

Science

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Competition for space in *Science* is keen, and many papers are returned without in-depth review. Priority is given to papers that reveal novel concepts of broad interest.

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Research Articles (up to ~4500 words or ~5 journal pages) are expected to present a major advance. Research articles include an abstract, an introduction, up to 6 figures or tables, sections with brief subheadings, and a maximum of about 40 references. Can also include supporting online material.

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The program's tools for freehand line drawing work exceptionally well, though ConceptDraw is better used to create technical figures than artistic drawings. The sector and arch tools create circular or elliptical segments, and the so-called spline tool creates smooth hand-drawn lines, which can be reconfigured by using the adjustment handles. The accuracy with which line drawings and objects can be created, edited, or manipulated is a particular strength of the program. Precise placement is achieved by using a variable grid to which objects can be aligned. Rotating objects freely is easy. ConceptDraw also provides an object parameter table where the user has direct access to the values associated with the objects on the "canvas." Using the formula option, objects can be made dependent on each other in their size, location, or geometry.

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The manual that accompanies the program is well written, but it lacks a tutorial on the unique features of ConceptDraw. The help function refers back to pages in the manual, but fails to walk the user through a problem step by step.

The basic version of ConceptDraw allows the user to import pictures in a large variety of file formats, including JPEG, GIF, or Macintosh PICT files. Compatibility with TIFF files or Microsoft PowerPoint files, however, requires the professional version of ConceptDraw. Users will need either Macintosh OS 8.6 (or higher, including OS X) or Windows operating system.

—Andreas Madlung

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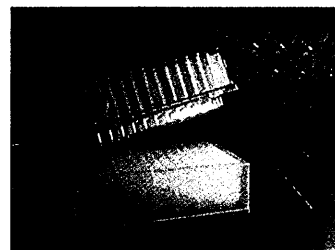
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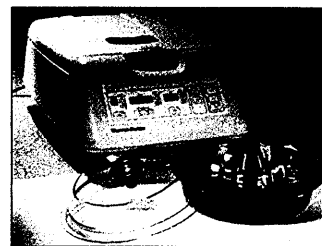
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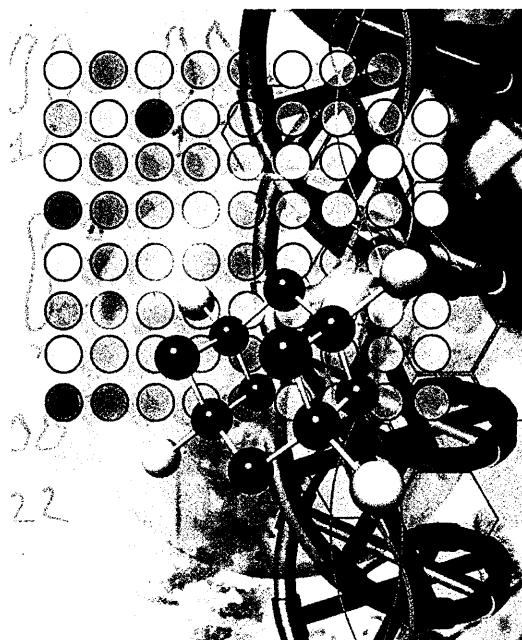
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CAREERS AND EVENTS IN DRUG DISCOVERY: EUROPE

Era of Change



In the past few years, genomics has changed the entire complexion of drug discovery. Participants today must prove themselves adept at multidisciplinary, multicultural, and multinational thinking.

In Europe, as in the rest of the world, the nature of drug discovery is changing at a rapid rate. The successful sequencing of the human genome and the consequent emergence of genomics has produced a plethora of drug targets. That, in turn, has opened the way to new and previously unanticipated families of drugs. The changes have had a marked impact on employment in drug discovery laboratories. Recruiters now expect candidates to possess hands-on skills and a breadth of outlook quite different from that in the past.

Paul Herrling, head of research at Novartis Pharma AG, based in Basel, Switzerland, outlines the impact on scientists of the recent changes in drug discovery. "Working alone in a lab is still important and will continue," he explains. "But large projects like sequencing the human genome can only be done with a large group effort and highly automated equipment. These projects require high throughput, automated data gathering, storage, and manipulation. Data gathering has changed from an art to an industrial process. A complete revolution has taken scientists from pipetting at the bench to robotics. They are also handling terabytes of information using powerful computers. Scientists must know their own fields. But they must also be able to learn about automation, project engineering, and other disciplines."

David Alker, discovery recruitment and academic liaison manager at Pfizer Global Research and Development in the English town of Sandwich, makes a similar point about the process of discovering drugs. "The early part of drug discovery is very much about making and screening large numbers of compounds and using sophisticated

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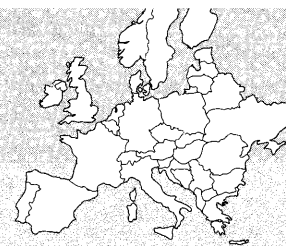
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URSULA FUGGIS-HAHN

molecular modeling and computer analysis to design virtual libraries," he explains. "To find a lead we rely on 'designed chance': The more compounds you have, the more likely it is that you'll find a molecule with the properties you're looking for. But making one million compounds randomly won't do it. A large element of design goes into what you make, and for that you need experienced medicinal chemists and computa-

tional chemists who can analyze chemical space. Then you need the latest screening technologies and biological techniques to back them up."

Scientists in drug discovery also have a growing need for support further down the drug pipeline. In the past, most pharmaceutical research teams worked independently. They identified compounds with therapeutic promise, handed them off to development teams, and returned to the lab to seek out more molecules. No more. "We consider development earlier and earlier in the process," says Dieter Hinzen, head of R&D at Boehringer Ingelheim Pharma in Biberach, Germany. "You can't go ahead with a molecule without considering the development factor."

The mandates of multidisciplinary collaboration and high-tech equipment don't detract from the thrill of the scientific chase. "Drug discovery, if it's well done, can be as exciting as basic science," says Mariano Barbacid, director of Centro Nacional de Investigaciones Oncológicas Carlos III (CNIO), the Spanish National Cancer Center in Madrid.



GÜNTHER WESS

IMPACT ON HIRING

What effect has the new mode of drug discovery had on hiring practices? Executives from five large pharmas, a newly established biotechnology firm, and a national research organization reveal several significant pan-European trends.

Increasingly the search for scientists focuses on the skills that applicants have acquired rather than the particular disciplines in which they have received their training. "We are looking specifically for skills that help us exploit the biological space – finding druggable targets – and the chemical space – discovering drug-like molecules," says Günther Wess, senior vice president responsible for research and development at Aventis Pharma in Frankfurt, Germany. "We're looking for interdisciplinary scientists able to integrate technologies and combine them with their knowledge."

Chemistry has a strong influence in modern drug discovery. "As long as we sell chemicals we'll need chemistry," says Wolfgang Hartwig, worldwide head of R&D at Bayer Pharmaceuticals, based in Leverkusen, Germany. Executives in drug discovery have a particular need for practitioners of certain chemical disciplines. "Right now we're looking for synthetic chemists and anyone with experience in protein expression and characterization," says Johan Kördel, senior vice president for research at Biovitrum AB, a biotechnology firm in Stockholm, Sweden. "We're looking for more than 30 scientists in the protein area alone." Recruiters focus on certain traditional skills "that have gone out of favor," adds Pfizer's Alker. "For example, there's a war for talented synthetic organic chemists." Equally in demand



WOLFGANG HARTWIG

are scientists trained in pharmacology and physiology. "We have difficulty finding them," says Ursula Fuggis-Hahn head of human resources for R&D at Boehringer Ingelheim in Germany. "There aren't many pharmacologists and physiologists able to perform *in vivo* animal studies."

Those specialists can't afford to be too narrow-minded, however. "Drug discovery is eminently multidisciplinary," asserts Herrling of Novartis. "We want individuals who are interested in how a drug will work in the patient, not just in the lab." Bayer's Hartwig makes a similar point. "Being a team worker is important. Today it's impossible to be a drug hunter on your own," he says. "The big difference between basic research and drug discovery," adds Barbacid of CNIO, "is that in basic research you're pretty much on your own. You can be isolated and still succeed. In drug discovery you cannot have ownership of any particular project. You have to be much more open minded and willing to work with experts in many other disciplines."

The need for sensitivity to differences extends beyond scientific disciplines. European drug discovery labs typically contain scientists from several countries and cultures. "We have a very multinational group, with people from about 18 nations," says Biovitrum's Kördel. "The ability to work in international teams is very important," says Aventis's Wess. That skill has particular importance for managers of groups and laboratories. "We want people who can manage multidisciplinary, multinational projects," Wess continues.

One other skill is essential for all members of drug discovery teams: communication ability. "We rely on good communications among different disciplines," says Susanne Fröhlich, who recruits scientists for Boehringer Ingelheim's Austrian subsidiary in Vienna. "We're mainly a research unit," adds her colleague Ingrid Maurer-Fogy, who is department head for R&D coordination. "We have to communicate heavily with our development unit in Germany. It's important to convince our colleagues there that what we have discovered is really worthwhile."



DAVID ALKER

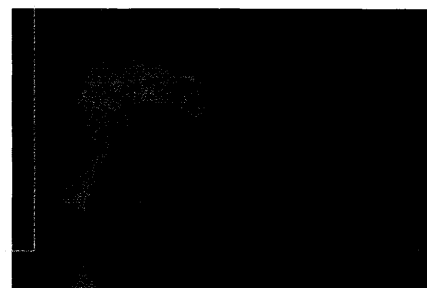
BREADTH OF FOCUS

The specifics of recruiting strategies obviously depend on the type of drug discovery undertaken by the hiring company. Large pharmaceutical corporations typically have a broad focus, and therefore seek cadres of candidates with training in a wide variety of disciplines.

Bayer provides a typical example. "We have several therapeutic areas," says Hartwig. "Among them are cardiovascular, including atherosclerosis; central nervous system diseases, including dementias and Parkinson's disease; bacteriology and virology; cancer, particularly solid tumors; metabolic disorders such as diabetes and obesity; and respiratory diseases, including asthma. That's typical for a company of this size. In fact there are many synergies between studies of the different diseases."

Aventis has a similarly broad brush approach to drug discovery. "The company is a global pharma," explains Wess. "Our main focus is small mol-

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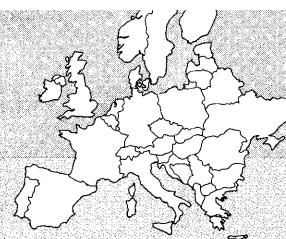
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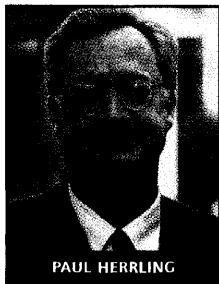
SUSANNE FRÖHLICH

ecules. We look at the entire chain from targets and target validation right up to the launch of drugs. We have special interest in chemical biology. And we are moving away from the high throughput approach to high output approaches."

Like other large pharmas, Aventis carries out its drug discovery in several locations around the world. In addition to Frankfurt it has

research centers in Paris and Bridgewater, New Jersey. Pfizer has six principal discovery sites, including its UK location in Sandwich. Boehringer Ingelheim maintains research and development centers in seven countries, among them Austria and Germany. Novartis supports pharmaceutical research centers in Austria, Switzerland, and the United Kingdom, as well as non-European centers in Japan and the United States.

Novartis's Herrling points out how genomics has altered the broad approach to drug discovery. "With the human genome sequenced we now have biological information for diseases," he says. "This helps us to find which pathways we should pursue for drug discovery. Gleevec, one of our recent drugs, is a great example of this targeted approach. Because of genomics we can address diseases earlier and be more successful. We are moving toward the causes of disease, not just the symptoms."



PAUL HERRLING

HOT AREAS

Not surprisingly, the large European pharmas have similar needs for scientific staff in their drug discovery laboratories. "Some of the hot areas are bioinformatics, cheminformatics, high throughput screening, and automated chemistry – a lot of newer technology based disciplines," says Pfizer's Alker. "So we have an increasing demand for people with specialist

skills. We don't require a high number of those scientists. But it's difficult to find them because the skills aren't taught in academe."

However, Alker adds, "We still need more recruits with more traditional skills." Thus most of Pfizer's drug discovery hires with college backgrounds have degrees in chemistry or biological sciences. "We prefer recruits to have industrial experience – an internship on a specific project in a team at the minimum," Alker says. "Those people tend to have decided that they really want drug discovery as a career."

In analyzing applicants' qualifications, Pfizer focuses on four key factors. "They should have a background understanding of the theory of their subject," Alker says. "They need the ability to use that knowledge in a problem-solving research environment. We also expect a passion for drug discovery; it can be the most frustrating job in the world because

failure sits on your shoulder all day long. And we expect collegiality. That means an appreciation of other scientists and their needs, along with the ability to listen and get your point across in a balanced way and to accept when your ideas may be good but not the right way forward." In return, he continues, Pfizer offers a culture of "competition between ideas." The most junior member of a team, he says, "can suggest an idea in an open, nonhierarchical way, with the best idea being progressed."

Pfizer has introduced a new twist on hiring junior members of discovery teams. "We take a lot of people directly from A levels [the examinations that British students take at the end of their high school careers]," Alker says. "This year at least 20 percent of our hires will be at the school-leaver level. That improves the diversity of our work force. And since most school-leavers are local it is great to offer scientific career opportunities to the local community. They can earn £75,000 (\$105,000) in the five years they take to obtain part-time degrees and also gain huge amounts of directly relevant industrial experience." How does the company select those recruits? "We look for an aptitude for science, maturity, and motivation," he says.



JOHAN KÖRDEL

PH.D.S AND OTHERS

Boehringer Ingelheim also provides job opportunities for precollege students. "Each of our labs is headed by a Ph.D. who oversees two to four lab technicians. The technicians may or may not have academic backgrounds," says Maurer-Fogy of the company's Austrian center. Among individuals with degrees, the center has particular need for expertise in synthetic chemistry, analytics, molecular modeling, X-ray crystallography, and pharmacokinetics. "For biology," adds Fröhlich, "we need protein chemists, cell biologists, pharmacologists to work with animals on *in vivo* research, and biochemists for enzyme work."

