Technologies, Inc.
Director of Human Resources
1000 Atlantic Avenue, Suite 108
Alameda, CA 94501

Optron Technologies, Inc.

Optron Technologies, Inc.

Optron Technologies, Inc.

JUNIOR FACULTY POSITION SECTION OF IMMUNOBIOLOGY YALE UNIVERSITY

The Section of Immunobiology seeks applicants for a junior faculty position. Qualified applicants in all areas of immunobiology are invited to apply. We are particularly interested in candidates who have demonstrated ability to study important pathways but not direct research of the existing faculty. Research interests already represented within the Section of Immunobiology include T lymphocyte activation, differentiation and tolerance; T lymphocyte development; antigen processing and presentation; transcriptional regulation; cytokines; immunoglobulin and T-cell receptor gene rearrangement; and autoimmunity. Candidates are expected to develop an independent research program and to participate in departmental teaching. The Section of Immunobiology is committed to increasing representation of members of minority groups and women on the faculty and particularly encourages applications from such candidates. A candidate's application package must include a curriculum vitae, a summary of present and future research interests and three letters of recommendation. Completed applications should be received at the address below no later than Feb 15. This position was advertised in Spring 1994. Persons who have already applied need not re-apply, except to update their applications.

Dr. Kim Bottomly
c/o Administrator

Section of Immunobiology
Yale University School of Medicine
PO Box 208011
New Haven, CT 06520-8011

An Equal Opportunity/Affirmative Action Employer. Women and minority candidates are encouraged to apply.
THE CLEVELAND CLINIC FOUNDATION
NEUROPATHOLOGIST
The Cleveland Clinic Foundation is seeking a Board-certified Neuropathologist to fill a position as the Assistant to Full Staff level, with joint appointments in the Departments of Pathology and Neurosciences. Applicant must have an independent research program, and will be expected to devote 20% effort to diagnostic neuropathology. Competitive salary, generous start-up funds, and excellent opportunities for interactions with programs in the Departments of Neurology, Neurosurgery, and Neurosciences are available. Neuroscience programs at The Cleveland Clinic Foundation are undergoing a rapid start-up phase, with several new Staff appointments planned in the near future. Candidate should send CV, name and fax number of three references, and brief statement of research interest to: Dr. Bruce D. Trapp, Chairman, Department of Neurosciences - NC/30, The Cleveland Clinic Foundation, 9500 Euclid Avenue, Cleveland, Ohio 44195. The Cleveland Clinic Foundation is an Equal Opportunity/Affirmative Action Employer.

THE CLEVELAND CLINIC FOUNDATION
NEUROSCIENCES FACULTY
Department of Neurosciences, The Cleveland Clinic Foundation Research Institute, seeks an outstanding candidate to fill a Faculty Position at the Assistant to Full Staff level. Applicant must have a Ph.D. and/or M.D., an active independent research program and utilize state-of-the-art techniques to investigate neuronal function as it relates to the pathogenesis of epilepsy. Competitive salary and generous start-up funds are available. Epilepsy programs in the Departments of Neurology and Neurosurgery are very active and provide an excellent opportunity for collaborative studies. The Department of Neurosciences is undergoing a rapid growth phase with several new Staff appointments planned in the near future. Candidates should send CV, name and fax number of three references, and brief statement of research interests to: Dr. Bruce D. Trapp, Chairman, Department of Neurosciences - NC/30, The Cleveland Clinic Foundation, 9500 Euclid Avenue, Cleveland, Ohio 44195. The Cleveland Clinic Foundation is an Equal Opportunity/Affirmative Action Employer.

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FACULTY OF MEDICINE
CHAIR OF PSYCHIATRY

The University Court invites applications for a second Chair of Psychiatry in the Faculty of Medicine. This is the Chair held until 1991 by Professor R. E. Kendell. The post will be tenable from a date to be arranged. This Chair is being reactivated in order that the Department of Psychiatry can make full use of the opportunities for research created by the advances in Biological Psychiatry. The University seeks to appoint to this Chair a clinical scientist who has already made significant contributions to Biological Psychiatry and who can demonstrate a capability for obtaining appropriate financial support to develop an innovative research programme in this highly rated department.

Excellent facilities are available for imaging, genetic and neuropathological research. The clinical base is well developed and it is anticipated that the person appointed to this post will be able to make appropriate use of some or all of the facilities available here.

The new Chair will be part of the staff of the Department of Psychiatry, which has an extensive research programme and substantial teaching commitments, including a three-year course leading to an MPhil in Psychiatry. It is anticipated that the holder of this post will have a substantial research interest, but the balance between the research, teaching, clinical and administrative work of the post will be negotiable.

Salary will be within the clinical professorial range.

Please quote REF: SC 490530.

Informal enquiries may be addressed to Professor Eve C. Johnstone, Head of the Department of Psychiatry, Tel: 031-537 6000, Ext. 46261.

