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The biotechnology industry first took root in the United States more than two decades ago. Since then, a combination of visionary life scientists, aggressive venture capitalists, and the determined support of state and local governments has created a series of world-class biotechnology clusters, among them, cities and states such as San Francisco, Boston, San Diego, Seattle, Maryland, and North Carolina.

Commercial biotechnology has taken longer to catch fire in Europe. Within recent years, however, several European governments have awakened to the potential benefits of a strong biotechnology sector. "Politically, Europe is becoming a more conducive environment for biotech businesses," states *European Life Sciences 99*, a report issued by consulting firm Ernst & Young. "Governments are looking for ways of establishing supportive infrastructure and changing tax regimes to encourage venture capital investment and entrepreneurial risk taking."

European nations are rushing to develop home-grown biotechnology industries. In the process, they must deal with difficulties obtaining venture capital, conservative attitudes toward commercial risk, and frequently suspicious public opinion.

Specific regions in Europe, often stimulated by national and local governments, have started their own aggressive efforts to create effective local bases for industrial biotechnology. To set up successful clusters, however, these regions need more than government support. Just as in the case of North America (see *Science* advertising supplement, May 7, 1999, page 989), significant factors include good relations with academic departments that specialize in the life sciences, the availability of educated venture capital, and the development of critical masses of companies involved in biotechnology and related activities.

Cautious Approaches

Three other factors that have had relatively little impact in North America influence the growth of biotechnology in Europe. They are state organization of scientific activity, which in some countries controls what scientists can and cannot contribute to commercial enterprises; an attitude toward failure that is far more conservative than that in the New World; and public opinion, which is frequently against the growth of biotechnology.

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Thus, the continent that created Dolly the sheep, the world's first cloned mammal, is now in the midst of a raging debate about the acceptability and labeling of genetically modified foods. "The public believes it has the right to have a say in the debate, not just as a consumer but also because it is subsidizing much of the scientific enterprise through research grants and tax breaks," states the Ernst & Young report. "The public is looking to the politicians to focus on the detail to ensure that it is not exposed to avoidable risk."

Attitudes toward risk also differentiate Europe from North America in terms of growth opportunities for the biotechnology industry. "The culture is still very negative towards people who have failed in business," says William Powlett Smith, who works in Ernst & Young's British branch. "It's very difficult to obtain backing once you've gone bust once."

Such attitudes do not have an entirely negative impact. Financial caution seems to act as a kind of Darwinian screen, one that acts very fast. "In comparison with typical U.S. companies, German biotechnology companies have to get their first revenues very quickly," says Ralf Kindervater, general manager of Biostart, a broker that helps biotechnology start-ups in Jena, Germany. "That means that the start-ups are rather healthy. They don't have to keep going from one financing round to the next."

Small but Growing

Certainly, Europe's biotechnology industry remains small compared with the transatlantic behemoth. The U.S. industry has stabilized at roughly 1,400 biotech corporations. Europe, by contrast, has no more than approximately 400 established companies in the business, although start-ups are continually emerging from incubators to become fully fledged firms.

Biotechnology clusters like those around San Francisco and Boston are only just beginning to appear in Europe. Such clusters are critical to the industry's growth, according to Pascal Brandys, chairman and CEO of Genset, the largest biotechnology company in France. "It's very important that these centers exist and are developed," Brandys says. "It has been one of the reasons for the success of the U.S. industry. It seems to be an absolute prerequisite to be in a cluster. But there are no more than five or 10 clusters in Europe."

That number will grow rapidly, however. Governments, local authorities, and private organizations throughout the continent have plans for biotechnol-



ogy centers. "Everybody is competing, because the majority of economic development sections and the local authorities have realized what a bandwagon biotechnology is," says Lyn Davies, scientific consultant to the Bioscience Innovation Centre in Sittingbourne, Kent, which is roughly 50 miles southeast of London. "Biotechnology is the "in" technology."

Leaders and Pursuers

So far, the U.K. has been the "in" country. "By any qualitative measure, the U.K. still leads Europe," says Gary Clements, an international technology promoter with the U.K. Department of Trade and Industry. The Thatcher government's encouragement of entrepreneurialism in the 1980s stimulated the creation of a generation of British biotech companies, many of which still survive and even thrive. Indeed, over two-thirds of Europe's biotechnology companies whose stocks are publicly traded are British. "Venture capital is much more developed in the U.K. than elsewhere in Europe," explains Powlett Smith of Ernst & Young. "We have a stock market that is the biggest outside America. And the political environment and links with the United States helped."

As biotech's business image has risen, so has interest in starting up new clusters for emerging companies. Several British biotechnology companies have set up shop in the science parks created a decade ago. Regions throughout the U.K. are now fighting hard to attract both capital and companies.

Britain's route to success in biotechnology is not the only one. Germany has parlayed a unique government-inspired initiative into second place in Europe's biotechnology league. Concerned that the country risked failure in commercial biotechnology, the German federal government set up a competition among the nation's regions in 1996. The goal: to create the best environment for the commercialization of biotechnology, by using monies from the federal government and regional governments, as well as persuasion.

The competition produced far more winners than losers. For while only four "BioRegions" — centered

"... the majority of economic development sections and the local authorities have realized what a bandwagon biotechnology is. Biotechnology is the "in" technology." Lyn Davies, Bioscience Innovation Centre

> on Cologne, Heidelberg, Munich and Jena received federal funds for winning the competition, the exercise showed that other regions had the ambience and outlook to attract biotechnology companies. "Some of the non-winner regions had dramatic developments." says Kindervater. "It's like catching up to the runners ahead of you in a race." Thus Jena, in the East German state of Thuringia, is becoming a significant center for small biotechnology companies. "We are told we are where the biotechnology center in Research Triangle Park, North Carolina, was 10 years ago," says Kindervater.

> Other European nations have joined the trail that leads to biotech success. "There have been a lot of national initiatives like Germany's BioRegions," says Brandys.

> Two years ago, "the French government realized that it needed to support a biotech industry," says Donny Strosberg, dean of the biochemistry graduate school at the University of Paris and vice president of the lobbying organization France Biotech. "It has now proposed new laws, tax measures, and support for people who will leave the university system temporarily to start up companies in incubators."

> Life scientists in Scandinavian countries have also caught the business bug. "There's a very strong move toward entrepreneurialism in this region," says Børge Diderichsen, director of corporate research for the Danish pharmaceutical company Novo Nordisk. "Many more people studying science are becoming interested in making inventions and business plans." Indeed graduate schools throughout Europe have started to offer life scientists courses in entrepreneurship and business.

> In Amsterdam, meanwhile, a new venture capital fund called Life Sciences Partners (LSP) is seeking investment opportunities in the Netherlands, Belgium, Luxembourg, and other parts of Europe. "We have about \$50 million and are aiming for \$80-100 million," says Tom Schwarz, one of the partners. "LSP is dedicated to human life sciences and biotechnology." While specialty funds of this type are common in the United States, adds investment manager Mark Wegter, "they're a new item in Europe."

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"Universities in the U.K. are finding that funding is less freely available from the government than it used to be. Forced to look at alternative ways to raise funds, these institutions are exploiting the knowledge from proprietary research for commercial gain." Carolyn Keenan, Ernst & Young

The Raw Materials

The foundation of any national or local biotechnology cluster is a solid source of ideas with commercial potential and qualified individuals who can exploit those ideas. These questions can usually be found in strong life science departments in universities or research institutions. In this case, Europe has strength in depth.

In England, both the ancient universities of Oxford and Cambridge and more modern institutions provide a steady source of world-class research. Scotland boasts 13 universities, five medical schools, two veterinary schools, and five government-funded agricultural research institutions. The latter institutes include the Roslyn Biomedical Research Institute, home of the first cloned sheep. "The Dolly project gave us worldwide exposure," says Ken Snowden, senior project executive at Scottish Enterprise, a governmentfunded promotional organization. On mainland Europe, Germany has a long history of excellent life science research in its universities and Max Planck Institutes.

Achievement at the basic research level does not necessarily point to commercial exploitation. France has strong academic centers for bioscience in Paris and Strasbourg, among other cities. However, says Strosberg, "we have a unique system. Most scientists in universities and research organizations are civil servants. So all their discoveries are owned by the state. Until Parliament passes a new law that is now before it, scientists are not allowed to own shares in companies they start."

The Netherlands has a similar problem. "The research system is relatively strong," says

Clemens van Blitterswijk, CEO of the tissue engineering company Iso Tis. "The level of expertise in life sciences is high. But we lack a good entrepreneurial climate."

Entrepreneurial Attitudes

Entrepreneurialism may still be lacking in France and the Netherlands, but that is no longer the case in several other European countries. Academic institutions and faculty members who used to sneer at the very idea of commercializing their research now line up to share their ideas and their business plans with venture capitalists. "At Oxford, I noticed a change in attitudes toward commercialization," says Carolyn Keenan of Ernst & Young. "Universities in the U.K. are finding that funding is less freely available from the government than it used to be. Forced to look at alternative ways to raise funds, these institutions are exploiting the knowledge from proprietary research for commercial gain."

Universities across Europe have started to wean themselves from dwindling government support by capitalizing on their biotechnological research. "The last five or six years have seen an increase in the demand for private capital to support promising inventions in Scandinavia," says Bjöm Nordenvall, CEO of OXiGENE, a biotechnology company based in Lund, Sweden, and Boston, Massachusetts. "A lot of small biotechnology companies have been created by new collaborations between private capital and universities."

Venture capitalists have begun to realize the promise of investing in biotechnology. "The creation of markets designed to fuel high-growth companies has been critical," says Brandys, Genset chairman and CEO. "This is a consequence of Europe's financial deregulation in 1996, which has reduced competition for capital among different companies." The emergence of small European stock exchanges has provided a necessary back-up for venture capitalists. "It gives them the choice of holding and selling stocks in an organized way," explains Strosberg of the University of Paris, who has started up several companies. "Investors need to know they can get out without hurting the company they helped to form."

Genset, France's largest biotech company, has emerged as a leader in taking advantage of stock exchanges. "We were the first biotechnology company to be listed on the French stock exchange," says CEO Brandys. "In June 1996 we had a very successful initial public offering (IPO) that raised almost \$100 million. There haven't been many IPOs of that size even in the United States." Genset's actions set the stage for venture capitalists to support biotechnology throughout Europe. In France alone, says Brandys, "more than 800 million francs (over \$130 million) is available for biotech start- ups." Some American venture capitalists, disappointed with low returns on biotechnology in the United States, have started to put their money into European ventures.

New investors are finding a ready welcome in Europe because their European counterparts are so cautious. European venture capitalists "won't get out of bed for an investment of less than £2 million (\$3.2 million)," says Powlett Smith. Davies, the scientific consultant in Kent, agrees. "Our venture capitalists don't know what venture means," he complains. "Most biotechnology start-ups have been self-financed or have relied on business angels."

Owners of businesses that go broke suffer particularly from this aversion to risk. "If your company fails, you're a loser in Europe," says Schwarz, a partner in LSP. In other words, it is almost impossible to obtain backing for a second venture after the first one has failed.

Ironically, the cautious nature of European venture capitalists can stimulate the flow of ideas in start-up companies. When IsoTis was founded in late 1996, says van Blitterswijk, "we almost had to make a profit from the start." As a result, adds Kindervater, "most new biotechnology companies are active on the international platform and have innovative ideas and technology. The typical German biotechnology start-up gets its first products to market very quickly."

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Catalysts for Change

German biotechnology owes at least as much to the federal government as to venture capitalists. Its BioRegion competition "acted like a catalyst," says Kindervater. So far, more than 400 biotechnology companies have started up in the top four BioRegions alone. In those regions, continues Kindervater, "different modules have been developed to promote start-ups and to run relocation programs for overseas companies, which will enrich the BioRegions."

Individual BioRegions determine their business strategy according to the amount and types of academic and industrial expertise available to them. Jena, for example, has a polytechnic engineering school that focuses heavily on medical technologies and biotechnology. It provides a ready source of engineers interested in business. Science faculty at the local Friedrich Schiller University and University Hospital promote local efforts to establish biotechnology companies. And several high-technology institutes, administered by the federal and state government, focus on tools such as new drug targets and optical techniques that will benefit biotechnology start-ups.

Other European nations have learned a lesson from the German federal government's financial encouragement of biotechnology. The Dutch government recently started a 100 million guilder (\$47 million) program to encourage the creation of hightechnology companies, particularly in the life sciences, during the next five years. Belgium pumps about half that total into biotechnology each year, largely into the Flanders region. The British government agreed this year, for the first time, to provide tax credits for small businesses. And the Danish government has recently established its Vaeksfonden growth fund. "If you come up with a reasonably convincing product and you have secured some investment already, you will almost automatically get about 40 percent extra in attractive loans," explains Novo Nordisk's Diderichsen.

Finance at the Grass Roots

Local governments also play a role in attracting biotechnology clusters. Authorities in Denmark and southern Sweden, for example, are encouraging large and small biotechnology companies to set up in the 'Medicon Valley,' a region that spans the two



nations. "When you have a start-up company, it's good to have people in the neighborhood with experience in big companies, and vice versa," says Nordenvall, OXiGENE's CEO. "It's good for recruiting, and it makes collaborations and joint ventures possible." Next year, the region will become a more compelling center for biotechnology. A bridge between Denmark and Sweden will provide a crucial transportation link between the two halves of the valley.

In Britain, meanwhile, "Kent County Council has recognized the need to attract technology-based companies," says Stuart Holmes, site director of Sittingbourne's Bioscience Innovation Centre. "A lot of local areas in the U.K. are looking to attract biotech companies as they begin to realize their growth potential."

Like their regional counterparts elsewhere in Europe, local governments in the U.K. recognize the need to build up clusters of universities and companies of different sizes. "We've been looking at the interactions among organizations and the research base and the outside world," explains Snowden of Scottish Enterprise. "The more we can help companies interact, the greater the value we create, and the more competitive the companies become."

The International Context

To ensure the most effective interaction, biotech clusters work hard to seek out overseas companies." Biotechnology is a great example of an industry that is global," says Clements of the U.K. Department of Trade and Industry. "North American companies are going over to Europe to look for partnering opportunities." Clements plans to attract those companies to the U.K., by showing off British companies and capabilities at trade shows and in visits to North America. Strosberg's latest company, Paris-based Hybrigenics, has partnered with Small Molecule Therapeutics of Princeton, New Jersey.

Germany's BioRegions take a similar approach. "We look for U.S. companies that have problems with a bottleneck in their technology, or access to European markets, or manufacturing technologies,"

"The more we can help companies interact, the greater the value we create, and the more competitive the companies become."

Ken Snowden, Scottish Enterprise

says Kindervater. "We are convinced that we have probable solutions in Jena 99 percent of the time — or we can set up a project team to find solutions. With this dedicated, problem-solving approach, I call Jena the biggest application lab in the world."

Several European clusters have devised business strategies to differentiate themselves from their competitors. At Sittingbourne, for example, Holmes is working to attract overseas biotechnology firms that want to test the European waters before committing to them. "My goal is to attract U.S.-based companies looking for a foothold in Europe for five or 10 years, rather than 25," he explains. "They can also dip their toes in the water for two months. We try to offer flexibility."