For scientists with academic backgrounds, the company's German research operation focuses largely on Ph.D.s. "In chemistry we want scientific backgrounds mainly focused on synthetic, organic, and structural chemistry. In biology the focus is on pharmacology and system physiology," says Hinzen. Both centers regard the entire world as their recruiting pool. "My personal experience is that we recruit successfully in Europe," Hinzen continues. "We have more difficulty in the U.S., apart from Europeans who want to return home."

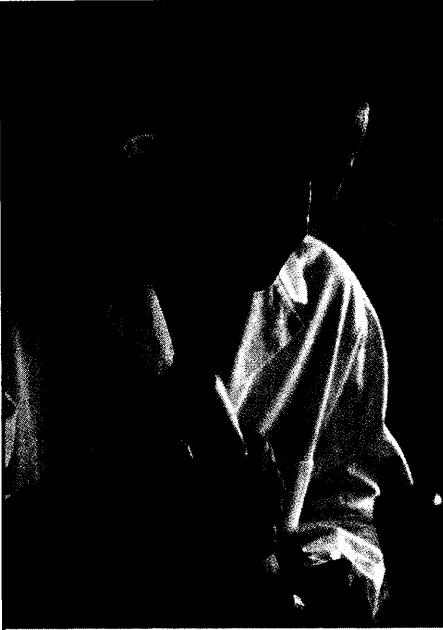
Even pharmas that hire graduates as laboratory associates recognize the need for internal training. "People are not ready for drug discovery when they leave the university," declares Wess of Aventis. "We have to bring them into the job. There's a period of perhaps one or two years for them to get the necessary experience."

Experience abroad can prove valuable in stimulating sympathy for other scientific disciplines, as well as different cultures. "The first thing is being an expert in your specific field of science," says Bayer's Hartwig. "Being a team worker is also important. I'm looking specifically for intellectual grasp and speed in thinking and picking up ideas. People have to learn quickly as technologies are changing all the time."

Newer organizations have equally high expectations for their scientific recruits. Biovitrum, for example, is a spin-off from Swedish company



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Drug discovery for tropical diseases



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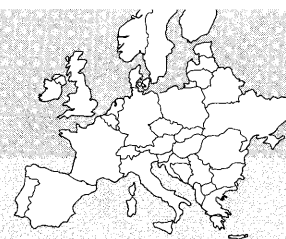
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CAREERS AND EVENTS IN DRUG DISCOVERY: EUROPE



INGRID MAURER-FOGY

Pharmacia Corporation created in August 2001. A staff of more than 400 scientists makes the company one of the largest biotechnology firms in Europe. "We are the better part of a large pharma's therapeutic area drug discovery and preclinical unit," says Kördel, who is also an associate professor at the University of Lund. "We focus on small molecule drugs for diabetes and obesity. We also investigate processes for manufacturing protein drugs."

To maintain that focus, Biovitrum maintains a level of about 50 percent Ph.D.s in its laboratories. "We're still looking for Ph.D. level people, preferably with postdoctoral experience. We expect a fraction of them to have industry experience as well," says Kördel. As to subject matter, he continues, "chemistry and specifically medicinal chemistry is important. And preclinical sciences and pharmacology are core competencies."



DIETER HINZEN

AN EMERGING CANCER CENTER

Like Biovitrum, CNIO has a short history. Barbacid set it up three years ago when he returned to his native Spain after 24 years in the U.S., the last 8 as vice president of oncology drug discovery for Bristol-Myers Squibb. "We have built up the center and we are now beginning to occupy it," he says.

CNIO's newness, combined with Spain's general lack of investment in research until very recently, has given Barbacid the opportunity to set up a research organization from scratch. "We don't have any dead wood or preconceived ideas," he explains. "What we are trying to do is allocate half our resources to basic research and the other half to applied. Within applied research we are working on molecular diagnostics and drug discovery. Our strategic plan calls for 60 or so biologists to work on *in vitro* assays, cell culture assays, and animal models. To this core biology component we will add a bit of medicinal chemistry, along with structural modeling and biocomputation."

The center has one important advantage over similar organizations elsewhere. "In Spain there is little research at hospitals," says Barbacid. "So we have a large availability of tumor samples. We have built a national tumor bank. We hire one person per hospital to make sure that the samples are collected in time and properly processed. We have collected more than 2,000 tumor samples a year from hospitals in Madrid. Now we're beginning to work on clinical trials with higher quality, better controlled samples and follow-ups of the patients."

To carry out those and other tasks, CNIO seeks a wide range of specialists. "We need molecular biologists as well as people with experience in cell culture," Barbacid notes. "One of our goals is to build a cell line bank with primary tumor cultures. Also important to our drug discovery is animal modeling. I have been very concerned by the low rate of success of drug candidates in clinical trials for oncology. The rate of approval is below 1 in 10. The numbers are so dismal, I think, because our preclinical models do not reflect the real problem of human can-

cer. We are using sophisticated gene targeting technology to design animal models that mimic the same mutations as in humans. We are activating oncogenes in very few cells in adult animals, which we believe will be more predictive of what occurs in human tumors than current xenograft models."



MARIANO BARBACID

THE COMMUNICATIONS IMPERATIVE

For all the differences of their organizations' sizes, nationalities, and hiring practices, drug discovery executives agree on one factor about potential recruits. "Applicants must have the will and the skill to communicate clearly and effectively with other researchers and team members," says Herrling of Novartis. "Presentation skills are critical," agrees Bayer's

Hartwig. "Everybody has to sell his or her research to others."

Most drug discovery organizations emphasize that aspect of their requirements by asking candidates with Ph.D.s to explain their work at their job interviews. "We expect a scientific presentation and an interview with people outside the applicant's field," says Hinzen of Boehringer Ingelheim. "This gives a certain feeling about the applicant's ability to think in terms of other disciplines."

Wess of Aventis also emphasizes the multidisciplinary theme. "Be aware that the challenges in life science have a biological and a chemical component," he says. "Candidates must have some insight into other discoveries so that they can work in interdisciplinary teams and ask the right questions." Biovitrum's Kördel has similar advice. "To be attractive to us, concentrate on being multidisciplinary," he suggests. "We are looking for people who, from the basis of being specialists, can take a generalist view of scientific questions."

Hinzen recommends one way to achieve such a view. "We appreciate scientists with a postdoctoral experience, particularly in a different institution, so that their horizons are broadened," he says. "It's also useful for students to spend time in the industry to get experience in applied research. This is an excellent way to show industry your abilities and to see if you really like the environment."

That decision is perhaps the most critical in the career of any researcher. "If you are passionate only for accumulating fundamental knowledge, you should stay in academe. Drug discovery is not like basic science," advises Herrling. "But if you are fascinated by excellent science and motivated by translating science into therapy, you will be successful in an organization like ours." Young people who want to participate in drug discovery "have to be absolutely dedicated. They must love this work," adds CNIO's Barbacid. "We are still underpaid and overworked. Our scientists have to really enjoy what they do and let their instincts run. But they shouldn't think that basic research has all the glamour while drug discovery is just routine. Drug discovery can be just as exciting as research." ■

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

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Please send CV and covering letter to:

(Ref. B-01,02,03) **Dr. Emanuela Scacheri - Biology Department - Pharmacia Corporation**
Viale Pasteur, 10 - 20014 Nerviano - Milano - Italy
Fax +39 024838 3755 e-mail: emanuela.scacheri@pharmacia.com

(Ref. P-01) **Dr. Jim Bischoff - Pharmacology Department - Pharmacia Corporation**
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MRC
Medical Research Council

DIRECTOR

MRC ENVIRONMENTAL EPIDEMIOLOGY UNIT

MRC wishes to recruit a leading international medical scientist to succeed Professor David Barker FRCP FRS, on his retirement in 2003, as Director of the Environmental Epidemiology Unit.

The Unit is a dedicated, research facility within the grounds of Southampton General Hospital and comprises 120 scientists and support staff (including research nurses), 11 at Senior Scientist level and international authorities in their own research specialties. Many of the scientists are also Principal Investigators on grants to Southampton University, where there are well-developed links with university biomedical scientists. The Unit is renowned for its research into how the environment *in utero* and during infancy influences susceptibility to common diseases in adult life and how occupational and environmental hazards encountered in adult life affect health.

The Director will be invited to forge and lead new research into clinical epidemiology, by fostering scientific collaborations and integrating new scientific approaches. The Director will set the overall research

strategy for the Unit. He/she should have expertise in leading clinical cohort studies and/or health intervention research and should possess the scientific insight and breadth to engage with the genetic, statistical and clinical research aspects of such research. He/she should have the strong management and communications skills necessary to effect their vision.

The Director should ideally be medically qualified or must have extensive experience of working with clinicians and clinical researchers in the field of epidemiology.

Salary is highly competitive and negotiable, depending on previous experience.

MRC is an equal opportunities employer.

**Please contact Dr Kevin Young at
MKA Management Consulting Ltd. to discuss your
interests in strict confidence:**

Tel: +44 (0)1628 798015;

email: k.young@mkanet.com

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FURTHER INFORMATION AND REGISTRATION

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EURASANTÉ

Tel: +33 (0)3 28 55 90 68

Fax: +33 (0)3 28 55 90 61

E-mail: contact@biotech-lille.com

EXHIBITION MANAGEMENT

PACKAGE ORGANISATION

Thomas Garmier

Tel: +33 (0)4 72 77 45 50

Fax: +33 (0)4 72 77 45 77

E-mail: t.garmier@package.fr



WESTFÄLISCHE
WILHELMS-UNIVERSITÄT
MÜNSTER

The medical faculty of the Westfalian Wilhelms-University (Westfälische Wilhelms-Universität) Muenster invites applications for a full university Professor (C4) for

Biomagnetism and Biosignal Analysis

The incumbent of the position (male/female) must fully represent research and teaching in the area of biomagnetism and biosignal analysis. This also entails the position of the director of the Institute of Biomagnetism and Biosignal Analysis of the Muenster University Hospital (Universitätsklinikum Muenster).

Candidates applying should be thoroughly familiar with the whole field biomagnetism and biosignal analysis, should have outstanding experience in research and teaching, and will normally be expected to have a *Habilitation* degree (postdoctoral degree). For applications from outside Germany, an equivalent scientific qualification or achievement may take the place of a *Habilitation*. Candidates should be qualified by extensive experience in magnetoencephalography (including whole cortex systems). Besides the documented ability to work on theoretical analytical topics, successful collaboration especially in the clinical-neuroscience interface is highly desired.

The successful candidate will be expected to collaborate with existing research specializations in the Faculty of Medicine – e.g., with the "Interdisciplinary Clinical Research Center" (IZKF).

The University of Münster aims to increase the proportion of women employed in areas where they are currently underrepresented, and would therefore encourage women in particular to apply.

Handicapped candidates with equivalent qualifications will be given preference.

Documents in support of an application, enclosing offprints of important publications (a maximum of 10), should be submitted to the **Dean of the Faculty of Medicine, University of Münster, Domagkstrasse 3, D-48129 Münster, Germany, by May 17th 2002.**

On environmental protection grounds, we would request candidates to refrain from using plastic document covers.

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Director of Structural Genomics

The Wellcome Trust would like to invite nominations and applications for the position of Director of Structural Genomics to lead a Structural Genomics Consortium in the UK in partnership with industry.

We are seeking an enthusiastic, internationally recognised research scientist to provide vision and leadership in implementing a major programme in Structural Genomics to be funded by the Wellcome Trust and other members of the proposed Structural Genomics Consortium. Previous experience working in the pharmaceutical or biotechnology industries will be a distinct advantage although the successful applicant will be provided with business management support. The salary will be commensurate with the level of responsibility and is negotiable depending on experience.

The Structural Genomics Consortium will be a charitable enterprise with significant funding, initially over 3 years. Its objective will be to increase substantially the number of protein structures of relevance to human health available in the public domain. Laboratory facilities will be provided in the Oxfordshire area with easy access to Diamond, the new synchrotron, and there is the potential for close interactions with the University of Oxford. It is anticipated that the successful applicant will be considered for a Principal Research Fellowship from the Wellcome Trust, which would provide personal support for 10 years. He/she will play an important role in the development of the Trust's scientific strategy in the field of Structural Biology.

Initial expressions of interest should be sent by email (with a CV attached) to y.jenkins@wellcome.ac.uk by 3 May 2002. Short-listed applicants will be required to prepare a detailed scientific strategy and implementation plan for the Structural Genomics Consortium.

The Wellcome Trust

www.wellcome.ac.uk

The Wellcome Trust is a Registered Charity. (No: 210183).

Call for Proposals BMBF Competition "BioFuture"

The German Federal Ministry of Education and Research (BMBF) intends to give younger scientists from Germany and abroad with experience in heading a research group the opportunity to work on new, basic research-oriented approaches in the biosciences in Germany, independently and in their own team in order to generally improve chances for a further career in science or economy in Germany or to aim at self-employment in the private sector (e.g.; by setting up businesses or spin-out companies) in the medium term.

The teams (staff: 1 group leader, 1-2 postdocs, 1-2 doctoral students, 1-2 technicians; investments and expendable materials; depending on technical support required each) are to work for a period of 5 years on topics in the frontiers of biology and neighbouring disciplines such as chemistry, physics, mathematics, informatics, engineering sciences, nanotechnology, etc.

For the projects selected by a jury, nonrepayable grants will be awarded in the form of project funding.

Deadline: August 9, 2002 (fifth call)

For further information:

www.fz-juelich.de/ptj/contentory/index.lw?index=631

Forschungszentrum Jülich GmbH, Projektträger Jülich,
Außenstelle Berlin, Wallstrasse 17-22, D-10179 Berlin, Germany

Dr. A. Hache/ Dr. C. Junge, Tel.: +49 (0) 30/20199-466
Fax: +49 (0) 30-20199-470, e-mail: a.hache@fz-juelich.de

Dr. H.-P. Peterson, Tel.: +49 (0) 2461/61-3782
e-mail: h.-p.peterson@fz-juelich.de



INSTITUT PASTEUR

YOUNG GROUP LEADER POSITIONS

The INSTITUT PASTEUR (www.pasteur.fr) has decided to create further **new positions for outstanding young scientists** (under 40) to lead groups for five years. Each group (of 5 to 6 people) will be allocated a technician, a post-doctoral fellowship, lab space, and an annual budget of 50 000 euros for the first 3 years (salaries not included). Whereafter budget will be allocated according to research progress. The new laboratories will have access to all facilities and technical platforms of the Institut Pasteur (Genopole, dynamic imaging).