Applications, giving the names and addresses of three referees, should be lodged with:

THE SECRETARY TO THE UNIVERSITY,
THE UNIVERSITY OF EDINBURGH
PERSONNEL OFFICE,
1 ROXBURGH STREET,
EDINBURGH EH8 9TB

where further particulars may be obtained.

Candidates from within the United Kingdom should send 16 copies of their application. Overseas candidates need only send one copy. Applications by Fax: 031-650 6509 should be confirmed by mail.

Closing date: 9th January, 1995.

The Royal Society

VACANT RESEARCH APPOINTMENTS 1995

Applications are invited for about 35 Royal Society University Research Fellowships, tenable in the first instance for five years from 1 October 1995 (or later in the academic year 1995-96). Renewals of three years and then a further two may be possible. The appointments are available worldwide to all branches of science, including agriculture, medicine, mathematics, engineering and technology.

Research Fellows are paid on the academic and academic-related staff (Lecturer A and B) salary scale which currently runs from £14,756 (age 26) to £25,735 (age 39) plus three additional discretionary points up to £28,765. Starting salaries will be on this scale, with London Allowance where appropriate, and will rise incrementally each year. A limited number of merit increments will be awarded each year to reward outstanding performance. Annual research expenses (up to about £11,000 for 1995-96) will be available together with travel expenses and a contribution to baggage costs for successful applicants from overseas and their families.

Applicants must have a Ph.D. or equivalent research experience. They should be at least 26 but not have passed their 40th birthday by 1 October 1995 and have between two and seven years postdoctoral experience. Applicants over 40 may be considered under very exceptional circumstances; they should contact the Research Appointments Department at The Royal Society for advice before submitting an application. Fellowships must be held in a university in the United Kingdom. Those already holding substantive posts in a UK university will not be considered. University Research Fellowships are open only to European Community citizens who are either employed in the UK or who, if not employed, have been resident in the UK for a continuous period of three years other than for the sole purpose of receiving full-time education.

Application forms and further information are available from the Research Appointments Department, The Royal Society, 6 Carlton House Terrace, London, SW1Y 5AG (Fax 0171-930 2170). Closing date 17 February 1995. Application forms are not available after 3 February 1995 and applications arriving after 4 p.m. on 17 February will not be considered.

Parasitologists

Lead research at a world renowned New Zealand Centre

This is an opportunity to lead a parasitology at a research centre known worldwide for vaccine development, control measures and disease management techniques.

Part of AgResearch, Wallaceville Animal Research Centre, just 30km from the capital city of Wellington, has been New Zealand’s centre for health and disease control since 1905.

Major advancements made here include starting the world’s first programme to eradicate hydatids developing the world’s first genetically engineered vaccine to control multi-celled parasites.

As leader of the parasitology programme, the role includes managing a $4 million budget and 46 full and part-time scientific staff. As well as fulfilling scientific and management responsibilities, some time will be spent offshore looking for funding.

We have established links and commitments with research universities and specialist search centres worldwide and support will be provided for the applicant to attend conferences and maintain their publications record.

The successful applicant will have an international profile in parasitology, hold a PhD and have held a number of post-doctoral appointments. An impressive research record and the ability to relate well to clients is also desirable.

To find out more about this opportunity, please contact or send your application to:

Margot MacGillivray,
Human Resources Manager, AgResearch, Wallaceville Animal Research Centre, PO Box 40063, Upper Hutt, New Zealand.
Telephone: 64-4-528 1371 or 64-4-528 6089,
fax: 64-4-528 1380,
email: macgillivm@agresearch.cri.nz

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We invite highly motivated senior professionals holding Ph.D. and/or M.D. Degree to work in the above areas with relevant research experience of at least 5 years. We also have openings in Receptor Binding, Pharmacokinetics, Toxicology, Medicinal Chemistry, Biochemical Pharmacology and Microbiology.

We offer a very attractive compensation package and potential for future growth. For immediate consideration, please send your resume with name and fax no. of three references to Vice President (Human Resources), Ranbaxy Laboratories Limited, 19 Nehru Place, New Delhi - 110019. Forward your particulars by courier or fax at (91-11)681-4111 or 6476288 within 7 days.

THE UNIVERSITY OF BIRMINGHAM

CHAIR OF APPLIED PSYCHOLOGY

SCHOOL OF SPORT AND EXERCISE SCIENCES

Applications are invited for a new Chair of Applied Psychology in the School of Sport and Exercise Sciences. This Chair complements the recent expansion within the School of physiology, biochemistry and biomechanics. The successful candidate will have an established research reputation in psychology as related to sport, exercise or health and will be expected to take the lead in developing research and teaching. Part of the support available will be the filling of two Lectureships, or equivalent posts.

Further particulars may be obtained from Mr P.J.F. Scott, Director of Staffing Services, The University of Birmingham, Edgbaston, Birmingham B15 2TT. Telephone 021 414 3842 or fax 021 414 7043.

The closing date for applications is Wednesday 21st December, 1994

The University is an exempt Charity which exists to advance learning to the highest level for the benefit of its students and society at large.

Molecule of the Year!

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Internet: science_classifieds@aaas.org

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