Internationalism is a two-way street. A few European biotechnology companies, including Genset, have started to establish research centers in the United States and Asia. Those centers help them forge business alliances with pharmaceutical com-

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panies, which many observers regard as a way to ensure stability for individual biotechnology firms. "In this area," says CEO Brandys, "European companies are maybe doing better than American companies."

Changes to Come

Capable managers represent another target for Europe's biotechnology industry. "Many of these European companies desperately need people who have strong managerial skills," says Brandys. "This is a very new industry, and you need management with experience."

North America is the obvious source of such managers. However, European firms have great difficulty attracting even European-born executives back to their native lands. "There have been discussions about more extensive stock options and modifying the tax rules," says Novo Nordisk's Diderichsen. "The real stumbling block is the very high income tax levels in Europe. To pay an American a salary that gives him or her the same living standard found in the United States is next to impossible."

Of course, Europe can offer a few incentives. "Denmark is a safe country with a very pleasant living and working environments," says Diderichsen. "We don't worry much about criminals in the streets. We have high concern for the environment. And there are fewer social inequalities." Nevertheless, he continues, "the best way to attract managers is for Scandinavians to marry them." That is not entirely a flip comment. Ron Perot, an American professor who founded OXiGENE, moved the company to Sweden soon after he married a Swedish woman.

Individual governments and the European Union have started to tear down a significant roadblock to biotechnology start-ups: patent laws that fail to clarify whether discoverers or their academic institutions own the rights to inventions. In France, says Strosberg, "patent applications have to be taken out and then guarded against infringement by the research organizations, which are reluctant to do so as they don't have the resources. So opportunities have gone begging." New legislation on patents and university-industry collaborations are already reaping dividends. "We have established a technology transfer committee, and formal regulations for the commercialization of discoveries," says Dirk Bohmann, a senior scientist at the European Molecular Biology Laboratory (EMBL), an organization based in Heidelberg, Germany and created by 16 nations. "We have formal ways in which EMBL can start spin-off companies and own stock in them. And since scientists became aware of this, there has been more patenting and licensing." So successful has been the process that EMBL has just created a company, EMBLEM, to coordinate its commercial activities.

The Force of Public Opinion

One factor will not change in European biotechnology: the industry's need to respond to public concerns about its methods. Over recent years, the European public has shown far more suspicion of biotechnolo-

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gy than the American public. The Green movement, which has significant public support in some European nations, has helped put the potential dangers of biotechnology high on the political agenda. Such issues as the possible extension of cloning techniques to humans and the introduction of genetically modified foods have become the subject of wide public debate that transcends green politics.

The debate has not halted the development of Europe's biotechnology industry. But it has forced policy makers and entrepreneurs to think hard about the industry's processes and products. Even Britain, which has the most market-oriented economy in Europe, has not avoided a major debate over the possible dangers posed by genetically modified foods.

In the Netherlands the agriculture minister, acting on the recommendation of a governmentappointed committee of ethicists and other independent advisers, banned a process called nuclear transfer, which was used to produce transgenic animals. The ban forced Pharming NV, a Dutch company that produces medications in the milk of such animals, to close its farm facilities in the Netherlands, and to transfer its nuclear transfer work to Belgium and the United States. "Biotechnology companies are vulnerable to pressure groups, who choose their opponents very carefully," says Hans Herklots, a life science consultant with Praaning Meines, based in The Hague. "We don't have the counterweight of a political establishment that dares to say that biotechnology is an industry of the future, with high-quality jobs."

The biotechnology industry has found an effective counterargument to protests by green groups and animal rights organizations. Companies emphasize the likely health benefits of their activity and downplay the use of biotechnology in agriculture. "The industry in Europe still focuses primarily on biomedical applications, which are regarded positively by the public," says Snowden of Scottish Enterprise.

Indeed, pressure groups' suspicion of biotechnology has had one valuable outcome. Because of the public debate, says Snowden, "the industry is very highly regulated. The public regards that as a positive thing because it means that the industry is transparent."

European Biotechnology

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

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POSITIONS OPEN

ASSOCIATE PROFESSOR FACULTY POSITION IN COMPARATIVE MEDICINE Department of Comparative Medicine Stanford University School of Medicine

The Department of Comparative Medicine, within the School of Medicine, is seeking a tenure-track basic science faculty position as Associate Professor. Candidates must have received the Ph.D. degree and have a demonstrable record of research productivity as evidenced by grant support and publications in peerreviewed journals in the area of neuroscience/neurobiology as applied to disease. The D.V.M. or V.M.D. degree from an institution accredited by the American Veterinary Medical Association is desirable, but not required. Applicant whose research focuses on neurologic/psychiatric diseases based on systems of neuroanatomy and neuropsychological approaches to behavior are especially encouraged to apply.

The mission of the Department of Comparative Medicine is (1) to advance the health of all species; (2) to make significant contributions to our knowledge of vertebrate biology and pathobiology through independent and multidisciplinary research; (3) to foster a collegial, synergistic environment for its faculty.

The Department of Comparative Medicine also has a University-wide mission: (1) to use its diverse veterinary expertise to provide excellent quality humane care for laboratory animals; (2) to promote animal welfare and improve the quality and integrity of animal-based research; (3) to share its comparative biological and veterinary expertise through teaching and consultations with faculty, students, and staff.

In addition to its academic functions, the Department of Comparative Medicine provides the clinical care and management for a large, modern, AAALACaccredited, central animal facility, which includes a critical care unit staffed by Veterinary Technicians. Research strengths at Stanford include genetics, neuroscience, molecular biology, noninvasive nuclear and magnetic imaging, and transgenic mouse studies among others. Interested candidates should send a letter containing a description of their career goals and research interests, their curriculum vitae, and names and addresses of five references, to: Linda C. Cork, D.V.M., Ph.D., Professor and Chairman, Department of Comparative Medicine, MSOB X347, Stanford University School of Medicine, Stanford, CA 94305-5415. Applications will be reviewed upon receipt and searches will be continued until the position is filled. Stanford University is committed to increasing representation of women and members of minority groups on its faculty, and particularly encourages applications from such candidates.

SENIOR FACULTY POSITION IN IMMUNOLOGY University of California, San Francisco

The Department of Microbiology and Immunology of the University of California, San Francisco (UCSF), School of Medicine is seeking outstanding candidates to fill a tenured PROFESSOR-level position in the area of immunology. The successful candidate will also have a joint appointment in the UCSF Cancer Center and will develop a cancer immunotherapy program for the Cancer Center. The successful candidate must have demonstrated a long period of research excellence in immunology. Candidates with research in areas of immunology related to cancer immunotherapy would be especially appropriate. In addition, affiliation with the Biomedical Sciences graduate program of the graduate Program in Biological Sciences and participation in graduate education is expected. Interested candidates should send a curriculum vitae, short statements of research accomplishments and future research plans, and the names of three references by August 1, 1999, to: **Immuno**]ogy Search Committee, Department of Microbiology and Immunology, University of California, San Francisco, Box 0414, San Francisco, CA 94143-0414. The University of California, San Francisco is an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.

FACULTY POSITIONS IN ATMOSPHERE, OCEAN, CLIMATE DYNAMICS AT YALE UNIVERSITY

POSITIONS OPEN

The Department of Geology and Geophysics at Yale University announces a search for several ladder faculty positions in the general area of atmosphere, ocean, and climate dynamics. We seek both JUN-IOR and SENIOR applicants with records of creative research in subject areas that improve understanding of modern atmospheric and oceanic processes and/or the evolution of the earth's climate on geologic time scales. Areas of special interest include atmosphere/ ocean modeling; climate-system modeling; coupled air-sea interaction; dynamical meteorology and oceanography; glaciology; hydrology; remote sensing; and the physics, dynamics, and chemistry of clouds. New appointments at Yale in these areas will contribute to a broad emphasis in the Department on paleoclimatology, paleo-environments, and global change. Additional appointments in the Department will be made in areas of active tectonics and geomorphology, geochemistry, paleontology, and solid-earth geophysics. Closing date for applications is September 30, 1999.

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

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

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

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The Society for Biomolecular Screening **5TH ANNUAL CONFERENCE & EXHIBITION**



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September 12, 1999 • Edinburgh International Conference Centre Short Course #1 Automation in the HTS Environment Short Course #2 Fluorescence Detection Technologies for Pharmaceutical Drug Screening Short Course #3 Screening Applications of ADME/TOX Assays

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	Session 5:	Automation, Robotics & IT
Thursday, September 16, 1999	Session 6:	Technologies via External Collaborations
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St Jude Children's Research Hospital Autor Theorem Transform Postdoctoral position using knockout mice to study transcriptional coactivators

A postdoctoral position is available for NCI supported projects focused on understanding the role of the transcriptional coactivators CBP and p300 in normal and malignant hematopoietic cells. Projects will emphasize the use of knockout mouse model systems in studying the functions of these coactivators and their associated proteins (**Parker et al**. Mol Cell Biol in press; **Kasper et al**. Mol Cell Biol 19:764-776; **Yang et al**. Mol Cell Biol 18:2218-2229; **Brindle et al**. Proc Natl Acad Sci 92:10521-10525). Abundant expertise is available through the Transgenic Core Facility, the Department of Biochemistry, chaired by James Ihle, as well other departments throughout the hospital. This is an excellent opportunity to combine the power of mouse genetics with molecular biology and biochemical approaches to answer fundamental questions about transcription. Candidates should have experience in molecular biology or biochemistry. Previous experience with transgenic animals would be advantageous. Please send a C.V., a statement of research interests, and three letters of recommendation to:

> Paul Brindle Department of Biochemistry St. jude Children's Research Hospital 332 N. Lauderdale Memphis, TN 38105 E-mail: paul.brindle@stjude.org Equal Opportunity Employer



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Dr. Eric Poeschla Molecular Medicine Program & Division of Infectious Diseases-Guggenheim 18 Mayo Clinic 200 1st St. SW Rochester, MN 55905 e-mail: <u>emp@mayo.edu</u> Mayo Foundation is an affirmative action and equal opportunity employer and educator.



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Jan van Deursen, Ph.D. Mayo Clinic Pediatric and Adolescent Medicine Guggenheim 10 200 First St. SW Rochester, MN 55905 e-mail: vandeursen.jan@mayo.edu

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To apply, send a cover letter which refers to the grade and position being sought, a statement addressing the selective placement factors, vitae, and names and addresses of three references <u>no later than 26 July</u> to U.S. Department of Commerce, Central Administrative Services Center, Human Resources, Attn: Ms. Marcia Nolan, 601 E 12th St., Kansas City, MO 64016.

Additional application information about positions can be obtained from Stephen Brandt (brandt@glerl.noaa.gov) or about application procedures from Ms. Nolan at 816-426-5016 and at usajobs.opm.gov/a9noaa.htm. All applicants must have U.S. Citizenship. GLERL is an Equal Opportunity Employer.

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CHAIR OF BIOLOGICAL SCIENCES Duquesne University

The Bayer School of Natural and Environmental Sciences invites applications and nominations for the position of Professor and Chair of the Department of Biological Sciences. The Department currently has 14 full-time faculty, 5 full-time staff, and 22 graduate teaching assistants. Faculty research interests are in the areas of cellular and molecular biology, microbiology, and cellular and systems physiology. The Department offers B.S. and M.S. programs with a strong emphasis on research. Additional information regarding our programs, the School, and the University can be found at the University Web site (www.duq.edu).

We are seeking an individual with imagination, energy, and leadership ability to enable us to continue strengthening our educational and research programs. The preferred candidate will have a Ph.D. in an area of biology, have an excellent record of publication and extramural support, have demonstrated a commitment to education, and have evidence of leadership skills. Salary will be commensurate with qualifications and experience. Review of applicants will begin August 15 and will continue until the position has been filled. Applicants should submit a letter of interest, a curriculum vitae, and a list of references to: Kyle W. Selcer, Chair Search Committee Department of Biological Sciences Duquesne University Pittsburgh, PA 15282-1502 Duquesne University is an Affirmative Action, Equal Opportunity Employer.

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development of innovative pharmaceutical, vaccine and nutritional products. We achieve this through our superior research, manufacturing, sales and marketing capabilities. Enjoy the freedom to develop your own career while having the support of a valuable team. We currently have immediate opportunities available in our **Neuroscience Division** at our **Princeton**, **NJ** facility.

Sr. Research Scientist I Protein Biochemist

Position will play a key role in a proteomics-oriented lab with the development of novel drugs in the psychiatric/ neurodegenerative discovery areas. Responsibilities include the supervision/operation of MALDI-TOF and/or LC/MS/MS mass spectrometer, the identification of individual proteins within complex samples, and the assessment of outcomes of various drug-treatment and/or genetic manipulations. You must have a Ph.D. in Biochemistry or Biology, and 2-5 years of relevant postdoctoral experience. Additional experience in protein biochemistry is essential; experience in signal transduction assays, protein characterization, HPLC, mass spectrometry, automated genomic/proteomic database search techniques and molecular/cell biology is desired. Job Code: OPSCI-5558

Senior Research Scientist II Molecular Pharmacologist

The chosen individual will have significant experience in the pharmacology and signaling properties of G-protein coupled receptors to further understanding signaling networks, and regulation of G-proteins in receptor pathways of neurobiological importance. Additionally, this position requires expertise in molecular biology as well as experience with biochemistry techniques and mammalian cell culture systems. A Ph.D. with a minimum of 5 years' experience is required and a background in neurobiology, drug discovery and protein-protein interaction systems is highly desirable. This research position is an integral part of a multifaceted G-protein signaling research team. Job Code: OPSCI-4858

Research Scientist I Molecular Biologist

Candidate selected will participate in the exciting early phases of drug discovery and will focus on the generation of viable technologies for the generation of neuronal signal transduction pathway modulators. Responsibilities include working creatively and independently and communicating well with collaborators. We require a BS/MS with at least 5 years' industrial experience in Molecular Biology and the ability to support a small assay and screen development team. A demonstrated proficiency in molecular cloning methodology and experience in mammalian cell culture are required. Aptitude in bacterial, insect, or mammalian expression systems and experience in protein purification and protein-protein interaction assay development would be an asset. Job Code: OPSCI-5562

Research Scientist III Molecular Biologist

The selected candidate will demonstrate expertise in molecular biology and join our team investigating the structure/function of signal transduction proteins, including the characterization of orphan receptors. The successful candidate will have an interest in signal transduction and have a BS/MS degree with a minimum of 8 years' experience. This position requires strong molecular biology skills, including cDNA cloning, RNA analysis and heterologous expression in both prokaryotic and eukaryotic systems. Familiarity with the yeast 2-hybrid assay and the purification and study of proteins would be an advantage. Job Code: OPSCI-6555

Wyeth-Ayerst offers competitive compensation and benefits programs including stock options, child-care subsidies, flex-time, business casual Fridays, educational assistance and professional development programs. Please forward your resume with salary requirements, referencing appropriate Job Code, to: Wyeth-Ayerst, P.O. Box 7886, Philadelphia, PA 19101-7886. Fax in

Philadelphia, PA 19101-7886. Fax in fine mode to: (610) 989-4854. Email: jobs@RAMAIL1.wyeth.com (ASCII format, no attachments, subject: resume). For more information, visit our website at www.ahp.com/wyeth.htm Principals only. Equal Opportunity Employer M/F/D/V



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Scientists – Chromosome Team

The Chromosome Team is comprised of Scientists from varied backgrounds working together to tackle the post-sequencing challenges of data validation and biological annotation.