Salaries will be commensurate with experience and achievements. Several years of post-doctoral experience are required.

Research areas should be compatible with the strategic interests of the Institut Pasteur in life sciences (microbiology, virology, immunology, developmental biology, neuroscience, structural biology, chemistry, bioinformatics, ecosystems, epidemiology, etc.).

Applications (in English, not to exceed a total of 20 pages) should include: a detailed CV with a complete list of publications, an innovative research program, a one-page summary of the project, and three references.

Proposals should be submitted electronically, before April 26th, 2002 to g5@pasteur.fr (see below). Short-listed candidates will be invited for interviews and to give a seminar.

The future groups will be installed in early 2003.

Contact:

Prof. Alain GOUYETTE

Institut Pasteur

28 rue du Docteur Roux

75724 Paris Cedex 15 (France)

e-mail: g5@pasteur.fr

tel: +33 (0)1 45 68 80 01

fax: +33 (0)1 45 68 81 86

HERBERT YORK Postdoctoral Fellowship Program

In coordination with the University of California, and the Department of Energy's National Nuclear Security Administration, Lawrence Livermore National Laboratory (LLNL) has established a postdoctoral fellowship program named after LLNL's first director, Herbert York.

The Herbert York Postdoctoral Fellow will reside in LLNL's Center for Global Security Research. The successful candidate will be expected to develop and pursue a study focusing on the policy-technology interface and providing fresh insights into vexing national security challenges.

Major areas of interest include:

- Reducing the threats associated with the proliferation of weapons of mass destruction
- Security implications of emerging technologies
- Role of science and technology in national security, including arms control, peacekeeping, homeland defense and warfare

U.S. citizenship is required for the Herbert York Fellowship. Candidates with a Ph.D. degree within five years of appointment in a relevant science or engineering field, or Ph.D. in political science or a related field with expertise in science and technology are desired.

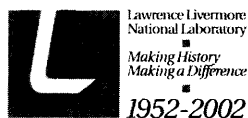
Application Submission Requirements For This Position

1. Reference source AJSC452DO and submit resume, publication list and a one-page summary of proposed scientific research during this Fellowship via email to: yorkfellowships@llnl.gov.

2. Send three letters of recommendation from experts who are familiar with the applicant's research and ability to Edie Rock, L-413, P.O. Box 808, Livermore, CA 94551. One letter must be from the applicant's thesis advisor. All recommendation letters must be received before the deadline.

Deadline for Application
May 31, 2002

We are an equal opportunity employer, with a commitment to workforce diversity. Lawrence Livermore National Laboratory is operated by the University of California for the National Nuclear Security Administration/Department of Energy.



www.llnl.gov/jobs

The Office of Therapeutics Research and Review (OTRR), Center for Biologics Evaluation and Research (CBER), Food and Drug Administration (FDA) is searching for a candidate for the position of Director, Division of Monoclonal Antibodies. The Director will manage a scientific and administrative team of approximately 50 people based at the NIH in Bethesda, MD. The Division is responsible for pre-market evaluation of monoclonal antibodies, immunotoxins and Fc fusion proteins.

The division conducts a research program to support these regulatory efforts, and development of appropriate standards and policies. The director interacts with high level government and pharmaceutical industry officials and with leaders of scientific, academic, health, and medical organizations.

Qualifications: All applicants must be U.S. or naturalized citizens. Candidates must also possess a M.D. and/or Ph.D. degree with subsequent training and professional experience in scientific research and management.

Physician: Applicants must have a Doctor of Medicine or equivalent degree from an accredited institution and additional clinical and/or research training. Graduates of foreign medical schools must submit a copy of their permanent Education Commission for Foreign Medical Graduates (ECFMG) certificates. **Location:** Offices and laboratories are located on the campus of the National Institutes of Health in Bethesda, Maryland.

Salary: Physicians: Salary range for Civil Service positions at the GS-15 level is \$92,060 to \$119,682 per annum. Physicians may also be eligible for either a Physician's Comparability Allowance (PCA) OR Physician's Special Pay (PSP) up to \$166,700 based on experience, qualifications and medical specialty. **Scientists (other than physicians):** Salary range for Civil Service position at GS-15 is \$92,060 to \$119,682 per annum. Scientists may be eligible for the Senior Biomedical Research Service, which pays up to a maximum of \$166,700. Position may be filled by appointment in the U.S. PHS Commissioned Corps with commensurate salary and benefits. To Apply: Please send a curriculum vitae, resume OR an SF-171 to: **Food and Drug Administration, CBER, 1401 Rockville Pike, HFM-123, Rockville, Maryland 20852-1448, Source Code: DMA**

Applications must be received or postmarked by May 3, 2002.

For more information, call **Candie Gross at (301) 827-3826.**

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PENNSTATE



**The Milton S. Hershey Medical Center
The College of Medicine**

Bioengineering Faculty Position

The Musculoskeletal Research Laboratory, Department of Orthopaedics and Rehabilitation of The Pennsylvania State University College of Medicine announces a search for an Assistant or Associate Professor (tenure or tenure track) in the area of Skeletal Bioengineering. This position includes a highly competitive salary and significant start-up funds. The successful candidate will be an individual who can apply engineering concepts to the study of skeletal tissues at the cell and molecular level. This is a unique opportunity to join a well-established, highly interactive research group consisting of engineers and clinical and basic scientists focusing on musculoskeletal research. Additional bioengineering faculty with interests in medical devices, biomaterials, imaging and drug delivery may be found in the Biomedical Engineering Institute within the College of Medicine and in the Department of Bioengineering within the College of Engineering. A joint academic appointment will include a primary appointment in the College of Medicine and a secondary appointment in the Department of Bioengineering.

The Department of Orthopaedics and Rehabilitation is nationally ranked in the top 5 in research funding and has made a commitment to expand its research effort. The Penn State College of Medicine is located in semi-rural Hershey, Pennsylvania and offers a highly desirable lifestyle and an affordable cost of living in close proximity to many metropolitan areas including Baltimore, Washington, D.C., Philadelphia and New York City.

Applications will be accepted until the position is filled.

Send a curriculum vitae to:

**Shirley Marks c/o Bioengineering Search Committee
Musculoskeletal Research Laboratory
Department of Orthopaedics and Rehabilitation
The Pennsylvania State University, College of Medicine
500 University Drive, H089, Hershey, PA 17033. AA/EOE**

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UNIVERSITY OF
CALGARY

Respiratory Research Group Academic Positions

Creating the future of health.

The Respiratory Research Group (RRG) invites applications from outstanding investigators for three full-time academic positions at the Assistant Professor level or higher to develop vigorous independent research programs within a multidisciplinary research environment. While duties include some teaching and graduate student supervision, 75% of time will be protected for research.

RRG comprises 15 principal investigators and their research teams, investigating both basic and clinical aspects of respiratory disease. The group has two focuses: obstructive and inflammatory airways disease, and respiratory neurobiology and sleep. The group is currently undergoing a major expansion following a successful external review. RRG has strong interactions with the Alberta Asthma Centre in Edmonton and the Alberta Lung Association Sleep Disorder Centre in Calgary. The Faculty is supporting the establishment of an endowment to support a research chair. Existing strengths of RRG include adult and paediatric respirology, asthma, sleep disorders, control of breathing, occupational and interstitial lung diseases and perinatal respiratory disorders. The group wishes to expand its expertise to include the basic cellular biology of these diseases.

The Faculty of Medicine is in the process of building a major new research facility. Calgary is a vibrant, multicultural city (population ~1,000,000) near the Rocky Mountains, Banff National Park and Lake Louise.

Translational Research in Airway Diseases – The successful applicant will be a physician with a primary interest in the molecular pathogenesis of asthma and/or COPD. The ideal candidate will have a strong interest in studying disease mechanisms in humans, and in the evaluation of the relevance of basic scientific observations to diseases in humans *in vivo*. The position will serve an important complementary link between basic and clinical researchers working in lung diseases.

Molecular Pathogenesis of Asthma – The successful applicant will have a background in cellular and molecular biology, and a primary interest in the inflammatory mechanisms underlying asthma and/or COPD. Expertise in mechanisms of airway remodelling and the role of structural cells (smooth muscle cells, fibroblasts, etc.) will be an asset.

Epithelial Biology and Airway Inflammation – The successful applicant will have a background in cellular and molecular biology of the epithelium. The ideal candidate will have an interest in the interaction of the epithelium with inflammatory cells and/or other structural cells. Other areas of interest would involve the epithelium in airway remodelling or host defense.

Qualifications for all positions include a PhD and/or MD, at least two years of postdoctoral experience and an established record of publications and expertise in the chosen area of research. Eligibility for licensure in the Province of Alberta is required if the selected individual will be providing patient care.

Salary support and establishment funding are available through successful application to the Alberta Heritage Foundation for Medical Research and/or the Canadian Institutes of Health Research; we anticipate generous start-up funds will be available to qualified candidates.

Please submit a curriculum vitae and a statement of research interests and arrange to have three letters of reference sent directly, **by May 30, 2002**, to:

Dr. David Proud, Professor
Department of Physiology & Biophysics
Faculty of Medicine
3330 Hospital Drive N.W.
Calgary, Alberta, Canada T2N 4N1

In accordance with Canadian immigration requirements, priority will be given to Canadian citizens and permanent residents of Canada. The University of Calgary respects, appreciates and encourages diversity.

www.ucalgary.ca



**Center for Immunology & Microbial Disease
Albany Medical College**

Assistant/Associate Professor

The Center for Immunology & Microbial Disease at Albany Medical College invites applications for a tenure-track faculty position at the Assistant/Associate Professor level from individuals who have a doctoral degree, postdoctoral experience, and demonstrated research productivity. The successful candidate will be expected to establish an independent, extramurally-funded research program and participate in the teaching of medical and graduate students. The Center for Immunology & Microbial Disease is an interdisciplinary research group with a focus on understanding the immune response, microbial and viral pathogenesis, cancer development and cell transformation, and biochemical and genetic mechanisms responsible for human disease. Faculty at Albany Medical College receive competitive salaries, attractive start-up packages, and access to outstanding core facilities. In addition, the Center has established close relationships with the New York State Department of Health Wadsworth Laboratories and the Trudeau Institute, providing a diverse environment that is rich in immunology and infectious disease expertise. Albany Medical College is located in a mid-sized city within the New York Capital Region, and has easy access to Boston, New York City, and the Adirondack Mountains.

Applicants should send by May 15, 2002, their curriculum vitae, a statement of research plans, and three letters of reference to:

Dennis W. Metzger, Ph.D.
Theobald Smith Alumni Chair, Professor and Director
Center for Immunology & Microbial Disease
Albany Medical College
47 New Scotland Avenue, MC-151
Albany, NY 12208

For further information about the Center, visit www.amc.edu/Academic/Research/imd.htm

*An Equal Opportunity/Affirmative Action Employer.
Women and minorities are encouraged to apply.*

Senior Fellow in Bioinformatics

The National Center for Infectious Diseases, Centers for Disease Control and Prevention, Atlanta, GA, invites applications for a position in its Biotechnology Core Facility's Computational Molecular Biology laboratory. The incumbent will collaborate closely with molecular biologists and take responsibility for computational aspects of projects in gene expression analysis on microarrays, genomic sequencing, phylogenetic inference, and proteomics, as well as the creation of web-based, curated databases of sequence and other data relating to specific pathogen families.

Candidates must meet the basic qualifications for the GS13 level of the federal civil service, and have a doctorate degree in a biological science, computer science or mathematics with significant experience in computational molecular biology, good communication skills, and a record of publications. Annual salary in the range \$65,000 to \$84,700 depends on qualifications.

Applicants should send curriculum vitae by May 10 to:

Benita Minor
CDC / HRMO
1600 Clifton Road, Mailstop C-19
Atlanta, GA 30333
email: bminor@cdc.gov

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Located in the heart of the Oklahoma Health Center – a mecca of medical and research-oriented institutions – OMRF is home to world-renown scientists and numerous biomedical accomplishments. Research at OMRF focuses on the basic science of human disease: immunology, biochemistry, and molecular/cellular biology. And in the past decade alone, our scientists have been responsible for major breakthroughs in cardiovascular disease, Alzheimer's disease, and lupus.

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The Oklahoma Medical Research Foundation is accepting applicants for both graduate and post-graduate doctoral fellowship training programs, as well as independent investigators/members. (Graduate Degrees are granted through the University of Oklahoma Health Sciences Center.) Be a part of it. Find out more by visiting www.omrf.org, or call 1-800-522-0211 today.

X. Cai Zhang, Ph.D.
Crystallography



Philip M. Silverman, Ph.D.
Molecular and Cell Biology



Xiao-Hong Sun, Ph.D.
Immunobiology and Cancer



Christopher E. Aston, Ph.D.
Arthritis and Immunology



Program Head, Developmental Biology

The Oklahoma Medical Research Foundation (OMRF) is recruiting a head for its Developmental Biology Research Program. OMRF is committed to expanding its Developmental Biology program from one to four (with the possibility of additional) member scientists over the next three years. OMRF has made major investments in the program, including extensive laboratory renovations and additions, commitments to new salary lines, and the addition of state-of-the-art core facilities. The major research focus of the Developmental Biology program will be developed by the new program head. However, a key component of the program is the molecular engineering of the mouse genome to generate useful models of human disease. The program has established a Microinjection Core Facility, the only one in the state of Oklahoma. In addition, the Developmental Biology program will have as a resource the Donald W. Reynolds Center for Genetic Research, a new \$12.5 million state-of-the-art barrier rodent facility for the production of transgenic and knockout mice. Applicants should submit a curriculum vitae and a letter of application explaining interest in the position and include qualifications, previous professional responsibilities and achievements, leadership and administrative philosophy. CV and letter should be directed to **J. Donald Capra, M.D., President, The Oklahoma Medical Research Foundation, 825 Northeast 13th Street, Oklahoma City, OK, 73104.** E-mail inquiries and applications can be sent to JDonald-Capra@omrf.ouhsc.edu.

Free Radical Biology & Aging Research

A postdoctoral position is available to study the molecular mechanisms by which the protein C pathway modulates vascular inflammation, sepsis and autoimmune vasculitis. The current research is aimed at identification of the novel molecular interactions responsible for modulation of neutrophil-mediated injury that leads to development of vasculitic lesions and organ failure. Experience in one or more of the fields of molecular biology, cell biology or biochemistry are desirable. Ample opportunities exist for training in many of the basic techniques in each area. Applicants must have a Ph.D. and/or M.D. Please send a CV, statement of research experience and interests and three references to: **Shinichiro Kurosawa, M.D., Ph.D., Free Radical Biology & Aging Research Program, Oklahoma Medical Research Foundation.** FAX: 405-271-1795; E-mail: Shinichiro-kurosawa@omrf.ouhsc.edu



FOR MORE INFORMATION AND JOB OPENINGS, VISIT www.omrf.org

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Associate Director of Molecular Biology

We currently seek a scientist with a proven track record of novel gene discovery and drug development and a background in protein expression to lead IDEC's current gene discovery efforts and maintain our state-of-the-art expression technology. This individual should have in-depth knowledge of unmet medical needs and be capable of leading gene discovery in the future in other sources besides oncology.

In this role, you will lead and conduct all aspects of substantive projects related to the discovery of novel genes of strategic value as drugs or drug targets to IDEC and expression of novel recombinant proteins. You will supervise at least fifteen scientists. Requires a PhD with at least 11 years relevant postdoctoral research experience, preferably in the scientific management of novel gene isolation, drug development, and protein expression. A minimum 15 years relevant postdoctoral experience (for Director) is preferred, along with demonstrated managerial and supervisory skills and working knowledge of molecular biology, cellular biology and immunology.

For immediate consideration, please send your resume and salary history, indicating Job Code 013, to IDEC Pharmaceuticals Corporation, Attn: HR, Unit #220, PO Box 3175, Burlington, MA 01803. Email to hr_info@idecpharm.com. EOE. NASDAQ/IDPH. Visit our website at www.idecpharm.com.

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CHAIR – DEPARTMENT of CELL and DEVELOPMENTAL BIOLOGY

The State University of New York Upstate Medical University invites nominations and applications for the position of Chair of the Department of Cell and Developmental Biology. We seek candidates who have nationally and internationally recognized, well-funded research programs in the general areas of cell and/or developmental biology. The successful candidate will have a distinguished record of scholarly achievement, a commitment to graduate and medical education, and the exceptional leadership skills needed to recruit and develop an outstanding faculty. The department has current research interests that include signal transduction, cytoskeleton and adhesion, cell motility, angiogenesis, and neural development and repair. The department has institutional teaching responsibilities in the anatomical, cellular and neural sciences. It offers a Ph.D. program in Cell and Developmental Biology and is active in a new University-wide initiative for graduate education in the biomedical sciences. The new chair will have the immediate opportunity to recruit tenure-track faculty with generous start-up packages and laboratory space.

SUNY Upstate Medical University is located in the University Hill section of Syracuse, New York, adjacent to Syracuse University and the Veteran's Administration Hospital. It is minutes away from beautiful residential neighborhoods, two of the consistently highest ranked K-12 school districts in New York State, and major cultural and recreational opportunities.

Please submit a curriculum vita; the names of four references; and a 3-page statement of research accomplishments, future goals, and your articulation of a vision for the promotion of Departmental excellence in research and teaching to: **Dr. Jose Jalife, Chairman, Search Committee, c/o Office of the Dean, SUNY Upstate Medical University, 750 East Adams Street, Syracuse, NY 13210.** E-mail address is jalifej@upstate.edu and the Upstate campus web site is <http://www.upstate.edu>.

Review of application will begin immediately. The search will remain open until the position is filled.



State University of New York
Upstate Medical University
Formerly known as SUNY Health Science Center

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Ortho-Clinical Diagnostics, a Johnson & Johnson company, located in Rochester, New York, is a leading provider of high-value diagnostic products and services for the global health care community. For more than half a century, the company has been committed to providing accurate, timely, and cost-effective solutions for screening, diagnosing, monitoring and confirming diseases. We are currently seeking qualified candidates for a position in our Chemical Chemistry Assay Design Center as:



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We offer competitive compensation & benefit program. For more information on Ortho-Clinical Diagnostics, please visit our website, www.orthoclinical.com. Qualified candidates should send a resume, including salary requirements, to: **Ortho-Clinical Diagnostics, 100 Indigo Creek Dr., Rochester, NY 14626.** Fax: 585-453-4440. Email: kkelley1@ocdus.jnj.com. Please reference #02-0000146



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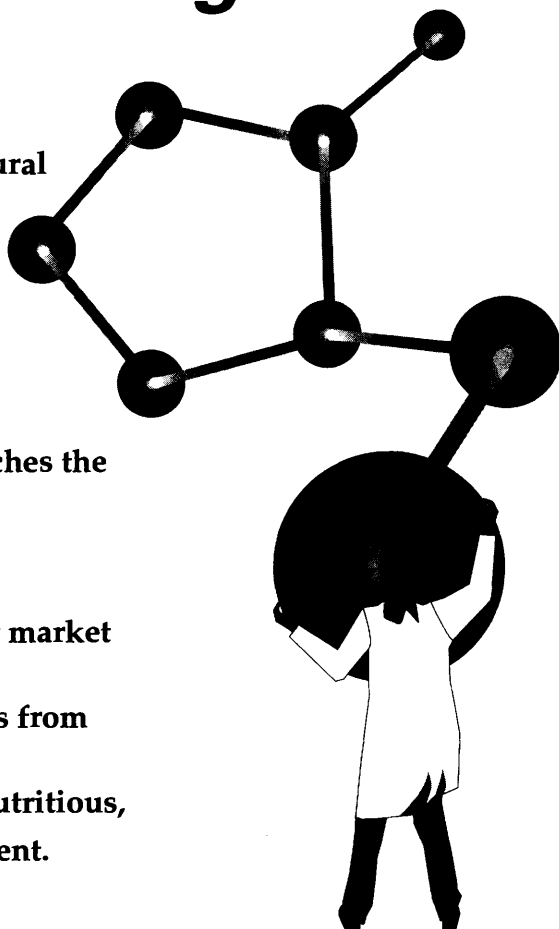
Consider a research scientist or postdoctoral research associate position with the Agricultural Research Service (ARS), USDA's principal in-house research agency.

ARS offers—

- competitive benefits packages,
- a family-friendly work environment, and
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ARS is involved in—

- opening up a new multimillion-dollar export market for U.S. crops,
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Permanent Research Scientist Vacancies

<http://www.afm.ars.usda.gov/divisions/hrd/index.html>

Postdoctoral Research Associate Vacancies

<http://www.afm.ars.usda.gov/divisions/hrd/hrdhomepage/vacancy/pstdeclst.htm>

ARS offers a challenging, scientific research environment, excellent benefits, and opportunity for advancement. Openings exist in many disciplines at locations throughout the United States.

ARS is an equal opportunity employer.



Agricultural
Research
Service

United States
Department of
Agriculture

SCIENTISTS - BIOLOGY RESEARCH

Telik, Inc. is a biopharmaceutical company working to discover, develop and commercialize small molecule drugs to treat serious diseases for which there is significant demand for new therapies. The company's most advanced development programs are for the treatment of cancer, diabetes and inflammation. Due to the growth of the company, key positions are immediately available on the Biology Research team for the anti-cancer drug discovery and development program.

Scientist, Biochemistry (Job code BC-DC)

In this position, you will develop and implement enzymatic assays focusing on novel cancer targets. These assays will be used with our proprietary TRAP technology to rapidly identify small molecule inhibitors. You will perform pivotal biochemical and cell-based experiments to characterize and validate the inhibitors in regard of their modes of action, work with medicinal chemists in lead optimization, and recommend drug candidates for addition to the company's anti-cancer drug pipeline. Successful candidates will have a good working knowledge of steady-state kinetics and solid analytical skills. Experience with various enzyme assay formats is preferred.

Scientist, Cell & Molecular Biology (Job code CMB-DC)

You will carry out experiments to characterize novel compounds that have attractive anti-cancer properties and provide validation at the cellular level for further *in vivo* testing in animal models. You will design and carry out experiments to study the mechanism of action of proprietary drug candidates at the biochemical and cellular levels. Successful candidates will have hands-on experience with mammalian cell culture and experience in biochemical and cellular approaches for studying signal transduction.

Requirements:

- Ph.D. in Biochemistry, Molecular & Cell Biology or related field, and a minimum of 2 years postdoctoral training. Experience with molecular biology is preferred; oncology and industrial experience are desirable.
- Good communication and interpersonal skills are essential.

Telik offers an attractive compensation package, along with a challenging and rewarding work environment. For immediate consideration, please mail your resume to: **Telik, Inc., Attn: (Job Code), 750 Gateway Blvd., So. San Francisco, CA 94080, fax to 650-244-9388, or e-mail to inquiry@telik.com. Visit our web site at www.telik.com for more information. EOE.**



Mendel Biotechnology

Vice President, Research and Development

Mendel Biotechnology, Inc. (www.mendelbio.com) is a pioneer in plant functional genomics. The company has developed extensive knowledge of the functions of plant transcription factors and intends to develop and commercialize products based on these discoveries. These products will benefit customers in agriculture, healthcare, fine chemicals, forestry and horticulture markets.

We seek an individual who can provide scientific and technical leadership within the company and who can facilitate integration of the discovery program with the business objectives. He or she will report to the CEO and will lead the daily operations of the company in the scientific arena, manage the scientific staff, participate on the management team to guide operational and strategic activities of the company, and represent the company's scientific leadership in investor relations and corporate development.

The ideal candidate will have greater than 10 years experience in industry with at least 5 years in VP or higher positions, extensive managerial experience, excellent leadership and communication skills, experience in product development and negotiation of licensing deals, and familiarity with legal, regulatory and market issues in plant biotechnology. An outstanding scientific track record of achievement, with world-class recognition in plant sciences is expected.

Send resume or c.v. to hr@mendelbio.com, or FAX to 510-264-0254.

CAREERS IN GENETICS RESEARCH

UIC University of Illinois at Chicago

Head Biochemistry and Molecular Genetics

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

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

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

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

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



The University of Sydney AUSTRALIA

Professor of Functional Genomics

*Centre for Advanced Technologies in
Animal Genetics and Reproduction
Faculty of Veterinary Science*

Reference No. A13/002546

The Centre for Advanced Technologies in Animal Genetics and Reproduction (Reprogen) at the University of Sydney seeks a senior scientific leader for a new national genomics initiative in dairy cattle as part of the Cooperative Research Centre (CRC) for Innovative Dairy Products. The applicant will join a strong team of 65 scientists involved in the CRC, of which 30 are directed to the Gene discovery programme. A generous start-up fund for capital development is available for the incumbent. The Chair will have access to the new Institute for Functional Genomics and Bioinformatics under development at the University of Sydney and includes state of the art technology capability in genomics, cell biology, bio-informatics and proteomics.

For full advertisement, please refer to the University's website at <http://www.bull.usyd.edu.au/personnel/>. Further information about the position and a copy of an information brochure should be obtained from Professor Herman Raadsma, Associate Dean of Research, the Faculty of Veterinary Science on (+61 2) 9351 1603, e-mail: raadsma@camden.usyd.edu.au or the Associate Dean, Staff and Students, Associate Professor Chis Maxwell on (+61 2) 9351 4864, e-mail: chism@vetsci.usyd.edu.au

Remuneration package: A total remuneration package of up to AUD \$119,594 p.a. (which includes a base salary Professor Level E AUD \$101,537 p.a., leave loading and up to 17% employer's contribution to superannuation). There is also available a Professorial expense of office allowance that is paid against expenses. Any additional benefits would be subject to negotiation.

Closing: 13 June 2002

Ten copies of application, which should quote the reference no., address the selection criteria, and include a CV, a list of publications, the names, addresses, e-mail, fax and phone number of five confidential referees, should be forwarded to: The Personnel Officer, College of Sciences and Technology, Carslaw Building, (F07), The University of Sydney, NSW, 2006.

The University is a non-smoking workplace and is committed to the policies and principles of equal employment opportunity and cultural diversity. The University reserves the right not to proceed with any appointment for financial or other reasons. See <http://www.usyd.edu.au/>

POSITIONS OPEN

EXECUTIVE DIRECTOR

ILSI Health and Environmental Sciences Institute (HESI) is a global branch of the International Life Sciences Institute, a public nonprofit scientific foundation with branches throughout the world. ILSI HESI provides an international forum to advance the understanding and application of scientific issues related to human health, toxicology, risk assessment, and the environment. ILSI HESI is widely recognized among Scientists from government, industry, and academia as an objective, science-based organization within which important issues of mutual concern can be discussed and resolved in the interest of improving public health. As part of its public benefit mandate, ILSI HESI's activities are carried out in the public domain, generating data and other information for broad scientific use and application. ILSI HESI's programs are supported primarily by its industry membership and also receives support from a variety of government agencies from the United States and internationally.