Responsibilities include quality assurance at the sequencing and assembly stages, annotation of genes, and other relevant features using computational analysis tools, database querying, and data set mining in support of knowledge-based discovery. Qualifications: BS/MS/Ph.D. in Life Sciences with extensive knowledge of sequence analysis tools; experience with the UNIX operating system; familiarity with relational database systems and SQL; the ability to independently identify and creatively address complex problems; and the desire to work in a supportive team environment requiring cooperative development.

Scientists – Gene Discovery Department

Gene Discovery Scientists are exploiting and extending the state-of-art in prediction of protein function through sequence analysis. Identifying and characterizing novel gene targets requires a multidisciplinary approach. We're building a group with experience in a wide variety of approaches to computational target identification. Our goal is to develop and apply these tools for understanding the biological function in many genomes.

Responsibilities for varying position levels may include performing and interpreting routine analysis of DNA and protein sequences, working as part of a team to assist in the identification of novel gene targets, and implementation of new and existing analysis methodologies. More senior positions will include supervising research efforts. Qualifications: MS or Ph.D. in Biochemistry, Chemistry, Biology, Molecular Biology, Mathematics or related field; experience in biochemistry, genetics and/or analysis of genome data, preferably human; familiarity with genomic and protein databases as well as DNA and protein analysis software. Experience with UNIX, SQL and/or Perl is highly desirable.

For immediate consideration, please forward your resume online by visiting us at: www.celerajobs.com

If you are unable to visit us online, you may mail your resume to: Celera Genomics, Attn: HR/SCI/7-2, 45 West Gude Drive, Rockville, MD 20850. You may also e-mail your resume directly to: resumes@celera.com Celera Genomics is committed to a drug-free work environment. EOE, M/F/D/V.





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Quantum Dot Corporation is revolutionizing biological assays via its proprietary quantum dot technology. Quantum dot nanocrystals (QdotsTM) are nanometer scale "LED" labels that have vast advantages in multiplexing, detection, and sensitivity versus dye molecules. Quantum Dot Corporation is currently developing applications in genetic analysis, flow cytometry, diagnostics and HTS. We are looking for the best and the brightest to work with us in developing these applications and the killer products of tomorrow.

Director/VP Biology

Lead an outstanding team of accomplished biological scientists in their efforts to create and commercialize applications for Qdots. Work with world leading corporate partners in joint development projects. You must be a proven leader in scientific thinking and management; 8+ years of experience in assay/product development (diagnostic experience beneficial); Ph.D. in molecular biology; encyclopedic knowledge of a wide range of protein/Ab and DNA based assays; and demonstrated productivity in managing cross-functional teams.

Director/VP Chemistry

Lead an outstanding team of accomplished chemists, including inventors of the technology, in their efforts to create and commercialize applications for Qdots. Work with world leading corporate partners in joint development projects. You must be a proven leader in scientific thinking and management; 8+ years of experience in bioconjugation or organic chemistry (familiarity with inorganic chemistry and dye chemistry beneficial); Ph.D. in organic/bioorganic chemistry; encyclopedic knowledge of bioconjugation chemistry and purification; and demonstrated productivity in managing cross-functional teams.

As part of the Quantum Dot's dynamic team, our full time employees receive a competitive salary and benefits package including stock options. For consideration, please send your resume to: Quantum Dot Corporation, 4030 Fabian Way, Palo Alto, CA 94303. Quantum Dot is an equal opportunity employer.





In keeping with our long history of providing quality ophthalmic drugs for an improved quality of life, **Santen** is again revolutionizing the healthcare world with its latest research and development. We are currently seeking bright, committed individuals to work in our international office located in the Napa Valley.

Join us for an exciting growth opportunity and future at Santen, Inc. Opportunities exist for experienced individuals in the following areas:

Marketing Department

- Director of Marketing
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- Product/Market Manager Glaucoma
- Director of Managed Care, Marketing

Manufacturing/Distribution

Director of Logistics

Administration

Controller

Sales Department

- Director, Sales Operations
- Director, Managed Care Sales
- Director of Sales Training
- Sr. Manager, Customer Service

Research & Development

- Clinical Research Associate
- Regulatory Affairs Specialist
- Biostatistician/Data Manager
- Coordinator of Stability Programs
- Scientist, Pharmaceutical Development

These positions require at least a BS degree or equivalent in the appropriate discipline. Experience in a pharmaceutical environment is highly desirable. Applicants must have a good working knowledge of PCs & other relevant software. Excellent communication & organizational skills and the ability to travel are necessary.

Santen offers competitive salaries and benefits, and growth potential in a stimulating and supportive environment. Please send your resume to: Santen, Inc., Attn: H.R. Dept. SCI, 555 Gateway Drive, Napa, CA 94558. FAX (707) 254-1769. E-mail: resume@santen-inc.com. NO PHONE CALLS, PLEASE. We are an Equal Opportunity Employer.



MOLECULAR BIOLOGIST

VICAL Inc., is a San Diego based biotechnology company with a world leadership position in research and development of DNA based delivery systems for vaccines against infectious diseases and for therapeutics to treat cancer and metabolic disease. Our Department of Molecular Biology has an immediate opportunity for a Research Scientist.

Candidates should hold a Ph.D. degree in Molecular Biology/Genetics and have completed at least two years of postdoctoral research using techniques common to this discipline.

The position is to be filled by a candidate who has demonstrated success in the science of molecular biology and who is interested in a career where one can use these techniques to develop new therapies for the treatment of human disease. Candidates should have excellent communication skills and a strong publication record in refereed journals that report original research.

For consideration, please send your resume to: Vical Inc., Human Resources, 9373 Towne Centre Dr., Ste. 100, San Diego, CA 92121. Fax to: (619) 646-1350, or E-mail: cgoodall@vical.com EOE.



ASSISTANT PROFESSOR APPLIED PHYSICS

The School of Applied and Engineering Physics at Cornell University is seeking applications for a tenure-track assistant professor position, which is expected to be filled as early as the fall of 1999. The appointment is intended to be made in experimental or computational applied physics research areas; including but not limited to applied optics, biological physics, and nanostructure science. Interdisciplinary research efforts are encouraged.

Candidates must be able to develop a successful independent research program in one of these areas and to participate effectively in the teaching of applied physics at both the undergraduate and graduate level. Considerable institutional resources for the support of the successful applicant's research program are available and a competitive start-up package can be expected.

The successful candidate can expect to benefit from association with one or more of Cornell's interdisciplinary research centers, national facilities, and national resources which include the Cornell Center for Materials Research, the Cornell Nanofabrication Facility, the Cornell Theory Center, the Cornell High Energy Synchrotron Source, the Biotechnology Center, and the NIH funded resources for Macromolecular X-ray Diffraction and for Biophysical Imaging.

Applications, which should include a resume, a statement of research interests, copies of publications or preprints, and names of several references, should be submitted to:

Professor Harold G. Craighead, Director, School of Applied and Engineering Physics, 210A Clark Hall, Cornell University, Ithaca, New York 14853-2501. Consideration for an associate or full professor level position may be made for exceptionally suited candidates.



Cornell University's College of Engineering is an equal opportunity/affirmative action employer and welcomes nominations of, and applications from, women and underrepresented minorities.

CTRC

DIRECTOR CTRC INSTITUTE FOR DRUG DEVELOPMENT

The Cancer Therapy and Research Center (CTRC) and the University of Texas Health Science Center at San Antonio invite applications for the position of Director, CTRC Institute for Drug Development (IDD). The Director will hold a full time faculty appointment in the appropriate academic department of the University. The IDD Directorship is endowed by the CTRC Board of Governors and will become vacant in August when founding Director Dr. Daniel Von Hoff takes up his appointment as Director of the University of Arizona Cancer Center.

The mission of the Institute for Drug Development is the pursuit of new treatments for patients with cancer through integration of research programs of excellence in the basic, translational, and clinical sciences. The IDD is composed of Basic Research. Translational Research, and Clinical Research divisions.

Candidates should possess the experience, knowledge, and personal energy to provide the IDD with continued strong leadership through a period of major growth and facilities consolidation. We seek a world class investigator in translational research, including drug development, with a strong grounding in the basic and clinical sciences and a desire to continue independent laboratory and clinical research programs. Candidates should be at the leading edge of technological and pharmaceutical advances with a broad understanding of novel cancer therapeutic concepts including the use of high-throughput genomics technology. In addition to the M.D. and/or Ph.D. degree, research experience in one of the basic sciences would be valuable. NCI and pharmaceutical industry experience is desirable, as is ability to attract and mentor young investigators and clinicians.

The successful candidate will have the stature and personal characteristics to represent IDD as an organization of excellence and scientific integrity to grant reviewers, the NCI and other government agencies, other cancer research and treatment institutions, pharmaceutical and biotechnology companies, and the community and public.

Please submit a statement of research interests and current *curriculum vitae* to the Chair, IDD Director Search Committee, CTRC Institute for Drug Development, 14960 Omicron Drive, San Antonio, TX 78245-3217.

CTRC and the University of Texas Health Science Center are equal employment opportunity/affirmative action employers.



SEARCH REOPENED <u>CHAIR</u> Department of Neuroscience and Physiology

The State University of New York Health Science Center at Syracuse invites nominations and applications for the position of Chair of the Department of Neuroscience and Physiology. The department has an outstanding reputation for its research and teaching programs. The Chair will be responsible for building a strong departmental focus consistent with its research mission in the area of neurophysiology. The department has institutional teaching responsibilities in physiology and neuroscience in the medical curriculum; and in addition to offering the Ph.D. program in Physiology, it also contributes to an interdisciplinary Ph.D. program in Neuroscience. Candidates should have exceptional leadership skills, the ability to recruit and develop an outstanding faculty in the neurosciences and physiology, a nationally recognized wellfunded research program in the area of neurophysiology, and a record of accomplishment in teaching and administrative service in a medical school environment. The department is scheduled to add four state-funded tenure-track assistant professors with appropriate startup packages and newly renovated laboratories for the Chair and new faculty. This position represents an excellent opportunity to build a thriving neuroscience and physiology program at a Health Science Center committed to excellence in research and education. Please submit a curriculum vitae and the names of four references to: Dr. John J. Lucas, Vice Provost for Research, c/o Office of the Provost, SUNY Health Science Center at Syracuse, 750 East Adams St., Syracuse, NY 13210.

Review of applications will begin immediately and will continue until the position is filled. An AA/EEO/ADA employer, committed to excellence through diversity.

Faculty Position Assistant Professor/Laboratory Director **UT Southwestern Medical Center** at Dallas

The Radiology Department invites applicants for a full-time, research track faculty position available at the Assistant Professor level. The candidate will be the lab director for the Mobility Foundation Center's research in stroke, spinal cord injury and other mobility limiting diseases. Requirements include a Ph.D. in physiology with a demonstrated interest in neurophysiology. The applicant will be required to oversee the operation of a research lab with special emphasis in cerebrovascular disease and spinal cord injury, including supervision of a laboratory technician The applicant will be expected to pursue animal research in cerebrovascular disease and spinal cord injury in support of existing efforts, as well as development of further projects intended to foster new external funding. Preference will be given for demonstrated abilities in calcium autoradiography and in perfusion measurement via radiolabelled microspheres. Experience with MRI/MRS angiography, canine research or surgery, and animal models for spinal injury and stroke will be positive factors. Some teaching of medical students and residents will be required. For more information, contact: Phillip Purdy, M.D., Director of Neuroradiology, Department of Radiology, UT Southwestern Medical Center, 5323 Harry Hines Blvd., Dallas, TX 75235-8896 Phone: (214) 648-3928 Facsimile:(214) 648-3904 E-mail: Phillip.Purdv@email.swmed.edu

The University of Texas Southwestern Medical Center is an Equal Opportunity, Affirmative Action Employer

Molecular and Cellular Neuroscience Positions For **New Neurobiology**

Research Department

Applications are invited for recently opened positions in the Dept. of Molecular and Cellular Neuroscience within the Legacy Health System Research Center in downtown Portland, Oregon. Research will be conducted at a newly designated six-floor building with state of the art laboratories. The facilities are conveniently located for access to two downtown academic centers (Oregon Health Sciences University and Portland State University).

Core research programs are centered on gene modulation of ischemic and epileptic brain injury. We are recruiting complementary scientists at the level of post-doctoral, and assistant and associate scientists. The more senior candidates should have proven track records in neuroscience research with particular emphasis in molecular biology. All positions are immediately available.

Positions are also available for motivated and skilled technical staff with laboratory experience in histology and/or molecular biology Letters of interest with CV and names of three or more references may be submitted to:

Roger Simon, M.D. **Director Neuroscience Research** Legacy Health System P.O. Box 3950 Portland, Oregon 97208 Fax: (503) 413-5145 Equal Opportunity Employer

SCIENTIFIC DIRECTOR BREAST CANCER PROGRAM

The H. Lee Moffitt Cancer Center and Research Institute, a newly designated NCI Cancer Center at the University of South Florida and the Department of Internal Medicine, are seeking a senior level independent investigator to serve at the rank of Associate/ Full Professor to direct research in the Cancer Center's Breast Cancer Research Program. This program is part of the Clinical Investigations Program funded by the NCI. Significant resources are available to support this program including academic FTEs in clinical and basic science departments, laboratory space, and a substantial start-up package. The interdisciplinary clinical breast cancer program sees more than 1900 new breast cancer patients per year. Candidates must have a M.D. or M.D./Ph.D., be ABIM certified in Medical Oncology, and have a reputation for conducting peer-reviewed breast cancer research. Academic rank and salary rate dependent upon individual qualifications and scholarly activity. Research areas of particular interest include: molecular oncogenesis, signal transduction pathways, novel treatment approaches, and molecular genetic studies. Interested applicants should send their CV and 1-2 page statement of academic interests by 8/31/99 to William S. Dalton, M.D., Ph.D., (Associate Center Director for Clinical Investigation), or Kenneth Zuckerman, M.D. (Director, Division of Medical Oncology/Hematology), H. Lee Moffitt Cancer Center, 12902 Magnolia Drive, Tampa, FL 33612.

> H.LEE MOFFITT CANCER CENTER & RESEARCH INSTITUTE At the University of South Florida A NATIONAL CANCER INSTITUTE DESIGNATED CANCER CENTER

The University of South Florida is accredited by the Commission on Colleges of the Southern

Association of Colleges and Schools to award degrees at the baccalaureate, master's, specialist and doctoral levels, including the Doctor of Medicine. The University of South Florida and the H. Lee Moffitt Cancer Center & Research Institute are Equal Opportunity/Equal Access/ Affirmative Action Employers. For disability accommodations contact Jody Swanson at 813-975-7899 (TDD: 813-974-2218) a minimum of 5 working days in advance of the deadline.

BS/MS SCIENTISTS - CANCER RESEARCH



In the highly competitive global pharmaceutical marketplace, there are many "Bayer Facts" that distinguish us as a leader. To name a few, we are part of Bayer Corporation, a \$12 billion international diversified organization and one of the most broadly-based healthcare companies in the U.S. Our Pharmaceutical Division has worldwide responsibility for the research and development of treatments for osteoporosis; cancer; diabetes and other metabolic disorders. We have several exciting opportunities available within our Cancer group for scientists with the following qualifications:

CELLULAR BIOLOGIST/ PHARMACOLOGIST

Candidate will be responsible for the development of preclinical in-vivo tumor models, generation of mechanism and functional cell-based assays for compound screening in cancer drug discovery. A good understanding of cancer biology and functional genomics is very useful. Specific interests in angiogenesis, oncogene signaling, G protein coupled receptor activity and/or enzyme pathways involved in steroidigenesis preferred.