ILSI HESI seeks a full-time Executive Director to provide overall vision, leadership, coordination, and strategic planning and to ensure delivery of programs and products consistent with the ILSI HESI mission and priorities. This position requires 10 to 15 years of experience at a senior scientific level, having oversight responsibilities for both programmatic and managerial activities. A Ph.D. or comparable degree in a relevant scientific discipline (i.e., toxicology, pharmacology, public health, etc.) is required. The incumbent should have demonstrated problem-solving skills that cut across industry, government, and/or academia with some industry experience preferred. The incumbent should have an understanding of regulatory, political, and business issues including the needs and constraints of a variety of industries. International travel is required in this position. To be considered, send detailed résumé and salary history to **e-mail: resumes@ils.org** or mail to: **ILSI Human Resources, One Thomas Circle, N.W., Ninth Floor, Washington, D.C. 20005. FAX: 202-659-3859** (Reference Number: HED-SM). Detailed information about the position and the Institute can be found at **website: <http://www.ils.org>**. *Equal Opportunity Employer; Minorities/Females/Disabled/Veterans.*

ASSOCIATE/FULL PROFESSOR OF ANIMAL SCIENCE University of Vermont

The Department of Animal Science at the University of Vermont invites applications for a nine-month, tenure-track faculty position in the area of mammary gland biology/pathogenesis at the level of Associate or Full Professor. The candidate will be expected to establish a strong, competitively funded, and highly collaborative research program that will complement our established center of excellence in lactation physiology/mammary gland biology (for details, go to **website: <http://asci.uvm.edu>**). Individuals with a research focus in pathogenesis including the areas of immunology, breast cancer, mastitis, or animal health are particularly encouraged to apply. Candidates must have a Doctoral degree in animal or life sciences or a related discipline and already have developed a well-funded, productive, and collaborative research program with a strong commitment to teaching and advising undergraduate and graduate students. Evaluation of applications will begin May 1, 2002, and will continue until suitable candidates are identified. Applicants should submit a letter of application, curriculum vitae, a statement of interests and vision regarding research and teaching, and request three letters of reference be sent to: **Dr. Douglas I. Johnson, Chair, Animal Science Search Committee, c/o Kathy Tatrow, Department of Animal Science, The University of Vermont, 570 Main Street, 102 Terrill Hall, Burlington, VT 05405. Telephone: 802-656-0155; FAX: 802-656-8196; e-mail: ktatrow@zoo.uvm.edu**. *The University of Vermont is an Equal Opportunity/Affirmative Action Employer. Women and members of minority groups are particularly encouraged to apply.*

POSITIONS OPEN

UNIVERSITY OF MINNESOTA Cancer Center



CLINICAL CHEMOPREVENTION

The University of Minnesota Cancer Center is conducting a search for a tenure-track **ASSISTANT or ASSOCIATE PROFESSOR** to develop a clinical chemoprevention research program. He or she will have a particular interest in designing and executing Phase I through III studies of efficacy of chemopreventive agents against lung cancer in smokers and ex-smokers. The University of Minnesota has a long history of development of chemopreventive agents including those designed to inhibit lung cancer. These agents are very effective in preclinical studies using animal models, and several are now ready to advance to clinical trials. The University of Minnesota has a Transdisciplinary Tobacco Use Research Center focused on smoking reduction approaches. Collaborative interactions for development of chemopreventive agents are envisioned. In addition to an M.D., the successful candidate will have some experience and knowledge of clinical trial design and implementation. An M.P.H. in and/or experience with respiratory- and tobacco-related cancers desired. Please send curriculum vitae and a summary of research interests to: **Stephen Hecht, Ph.D., c/o Human Resources, University of Minnesota Cancer Center, Mayo Mail Code 806, 420 Delaware Street S.E., Minneapolis, MN 55455. Website: <http://www.cancer.umn.edu>**. Application deadline: July 1, 2002. *The University of Minnesota is an Equal Opportunity Educator and Employer.*

TENURE-TRACK POSITIONS Cornell University Weill Medical College

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 the Department of Cell and Developmental Biology is seeking to recruit tenure-track faculty. We are especially interested in candidates with research interests related to the differentiation and migration of neurons and their supporting cells, matrix function and remodeling, and cell cycle control and apoptosis. 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. Primary appointment of tenure-track faculty as part of this initiative will be in the Department of Cell and Developmental Biology.

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, and in the Tri-Institutional M.D.-Ph.D. Program, which also includes faculty from The Rockefeller University. Applications should include curriculum vitae, statement of research interests, and three letters of recommendation. Applications should be sent to: **Jack D. Barchas, M.D., Neuroscience Recruitment Committee (KH), Box Number 27, Weill Medical College of Cornell University, 1300 York Avenue, New York, NY 10021**. *Equal Employment Opportunity/Affirmative Action/Minorities/Females/Disabled/Veterans.*

POSITIONS OPEN

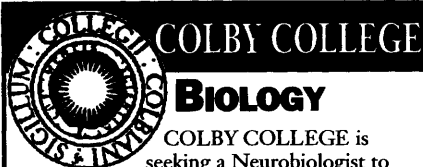
OCEAN BIOLOGIST/ECOLOGIST University of Hawaii at Manoa

The School of Ocean and Earth Science and Technology (SOEST) was established at the University of Hawaii to promote excellence in interdisciplinary research and graduate education in marine, atmospheric, and geological sciences. To further these goals, the Department of Oceanography is inviting applications for a **TENURE-TRACK FACULTY POSITION** in biological oceanography. Applicants must have a Ph.D. degree in oceanography, marine biology, fisheries, or related discipline; excellent communication skills; and demonstrated capability for creative, high-quality research. We particularly seek strong applicants with research specialty areas in fisheries oceanography, oceanic nekton, and/or pelagic community ecology. However, the successful candidate will be chosen on the basis of individual qualifications and excellence rather than specific research discipline. The successful candidate will be expected to develop outstanding research and teaching/educational programs. The position can be filled at any rank commensurate with experience. Apply in writing with supporting materials including curriculum vitae, statement of research and teaching interests, three representative publications, and the names and addresses of three references. Send application to: **Dr. Michael R. Landry, Search Committee Chair, Department of Oceanography, University of Hawaii at Manoa, 1000 Pope Road, Honolulu, HI 96822**. The deadline for receipt of applications is 31 May 2002. *The University of Hawaii is an Equal Opportunity/Affirmative Action Employer. We especially encourage applications from qualified women, minority, and junior-level colleagues.*

FACULTY APPOINTMENT Memorial Sloan-Kettering Cancer Center Department of Radiology

The Department of Radiology invites applications for a faculty position at the level of **ASSISTANT MEMBER** in the Laboratory of Molecular Imaging. Traditionally strong in the area of imaging, the Laboratory is an expanding, highly interactive, multidisciplinary group with a broad spectrum of research interests relevant to human cancer. We are seeking creative applicants with an advanced degree (Ph.D. or M.D.) and a record of scientific accomplishment in the areas of animal modeling of human cancers and/or animal imaging. We are particularly interested in the animal models for ovarian and prostate cancer; however, outstanding candidates in any area of cancer modeling will be considered. Interested candidates should send curriculum vitae, summary of research interests, and three letters of reference to: **Hedvig Hricak, M.D., Ph.D., Chairman, Department of Radiology, Memorial Sloan-Kettering Cancer Center, 1275 York Avenue, New York, NY 10021. E-mail: hricakh@mskcc.org; website: <http://www.mskcc.org>**. *The Memorial Sloan-Kettering Cancer Center is an Equal Opportunity Employer.*

The University of Massachusetts Medical School is seeking a dynamic leader for the position of **DIRECTOR OF THE DEPARTMENT OF ANIMAL MEDICINE**. The Animal Medicine Department includes facilities for species that range from nonhuman primates and aquatic species to extensive VAF and SPF facilities for rodents. The University of Massachusetts Medical School is a major research institution with 250 Research faculty conducting research in six buildings on the Worcester campus. The Medical School is committed to a major expansion of research in the area of genomics, neurosciences, cancer biology, chemical biology, immunology, and infectious diseases in a new state-of-the-art, 365,000-square-foot research building. The ideal candidate should have a D.V.M. or other suitable Doctoral degree and experience in managing a large and diverse animal medicine department. Applicants are invited to submit a letter of interest, current curriculum vitae, and names of three references to: **Aldo Rossini, M.D., Program in Molecular Medicine, Two Biotech, Suite 218, 373 Plantation Street, Worcester, MA 01605**. *The University of Massachusetts Medical School is an Affirmative Action/Equal Opportunity Employer.*



COLBY COLLEGE
BIOLOGY
COLBY COLLEGE is seeking a Neurobiologist to fill a one-year position as Visiting Assistant Professor of Biology to begin September 2002. Candidates should have a Ph.D. in the biological sciences with broad training in neurobiology. Expertise in developmental biology or animal physiology is highly desirable. Teaching assignments will include Neurobiology and two additional courses in the candidate's area of expertise. Familiarity with liberal arts colleges, teaching experience, and post-doctoral experience are desirable.

Please submit a letter of application, statement of teaching interests, curriculum vitae, reprints of no more than three publications, undergraduate and graduate transcripts, and three letters of recommendation to:

W. Herbert Wilson, Jr., Chair
Department of Biology
5720 Mayflower Hill, Colby College
Waterville, Maine 04901.
Tel: (207) 872-3432
E-mail: whwilson@colby.edu

Application review will begin by April 19, 2002 and continue until the position is filled.

Applications and nominations of women and minorities who would enrich the diversity of the campus community are strongly encouraged.

For more information about the College, please visit the Colby web site:
www.colby.edu

FACULTY POSITIONS **Johns Hopkins University** **Bloomberg School of Public Health** **Department of Environmental Health** **Sciences**

The Department seeks individuals to fill two positions at either the tenure track Assistant or Associate Professor level in the Division of Toxicological Sciences. Individuals should have a strong interest in Environmental Health related issues and should be employing molecular, biochemical and/or cell biological approaches to understanding mechanisms of toxicity. Successful candidates are expected to complement the research interests of current faculty that includes mechanism-based studies of metal and oxygen radical toxicity, carcinogenesis and chemoprevention and toxicities of xenobiotics of the nervous, pulmonary and hematopoietic systems. A broad spectrum of mechanistic toxicology candidates are encouraged to apply, although it is expected that one of the two positions will be filled by an individual whose research is focused on xenobiotic metabolism.

Send complete curriculum vitae, statement of research interests and three letters of reference to:
Val Culotta, Ph.D., c/o Ms. Kay Castleberry,
Senior Academic Coordinator, Department of Environmental Health Sciences, 615 North Wolfe Street, Room W1102, Johns Hopkins Bloomberg School of Public Health, Baltimore, MD 21205 or email at kcastleb@jhsp.h.edu.

The Johns Hopkins University is an Equal Opportunity Employer, and encourages interest from women and minorities and is an Affirmative Action/Equal Opportunity Employer.

CAREERS IN GENETICS RESEARCH

STONY BROOK

STATE UNIVERSITY OF NEW YORK

POSTDOCTORAL POSITIONS

The following postdoctoral positions are anticipated for Fall/Winter 2002/2003.

Adenovirus regulation of cellular transcription factors; Patrick Hearing, Molecular Genetics and Microbiology, phearing@ms.cc.sunysb.edu

Anatomical, physiological, molecular effects of gonadal hormones on cerebral cortex
Mary Kritzer, Neurobiology & Behavior
cabrady@sunysb.edu

Biophysics of Signal Transduction: Phosphoinositides
Stuart McLaughlin, Physiology & Biophysics,
<http://physiology.pnb.sunysb.edu/faculty/mclaughlin/mclaughlin.htm>

Cell cycle control of DNA replication in Schizosaccharomyces pombe
Janet Leatherwood, Molecular Genetics and Microbiology,
janet.leatherwood@stonybrook.edu

Cellular- and Systems-level Basis of Behavior in Oculomotor Neurophysiology, James Gnadt, Neurobiology & Behavior, ignadt@sunysb.edu

Chromosome recombination, synapsis, and segregation during meiosis in yeast
Nancy M. Hollingsworth, Biochemistry and Cell Biology,
nhollin@notes.cc.sunysb.edu

Computational fluid dynamics, large scale scientific computing modeling
James Glimm, Applied Mathematics and Statistics

DNA microarray analyses of the fission yeast Schizosaccharomyces pombe
Janet Leatherwood, Molecular Genetics and Microbiology,
janet.leatherwood@stonybrook.edu

Electron spin resonance and optical spectroscopy in strong magnetic fields, Laszlo Mihal, Physics

Environmental/Analytical Chemist: Detection and Environmental Fate of Pharmaceuticals
Bruce J. Brownawell, Marine Sciences Research Center,
bbrownawell@notes.cc.sunysb.edu

Evolutionary History of Vertebrates, Functional and Evolutionary Morphology of Primates
David W. Krause, Anatomical Sciences,
David.Krause@stonybrook.edu

Flow-induced polymer crystallization, nanocomposites, nanoparticles and biodegradable polymer
Benjamin S. Hsiao, Chemistry,
bhsiao@notes.cc.sunysb.edu

G protein-coupled receptors, James B. Konopka, Molecular Genetics and Microbiology,
james.konopka@sunysb.edu

Glycoproteins: Biosynthesis, folding, and catabolism in yeast. William J. Lennarz, Biochemistry & Cell Biology

Host-pathogen interaction, DNA repair, T-DNA integration, Tzvi Tzfira, Biochemistry & Cell Biology,
ttzfira@notes.cc.sunysb.edu

Medical Imaging Radiology, mchodkow@radiol.som.sunysb.edu.

Mitochondrial Molecular Biology: Replication, Repair, Proteomics, Dan Bogenhagen, Pharmacology,
dan@pharm.sunysb.edu

Molecular Biology of Nerve Regeneration
Joel Levine, Neurobiology & Behavior,
cabrady@sunysb.edu

Molecular biology of protease activated receptors
Gene therapy strategies for treatment of hemophilia A (two positions available), Wadie F. Bahou, Hematology, wbahou@notes.cc.sunysb.edu

Molecular Biology: Cloning and Expression of anti-tumor antibiotic proteins, Smita Mohanty, Biochemistry,
smohanty@notes.cc.sunysb.edu

Molecular Virology: Hantavirus and Rotavirus Directed Cell Signaling, Erich R. Mackow, Medicine, Molecular Genetics and Microbiology,
Mackow@notes.cc.sunysb.edu

Neural Networks: Modeling of self-evolving networks with nanoelectronic synapses, Konstantin K. Likharev, Physics and Astronomy, klkharev@notes.cc.sunysb.edu

NMR Structure and Function of Membrane Proteins
Steven O. Smith, Biochemistry and Cell Biology

Nuclear Reactions at Relativistic Energies
John Alexander and Roy Lacey, Chemistry

Polyelectrolyte-surfactant complexes, polymer nanostructure/composite networks, colloids and fibers, Ben Chu, Chemistry, bchu@notes.cc.sunysb.edu

Postdoctoral Research in Biogeochemistry using ICP-MS Techniques, Sergio Sañudo-Wilhelmy, Marine Sciences Research Center,
ssanudo@notes.cc.sunysb.edu

Regulation of exocytosis and morphological reorganization Phospholipase D, Michael A. Frohman, Pharmacology, michael@pharm.sunysb.edu

Sedimentary biogeochemistry: development of an in situ hyperspectral sensor and optode system
Robert C. Aller, Marine Sciences Research Center,
www.mscc.sunysb.edu/pages/eo-sedbio.html

Signal Transduction and Gene Expression in Response to Cytokines and Virus, Nancy C. Reich, Pathology, nreich@notes.cc.sunysb.edu

Signal Transduction: Regulation of PI 3-kinase and S6 kinase, Richard Z. Lin, Medicine, richard.lin@sunysb.edu

Structural studies on antitumor antibiotic proteins
Smita Mohanty, Biochemistry,
smohanty@notes.cc.sunysb.edu

Study gap junctional communication in human diseases and knockout mice, Thomas White, Physiology, Twhite@physiology

Theoretical and experimental fields in Physics & Astronomy (multiple positions), Physics and Astronomy, Maria.Hofer@stonybrook.edu

Transgenic Biology: Role of Integrins in Epithelialization, Richard A. Clark, Dermatology

Viral Pathogenesis: Differential Regulation of Endothelial Cell Function by Pathogenic and Non-pathogenic Hantaviruses, Erich R. Mackow, Medicine, Molecular Genetics and Microbiology,
EMackow@notes.cc.sunysb.edu

Submit résumés and name of researcher to: George Meyer,
Office of the President, Stony Brook University, Stony Brook, NY 11794-0701
or e-mail: postdocads8@notes.cc.sunysb.edu

AA/EOE

POSITIONS OPEN

DIRECTOR Microscopy Facility

The Department of Cell and Molecular Biology seeks an individual with experience in modern light microscopic techniques to direct the Cell Imaging Facility and to work closely with an active group of Principal Investigators from numerous departments in the Medical School. This modern facility has two TEMs and all ancillary equipment, two confocal microscopes, a deconvolution microscope, and several light microscopes equipped with advanced digital imaging capabilities. The Director will oversee the facility and guide its development by implementing cutting-edge techniques, working closely with researchers, and helping write instrumentation and other grant proposals. The Director should be familiar with confocal and digital imaging techniques, microinjection, visualization of living cells containing fluorescent probes, photobleaching, and fluorescence *in situ* hybridization. This is an exciting opportunity to work closely with top Researchers during a rapid phase of research development in the basic biomedical sciences. Qualifications: Ph.D. degree and three or more years of relevant experience. Salary is commensurate with experience. Send letter, résumé, and names of three references to: **Dr. Ed Kuczmarski, Cell and Molecular Biology, Northwestern University Medical School, 303 East Chicago Avenue, Chicago, IL 60611. FAX: 312-503-0954; e-mail: e-kuczmarski@northwestern.edu.** Closing date for receipt of applications is April 30, 2002.

Northwestern University is an Equal Opportunity/Affirmative Action Educator and Employer and invites applications from all qualified individuals. Applications from women and minorities are especially sought.

ASSISTANT/ASSOCIATE PROFESSOR Virology

The Department of Microbiology and Immunology at the East Carolina University Brody School of Medicine invites applications for a tenure-track faculty position at the **ASSISTANT PROFESSOR** or **ASSOCIATE PROFESSOR** level. Major responsibilities will include establishment and direction of an independent research program and participation in teaching of medical and graduate courses. An individual utilizing modern molecular approaches in the general area of viral pathogenesis related to human health and disease is sought. Salary and rank will be commensurate with qualifications. Appointment at the Associate Professor level requires a strong record of continuous research funding including current extramural support and evidence of leadership in teaching and service. The Department has 13 full-time, tenure-track faculty; an active Doctoral studies program; and is fully equipped with advanced facilities for virology, bacteriology, molecular biology, genetics, immunology, and animal research (**website: <http://www.ecu.edu/microbiology>**). Applicants should provide curriculum vitae, a letter describing research and teaching goals, and names and complete addresses of three references by mail to: **Virology Search Committee, Department of Microbiology and Immunology, Brody School of Medicine, East Carolina University, Greenville, NC 27858-4354.**

East Carolina University is an Equal Opportunity/Affirmative Action University. Accommodates individuals with disabilities. Applicants must comply with the Immigration Reform and Control Act.

The University of Chicago invites applications for a nontenure-track position as **SENIOR LECTURER/LECTURER** in the Biological Sciences Collegiate Division. The applicant will teach introductory general biology courses, which will include laboratories. We are seeking broadly trained Ph.D. applicants with teaching and research experience who are competent to teach cell/molecular, organismal, and population biology at the introductory survey level. Expertise in physiology is desirable. Send curriculum vitae; three letters of reference; and a statement of teaching interest by May 30, 2002, to: **Jose Quintans, The University of Chicago, Biological Sciences Learning Center, Room 104C, 924 East 57th Street, Chicago, IL 60637. Equal Opportunity/Affirmative Action Employer.**

POSITIONS OPEN



The Lineberger Comprehensive Cancer Center in conjunction with the University of North Carolina Department of ENT is seeking a **RESEARCH ASSOCIATE**. Successful applicant will execute and manage translational and basic research projects including animal xenograft, tissue culture models of normal and tumor tissue, and microarray analyses. The models will be used to test efficacy of novel adenoviral therapy of head and neck squamous cell carcinoma. Applicants should have a Ph.D. or extensive previous experience in a wide range of molecular techniques. Experience with animal models will be helpful.

Submit curriculum vitae (referencing RA-WY) to: **Vanessa Brock, Human Resource Manager, LCCC, CB Number 7295, UNC-CH, Chapel Hill, NC 27599-7295. FAX: 919-966-3015. Equal Opportunity Employer.**

ENVIRONMENTAL MOLECULAR SCIENCE/ENGINEERING AT YALE

The Environmental Engineering Program at Yale University invites applications for an **ASSISTANT PROFESSOR** position in environmental molecular science starting January 1, 2003. This position is part of the ongoing initiative at Yale University to strengthen the interdisciplinary Environmental Engineering Program, which involves engineering and science departments as well as the School of Forestry and Environmental Studies. Candidates are expected to have expertise in environmental molecular science involving microbial or chemical processes in engineered and/or natural aquatic systems. The successful candidate will be expected to teach undergraduate and graduate courses in environmental engineering and related engineering science, advise graduate students, and develop a creative and dynamic externally funded research program. Nominations and applications with a detailed résumé, a description of research and teaching interests, and names and addresses of at least four references should be sent to: **Chair, Environmental Engineering Search Committee, Department of Chemical Engineering, Environmental Engineering Program, Yale University, P.O. Box 208286, New Haven, CT 06520-8286. Website: <http://www.eng.yale.edu/environmental>.** Review of applications will begin June 2002 and will continue until the position is filled. *Yale University is an Affirmative Action/Equal Opportunity Employer. Women and members of minority groups are encouraged to apply.*

ASSISTANT PROFESSOR OF PHARMACOLOGY-TOXICOLOGY Duquesne University Pittsburgh, Pennsylvania

The Pharmaceutical Sciences Division of the Mylan School of Pharmacy and the Graduate School of Pharmaceutical Sciences seeks to fill a tenure-track position in Pharmacology-Toxicology beginning July 1, 2002. Applicants should possess a Ph.D. degree in a suitably related field. Postdoctoral experience is required and a pharmacy background is desirable. Successful candidates will be expected to teach in the Doctor of Pharmacy program and M.S./Ph.D. graduate programs and to develop vigorous, creative, and extramurally funded research programs. Applicants should submit a letter of intent accompanied by curriculum vitae, a summary of research interests, and at least three letters of reference to: **Dr. David A. Johnson, Chair, Search Committee, Pharmaceutical Sciences Division, Duquesne University, Pittsburgh, PA 15282. Telephone: 412-396-5952; FAX: 412-396-4660; E-mail: johnsond@duq.edu.** Applications will be accepted until the position is filled. For more information about the Mylan School of Pharmacy, the Graduate School of Pharmaceutical Sciences, and Duquesne University, visit our **website: <http://www.pharmacy.duq.edu>.** *An Affirmative Action Employer.*

POSITIONS OPEN

FACULTY POSITIONS Genetics and Genomics Boston University Medical Center

A newly created academic department, Genetics and Genomics, has been established at Boston University Medical Center (BUMC). A number of faculty positions are available in two broad areas: chromosome biology and bioinformatics/genomics. The Department will complement major existing strengths in human genetics and bioinformatics at Boston University. Substantial resources and excellent facilities are available to support new faculty. BUMC is located in the heart of Boston, Massachusetts.

Bioinformatics faculty candidates interested in development of computational algorithms and software for mining biological data, modeling biological pathways, or protein structure prediction are sought.

Genomic instability studies that focus on molecular aspects of chromosome behavior using model organisms will also be a focus of the Department. Researchers using mice, worms, flies, frogs, and yeast are encouraged to apply. Send applications with e-mail addresses of three references to:

**Michael Christman, Ph.D.
Professor and Chair**

**Department of Genetics and Genomics
Boston University School of Medicine
715 Albany Street, E603
Boston, MA 02118
E-mail: mfc@bu.edu
Telephone: 617-414-1636
FAX: 617-414-1646**

POSTDOCTORAL FELLOW/RESEARCH ASSOCIATE/ASSISTANT RESEARCH PROFESSOR

One full-time Postdoctoral Associate/Research Associate/Assistant Research Professor position for two to three calendar years, funded through an NIH grant, is available immediately. Duties for this position include research to determine the effects of ethanol and other environmental factors on growth and differentiation of hypothalamic neurons using immunocytochemical *in situ* hybridization and digital microscopy methods. Salary: \$28,000 to \$48,000 per year depending on experience and qualifications. Candidate must have a Ph.D. degree with experience in immunocytochemistry, *in situ* hybridization and digital microscopy, and knowledge of general animal procedures and handling of rats or mice. *Assistant Research Professor and Research Associate candidates must be U.S. citizens or hold a visa for permanent residence.* Please send curriculum vitae and the names of three references to: **Dipak K. Sarkar, Professor II and Director, Endocrinology Program, 84 Lipman Drive, Rutgers, The State University of New Jersey, New Brunswick, NJ 08901. E-mail: sarkar@aesop.rutgers.edu.**

RESEARCH ASSISTANT/ASSOCIATE PROFESSORS: The School of Veterinary Medicine at Tufts University invites applications for Research Faculty positions in the Division of Infectious Disease. The incumbents will be joining a well-established, multidisciplinary research program concerned with many and diverse aspects of enteric infections of the normal and the immunodeficient host. Candidates must have a D.V.M. (or equivalent) and/or Ph.D. degree with a strong background in molecular pathogenesis, immunopathology, or pathophysiology. Candidates for the Research Associate Professor position must have a record of extramural research funding. Review of applications will begin immediately. Candidates should submit a letter of application with a statement of research experience and career goals, curriculum vitae, and the names of at least three references to: **Dr. Saul Tzipori, Division of Infectious Diseases, Tufts University School of Veterinary Medicine, 200 Westboro Road, North Grafton, MA. E-mail: saul.tzipori@tufts.edu.** *Tufts University is an Affirmative Action/Equal Opportunity Employer.*



**RESEARCH ASSOCIATE
Immunology and Medicine
Rochester, Minnesota, U.S.A**

Research Associate Position is immediately available to study mechanisms of T-cell homeostasis in autoimmune diseases. Candidates should have a Ph.D. or M.D. along with experience in cellular immunology and molecular biology.

Salary will be determined by the successful candidate's experience. There is an attractive benefit package. Mayo Clinic is a not-for-profit organization. Mayo integrates research with clinical practice and education in a multi-campus environment. For further information please visit <http://www.mayo.edu/research/>.

Applications, including curriculum vitae and bibliography, summary of past accomplishments, and the names of three references, should be sent to:

Jorg J. Goronzy, M.D.
Professor of Immunology and Medicine
Mayo Clinic, 200 First Street SW, Rochester, MN 55905
(507) 284-1650; (507) 284-5045
Goronzy.jorg@mayo.edu

Mayo Foundation is an Affirmative Action and Equal Opportunity Employer and Educator.

J · I · A · S · C

Director of Joint Institute for Advanced Scientific Computing

The University of North Carolina system, including North Carolina State University and the University of North Carolina at Chapel Hill, Duke University, Wake Forest University, and MCNC, the home of the North Carolina Supercomputing Center, is establishing a Joint Institute for Advanced Scientific Computing. The mission of the JIASC is to create the theoretical, mathematical and computational approaches required to take full advantage of terascale and beyond computers for modeling complex natural and man-made systems. The focus of the JIASC will be on computational materials and molecular science, nanoscience and engineering, biology and bioinformatics, and environmental science and engineering augmented by programs in computer science and applied mathematics for scientific computing.

Initial funding for the JIASC will be provided by MCNC. This funding will support the Director and his/her administrative office, graduate student and postdoctoral fellowships, seminars and symposia, and a visiting scientist program.

We are seeking a dynamic individual to be the founding Director of the Joint Institute. This individual should have a broad knowledge of computational science, computer science, and applied mathematics as related to high performance (scientific) computing. He or she should have an international reputation as well as a strong record of accomplishment in the field of high performance computing. A clear vision for the future of the Joint Institute and strong communications skills will also be needed. Qualified candidates will be considered for a faculty position at one of the Research Triangle universities (NCSCU, UNC-CH, or Duke).

Please forward applications with a curriculum vitae, a brief description of research and leadership accomplishments and future research directions, and a list of four references to: **MCNC, Human Resources, Reference Number 646, PO Box, NC 27709-2889**. Electronic applications may be sent to hr@mcnc.org (pdf files preferred). Review of applications will begin on June 1, 2002 and continue until the position has been filled. No phone calls or agency referrals please.

*We are an Affirmative Action/Equal Opportunity Employer.
We welcome and encourage diversity in our workplace.*

HIV Drug Resistance Program

Postdoctoral Fellow, Research Fellow, and Senior Research Fellow Positions

Postdoctoral Fellow, Research Fellow, and Senior Research Fellow positions are available immediately in a research program focused on understanding the replication of human immunodeficiency virus and other retroviruses. Research projects encompass a broad area of retroviral replication and pathogenesis; specific ongoing projects include reverse transcriptase fidelity and recombination, development of anti-HIV integrase inhibitors, mechanisms of reverse transcription, mechanisms of viral drug resistance, and viral RNA dimerization.