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additional follow-up.

MOLECULAR BIOLOGIST We are seeking a highly motivated candidate to be responsible for gene cloning, recombinant gene expression using baculovirus/bacterial expression systems and the generation of transfected cell lines. The incumbent will be expected to be familiar with a wide spectrum of molecular biology techniques. Expertise in bioinformatics, genomics and/or assay development is desirable. A strong background in biochemistry, protein purification and enzymology is preferred. The candidate will have primary or shared project enzymology and the state of the state of

responsibility and should be able to present scientific results in oral and

Please send, fax or e-mail your resume, indicating position of interest, including salary requirements, to: Dept KL, Bayer Corporation, Pharmaceutical Division, 400 Morgan Lane, West Haven, CT 06516. Fax: (203) 812-6798. E-mail: karen.laurel.b@bayer.com No agencies or phone calls please. For more information on Bayer search: http://www.bayerpharmana.com

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POSITIONS OPEN

VISITING FACULTY POSITIONS IN EARTH SCIENCES AT YALE UNIVERSITY

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

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

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

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

FACULTY POSITIONS ORGANIC CHEMISTRY

Applications and nominations are sought for organic chemistry faculty positions beginning in 2000. Although we expect to make appointments at the AS SISTANT PROFESSOR level (tenure-track), individuals qualified for appointment at a higher level are also encouraged to apply. Applications should be able to contribute to the teaching program in organic chemistry at the graduate and undergraduate levels and conduct a vigorous independent research program. Research interests complementary to existing faculty and exploiting other campus resources (Center for Chemical Biology, Duke University Medical Center) are particularly sought. All applicants should send a curriculum vitae and a description of future research plans to: Organic Faculty Search Committee, 101 P. M. Gross Chemical Laboratory, Duke Univer-sity, Box 90346, Durham, NC 27708-0346. Junior candidates should arrange for three letters of recommendation to be sent to this same address, and senior candidates should provide names of three potential references. Review of applications will begin on September 1, 1999, and continue until the positions are filled.

Duke University is an Equal Opportunity/Affirmative Action Employer.

Stanford University School of Medicine, Department of Neurosurgery seeks applicants for a full-time M.D. or Ph.D. faculty position at the **ASSISTANT PROFESSOR** level in the University Line. The candidate would be expected to facilitate translation of research developments into clinical therapies applicable to stroke, central nervous system trauma, Parkinson's disease, brain tumor, Alzheimer's disease, and other neurologic disorders. It is expected that the candidate would develop a basic science research program in central nervous system progenitor cells, neurotransplantation, regeneration, and recovery of function after injury.

Applicants should send a letter of intent and curriculum vitae to: Gary K. Steinberg, M.D., Ph.D., Chairman, Department of Neurosurgery, Room 281, Stanford University Medical Center, 300 Pasteur Drive, Stanford, CA 94305-5327. Telephone: 650-723-5575; FAX: 650-723-2815.

Our Medical School is committed to increasing representation of women and members of minority groups on its faculty, and we particularly encourage you to nominate such candidates.

POSITIONS OPEN



FACULTY POSITION IN BIOCHEMISTRY AND MOLECULAR BIOLOGY University of Nebraska Medical Center

The Department of Biochemistry and Molecular Biology invites applications for a tenure-track position at the rank of **ASSISTANT/ASSOCIATE PRO-FESSOR**. Qualifications include a Ph.D. or M.D. degree and relevant postdoctoral experience. Preference will be given to outstanding candidates who can apply state-of-the-art approaches in biochemical and molecular approaches to cancer research. The ideal candidate will have research interests and experience that will supplement ongoing research in the Prostate Cancer Research Program (website: http://www. unmc.edu/Biochemistry/).

The successful applicant will be expected to have or develop a funded, independent research program and to contribute significantly to the teaching programs of the department. Submit curriculum vitae, selected reprints, a brief description of current and future research interests, teaching experience, and three letters of references to: Chair, BMB Search Committee, Department of Biochemistry/Molecular Biology, 984525 Nebraska Medical Center, Omaha, NE 68198-4525. UNMC is an Equal Opportunity/Affinnative Action Employer. Minorities and women arc encouraged to apply.

OAKLAND UNIVERSITY ENVIRONMENTAL CHEMISTRY

The Department of Chemistry invites applications for a full-time, tenure-track position at the ASSIST-ANT or ASSOCIATE PROFESSOR level starting winter or fall 2000. A Ph.D. in chemistry, biochemistry, or an appropriately related environmental area is required. The successful candidate will be required to develop a strong, externally funded research program in environmental chemistry compatible with our Ph.D. in health and environmental chemistry and B.S. in environmental health. Research areas of interest include, but are not limited to, chemical toxicology, environmental analysis, and study of chemical fates in the environment. Teaching assignments will be mainly in environmental chemistry, e.g., toxicology, at the undergraduate and graduate levels. Submit curriculum vitae, a brief description of research plans, copies of transcripts, and arrange to have three letters of recommendation sent to: Professor P. Tomboulian, Department of Chemistry, Oakland Univer-sity, Rochester, MI 48309-4477. Review of applications will commence September 1, 1999, and will continue until an applicant is chosen. Inquiries to e-mail: envsearch@ouchem.chem.oakland.edu. Oakland University is an Equal Opportunity/Affirmative Action Employer.

Applications are invited for a tenure-track faculty position at the Stanford University School of Medicine, Cardiovascular Medicine Division, Department of Medicine. Candidates should possess an M.D., Ph.D., or an M.D.-Ph.D. and be interested in establishing an independent program investigating the basic molecular biology of the cardiovascular development, molecular signal transduction in the cardiovascular system, and smooth-muscle cell biology. The candidate will benefit from the rich basic science environment at Stanford including existing strengths in developmental biology and the presence of a human genome center. Candidates at all levels (ASSISTANT to FULL PROFESSOR) are invited to apply.

Applicants should forward their curriculum vitae, a concise statement of research interests, and the names of three references to: Thomas Quertermous, M.D., Chief, Cardiovascular Medicine Division, Department of Medicine, Stanford University School of Medicine, Falk CVRB, Stanford, CA 94305-5406. Stanford University is committed to increasing the representation of women and minorities on its faculty and encourages applications from such individuals.

FACULTY POSITION IN ACTIVE TECTONICS AND GEOMORPHOLOGY AT YALE UNIVERSITY

POSITIONS OPEN

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

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

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

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

FACULTY POSITIONS IN GEOCHEMISTRY AT YALE UNIVERSITY

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

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

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

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

RESEARCH ASSISTANT PROFESSOR AND POSTDOCTORAL POSITIONS

Positions available to investigate regulatory mechanisms controlling germ cell differentiation. Projects include RNA-protein interactions that control translation and mRNA localization, gene targeting of isoproteins as models for infertility, germ cell-Sertoli cell interactions, chromatin remodeling, and DNA microarray applications. Preference will be given to candidates with expertise in molecular biology. Send résumé and names of three references to: Norman B. Hecht, Center for Research on Reproduction and Women's Health, 1310 BRB II/III, 421 Curie Boulevard, University of Pennsylvania, Philadelphia, PA 19104-6142.



OCEANOGRAPHIC

The Department of Biology is seeking an outstanding scientist in the broad area of Fish Biology at the tenure-track level (Assistant, Associate or Senior Scientist, depending on experience and credentials). Potential research areas include but are not limited to: physiology, ecology, population biology, genetics, fisheries ecology or systematics. Potential for collaboration with existing staff is desirable. (see: http://www. whoi.edu/science/B/dept/).

Candidates must have a Ph.D. and demonstrated ability to carry out independent and innovative research. The successful candidate will be expected to establish an active program of externally funded research. Opportunities exist for participation in graduate education through the MIT/ WHOI Joint Program in Oceanography. Send curriculum vitae, statement of research interests and the names and addresses of three references by September 1, 1999 to: Woods Hole Oceanographic Institution, Box 54SFT79, Woods Hole, MA 02543. EOE/M/F/D/V

Staff Scientist

Be at the forefront of drug development research with DuPont Pharmaceuticals Company. We will be the most exciting Company to work for on the planet. Ideas, outstanding performance and the growth and caring of our people will be at the center of our value system. We will be a top-tier Company driven with a powerful R&D engine through customer-driven marketing innovation. Come and be a part of our success. We have an immediate Staff Scientist opportunity at our facilities in Wilmington, DE.

We are seeking a motivated Molecular Biologist or Microbiologist who is proficient with the following techniques: PCR, gene cloning and expression, protein purification and assay development. Expertise with bacterial gene knockout is highly desirable. A BS degree in Biology with a minimum of three years of research experience or an MS degree with a minimum of one year experience is required.

DuPont Pharmaceuticals Company can offer you an excellent compensation and benefits package. To be considered, please forward your resume to: DuPont Pharmaceuticals Company, Human Resources-SD-MB, E400/2413, P.O. Box 80400, Wilmington, DE 19880-0400. An equal opportunity employer, M/F/D/V.

DuPont Pharmaceuticals Company

University of Arkansas at Little Rock Graduate Institute of Technology Bio-Technology Specialist

The University of Arkansas at Little Rock invites applications for a Bio-Technology Specialist beginning July 1, 1999. The successful candidate must have an M.S. degree and experience in molecular biology/biotechnology research with broad training in molecular techniques and a background in instrumentation and use of computers.

Proficiency in the areas most desired include: production of genomic and cDNA libraries; alternative transfection methods such as biolistics and electroporation; southern, northern and western blot analysis; expression and purification of proteins; protein-protein interactions, production and characterization of monoclonal antibodies; ELISA development; diverse PCR procedures such as RT-PCR, RACE and RAPD; DNA sequencing and animal and/or plant tissue culture. Salary dependent on experience. Interested applicants should send a CV and three letters of recommendation to:

Prof. M. Keith Hudson, Director, Graduate Institute of Technology — ETAS 125, University of Arkansas at Little Rock, 2801 S. University, Little Rock, AR 72204, TEL: (501) 569-8211, FAX: (501) 569-8039, INTERNET: hudson@ualr.edu. Review of application materials will begin immediately and continue until the position is filled.

The University of Arkansas at Little Rock is an affirmative action, equal opportunity employer and actively seeks the candidacy of minorities, women and persons with disabilities. Under Arkansas law, all applications are subject to disclosure. Persons hired must have proof of legal authority to work in the United States.



The Liz Claiborne and Art Ortenberg Foundation announces its search for a program officer, reporting to the program director. The Foundation was established in 1984 as a family foundation dedicated to the survival of wildlife, wildlands and the human communities that share space with them. The Foundation and its trustees take active leadership in defining conservation issues and shaping the projects that the Foundation supports around the world.

The program officer's responsibilities will include professional assessment of grant proposals, monitoring and analyzing current field programs, generating ideas for new approaches and programs, travel to program sites, and brokering partnerships between and among organizations concerned about conservation. The program officer will work directly with the trustees and advisory board.

Qualifications include: a strong commitment to the Foundation's mission and strategies, knowledge of regional environmental issues, a field-based research background, organizational skills, an aptitude for disciplined analysis of written materials, a rigorous sense of objectivity, and a strong background in biology or other relevant science/social science discipline. It is highly desirable for the new program officer to have expertise in Latin America and the developing world to identify organizations and individuals capable of addressing the issues that concern the Foundation. Personal qualities of maturity, resilience, flexibility, intellectual sophistication and comfort in a collaborative environment are essential.

The position, based in New York, is available immediately. The salary range is \$50,000 to \$75,000, depending on experience and qualifications. Applications and nominations should be directed to Jean A. Dowdall, Ph.D., by phone (703-739-4761), fax (703-518-1782), e-mail (jean_dowdall@atkeamey.com), or mail (A.T. Kearney Executive Search, 333 John Carlyle Street, Alexandria, VA 22314). Candidates should provide a resume, names and phone numbers of five references, and a cover letter describing their interest in the position and experience. Materials should be received by August 1, although the position will remain open until it is filled.

The Liz Claiborne and Art Ortenberg Foundation is an Equal Opportunity Employer.

POSITIONS OPEN

TENURE-TRACK POSITIONS IN GENETIC MEDICINE CORNELL UNIVERSITY WEILL MEDICAL COLLEGE

As part of a significant enhancement of its basic biomedical science research programs and laboratory facilities, Weill Medical College of Cornell University (formerly known as Cornell University Medical College) is undertaking a major program initiative in the area of genetic medicine and is seeking to recruit tenure-track faculty at all levels. We are especially interested in candidates with research interests related to pharmacogenetics and the molecular genetics of cancer. Exceptional candidates in other related/appropriate fields will also be considered. Candidates for junior positions should demonstrate the potential for establishing a vigorous independent research pro-gram, and candidates for senior positions should have an outstanding record of productivity. Candidates should have Ph.D. or M.D. degrees.

Recruited faculty will receive generous start-up support. Candidates may participate in the Graduate School of Medical Sciences program, which includes faculty from the Weill Medical College and the Sloan-Kettering Institute. Applications should include a curriculum vitae, statement of research interests, and three letters of recommendation. Applications should be sent to: Bernadette M. Mosellie, Genetic Medicine Recruitment Committee, Box #27, Weill Medical College of Cornell University, 1300 York Avenue, New York, NY 10021.

Equal Employment Opportunity/Affirmative Action/Minorities/Females/Disabled/Veterans

FACULTY POSITIONS IN SOLID-EARTH GEOPHYSICS AT YALE UNIVERSITY

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

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

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

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

Immunology, virology, vaccines. RESEARCH SCIENTIST (Ph.D.), RESEARCH ASSISTANT (M.S. or equivalent), and POSTDOCTORAL FEL-LOWS to help develop vaccines for exotic BL4 viral agents (filoviruses) and improve existing vaccines (orthopoxvirus). Research Scientist: cellular immunology of viral vaccines, especially as applied to primates, is preferred; postdoctoral experience required. Assistant(s): versatility favored, as work includes immunology, virology, molecular biology, and viral pathogenesis. Appointments in circa five-year terms, renewable. U.S. citizenship required. NRC Associateships, both regular (recent Ph.D's or M.D's) and senior (for established Investigators), are also available to support basic research in related areas, in three- to five-year terms. Inquiries to: Dr. Alan Schmaljohn or Dr. Mary Kate Hart, Virology Division, U.S. Army Medical Research Institute of Infectious Diseases, Ft. Detrick, Frederick, MD 21702. FAX: 301-619-2290.

POSITIONS OPEN

DIRECTOR FOR RESEARCH

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

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

The Department of Veterans Affairs is an Equal Opportunity Employer.