Applicants must have a strong background in molecular biology, biochemistry, and/or virology. Applicants to the Research Fellow and Senior Research Fellow positions must have relevant prior postdoctoral experience. The salary ranges for the Postdoctoral Fellow, Research Fellow, and Senior Research Fellow positions are \$32K-\$51K, \$34K-\$58K, and \$42K-\$79K, respectively, commensurate with experience. To apply, submit a cover letter, curriculum vitae, bibliography, and names of three references to:

Dr. Vinay K. Pathak
HIV Drug Resistance Program
NCI-Frederick, P.O. Box B
Frederick, MD 21702
Fax: 301-846-6013, E-mail: vpathak@ncicfrf.gov
Website: www.retrovirus.info/Pathak.html



Equal Opportunity Employer



NATIONAL INSTITUTES OF HEALTH NATIONAL EYE INSTITUTE

Job Opportunities

The National Eye Institute Intramural Program at the NIH campus, Bethesda, MD., is seeking highly qualified Postdoctoral Fellows, Research Associates and Staff Scientists in the following areas:

- **Molecular Biology**
- **Cell Biology**
- **Immunology**
- **Psychophysics**
- **Biochemistry**
- **Genetics**

Salaries range from \$30,800 to \$125,700 per annum, based on experience and type of appointment.

NEI offers an extensive benefits package that you may be eligible for, depending on the appointment mechanisms: Health Benefits, Life Insurance, Retirement Benefits, Annual and Sick Leave, Formal Training Program, Recruitment Bonus, Retention Allowance, Relocation Allowance, Loan Repayment Program, and Travel Benefits.

Candidates interested in specific job opportunities at the NEI may visit the NEI web site at <http://www.nei.nih.gov/> listing the most current positions available.

NIH/NEI is an Equal Opportunity Employer

POSITIONS OPEN

PROTEIN STRUCTURE DETERMINATION University of Wisconsin—Madison

The Center for Eukaryotic Structural Genomics (CESG) is an NIH-funded facility dedicated to the development and critical analysis of methods for high-throughput, proteome-scale, eukaryotic protein production, characterization, and structure determination. Taking advantage of the benefits of the *Arabidopsis thaliana* model system, the CESG is using X-ray crystallography and NMR spectroscopy to elucidate 3-D structures of proteins encoded by its genome. CESG focuses on proteins likely to have novel folds or proteins associated with novel or unexpected functions. The development of new technology is an integral aspect of this project. CESG utilizes synchrotron beam lines at APS for X-ray data collection and spectrometers at the National Magnetic Resonance Facility at Madison (NMRFAM) for NMR data collection.

Openings are available for **RESEARCHERS** experienced in 3-D structure determination (expertise in protein production is desirable but not required).

X-ray crystallography: Positions are available at the Researcher level (experienced Ph.D.) and Technician level (B.S. or M.S.).

Protein NMR: Positions are available at the Scientist level for the NMR team leader (experienced Ph.D.), at the Researcher level (experienced Ph.D.; joint position with NMRFAM), and at the Research Associate level (Ph.D.). Details on these positions and application procedures are available from the CESG website: <http://www.uwstructuralgenomics.org>.

Unless confidentiality is requested in writing, information regarding applicants must be released upon request. Finalists cannot be guaranteed confidentiality. The University of Wisconsin—Madison is an Equal Opportunity/Affirmative Action Employer and especially encourages women and minorities to apply.

STAFF SCIENTIST

Molecular Glaucoma Group, Molecular Genetics Section, Laboratory of Molecular and Developmental Biology, National Eye Institute, National Institutes of Health, is seeking applications for a Staff Scientist with experience and established track record in molecular, cellular, and developmental biology with particular emphasis on neuroscience and vision research. Research projects include development of rodent models of glaucoma, identification and characterization of genes involved in glaucoma, and elucidation of molecular changes in eye tissues with glaucoma progression. The position is a time-limited appointment, renewable indefinitely upon mutual agreement, and is intended to be long-term with the individual playing a major role in maintaining research continuity within the laboratory. This is not a Principal Investigator position and is not endowed with independent funding, space, or autonomy. Salary is commensurate with the degree of relevant experience and training in the field with the range starting at \$66,229 per annum. Applicants must have a Ph.D. or M.D. degree. Interested candidates should send a statement of research interests and goals, curriculum vitae, bibliography, and contact information for three references to: **Dr. Stanislav Tomarev, Laboratory of Molecular and Developmental Biology, National Eye Institute, NIH, Building 6, Room 2A04, 6 Center Drive MSC 2730, Bethesda, MD 20892-2730. Telephone: 301-496-8524; FAX: 301-496-8760; e-mail: tomarevs@nei.nih.gov. NIH/NEI is an Equal Opportunity Employer.**

SUPPORT SCIENTIST Gene Transfer Research

A position is available in the laboratory of **John Zaia, M.D.**, for a **RESEARCH INVESTIGATOR** interested in gene therapy with primary application to AIDS. The position will oversee preclinical research and IND applications. Preference is given to career research professionals with experience in HIV. Experience in AIDS gene transfer and FACS analysis is desirable. Please forward résumé and salary history to: **KHD, City of Hope; FAX: 626-301-8271; e-mail: khansen-deasis@coh.org. The City of Hope is an Affirmative Action/Equal Opportunity Employer.**

POSITIONS OPEN

TWO OPENINGS PRINCIPAL VIROLOGIST AND MOLECULAR BIOLOGIST

University of Iowa Hygienic Laboratory

The University of Iowa Hygienic Laboratory (Iowa's Environmental and Public Health Laboratory) located in Iowa City, Iowa, needs a talented **PRINCIPAL VIROLOGIST** and **MOLECULAR BIOLOGIST**. Challenging projects include acting as Principal Investigator for grant/contracts, performing research and development activities, initiating new programmatic areas, serving as statewide consultant, and overseeing surveillance as well as diagnostic activities for either the virology or molecular laboratories.

The Hygienic Laboratory performs PCR testing for West Nile virus, *Bordetella pertussis*, *Chlamydia pneumoniae*, Norwalk-like viruses, HSV, *Mycoplasma pneumoniae*, arboviruses, enteroviruses, and IS6110 typing of *Mycobacterium tuberculosis*. For more specific basic and desirable qualifications, please access website indicated below. Refer résumé to:

**Principal Virologist or Molecular Search
University of Iowa Hygienic Laboratory
102 Oakdale Campus, H-101-OH
Iowa City, IA 52242-5002**

**E-mail: patricia-kosier@uiowa.edu
Website: <http://www.uhl.uiowa.edu>**

A background investigation check will be completed on the individual selected as the final candidate. The University of Iowa is an Equal Employment Opportunity/Affirmative Action Employer. Women and members of minority groups are encouraged to apply.

PROTEIN EXPRESSION AND PURIFICATION SPECIALISTS

The protein research and development group is expanding its team to produce and characterize recombinant target proteins for human disease treatment and prevention. Two **SENIOR RESEARCH TECHNICIAN** positions available immediately. They require an M.S. degree in biochemistry/molecular biology or B.S. with at least two years of practical research laboratory experience and excellent communication and teamwork skills. Basic responsibilities include recombinant protein production, purification, quality control analysis, and the quantitative evaluation of biological activities. The successful applicants will receive advanced training and experience with our pilot scale fermentation equipment, an HPLC purification system, and other research facilities in support of ongoing human parasite-related projects. Contact: **Dr. James D. Ashcom, Ph.D., Microbiology and Tropical Medicine, The George Washington University, Room 723, Ross Hall, Washington, D.C. 20037. E-mail: mtmjda@gwu.edu.** Review of applications will commence immediately and continue until position is filled. The George Washington University is an Equal Employment Opportunity Commission/Affirmative Action Employer.

RESEARCH POSITIONS Arizona Respiratory Center

Several Research positions are available immediately at the University of Arizona, Arizona Respiratory Center, to pursue cutting-edge, NIH-sponsored research on the molecular genetics, immunology, and functional genomics of asthma and allergy in the laboratories of **Drs. F. Martinez, M. Halonen, and D. Vercelli**. Preference will be given to candidates who have a strong background in molecular biology and/or genetics and/or immunology and/or biochemistry and who have effective communication skills. Competitive salaries will be available for highly qualified candidates. For more information about the projects and laboratories, visit website: <http://www.respiratory.arizona.edu>. For information about job descriptions, minimum qualifications, and application procedures, visit website: <http://www.hr2.hr.arizona.edu>. The University of Arizona is an Equal Employment Opportunity/Affirmative Action Employer; Minorities/Females/Disabled/Veterans.

POSITIONS OPEN

RESEARCH SCIENTIST POSITION OPENING

Position: Research Scientist. Permanent career track, full-time, and Fellowship positions available. Prerequisite: Ph.D. or equivalent degree in biochemistry or physiology or a related field. General description of duties: Conduct research primarily as part of the Hemorrhage Control Research Program. Other work in the general field of combat casualty care will also be performed. Current research under the Hemorrhage Control Research Program includes characterization of changes in coagulation and platelet function associated with trauma, study of drugs to promote hemostasis, study of drugs to correct coagulopathies associated with trauma, development of hemostatic dressings, and development of other hemostatic agents and devices. Work environment: Work will be performed at the U.S. Army Institute of Surgical Research, Fort Sam Houston, San Antonio, Texas. The Institute has extensive, modern, state-of-the-art laboratory and animal research facilities with highly trained veterinary and laboratory support staff. Publication and collaboration are highly encouraged. There are great opportunities to learn and develop new methodologies. Work hours are from 7:30 a.m. to 4:30 p.m.; a shifting work schedule including evenings and nights may be necessary depending on the research study. Proposed salary: excellent depending on position and experience. Position availability: Several positions are available immediately. Actual start dates are negotiable. Point of contact: **Anthony E. Pusateri, Ph.D., Chair, Hemorrhage Control Research Program, U.S. Army Institute of Surgical Research, Fort Sam Houston, TX. Telephone: 210-916-4858; e-mail: anthony.pusateri@cen.amedd.army.mil.**

POSTDOCTORAL TRAINING FELLOWSHIP Drug Metabolism and Hepatology

An NIH-funded Postdoctoral Training Fellowship is immediately available. The selected candidate for this two-year Postdoctoral position will interface with an interdisciplinary team of Scientists from the Departments of Medicine, Surgery, and Pharmacy at the University of North Carolina to develop a coculture model of viral hepatitis by isolating cells from HCV-infected liver for investigations on cytokine and retinoid signal transduction pathways responsible for dysregulated mechanisms of cell proliferation and apoptosis and altered hepatic transport and metabolism of drugs. Applicants should have a strong background in biochemistry, cell biology, cellular immunology, pharmacology, or related field. Send curriculum vitae and have two letters of recommendation sent to: **Roy L. Hawke, Pharm.D., Ph.D., School of Pharmacy, CB Number 7360 Beard Hall, University of North Carolina, Chapel Hill, NC 27599-7360. FAX: 919-962-0644; e-mail: rhawke@email.unc.edu.** UNC is an Equal Opportunity Employer. Candidates must have U.S. citizenship or permanent residency to qualify for this Training Fellowship position.

TECHNOLOGY SPECIALISTS (metro areas of Washington, D.C., and Boston, Massachusetts) for intellectual property law firm, which provides technical expertise and opinions for biotechnology and medical devices; prepares patent applications; and works on technology licensing. Ph.D./biophysics, biology, or chemistry or a related field required for all positions.

Position One (D.C.): Ability to sit for patent examination before USPTO.

Position Two (Boston): Must have one year of experience providing technical expertise and support in the development of biomedical devices and products; admission to practice before USPTO.

Position Three (D.C. or Boston): Ph.D. required. Biochemistry, molecular biology, or immunology preferred. Must have been accepted at or attend local area evening law school program.

Send résumé with position number to: **S. Gentes; Finnegan, Henderson, Farabow, Garrett & Dunner, LLP; FAX: 202-408-4400.**



**NATIONAL CENTER FOR COMPLEMENTARY & ALTERNATIVE MEDICINE
NATIONAL INSTITUTES OF HEALTH**

DEPUTY DIRECTOR

The National Center for Complementary and Alternative Medicine (NCCAM) is seeking an exceptional senior scientist to serve as Deputy Director. NCCAM is dedicated to exploring complementary and alternative medicine healing practices in the context of rigorous science, educating and training complementary and alternative medicine (CAM) researchers, and disseminating authoritative information to the public and professionals. The Deputy will represent the Center nationally and internationally in matters relating to all of its activities and interests, and help formulate, guide and personally oversee the management of all NCCAM-funded extramural centers, investigator-initiated research, research contracts, fellowship, training and career awards, totaling over \$86 million in investments this year.

The ideal candidate must have a doctoral degree or equivalent in health related sciences and a strong record of original research in the biomedical and/or behavioral and social sciences, research management and science administration in a discipline relevant to, if not directly involving CAM. Personal knowledge and experience with NIH funding mechanisms and processes is highly desirable. Total salary is competitive and will be commensurate with the qualifications and experience of the successful candidate. Applicants must be a U.S. Citizen, resident alien, or nonresident alien with a valid employment visa. Go to <http://nccam.nih.gov/nccam/an/employment> to see the full announcement and information on how to apply for this challenging position. Please submit a letter of intent, current curriculum vitae and the names, addresses and telephone numbers of three professional references to the attention of Dr. Lawrence Tabak, c/o NCCAM, NIH; Building 31, Room 2B11; 31 Center Drive, MSC 2182; Bethesda, MD 20892-2182.

APPLICATIONS MUST BE POSTMARKED BY MAY 15, 2002

NIH IS AN EQUAL OPPORTUNITY EMPLOYER

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

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

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



UNIVERSITY OF
CALGARY

Immunologist

Creating the future of health.

The Immunology Research Group (IRG) invites applications for a full-time academic position in immunology at the Assistant Professor level or higher.

With 75% of time protected for research, this position offers an excellent opportunity to develop an independent research program and collaborative interactions with 18 faculty whose research is in the areas of lymphocyte development and activation, signal transduction, immunologic mechanisms in disease and leukocyte trafficking. Duties will also include teaching and graduate studies supervision. Applications are particularly encouraged from researchers in the field of lymphocyte biology. Academic appointment will be held in an appropriate department of the Faculty of Medicine, which is in the process of building a major new research facility. For more information about IRG, visit <http://www.irg.ucalgary.ca/>

Qualifications include a PhD and/or MD, at least three years of postdoctoral experience, and a proven record of excellence in research. Salary and operating support will be available through successful application to the Alberta Heritage Foundation for Medical Research and/or the Canadian Institutes of Health Research.