TENURE-TRACK POSITIONS IN MOLECULAR AND BIOMEDICAL PHARMACOLOGY

The Department of Pharmacology, University of Kentucky College of Medicine at Lexington is pleased to announce the availability of new faculty positions in molecular and integrative biomedical pharmacology. Excellent facilities, salary levels, and resources are available to support this expansion. Entry-level or advanced tenure-track ASSISTANT PROFESSOR positions are available immediately. We encourage applications from candidates utilizing innovative, cutting-edge approaches in the study of basic molecular and cellular mechanisms of receptors, channels, and signaling pathways, and how these relate to broader biomedical principles. Emphasis on mechanisms underlying cell growth, steroid receptor function, and/ or cancer is desirable but not essential. The Department encourages collaborative, mutually beneficial research programs as well as independent projects and provides a rich and supportive environment for new faculty. Candidates should have a Ph.D. or M.D., with several years of postdoctoral experience and should have current extramural support or clear potential for developing an independent, externally funded research program. The successful candidate should also be able to participate effectively in pharmacology teaching programs for professional and graduate students. Interested candidates should send curriculum vitae and the names, addresses, and telephone numbers of three references to: Faculty Search Committee, Department of Pharmacology, University of Kentucky College of Medicine, MS-305 Medical Center, Lexington, KY 40536-0298.

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

POSITIONS OPEN

FACULTY POSITION IN PALEONTOLOGY AT YALE UNIVERSITY

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

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

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

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

ASSISTANT PROFESSOR DEPARTMENT OF PHYSIOLOGY Texas Tech University Health Sciences Center

The Department of Physiology at Texas Tech University Health Sciences Center (TTUHSC) invites applications from scientists for a tenure-track position at the rank of Assistant Professor in the Medical School. Exceptional candidates may be considered for more senior positions. The successful candidate will be expected to maintain an independent program of research that complements existing strengths within the department. He/she will also participate in medical and graduate training.

The closing date for applications is October 30, 1999. Applicants should send a curriculum vitae, a description of past research and future plans, and the names and addresses of three or more potential referees to:

Thomas A. Pressley, Ph.D. Chair, Physiology Search Committee Department of Physiology Texas Tech University Health Sciences Center

Lubbock, TX 79430

Texas Tech University Health Sciences Center is an Equal Employment Opportunity/Affirmative Action/ADA Employer.

RESEARCH ASSOCIATE California Pacific Medical Center A Sutter Health Affiliate

The California Pacific Medical Center Research Institute, located in scenic San Francisco, California, has an opening for a Research Associate.

The selected candidate must have a Ph.D. or equivalent and two to four years of experience in the fields of cancer research, especially in cancer cell culture, cancer molecular biology, and tumor animal model studies. The successful candidate will conduct preclinical studies (chemotherapeutic, radiosensitizing, and pharmacokinetic studies), and investigate the cellular and molecular mechanisms of radiosensitization and chemotherapeutic action in killing cancer cells.

Interested individuals should send their curriculum vitae and three recommendation letters to: Dr. Li-Xi Yang, Director, Radiation Biology Laboratory, California Pacific Medical Center Research Institute, OPR Building, Room #602, 3801 Sacramen-to Street, San Francisco, CA 94118 USA. E-mail: yang@cooper.cpmc.org. Equal Opportunity Employer.



PLANT ECOPHYSIOLOGIST BIOLOGY FACULTY

Tenure track position available beginning January (preferred) or September 2000 at the assistant professor rank.

Earned Ph.D. with specialization in Plant Ecophysiology and teaching experience required. Preference will be given to candidates working with Terrestrial systems. Candidates must be committed to excellence in teaching. Successful performance in an on-campus interview, including a teaching session is required. Perceived ability to work productively with students and colleagues required. Preference will be given to candidates demonstrating familiarity with a broad range of continuous assessment techniques, the use of instructional technology in the teaching-learning process, and the role of faculty in student success, recruitment, and retention.

Responsibilities will include but not be restricted to, teaching plant physiology and introductory non-major biology courses which are part of the Liberal Studies program; developing courses in area of specialization; establishing a research program which could involve undergraduates, academic advising; and service to the department, college and university. Applicants must provide evidence of teaching and research effectiveness.

Send letter of application, current resume, graduate and undergraduate transcripts (official transcripts will be necessary before hiring), statements of longterm goals, research interests, teaching philosophy, and the names, addresses and phone numbers of three references to:

> Dr. Dean DeNicola Plant Ecophysiologist Search Chairperson Department of Biology Slippery Rock University Slippery Rock, PA 16057 Fax: 724/738-2188 E-mail: dean.denicola@sru.edu

Review of applications will begin <u>August 1, 1999</u>. Slippery Rock University is a member of the State System of Higher Education and is an affirmative action/equal opportunity employer building a diverse academic community and encourages minorities, women, veterans and persons with disabilities to apply. You can learn more about us on our web page at <u>www.sru.edu/depts/</u> <u>artsci/bio/</u>.



Postdoctoral Fellow – Immunology Department of Pathology and Laboratory Medicine

Two postdoctoral positions are available to study autoimmune disease and/or T-cell signal transduction. Ongoing projects involve the use of transgenic murine models to analyze autoimmune and alloimmune conditions, development of new genetic therapies for autoimmunity using retrovirally transduced T-cells, analysis of signal transduction through chimeric T-cell receptor genes, and synthesis and use of MHC-peptide tetramers to isolate and study self-reactive T-cells. These positions are ideal for the recent Ph.D. or M.D. interested in broad based immunological research in an interactive and scientifically stimulating environment. A background in cellular immunology, molecular immunology, gene therapy, or signal transduction is essential. Please send a C.V., a statement of research interests, and names of three references to:

Terrence Geiger, M.D., Ph.D. Department of Pathology and Laboratory Medicine St. Jude Children's Research Hospital, D-4047 332 North Lauderdale St. Memphis, TN 38105-2794 Equal Opportunity Employer

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ANNOUNCEMENTS

Funding Now Available for Research on the

Neurobiology of the ATM Protein

- Up to \$75,000 per year
- Rapid, 30-day peer review decision process
- · Early start date possible
- Application process not too burdensome

Grants are now available to support efforts aimed at understanding the neurodegeneration seen in patients with ataxiatelangiectasia (A-T), as well as efforts focused on identifying therapeutic interventions. A major objective of new grant awards will be to elucidate the functional role of the ATM protein in the development and maintenance of the brain, in collaboration with other labs that have already developed reagents such as ATM knockout mice, monoclonal antibodies and biochemical assays for ATM activity.

Competitive awards will be given to researchers for one- and two-year projects to be funded up to a total direct cost of \$75,000 per year. No administrative overhead or fixed costs are supported.

Scientific excellence, originality and direct relevance to A-T neurodegeneration are the paramount criteria in award decisions. There is no formal deadline date for the submission of proposals. Decisions will be made within 30 days after proposals are received and grant periods can begin as early as 15 days after the grants are awarded.

For grant proposal guidelines, contact the A-T Children's Project or visit our web site.



1 West Camino Real, Suite 212 Boca Raton, FL 33432-5966 U.S.A. Web site: www.atcp.org Phone: 561-395-2621 Fax: 561-395-2640 E-mail: rosa@atcp.org

POSITIONS OPEN

DIRECTOR NATIONAL FOOD SAFETY AND TOXICOLOGY CENTER Michigan State University

Michigan State University (MSU) invites nominations and applications for the position of Director of the National Food Safety and Toxicology Center (NFSTC), The NFSTC is a multidisciplinary unit that draws its faculty from six colleges and is headquartered in a new, centrally located facility. In addition to existing faculty appointments, MSU has committed eight new faculty positions to be appointed with NFSTC. The successful candidate will have a distinguished research record in the Food Safety area with demonstrated leadership and administrative experi-ence. Candidates should have a Ph.D. degree or equivalent and experience in an appropriate disciplinary area associated with food safety. Interested applicants should submit a curriculum vitae, a cover letter describing the candidate's research, academic, and administrative experience, and the names and addresses of three references. Review of candidates will begin on September 15, 1999, and will continue until the position is filled. For further information contact website: http://foodsafe.msu.edu. Applications, inquiries, and nominations should be directed to: Dr. James J. Pestka, Chair, Director Search Committee, National Food Safety and Toxicology Center, Michigan State University, 191 Food Safety and Toxicology Building, East Lansing, MI 48824-1302. E-mail: pestka@pilot.msu.edu; Telephone: 517-353-1709; FAX: 517-432-2310.

MSU is an Affirmative Action/Equal Opportunity Institution.

ASSISTANT/ASSOCIATE PROFESSOR DEPARTMENT OF MICROBIOLOGY AND IMMUNOLOGY Medical College of Ohio

Applications are invited for a 12-month, tenuretrack faculty position from individuals who possess a Doctoral degree, postdoctoral experience, and record of research productivity. The successful candidate is expected to develop an independent, extramurally funded research program and participate in teaching medical and M.S./Ph.D. students. We are particularly interested in applicants who use bacteria, fungi, or viruses to dissect and elucidate cellular and molecular pathways involved in microbial infection, as part of an expanded departmental focus on molecular pathogenesis. The Department is in a growth phase and is concurrently filling an Endowed Research Chair in immunology. Medical College of Ohio (MCO) is a state school with a modern campus. To learn more about the Department and MCO, visit our website: http://www.mco.edu.

Applicants should submit a statement of research goals with representative reprints, a curriculum vitae, and three letters of recommendation to: Garry T. Cole, Ph.D., Chair, Department of Microbiology and Immunology, Medical College of Ohio, 3055 Arlington Avenue, Toledo, OH 43614-5806. Applications should be received by October 1, 1999, although the search will continue until the position is filled. Affinnative Action/Equal Opportunity Employer.

POSTDOCTORAL INVESTIGATORS DIABETES AND AGING Mount Sinai School of Medicine

Mount Sinai School of Medicine is a leader in medical research and education. Our Division of Experimental Diabetes and Aging has immediate opportunities for Cellular and Molecular Biologists and Immunologists. Previous research experience necessary.

We offer competitive salaries. For consideration, please send curriculum vitae and three letters of references, indicating program areas of interest to: Division of Experimental Diabetes and Aging, Box 1640, Mount Sinai School of Medicine, One Gustave L. Levy Place, New York, NY 10029-6574. FAX: 212-849-2652. Visit our website: www. careermosaic.com/mountsinai. We are an Equal Opportunity Employer fostering diversity in the workplace.

POSITIONS OPEN

TENURE-TRACK POSITIONS CORNELL UNIVERSITY WEILL MEDICAL COLLEGE NEUROSCIENCE Developmental Neurobiology Molecular Neuroscience Signal Transduction Visual Systems

As part of a significant enhancement of its basic science programs and laboratory facilities, Weill Medical College of Cornell University is undertaking a major program initiative in the area of neuroscience and is seeking to recruit tenure-track faculty at all levels. We are especially interested in candidates with research interests related to developmental neurobiology, molecular neuroscience, signal transduction, and retinal biology (with an emphasis in cell and/or developmental biology and genetics). Exceptional candidates in other related/appropriate fields will also be considered. Candidates for junior positions should demonstrate the potential for establishing a vigorous independent research program, and candidates for senior positions should have an outstanding record of productivity. Candidates may have Ph.D., M.D., or M.D.-Ph.D. degrees.

Recruited faculty will receive generous start-up support. Candidates may participate in the Graduate School of Medical Sciences program, which includes faculty from the Weill Medical College and the Sloan-Kettering Institute. Faculty appointment could be in any basic science and/or clinical department. Applications should include a curriculum vitae, statement of research interests, and three letters of recommendation. Applications should be sent to: Jack D. Barchas, M.D., Chair, Neuroscience Recruitment Committee, Box #27, Weill Medical College of Cornell University, 1300 York Avenue, New York, NY 10021.

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

Purdue University seeks a Molecular Quantitative Geneticist for a TENURE-TRACK POSITION. The initial appointment will be research (majority) and education (classroom teaching). The individual will be expected to develop an innovative and internationally recognized research program in one or more of the following areas: quantitative trait locus identification, bioinformatics, analysis of gene expression profiles, genomic and expression database development, and integration of quantitative and molecular genetic information into animal improvement programs. The individual will be expected to teach at the undergraduate and graduate level. Interests and/or experience in international dimensions of the discipline are desirable, as part of the package that the successful individual brings to Purdue Agriculture. Deadline: Screening of applications will begin October 1, 1999, and continue until a suitable candidate is found. Candidates should submit a letter of application, statement of research and teaching interests, detailed curriculum vitae including education, experience, qualifications, publications, and arrange for official transcripts and three letters of reference to be sent to: Dr. Jeff Armstrong, Head, Department of Animal Sciences, 1151 Lilly Hall, Purdue University, West Lafayette, IN 47907-1151. Telephone: 765-494-4808; FAX: 765-494-9346; e-mail: jeff_ armstrong@ansc.purdue.edu. Purdue University is an Equal Access/Equal Opportunity University.

ELECTRON MICROSCOPIST University of California, San Francisco

An electron microscopy **RESEARCH ASSOCI-ATE** is sought for research on neurodegenerative diseases. Extensive experience with ultrathin- and cryosectioning of plastic embedded or frozen samples is required. Special emphasis will be put on experience with intracellular localization. Knowledge about negative staining techniques and electron microscope maintenance would be advantageous. Mail applications to: Dr. H. Wille, University of California, San Francisco, Box 0518, San Francisco, CA 94143.

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POSITIONS OPEN

COMPUTER-ASSISTED DRUG DESIGN

Faculty position. Applications are invited for a tenure-track position at the level of ASSISTANT PRO-FESSOR to start January 3, 2000. Applicants must possess excellent communicative and interpersonal skills and be willing to collaborate with other faculty in multidisciplinary research projects in the areas of medicinal chemistry and pharmacology. A Ph.D. degree in a relevant area and a minimum of two years of postdoctoral experience in Computer-Assisted Drug Design (CADD) of ligands and proteins is required. The candidate must be experienced in small and macromolecular modeling software that will facilitate structure and pharmacophore-based drug design, QSAR, and protein targeting methods. The applicant will be expected to develop an independently funded research program that utilizes molecular modeling techniques in drug design and to participate in the teaching of professional and graduate students. Candidates should send a curriculum vitae, a statement of research objectives, and the names and addresses of three references by August 15, 1999, to: Dr. Joseph W. Kosh, Chair, Department of Basic Pharmaceutical Sciences, University of South Carolina, College of Pharmacy, Columbia, SC 29208. Additional information regarding the Department of Basic Pharmaceutical Sciences and the College of Pharmacy is available at website: http://pharmwww.biol. sc.edu/index.html. The University of South Carolina is an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.

RESEARCH SCIENTIST to conduct scientific and technological studies on designing, processing, characterizing, and testing advanced thermoelectric materials and devices, which are utilized for noncarbon floride chloride environmentally benign refrigeration, and also energy conversion from waste heat to electricity. Research work to include (1) development of improved materials processes such as Flash thin film deposition and inert gas condensation for nanostructured materials, alloy development and preparation, design and construction of testing equipment for high-temperature/cryogenic-temperature electrical conductivity and thermoelectric properties, performance testing and computer simulation of thermoelectric devices, as well as data analysis; (2) thermal hydride for hydrogen storage related to high-energy density metal hydride battery technology by synthesizing nanostructured hydrogen storage alloys to enhance their properties toward commercialization. Assist in preparation of technical proposals to research and development programs related specifically to thermoelectrics and nanostructured materials. 40 hours per week. 8:30 a.m. to 5:30 p.m. Ph.D. in materials science and engineering required. Annual salary \$53,450.80. Send résumés and transcripts to: MJC/ESA, P.O. Box 11170, Detroit, MI 48211-1170. Reference No. 154598. Employer Paid Ad.

DEVELOPMENTAL BIOLOGIST

The University of Nebraska Medical Center invites applications for a position in the Department of Cell Biology and Anatomy. Rank will be dependent upon qualifications. Applicants should have a Ph.D. or equivalent, and should have completed two or more years of postdoctoral experience. Experience with molecular genetics also is highly desirable, but not essential. The individual selected for this position will have experience in avian or murine developmental biology, and will be expected to collaborate in a research program that investigates gene/nutrient and gene/drug interactions that result in developmental abnormalities of neural crest and neural tube derivatives. Résumés and inquiries should be directed to:

Thomas H. Rosenquist, Ph.D. Von Housen Professor and Chairman Department of Cell Biology and Anatomy University of Nebraska Medical Center 986395 Nebraska Medical Center Omaha, NE 68198-6395

The University of Nebraska Medical Center is an Equal Opportunity/Affirmative Action Employer. Women, members of underrepresented minority groups, and persons with disability are encouraged to apply.



Computational Biology and Functional Genomics National Center for Biotechnology Information National Institutes of Health

The National Center for Biotechnology Information (NCBI) performs basic research in computational biology and creates information systems and computational tools for the biomedical research community. The Computational **Biology Branch invites applications for** Postdoctoral Fellowships and Staff Scientist positions. Research interests include the development of new methods for analyzing and mining data from new functional genomics and proteomics technologies. Current projects also include the analysis of genotype-phenotype correlations and the development of quantitative models of physiological and disease processes. Opportunities exist for collaborations with both intramural and extramural groups working with highthroughput and large-scale biotechnologies. Candidates with backgrounds in physics, applied mathematics, statistics, biomedical engineering and/or molecular biology are encouraged to apply. Programming experience is required.

Applicants may be U.S. citizens, resident aliens, or qualified nonresidents. Salaries are commensurate with experience. Salaries and benefits are competitive with similar positions at other institutions.

Candidates should send applications including a curriculum vitae, bibliography, and the names, addresses, and telephone numbers of three references to:

Mark S. Boguski, M.D., Ph.D. **Computational Biology Branch** National Center for Biotechnology Information National Library of Medicine NIH, Building 38Å, Room 5N503 Bethesda, MD, 20894 (301) 496-2475

Selection for this position will be based solely on merit, with no discrimination for non-merit reasons such as race, color, reli gion, sexual orientation, gender, national origin, politics, marital status, physical or mental handicap, age, or membership or non-membership in an employee organization.

NIH is an Equal Opportunity Employer.

THE J. DAVID GLADSTONE INSTITUTES

University of California, San Francisco San Francisco General Hospital



Postdoctoral Fellowship available in the laboratory of Robert V. Farese, Jr, at the Gladstone Institute of Cardiovascular Disease, to study mouse knockout models for neutral lipid synthesis enzymes (ACAT and DGAT). Ph.D. or M.D./Ph.D. with experience in both molecular biology and lipid metabolism required. Job# C99-044.

Postdoctoral Fellowship available in the laboratory of Dr. Israel F. Charo to study Chemokines and Chemokine Receptors. Current projects include the use of knockout mice to study the role of MCP-1 and Fractalkine in disease models, immune cell trafficking, and signal transduction. Backgrounds in molecular biology and immunology desirable. Candidate should possess Ph.D., M.D., or both. Job# C98-026.

E. Heberle-Bors (Vienna, A)

J. Memelink (Leiden, NL)

K. Niehaus (Bielefeld, D)

M. Strnad (Olomuc, CZ)

E.W. Weiler (Bochum, D)

Interested candidates, please send C.V. and references to: Job #_ The J. David Gladstone Institutes, P.O. Box 419100, San Francisco, CA 94141. Email: hr@gladstone.ucsf.edu Website: http://gladstone.ucsf.edu

Equal Opportunity/Affirmative Action Employer



EUROPEAN RESEARCH CONFERENCES nsored by the European Science Foundation and the Euroconferences Activity of the European Union

Plant Cell Biology & Biotechnological Applications

Signal Recognition, Transduction Mechanisms & Gene Regulation

Rolduc, near Kerkrade, The Netherlands, 17-22 September 1999

Chairman: W. Barz (Münster, D) Managing Chairmen: A.W. Alfermann (Düsseldorf, D) and R. Verpoorte (Leiden, NL)

> SPEAKERS WILL PROVISIONALLY INCLUDE P. Epple (Chapel Hill, USA)

> > C. Martin (Norwich, UK)

K. Saito (Chiba, J)

G. Neuhaus (Freiburg, D)

- R.A. Dixon (Ardmore, USA)
- J.W. Kijne (Leiden, NL)
- J.P. Metraux (Fribourg, CH)
- J.A. Pickett (Harpenden, UK)
- A.J. Trewavas (Edinburgh, UK)

C. Wasternak (Halle, D) SCOPE OF THE CONFERENCE

The conference will focus on the following topics:

- The Actions of Plant Hormones .
- The Interaction of Plants with Microorganisms
- The Interaction of Plants with Insects
- Natural Product Formation in Plants and Plant Cell Cultures

Special emphasis will focus on the different aspects involved in signal recognition, signal transduction as well as gene regulation important for these different processes. A Poster session will also be organised.

Deadline for Applications: 9 July 1999

The conferences are open to researchers world-wide, whether from industry or academia. Participation will be limited to 100. The Registration Fee covers full board and lodging. Grants are available for younger scientists, in particular those from less favoured regions in Europe.

For information & application forms contact: J. Hendekovic,

European Science Foundation, 1 quai Lezay-Marnésia, 67080 Strasbourg Cedex., France Fax.(33) 388 36 69 87 E-mail: euresco@esf.org; WWW server: http://www.esf.org/euresco

POSITIONS OPEN

PRINCIPAL INVESTIGATOR POSITIONS Southeast Poultry Research Laboratory, Agricultural Research Services, USDA has two permanent full-time positions available for Ph.D. or Ph.D.-D.V.M. scientists. The first position is for a MOLEC-ULAR BIOLOGIST/GENETICIST with experience in microbiology, molecular biology, biochemistry, or genetics. The incumbent will utilize modern molecular approaches to conduct basic and applied research examining Salmonella enteritidis ecology. The second position is for an IMMUNOLOGIST/ VIROLOGIST with experience in immunology, virology, microbiology, or molecular biology. The incumbent will conduct basic and applied research on the immunologic aspects of avian influenza and Newcastle disease virus. The ideal candidates will have a Ph.D. or Ph.D.-D.V.M. and postdoctoral research experience with evidence of recent peer-reviewed publications. Southeast Poultry Research Laboratory is a rapidly growing, dynamic research laboratory with over 18 scientists forming a diverse interdisciplinary team working on established and emerging disease threats to the U.S. poultry industry. Salary commensurate with experience (\$47,891 to \$87,489). United States citizenship required. For further information on the research programs and/or positions contact by telephone or by mail: Dr. David Swayne, 934 College Station Road, Athens, GA 30605. Telephone: 706-546-3434. For further information of application procedures, contact: Ms. Genell Powers, Telephone: 706-546-3029. Applications must be postmarked by August 2, 1999. *The USDA is an Equal* Opportunity Employer and Provider.

MOLECULAR MODELING MANAGER

The Department of Chemistry at the University of California, Irvine currently has an excellent opportunity for an individual to support researchers with a range of computational chemistry, theory, and modeling applications (Spartan, Gaussian, MSI Discover, MacroModel, etc.). Will also manage the research facility and be responsible for all aspects of daily operation, including coordination of facility services, equipment maintenance and troubleshooting, assisting and training users, and financial management; supervise and train graduate students to make critical applications of computational methods to active research problems and in collaborative research projects; analyze, recommend, and implement software and hardware; maintain the department's website.

Required experience in computational methods applied to chemistry research; successful interpersonal skills to work effectively with a variety of individuals. A Ph.D. or equivalent experience in chemistry or biology is strongly preferred. UNIX system administration and World Wide Web administration is desired. Salary will be commensurate with experience. Interested candidates should send a résumé and a list of three references, referencing Job #SCP-3330L, by August 4, 1999, to: University of California, Irvine, Human Resources Department, Berkeley Place Building, Suite 2500, Irvine, CA 92697-4600. Résumés will continue to be accepted until the position is filled. *The University of California is an Affirmative Action/Equal Opportmity Employer.* Visit us on the World Wide Web at website: www.hr.uci.edu.

POSTDOCTORAL RESEARCH ASSOCIATE

Postdoctoral Research Associate position available immediately in the Department of Pathology and Laboratory Medicine to study signal transduction pathways associated with mechanisms of anticancer action. Candidate should have a Ph.D. or M.D. and have experience in *in situ* hybridization, immunohistochemistry and purification of nucleic acids from tissue sections. Send curriculum vitae and three references to: H. Simpkins, M.D., Ph.D., Professor and Chairperson, Department of Pathology and Laboratory Medicine, Temple University School of Medicine, 3401 North Broad Street, Philadelphia, PA 19140. Temple University is an Affinnative Action/Equal Opportunity Employer and strongly encourages applications from women and minorities.

POSITIONS OPEN

ASSISTANT EDITOR NATURE NEUROSCIENCE

Nature Neuroscience, a monthly journal from the publishers of Nature, was launched in May 1998 and has already established itself as a leading journal in its field. Nature Neuroscience publishes papers of the highest quality in all areas of neuroscience, including molecular, cellular, systems, cognitive, and computational studies. Its aim is to reflect the multidisciplinary nature of this field and to provide a highly visible forum for communicating important advances to a broad readership.

In view of the strong response from both contributors and subscribers, *Nature Neuroscience* now wishes to hire another Assistant Editor. This is a full-time position based in the *Nature America* editorial office in Manhattan. Applicants should have a strong research background in neuroscience, a broad interest in the subject, excellent literary skills, and a commitment to the communication of scientific ideas.

This is an exciting opportunity to participate in running a major scientific journal and to play a key role in its future development. The successful candidate will participate in all aspects of the editorial process, including manuscript selection, commissioning and editing of News and Views and Reviews, and writing for the journal. The job also involves attending meetings in the United States and abroad, and maintaining contact with the international scientific community. The successful candidate will join the existing team of three Editors, and will become part of the larger editorial and publishing group who also produce *Nature Genetics, Nature Structural Biology, Nature Medicine*, and *Nature Biotechnology*.

Please submit a curriculum vitae, a short (500 to 1,000 words) News and Views-style article on an exciting and newsworthy recent development in any area of neuroscience, and a cover letter explaining your interest in the post to: The Editor, Nature Neuroscience, 345 Park Avenue South, New York, NY 10010. FAX: 212-696-0978; e-mail: neurosci@natureny.com to arrive as soon as possible and no later than 25 July 1999.

Further information about the journal may be found on our website: http://neurosci.nature.com.

POSTDOCTORAL OPPORTUNITIES IN GENE THERAPY Department of Human Genetics Mount Sinai School of Medicine

Mount Sinai School of Medicine is a leader in medical research and education. Two Postdoctoral positions are available in **Dr. Edward H. Schuchman's** laboratory to develop and evaluate gene-based therapies in animal models of lysosomal storage diseases. Strategies to target the central nervous system, cartilage and bone, and monocyte/macrophage system are currently under investigation. Applications are invited from individuals holding Ph.D. and/or M.D. degrees and having prior experience in molecular genetics/gene therapy. Opportunities for advancement in an active human genetics/gene therapy environment available.

Salaries commensurate with experience. We offer a comprehensive benefits package, a challenging work environment, and services that enhance the quality of work life. For consideration, please forward curriculum vitae and the names of three references to: Dr. Edward H. Schuchman, Department of Human Genetics, Box 1498, Mount Sinai School of Medicine, One Gustave L. Levy Place, New York, NY 10029-6574. We are an Equal Opportunity Employer fostering diversity in the workplace.

POSTDOCTORAL POSITION in molecular pharmacology available immediately to study the effects of neurotoxins and local anesthetics on mutant sodium channels. Expertise in patch-clamp or sitedirected mutagenesis is preferred. Send curriculum vitae and the names of three references to: Dr. Ging Kuo Wang, Department of Anesthesia, Brigham and Women's Hospital/Harvard Medical School, 75 Francis Street, Boston, MA 02115. FAX: 617-732-2801; e-mail: wang@zeus.bwh.harvard.edu.

POSITIONS OPEN

Kentucky. **PEDIATRIC SCIENTIST**. The Department of Pediatrics is recruiting a Pediatric Scientist (M.D., M.D.-Ph.D., or Ph.D.) to establish an extramurally funded laboratory research program. Our strengths and needs include cancer, molecular and biochemical genetics, neonatal lung development, cardiovascular development, and neuroscience. This is a tenure-track position with research endowment available to support tenure base. Suitable laboratory space and set-up funds will be identified. Candidates should contact: Dr. Vipul N. Mankad, Chairman of Pediatrics, University of Kentucky Medical Center, 800 Rose Street, Lexington, KY 40536. Equal Opportunity Employer.

RESEARCH ASSOCIATE POSITION immediately available to study biological functions of extracellular matrix proteoglycans, such as lumican (*JCB* 141:1277, 1998), in gene-targeted proteoglycan-deficient mice, emphasizing structure/function analyses using biochemical, cell-biological, and molecular biological tools. Strong research environment with in teractions between Departments of Medicine, Genetics, and Ophthalmology. Send curriculum vitae and references to: Dr. Shukti Chakravarti, Case Western Reserve University, Department of Medicine, BRB 423, Cleveland, OH 44106-4952. E-mail: sxc76@po.cwru.edu.

An NIH-funded **POSTDOCTORAL POSI-TION** is available immediately to investigate hormonal modulation of cartilage remodeling primarily through regulation of matrix metalloproteinases. Areas of emphasis include transfections, protein purification, cloning, modulation of receptor and receptor binding, isolation of receptors, and animal studies. Experience in molecular and cell biology, and animal experimentation is essential. Good verbal and writing skills are also required. Please send curriculum vitae and names of three references to: **Dr. Sunil Kapila**, **Department of Growth and Development, University of California San Francisco, San Francisco, CA 94143-0640. E-mail: skaps@itsa.ucsf.edu.** *UCSF is an Affimative Action/Equal Opportunity Employer.*

A POSTDOCTORAL FELLOW position is available to study the mechanism of tumor angiogenesis. Perspective candidates should hold a Ph.D. or equivalent degree in molecular biology or a related field. The study will focus on the role of a novel endothelial cell-specific gene involved in the regulation of angiogenesis (Zhai et al., Int. J. Canter 82:131, 1999). Send curriculum vitae and three letters of reference to: Dr. Luyuan Li, Georgetown University Medical Center, Lombardi Cancer Center, 3970 Reservoir Road N.W., RB/E301, Washington, DC 20007. E-mail: lilu@gunet.georgetown.edu.

POSTDOCTORAL RESEARCH FELLOW

Immediate opportunity for Ph.D. to study molecular mechanisms of gene regulation in bone. Experience in recombinant DNA, protein expression, promoter analysis. Salary negotiable. Forward résumé to:

Dr. Philip Stashenko The Forsyth Institute 140 Fenway Boston, MA 02115 E-mail: pstashenko@forsyth.org

Affirmative Action/Equal Opportunity Employer.

POSTDOCTORAL POSITION is available immediately to investigate molecular and cell biology of transcription factors of the vitamin D receptor. Salary commensurate with experience; appointment is for three years. Candidates should be experienced in molecular and cell biology. Send curriculum vitae and names of three references to: **Rajbir K. Gill, Ph.D., Department of Medicine, Box 250775, Medical University of South Carolina, 114 Doughty Street, Charleston, SC 29425. FAX: 843-953-6414.**

Université de Neuchâtel Faculté des Sciences

Two Positions: A professorship in exogenic geodynamic processes (1) and

A professorship in petrology and endogenic geodynamic processes (2)

are available at the Geological Institute of the University of Neuchâtel.

We are seeking candidates with internationally recognized research profiles in the areas of exogenic and andogenic geodynamic processes, who will develop and lead a research program in the field of

- (1) Analysis and modeling of earth surface processes and their geological records.
- (2) Petrology and endogenic geodynamic processes in the area of crystalline rocks of the continental and oceanic crusts, as well as of the mantle based on field observations and modern analytical techniques. Petrogenesis and deformation of crystalline rocks in different geotectonic contexts.

The successful candidates are expected to participate in the teaching of undergraduate and graduate courses in the general field of earth sciences, as well as in their field of specialization. The candidates will have the possibility to collaborate with other research groups in the Geological Institute, in the Hydrogeological Center and in the Geological Institutes of the Universities in Berne and Fribourg, which all are part of the BENEFRI Department in Earth Sciences.

Further details on the positions are available from Prof. K. B. Föllmi, Director of the Geological Institute, University of Neuchâtel, rue Emile-Argand 11, CH-2007 Neuchâtel, tél. +41 (0)32 718 26 55, email karl.follmi@geol.unine.ch.

Applicants are invited to forward a letter accompanied by a curriculum vitae, a list of publications, a list of planned projects, and the names and addresses of referees to

- Service de l'enseignement universitaire, Château, CH-2001 Neuchâtel before 30 November 1999.
- Starting date of the positions is October 1, 2000.

SEUCRITE

The University of Neuchâtel is an equal opportunity employer that encourages applications from women.

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Tel. +49 / 89 / 54 82 34 -0 Fax +49 / 89 / 54 82 34 - 44

e-mail: info@i-plan.de

GLOBAL OPPORTUNITIES

THE CHINESE UNIVERSITY OF HONG KONG

Department of Biology

Lecturer (carrying the academic title of Assistant Professor or Associate Professor, as appropriate)

(Ref. 99/072(540)/2) (closing date: 31 July 1999)

Applicants should have a PhD degree in molecular biology or plant biology and relevant postdoctoral research experience. The appointee will: (a) teach undergraduate courses in plant molecular biology, plant biotechnology, microbial biotechnology, and other biotechnology related courses offered by the Department and the new Molecular Biotechnology Programme; and (b) develop a vigorous and competitive research programme on plant molecular biology and biotechnology or related areas. Preference will be given to applicants with experience in teaching and independent research in the application of molecular biological approaches and techniques to the study of plant metabolism, functional genomics, and genetic engineering crops for improvement. Some experience in plant cell transformation and tissue culture will be an additional asset. Appointment will initially be made on fixed-term contract basis for two to three years from January 2000, renewable subject to performance and availability of funding.

Annual Salary and Fringe Benefits

Lecturer: HK\$554,280 - HK\$925,980 by 10 increments (approx. exchange rate in June 1999: $\pounds 1 = HK\$12.52$; US\$1 = HK\$7.75) Starting salary will be commensurate with qualifications and experience.

Benefits include leave with full pay, medical and dental care, and where applicable children's education allowance, housing benefit for eligible appointee (subject to the rules for the prevention of double housing benefits) and a contract-end gratuity (up to 15% of basic salary). Further information about the University and the general terms of service for teaching appointees is available at our World Wide Web homepage http://www.cuhk.edu.hk>.

Application Procedure

Please send full resume, copies of academic credentials, a publication list and/or abstracts of selected published papers, together with names and addresses (fax numbers/e-mail addresses as well, if available) of three referees to the Personnel Office, The Chinese University of Hong Kong, Shatin, New Territories, Hong Kong (Fax: (852) 2603 6852) before **31 July 1999.** Please quote the reference number and mark "Application" on cover.

POSITIONS OPEN

Two **POSTDOCTORAL POSITIONS** available at the Hormel Institute, University of Minnesota, Austin, Minnesota to study the signal transduction in tumor promotion and chemoprevention (*MCB* 16: 6427, 1996; *JBC* 271:9942, 1996; *JBC* 271:3126, 1996; *JBC* 272:4187, 1997; *JBC* 272:9962, 1997; *JBC* 272:26325, 1997; *JBC* 272:27753, 1997; *JBC* 273:32176, 1998; *JBC* 274:15389, 1999; *JBC* 274: 14596, 1999; *JBC* 274:15389, 1999; *PNAS* 94:5826, 1977; *PNAS* 94:11957, 1997; *Cancer Res.* 57:4414, 1997; *Cancer Res.* 58:711, 1998; *Cancer Res.* 57:4414, 1997; *Cancer Res.* 58:711, 1998; *Cancer Res.* 58:4102, 1998). We are seeking self-motivated Ph. D's with experience in biochemistry, molecular and cellular biology. Experience in gene cloning and signal transduction systems is a plus. Please send your curriculum vitae and the names and telephone numbers of three references to: Dr. Zigang Dong, The Hormel Institute, University of Minnesota, 801 16th Avenue N.E., Austin, MN 55912. FAX: 507-437-9606; e-mail: zgdong@smig.net. These positions will remain open until qualified candidates are found. The University of Minnesota is committed to the policy that all persons shall have Equal Access to its programs, facilities, and employment without regard to race, color, cred, religion, national origin, sex, age, marital status, disability, public assistance status, veteran status, or sexual orientation.

POSTDOCTORAL POSITION in cell biology of Alzheimer's disease. Available immediately at the Fisher Center for Research on Alzheimer's disease, The Rockefeller University. We seek qualified individuals to investigate the mechanism of beta-amyloid generation and its regulation by signal transduction pathways (*Nature Medicine* 4:447-451, 1998; *Proc. Natl. Acad. Sci.* 96:742–747, 1999). Solid experience in molecular and cell biology and a proven record of accomplishment are required. Please send curriculum vitae and a brief description of research experience to: Dr. Huaxi Xu, The Rockefeller University, 1230 York Avenue, New York, NY 10021. FAX: 212-327-7888; e-mail: xuh@rockvax.rockefeller.edu.

POSTDOCTORAL POSITIONS

Available immediately in a laboratory focused on breast cancer research. Projects include regulation of estrogen receptor expression and potential use of apoptosis pathways to design new therapies for breast cancer. Strong molecular and cell biology skills desired. Please send a curriculum vitae, cover letter with research interest, and names of three references to:

> Nancy E. Davidson Johns Hopkins Oncology Center 422 North Bond Street Baltimore, MD 21231-1001 FAX: 410-955-0840 E-mail: davidna@jhmi.edu.

POSTDOCTORAL POSITION. A Postdoctoral position is available to study genetic alterations in cervical cancer pathogenesis. Candidates should have demonstrable experience in molecular biology and diagnostic histopathology. Please send curriculum vitae and names of three references to: Kathleen R. Cho, M.D., Department of Pathology, University of Michigan Medical School, 4301 MSRBIII, Box 0638, 1150 West Medical Center Drive, Ann Arbor, MI 48109. FAX: 734-647-7979; e-mail: kathcho@umich.edu. A nondiscriminatory Affinative Action Employer.

POSTDOCTORAL POSITIONS available for Ph.D. in life sciences to study cell matrix or neuregulin signaling. Experience with molecular biology, biochemistry, neurobiology techniques required. Send curriculum vitae, three letters of references, and a brief statement of interests to: Dr. Wen-Cheng Xiong or Dr. Lin Mei, University of Alabama, Department of Pathology or Neurobiology, Birmingham, AL 35294. E-mail: wx9c@virginia.edu or Im5u@virginia.edu.

INTERESTED IN CLINICAL OR POSTDOCTORAL RESEARCH TRAINING?

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

The NIH is an Equal Opportunity Employer.

POSTDOCTORAL FELLOWSHIP IN THORACIC ONCOLOGY NATIONAL CANCER INSTITUTE

An immediate opening exists for a full-time Postdoctoral Training Fellowship in the Thoracic Oncology Section, Surgery Branch, National Cancer Institute. We are seeking an individual with documented expertise in cell cycle regulation, tumor suppressor genes, and gene therapy to extend our work pertaining to molecular mechanisms of lung and esophageal carcinogenesis.

Send cover letter, résumé, and statement of research interests to:

> David S. Schrump, M.D. Head, Thoracic Oncology Section Surgery Branch National Cancer Institute National Institutes of Health Building 10, Room 2B07 10 Center Drive MSC 1502 Bethesda, MD 20892-1502 FAX: 301-402-1788

E-mail: schrumpd@pop.nci.nih.gov

Selection for this position will be based solely on merit, with no discrimination for nonmerit reasons such as race, color, religion, gender, national origin, politics, marital status, physical or mental disability, age, sexual orientation, or membership or nonmembership in an employee organization.

A POSTDOCTORAL POSITION is available immediately for a highly motivated individual to pursue studies on the molecular events that regulate lymphocyte adhesion and migration, with a specific focus on chemokine- and integrin-mediated signaling events. Individuals with a Ph.D. and experience in molecular biology, cell biology, and/or immunology are encouraged to apply. Interested individuals should send a curriculum vitae, a statement of research interests, and names of three references to: Yoji Shimizu, Ph.D., Center for Immunology, University of Minnesota Medical School, Box 334 Mayo/420 Delaware Street S.E., Minneapolis, MN 55455. E-mail: shimi002@tc.umn.edu.

POSTDOCTORAL POSITIONS in structural biology to study (1) prodrug activation by kinases and (2) synapse-associated protein domains. The first project involves structure-based drug design, the second project protein-protein structural analysis. These are ideal positions for enthusiastic Crystallographers, or Biochemists interested in learning X-ray crystallography. Send curriculum vitae and names of three references to: Arnon Lavie, Ph.D., University of Illinois at Chicago, Department of Biochemistry and Molecular Biology, 1819 West Polk Street, M/C 536, Chicago, IL 60612. FAX: 312-413-0364; e-mail: lavie@uic.edu. UIC is an Affirmative Action/ Equal Opportunity Employer.

POSTDOCTORAL

Postdoctoral position available to study signaling mechanisms underlying abnormal integrin-mediated adhesion and growth regulation in hematopoietic progenitors in leukemia. Requires a Ph.D. or M.D. degree and molecular biology and signal transduction experience. Send curriculum vitae and names of three references to: A. Fryhoff, Beckman Research Institute, 1450 East Duarte Road, Duarte, CA 91010-3000. FAX: 626-301-8843. Visit us at website: www.cityofhope.org. City of Hope. Where the power of knowledge saves lives. *Equal Opportunity Employer.*

POSITIONS OPEN

POSTDOCTORAL POSITIONS available in the Department of Experimental Radiation Oncology: NIH/NCI Training Grant-supported POST-

NIH/NCI Training Grant-supported POSI-DOCTORAL FELLOWSHIPS in radiation oncology. Postdoctoral for two-year research training in basic or translational radiation biology. Candidates must possess a Ph.D. or M.D. degree and be a U.S. citizen or permanent resident to be eligible. (Send to: Attn: Dr. L. Milas.)

MOLECULAR BIOLOGIST. Two-year Fellowship to study DNA damage repair and recombination. Highly motivated candidates with an interest in improving gene therapy are encouraged to apply. Experience required in molecular biology and tissue culture. Experience with DNA repair or virus/plasmid construction is desirable. (Send to: Attn: Dr. C. Stevens.)

BIOCHEMIST/MOLECULAR BIOLOGIST. To study the role of oxidative stress in the radioresponse of the central nervous system and/or radiation-activated signal transduction processes. (Send to: **Attn: Dr. P. Tofilon**.)

BIOCHEMIST/MOLECULAR BIOLOGIST. To study the role of the recently cloned, radiationinduced, stress response protein p28 in the chemoand radiation resistance of mammalian cells. (Send to: **Attn: Dr. M. Story.**)

Send curriculum vitae and the names and addresses of at least three references by mail to: Administrator, Department of Experimental Radiation Oncology, Box 66, The University of Texas, M. D. Anderson Cancer Center, 1515 Holcombe Boulevard, Houston, TX 77030. E-mail: saxtel@mdanderson. org.

org. The University of Texas M. D. Anderson Cancer Center is an Equal Opportunity Employer. Smoke-free environment. Women in minority categories are encouraged to apply.

POSTDOCTORAL POSITIONS INDIANA UNIVERSITY SCHOOL OF MEDICINE Herman B. Wells Center for Pediatric Research Cell Signaling by Rac2 GTPase in Blood Cells

Positions available to investigate actions of Rac2 GTPase effectors in regulation of the adhesion, proliferation apoptosis, and inflammatory cell function. Applicants with experience in apoptosis, intracellular signaling, the cytoskeleton, and phagocyte and hematopoietic cell biology are encouraged to apply.

See: Immunity 10:183–196, 1999.

Experience with microscopy and live cell imaging, protein isolation, fluorescence techniques, murine models, and/or molecular biology is desirable. Salary commensurate with experience. Send curriculum vitae, statement of research interests, and three letters of recommendation to:

David A. Williams, M.D. Indiana University School of Medicine Herman B. Wells Center for Pediatric Research 1044 West Walnut Street Building R4-402 Indianapolis, IN 46202 Or:

Mary C. Dinauer, M.D., Ph.D. Indiana University School of Medicine Herman B. Wells Center for Pediatric Research 1044 West Walnut Street Building R4-402 Indianapolis, IN 46202

POSTDOCTORAL POSITIONS

Postdoctoral positions available to chart and analyze mammalian protein regulatory networks in the context of functional genomics (See: *PNAS* 94: 12473-8, 1997). Candidates should be highly motivated with a strong background in mammalian molecular biology. Send research interests, curriculum vitae, and three references to: C. Wilson Xu, Ph.D., Box 362, Sloan-Kettering Institute and Cornell University Graduate School of Medical Sciences, 1275 York Avenue, New York, NY 10021. FAX: 212-639-2767; e-mail: w-xu@ski.mskcc.org.

GLOBAL OPPORTUNITIES

TEL AVIV UNIVERSITY Sackler School of Medicine Tenure-Track Positions

The Sackler School of Medicine seeks outstanding candidates to fill a number of tenure-track academic positions at the levels of lecturer, senior lecturer and associate professor. Candidates must possess Ph.D. or M.D. degrees and have postdoctoral experience. Successful candidates will be expected to develop an independent, vigorous research program and be involved in teaching medical and graduate students. An appropriate start-up package will be offered.

Positions are available in the following Departments (preferred fields of research indicated):

Physiology and Pharmacology (physiology, biophysics, pharmacology, neurosciences)

Human Microbiology (fungal biology, pathogenesis of fungal infections)

Human Genetics and Molecular Medicine (molecular genetics, functional genomics, human population genetics, molecular cytogenetics, behavioral genetics, genetics of complex traits)

Pathology (molecular pathology; candidates with M.D./Ph.D. preferred)

Anatomy and Anthropology (physical anthropology, human biology)

Clinical Biochemistry (biochemistry, molecular and cell biology)

Review of applications will begin in early September 1999. Applicants should send their curriculum vitae and list of publications, and a statement of research program, to the address below, and ask at least 3 referees to send letters of reference to the same address:

> The Search Committee c/o Mr. Amit Nitzan The Sackler School of Medicine Tel Aviv University Ramat Aviv 69978 ISRAEL

EUROPEAN OPPORTUNITIES

Am Institut für Mikrobiologie, Biochernie und Genetik, Naturwissenschaftliche Fakultät II (Biologie, Chernie und Pharmazie), ist zum frühestmöglichen Zeitpunkt eine

C 3-Professur für Genetik

zu besetzen.

Zu den Aufgaben gehört, das Fachgebiet in Forschung und Lehre angemessen zu vertreten. Im Mittelpunkt der Forschung soll die Molekulare Genetik des blutbildenden Systems (auch unter Verwendung von Tiermodellen) stehen. Die Professur wird im Klinisch-Molekularen Forschungszentrum untergebracht. Bereitschaft zur Kooperation mit den klinischen Arbeitsgruppen und Mitwirkung an den naturwissenschaftlichen und/oder klinischen Sonderforschungsbereichen werden erwartet.

Einstellungsvoraussetzungen sind ein abgeschlossenes Hochschulstudium, pädagogische Eignung, Promotion und Habilitation oder der Nachweis gleichwertiger wissenschaftlicher Leistungen.

Zum Zeitpunkt der Ernennung dürfen Bewerberinnen/Bewerber das 52. Lebensjahr noch nicht vollendet haben.

Die Universität Erlangen-Nürnberg strebt eine Erhöhung des Anteils von Frauen in Forschung und Lehre an und bittet deshalb Wissenschaftlerinnen nachdrücklich um ihre Bewerbung.

Bewerbungen von Schwerbehinderten werden bei gleicher Eignung bevorzugt berücksichtigt.

Bewerbungen mit den üblichen Unterlagen (Lebenslauf, Verzeichnis der Schriften und Lehrveranstaltungen, beglaubigte Kopien von Zeugnissen und Urkunden) werden bis zum **31. August 1999** an den Dekan der Naturwissenschaftlichen Fakultät II (Biologie, Chemie und Pharmazie) der Universität Erlangen-Nürnberg, Universitätsstraße 40, D-91054 Erlangen, erbeten.

Friedrich-Alexander-Universität Erlangen-Nürnberg



UNITED ARAB EMIRATES UNIVERSITY FACULTY OF MEDICINE AND HEALTH SCIENCES (FMHS)

Professor & Chair of Biochemistry

Established in 1986 and recently moved into a completely equipped new building, the FMHS provides an integrated problem-oriented undergraduate medical curriculum with English as the medium of instruction.

The appointee will demonstrate strong leadership and communication skills, energy, and flexibility to insure the efficient operation and continued development of the Department and the Faculty in collaboration with the other 14 Chairs and educational, research, and clinical management of the FMHS and the University.

Applicants for this exciting opportunity should hold a PhD or MD by research and have senior experiences in development/implementation/evaluation of educational and research programs for medical students and graduate students in basic medical sciences and be familiar with USMLE and MCCEE.

The UAE is an open and tolerant society and clearly one of the most attractive places to live and work in the Middle East. Faculty receive tax-free salary, generous leave, and support for accomodation/furnishings, annual air fares, educational assistance for up to three children, and international conferences.

Further information may be obtained from the web site at http://www.uaeu.ac.ae.

Applications should include full CV and publication list, names/addresses/fax of five referees, and comprehensive letter indicating depth of interest, experience, and suitability for the post sent to:

The Dean (c/o Mr C. P. Nair) Faculty of Medicine and Health Sciences United Arab Emirates University P O Box 17666, Al Ain United Arab Emirates

Please note closing date extended to 1 November 1999.

POSITIONS OPEN

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

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

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

> **Richard Eckert** Department of Physiology Case Western Reserve University School of Medicine 2109 Adelbert Road Cleveland, OH 44106-4970 E-mail: rle2@po.cwru.edu

POSTDOCTORAL POSITIONS IN MICROARRAY TECHNOLOGY AND EXPRESSION PROFILING

The Henry M. Jackson Foundation for the Advancement of Military Medicine invites applications for Postdoctoral Training positions in DNA microarray technologies. Two positions are immediately available. Projects include DNA microarray development in support of antiparasitic drug discovery and development, and application of Affymetrix Gene Chip expression arrays for preclinical pharmacology and in vitro toxicology studies. Applicants must have a Ph.D. in molecular biology, biochemistry, or a related field. Experience in bioinformatics and infectious disease research is desirable. Competitive salary and excellent benefits package available. Interested applicants should send their curriculum vitae and three references to: Human Resources Department, Henry M. Jackson Foundation for the Advancement of Military Medicine, 1401 Rockville Pike, Suite 600, Rockville, MD 20852. Equal Employment Opportunity/Affirmative Action.

A POSTDOCTORAL RESEARCH POSI-TION is available to work in sleep and mood disorders in humans and in a rodent model. Our main interest is to study the mechanisms of action of the antidepressant effects of sleep deprivation at the cellular and molecular levels. Our laboratory is involved in experiments that include electrophysiological recordings, microdialysis (in humans and rats) and immediate early gene expression (rats). Experience in any of the above techniques is desired. Funds are available through a NIMH Training Grant. Candidate needs to be an American citizen or permanent resident. If interested, please contact: Dr. Faustino Lopez-Rodriguez, M.D., Ph.D., Department of Psychiatry, UCLA School of Medicine, 740 Westwood Plaza, Los Angeles, CA 90024. E-mail: faustino@ ucla.edu. Telephone/FAX: 310-825-3348. FAX résumé; no telephone calls.

Support is available immediately for three POST-**DOCTORAL FELLOWS** interested in mammalian developmental and molecular genetics, with special emphasis on understanding transcriptional regulation within complex loci. Previous expertise in molecular biology is required, and prior experience with mice is desired. Please send your curriculum vitae to: Dr. J. D. Engel, Department of Biochemistry, 2153 North Campus Drive, Northwestern University, Evanston, IL 60201-3500 USA. E-mail: d-engel@ nwu.edu.

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POSITIONS OPEN



POSTDOCTORAL POSITIONS IN BASIC VISUAL SCIENCE Harvard Medical School and the Massachusetts Eye and Ear Infirmary

The Howe Laboratory for vision research invites applications for research training with any of the following faculty: M. Applebury: photoreceptor signaling, development, degeneration; V. Arshavsky: phototransduction and adaptation in rods and cones; T. Li: gene therapy of retinal degenerations; C. Makino: electrophysiology of photoreceptor cells; J. Malicki: neuronal pattern and identity in zebrafish retina; F. Pignoni: eye development in Drosophila; D. Roof: development and maintenance of photoreceptor structure

Visit website: www.howelaboratory.harvard.edu. Or contact: Alessandra Favoretto, Department of Ophthalmology, Harvard Medical School/Massachusetts Eye and Ear Infirmary, 243 Charles Street, Boston, MA 02114. Applicants must have a Ph.D. or M.D. at time of training. Participation of minorities and women is encouraged. Affirmative Action/Equal Opportunity Employer.

POSTDOCTORAL SCIENTISTS WATERSHED BIOGEOCHEMIST OR HYDROLOGIST Full-Time, Exempt Search Extended

The Marine Biological Laboratory (MBL) has fulltime Postdoctoral Scientist positions available to work with a team of Ecological-Économists, Biogeochemists, Hydrologists, and Modelers that is integrating socioeconomic models with spatially explicit models of land use, biogeochemistry, and watershed hydrology to provide comprehensive assessments of human activities on nutrient, sediment, and water fluxes in coastal watersheds of the Plum Island Sound LTER. This position will be at the MBL Ecosystems Center in Woods Hole, Massachusetts, which can be viewed at website: http://ecosystems.mbl.edu. Education: We seek individuals with a Ph.D. and

expertise in one or more of the following areas: GIS, hydrology/hydrodynamics, watershed/river/stream biogeochemistry, or mathematical modeling.

Application deadline: July 16, 1999. Send cover letter with position desired, curriculum vitae, statement of research interests, and names and addresses of references to: Marine Biological Laboratory, Attn: Human Resources, 7 MBL Street, Woods Hole, MA 02543 Reference [PDS-IRWS].

Opportunity/Affirmative Action/Nonsmoking Eaual workplace.

Applications are invited for a **POSTDOCTORAL POSITION** in molecular biology and biophysics. The project investigates chromatin structure and transcription of individual complexes using optical tweezers and high-precision position and force detectors. This training program requires working collabora-tively in the laboratories of **John Lis** and **Michelle** Wang. Please send a curriculum vitae and arrange to have three letters of reference sent to: John Lis, Department of Molecular Biology and Genetics, Biotechnology Building, Cornell University, Ithaca, NY 14853

POSTDOCTORAL POSITION is available immediately for research using the exciting and powerful technology of combinatorial peptide synthesis for the design and engineering of membrane proteins. Synthesis skills are not necessary. Send curriculum vitae and names of three references to: William C. Wimley, Ph.D., Biochemistry SL43, Tulane University Medical Center, New Orleans, LA 70112-2669. E-mail: wwimley@mailhost.tcs.tulane.edu. Position will be open until a qualified applicant is identified. Equal Opportunity Institution.

POSITIONS OPEN

POSTDOCTORAL POSITIONS EMORY VACCINE CENTER

Two NIH-funded Postdoctoral positions are available immediately to investigate molecular and immunobiological aspects of malaria at the new Emory Vaccine Center at the Yerkes Regional Primate Research Center of Emory University. Studies will focus on (1) the molecular basis of the host-parasite relationship in the blood stage of the disease in humans and nonhuman primates, (2) identification, characterization, and testing of potential vaccine candidates, and (3) the genetic and immunobiological factors governing antigenic variation of surface-exposed proteins. Experience in molecular biology, protein analyses, and/or immunobiological technologies required. Please send curriculum vitae, description of research interests and goals, and three references to: Dr. Mary R. Galinski, Emory Vaccine Center, 954 Gatewood Road N.E., Atlanta, GA 30329. E-mail: galinski@rmy.emory. edu. Affirmative Action/Equal Opportunity Employer.

SYMPOSIUM

MOLECULAR LIBRARY TECHNOLOGIES AT THE MILLENNIUM. October 24-26, 1999; Holiday Inn, Chinatown, San Francisco. Keynote: S. Brenner, Mol Sci Inst Berkeley; Speakers: J. Wells, Sunesis, A. Plückthun, Zurich, J. McCafferty, CAT, J. Marks, UCSF, A. Bradbury, SISSA Italy, W. Dower, Affymax, C. Barbas, Scripps, T. Clackson, Ariad, P. Carter, Genentech, H. Hoogenboom, Maastricht, A. Skerra, Darmstadt, K. Janda, Scripps, J. Ellman, Berkeley, A. Ellington, Texas, L. Gold, NexStar, K. Wittrup, Illinois, J. McCoy, Genetics Inst, G. Nolan, Stanford, R. Brent, Mol Sci Inst, S. Michnick, Montreal, A. Griffiths, MRC, P. Stem-mer, Maxygen, R. Roberts, CalTech, F. Arnold, CalTech. Abstracts due October 1, 1999. Organizers: D. Burton, J. Larrick, J. Marks. Sponsor: Palo Alto Institute of Molecular Medicine, 2462 Wyandotte Street, Mountain View, CA 94043 USA. Telephone: 650-694-1420; FAX: 650-694-7717; e-mail: paimm@netgate.net. Details, website: www.pano.com/paimm.

EUROPEAN OPPORTUNITIES

The Institute for Marine Science in Kiel is seeking to fill the positions of ASSISTANT PROFESSOR (C1) and POSTDOCTORAL RESEARCHER in the Department of Marine Physics. Applicants are sought holding a Ph.D. in physical oceanography or physics with relevant experience for one or several of 1) dynamics of oceanic processes and ocean-climate interactions, (2) development of ocean-observing systems, (3) coupling of physical-biological processes and interdisciplinary observing strategies. The successful applicants are expected to participate in the mainly observational research projects of the department, including seagoing activities. The Postdoctoral position is for three years, the Assistant Professorship is for two terms of three years each. Applications must be received no later than 21 July 1999 at: The Personalbuero des IfM, Duesternbrooker Weg 20, 24105 Kiel, Germany. For details contact U. Send, e-mail: usend@ifm.uni-kiel.de. The IfM cspecially encourages qualified women to apply. Disabled applicants are given priority if suitably qualified.

POSTDOCTORAL POSITION is available immediately at the Department of Pharmacology, University of Cologne, Germany. The candidate is expected to lead the cell culture laboratory and to study regulation of native and expressed calcium channels (see website: www.medizin.uni-koeln.de/institute/ pharmakologie/AG_Herzig2.html). German language skills and broad experience in cell culture are required. Molecular biology and electrophysiology skills would be of advantage. A contract (house staff, BAT IIa) for up to five years will be offered. Curriculum vitae, a list of publications, and the names/telephone numbers of two referees should be sent to e-mail: stefan.herzig@uni-koeln.de.

GLOBAL OPPORTUNITIES

THE WESTON VISITING PROFESSORSHIPS 2000/2001 THE ERNA AND JAKOB MICHAEL VISITING PROFESSORSHIPS 2000/2001 THE JOSEPH MEYERHOFF VISITING PROFESSORSHIPS 2000/2001 THE ROSIE AND MAX VARON VISITING PROFESSORSHIPS 2000/2001 THE MORRIS BELKIN VISITING PROFESSORSHIP 2000/2001

The Weizmann Institute of Science, Rehovot, Israel offers a limited number of Visiting Professorships in the Natural and Exact Sciences, during the academic year of October 2000 to September 2001.

The Visiting Professorships are intended for candidates already holding the rank of Full Professor or equivalent and will be for a duration of two months to one year.

It is highly advisable to establish prior contact with the prospective host/department.

Deadline for submissioin of completed applications is December 31, 1999.

For further information or application forms, please contact: The Academic Secretary, The Weizmann Institute of Science, Rehovot 76100 Israel. FAX: 972-8-9471667; e-mail: rsmarjor@weizmann. weizmann.ac.il. Applications and information are also available on the Internet at website: http://www. weizmann.ac.il/acadsec/visit_prof_home.html.

FACULTY POSITIONS FOR STEM-CELL BIOLOGIST Taipei Medical College, Taiwan

Stem-Cell and Developmental Biologists are invited to apply for faculty positions to conduct research in the field of stem-cell analysis/culture at a newly established Center for Stem-Cell Research in Taipei. Interested individuals should provide a curriculum vitae and three letters of recommendation by August 1, 1999, to: D. T-b. Shih, Director, Institute of Cell and Molecular Biology, Taipei Medical College, 250 Wu-Hsing Street, Taipei, Taiwan, R.O.C. Telephone: 886-2-2377-8619; FAX: 886-2-2377-8620; e-mail: cmbdshih@tmc.edu.tw.





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Samples were run for 1 hr, 20 min at 70 volts on a 1.2% agarose/formaldehyde gel. From left to right, the lanes are human heart, human total brain, fetal liver, fetal thymus and fetal heart.

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