Please submit a curriculum vitae, three letters of reference, a statement of aims and research interests, and two reprints of recent publications by **May 6, 2002**, to:

Dr. Paul Kubes, Chair
Immunology Research Group
University of Calgary, 3330 Hospital Drive N.W.
Calgary, Alberta, Canada T2N 4N1

In accordance with Canadian immigration requirements, priority will be given to Canadian citizens and permanent residents of Canada. The University of Calgary respects, appreciates and encourages diversity.

www.ucalgary.ca

POSITIONS OPEN

ASSISTANT/ASSOCIATE PROFESSORS Cellular Microbiology University of Vermont

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

POSTDOCTORAL AND INFORMATION TECHNOLOGY OPPORTUNITIES

Postdoctoral position available in the area of proteomic analysis. Information Technology position available in the area of UNIX/Solaris and Linux system support and Perl scripting. Novozymes Biotech, Inc., located in Davis, California, is a wholly owned research and development subsidiary of Novozymes A/S based in Bagsvaerd, Denmark. Novozymes A/S is the world's largest discoverer, manufacturer, and marketer of industrial enzymes.

To learn more about our company and these exciting opportunities, please visit our [website: http://www.novozymesbiotech.com](http://www.novozymesbiotech.com). *Novozymes Biotech, Inc., is an Equal Opportunity Employer. All qualified applicants will receive consideration for employment without regard to race, color, religion, sex, or national origin.*

MEDICAL WRITER

Physicians' Education Resource (PER) is seeking a Medical Writer/Editor to join its team. PER is a medical education company located in Dallas, Texas, specializing in the field of oncology. Successful candidates will be responsible for writing manuscripts from original data, reporting highlights from cancer meetings, creating slide sets for pharmaceutical companies, and editing and rewriting author-submitted manuscripts. This full-time position requires a Ph.D. in a biomedical science. Send résumé and salary requirements to: **Barb Schmaedeke, Human Resources Manager, 3535 Worth Street, Number 4802, Dallas, TX 75246**. Confidential FAX: 509-352-2991; e-mail: barbaras@baylordallas.edu.

POSTDOCTORAL POSITIONS in structural virology. Positions at the University of Texas Medical Branch (Galveston, Texas 77555 U.S.A.) are available to investigate the molecular determinants of enveloped virus assembly including (1) HCV nucleocapsid structure and assembly, (2) alphavirus structure and assembly, and (3) structure-based antiviral development. Excellent facilities are available ([website: http://www.xray.utmb.edu/antipathogen/facilities.html](http://www.xray.utmb.edu/antipathogen/facilities.html)). Candidates should have research experience in structural, physical, and/or molecular biology. Send curriculum vitae to: **Dr. S. Watowich; e-mail: watowich@bloch.utmb.edu; website: <http://www.xray.utmb.edu/antipathogen/sw/watowich.html>**.

POSITIONS OPEN



PLANT MOLECULAR BIOLOGIST. Two permanent positions (GS11-GS14; \$49,621 to \$108,642 depending on experience) are available with the Agricultural Research Service, U.S. Department of Agriculture, Albany, California, to work on application of plant molecular biology/genomics to sustainable biofuel development. Candidates to form a new project working to apply genomics technologies to plant gene promoter development, polymer engineering, alterations in plant metabolism and architecture, and aspects of biomass conversions for biofuel production. One candidate to be Project Supervisor. Initial emphasis on cereal crops and other grasses. Should have combinations of experience in molecular biology, genomics, plant biochemistry, plant physiology and development, and bioinformatics. *Must be a U.S. citizen.* To apply for position, contact: **Personnel; Telephone: 510-559-6012; website: <http://www.ars.usda.gov>**. See Careers with ARS, Research Scientist, Announcements Number ARS-X2W-2224 and ARS-X2W-2228. Closing date: May 6, 2002. For information regarding the position, contact: **Dr. Olin D. Anderson; Telephone: 510-559-5773; e-mail: anderson@pw.usda.gov**. Minorities are encouraged to apply. *The USDA is an Equal Opportunity Provider and Employer.*

LABORATORY MANAGER/LABORATORY RESEARCHER

The Program in Studies at the Biological/Mathematical/Physical Sciences Interface (BioMaPS) at Rutgers University is seeking an individual to establish and operate a core laboratory facility to perform systematic quantitative measurements of RNA levels, protein levels, small molecule effector levels, promoter activities, and protease activities (in support of efforts to develop computational simulations of biological regulatory networks). M.S. or Ph.D. and research experience in at least four of the following areas essential: molecular cloning, RNA preparation, protein preparation, microarray expression analysis, immunoblotting, and enzyme assays. Excellent communication skills, record-keeping skills, organizational skills, and self-direction/self-motivation essential. Willingness to participate in instruction of a graduate-level laboratory course in conjunction with the facility desirable. Please send curriculum vitae and three letters of recommendation to: **Richard H. Ebright, BioMaPS Steering Committee, Waksman Institute, 190 Frelinghuysen Road, Piscataway, NJ 08854**. FAX: 732-445-5735.

If you want the challenge of developing new therapeutics and innovative treatments, discover a career at Neurocrine Biosciences! We're a leading publicly traded neuroendocrine company focused on the discovery of novel therapeutics to treat diseases and disorders of the central nervous system (CNS). We are growing and currently seek: **BEHAVIORAL SCIENTIST**, neuroscience. Requires Ph.D. and more than two years of postdoctoral experience in behavioral neuroscience or behavioral pharmacology. **SCIENTIST**, molecular biology. Requires Ph.D., more than two years of postdoctoral work, and experience in G protein-coupled receptor biology. **SCIENTIST**, medicinal chemistry. Required Ph.D. in organic chemistry and one year of postdoctoral experience in synthetic organic chemistry. Please visit [website: http://www.neurocrine.com](http://www.neurocrine.com) for more information. Neurocrine is located in the heart of San Diego's biotechnology sector. We offer excellent compensation and benefits. Please forward résumé to: **Neurocrine Biosciences, Inc., Attention: Human Resources, 10555 Science Center Drive, San Diego, CA 92121**. FAX: 858-623-3397; e-mail: hr@neurocrine.com. *Equal Opportunity Employer.*

POSITIONS OPEN

ASSISTANT PROFESSOR/PLANT REPRODUCTIVE BIOLOGY. The Faculty of Molecular and Environmental Plant Sciences ([website: http://soilcrop.tamu.edu/meps](http://soilcrop.tamu.edu/meps)) at Texas A&M University invites applications for a 12-month, tenure-track, research/teaching position. The area of research interest is from early floral evocation to early embryo development, primarily of monocots and willingness to collaborate on research efforts on apomixis and floral initiation. The successful candidate will use modern tools to develop an independent, extramurally funded research program. Postdoctoral experience is required; salary is negotiable. Review of applications will begin on May 1, 2002, and continue until a candidate is selected. Send curriculum vitae, transcripts, and a statement of research and teaching interests to: **Dr. Mark A. Hussey, Professor and Head, Department of Soil and Crop Sciences, Texas A&M University, College Station, TX 77843-2474**. Telephone: 979-845-3401. Have three reference letters sent to the same address. *Texas A&M University is an Affirmative Action/Equal Opportunity Employer.*

The Center for Scientific review, NIH, announces an opening for a **SCIENTIFIC REVIEW ADMINISTRATOR** for a study section within the Biochemical Sciences Integrated Review Group, the Division of Molecular and Cellular Mechanisms. The individual must have a broad knowledge of the area of biochemistry with a strong background in protein and nucleic acid chemistry, biophysical chemistry, or enzymology. The salary will be commensurate with experience. The applicant must have a Ph.D. or equivalent degree (or a combination of equivalent training and experience), postdoctoral independent research and administrative experience, and a record of research accomplishment. A recruitment/relocation bonus may be available. For further information, send e-mail: bengaliz@csr.nih.gov. *NIH is an Equal Opportunity Employer. Selection for any position will be based on merit with no discrimination for nonmerit reasons such as race, color, sex, national origin, marital status, handicap, age, sexual orientation, or membership/nonmembership in an employee organization.*

Four **RESEARCH ASSOCIATE POSITIONS** available immediately in **Dr. Miguel Nicolelis'** laboratory (see [website: http://www.nicolelislab.net](http://www.nicolelislab.net)) within the newly established Duke University Center for Neuroengineering. All positions require experience in cortical-electrophysiology in behaving primates. Excellent salary (commensurate with qualifications) and generous Duke University benefits ([website: http://www.hr.duke.edu/benefits/index.html](http://www.hr.duke.edu/benefits/index.html)). Send curriculum vitae, description of research accomplishments, and three professional references to: **Ms. Susan A. Halkiotis, Center for Neuroengineering, Department of Neurobiology, Box 3209, Duke Medical Center, Durham, NC 27710**. Telephone: 919-668-6031; e-mail: halkiotis@neuro.duke.edu or nicoleli@neuro.duke.edu. *Duke University is an Equal Opportunity/Affirmative Action Employer.*

PROJECT LEADER wanted for New Haven, Connecticut, genomics biotechnology company. Lead team planning by developing and implementing software programs using Java, C, Perl, and knowledge of scientific algorithms. Oversee research and development projects. Create algorithms for scientific data analysis. Requirements: Master's in computer science, applied math, physics, or closely related and two years of experience. Forward résumé to: **Human Resources Department, CuraGen Corporation, 555 Long Wharf Drive, 13th Floor, New Haven, CN 06511**. *Equal Opportunity Employer/Affirmative Action.*

A **POSTDOCTORAL POSITION** is available immediately. Specific emphasis will be directed toward antigen-specific clones and origin of disease-associated T cells. Salary: \$30,000 annually. M.D. and Ph.D.; two-year experience in EAE and transgenic mice is required. Send curriculum vitae, three English articles, and three letters of reference to: **Dr. Richard K. Burt, 320 East Superior Street, Room 3-489, Chicago, IL 60611**.

FELLOWSHIPS



Boyce Thompson Institute for Plant Research

The Boyce Thompson Institute at Cornell University is pleased to announce the initial competition for the Francis Goellet Distinguished Postdoctoral Fellowship. The 3-year Fellowship will be awarded to an individual seeking postdoctoral training at any laboratory within the Institute, and is designed to promote extraordinary scientists pursuing careers in plant biology. The Fellowship carries a starting stipend of \$35,000, both travel and research allowances, and is open to all persons with less than two years of accrued postdoctoral experience. Prior to application, a mentor at the BTI must endorse the application. Selection criteria will be demonstrated productivity, innovativeness of research plan, and potential as an independent faculty member.

Please see the BTI web site, <http://bti.cornell.edu>, for research areas and a link to application materials, or they may be obtained from Mary Westlake, mew14@cornell.edu, 607-254-1317, to whom other inquiries may also be directed. The deadline for applications is May 31, 2002.

Applications are encouraged from women and underrepresented minorities.



The University College of the Cariboo (UCC) is a regional institution serving south-central BC from a main campus located in Kamloops, just three and one-half hours by freeway from Vancouver. UCC features outstanding student and community facilities on a spectacular university-style campus, overlooking this dynamic and growing city of 80,000 residents. Almost 8,500 students now attend UCC to study in one of our 10 university degree programs or 50 different diploma and certificate programs, many of them unique in the province.

KAMLOOPS, BRITISH COLUMBIA

FACULTY MEMBER

CANADA RESEARCH CHAIR LANDSCAPE ECOLOGY & MANAGEMENT - Competition #02-019

The University College of the Cariboo (UCC) invites applications for a Tier II Canada Research Chair in Landscape Ecology & Management (LEM). The LEM Chair will be cross-appointed to the Departments of Natural Resource Science, Biological Sciences, and Social & Environmental Studies. As such, the Chair will be expected to develop a strong research program that wherever possible builds synergistic partnerships with faculty engaged in related research. Further, the Chair will play a leading role in developing new multidisciplinary research ventures in the area of sustainable resource management.

UCC is strategically located in the centre of British Columbia, where issues involving natural, cultural and economic resources are at the forefront. As such, it provides an opportune setting for the LEM Chair to develop his/her research program. The successful candidate will possess knowledge of the tools and techniques used in the field of LEM, including the design and integration of multiple values into decision-support systems. Experience working as part of an interdisciplinary team would be beneficial.

Closing Date for Applications: Open until filled

Commencement Date: As soon as a suitable candidate is available

For more information on this Research Chair Position, please contact the Dean, Faculty of Sciences, Dr. Colin James, (e-mail: james@cariboo.bc.ca)

The minimum qualifications are a Ph.D. in an appropriate area and post-doctoral experience. Teaching experience at the undergraduate and graduate levels would be an asset. We are seeking scholars who have established a strong record of research and who are considered emerging scholars within their field.

Research Chair nominations must be approved by the federal government's Canada Research Chair Secretariat before an offer of employment can be made.

The Canada Research Chairs program is a federal initiative intended to allow Canadian universities to achieve research excellence and to become world-class research centres in the global, knowledge-based economy. More information about the Research Chairs program can be found at: www.chairs.gc.ca

For application information, please consult our website at: <http://www.cariboo.bc.ca/>



CONFERENCES

First International Conference on Vascular Targeting

June 12-14, 2002

Royal Sonesta Hotel, Cambridge, MA

Program Director:

Philip Thorpe, Ph.D., Professor,
Department of Pharmacology,
The University of Texas Southwestern
Medical Center at Dallas

Research Advisors:

David Blakey, Ph.D., Cancer and Infection
Bioscience Department, AstraZeneca,
Macclesfield, UK

Dai Chaplin, Ph.D., Oxigene, Inc.,
Boston, USA

Vascular Targeting is rapidly gaining recognition as a leading new technology in the fight against cancer. The program will cover vascular targeting from basic science to clinical trials and will highlight differences from anti-angiogenic approaches.

Category I AMA/PRA Continuing Education
Credit Offered

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Visit: www3.utsouthwestern.edu/cme/vastarget/

Call: 1-800-688-8678

Email: francie.issa@UTSouthwestern.edu

United States Environmental Protection Agency

The National Center for Environmental Assessment-Cincinnati (NCEA-Cin) of the U.S. EPA Office of Research and Development (ORD) is seeking candidates for Federal, three-year postdoctoral research positions. The four postdoctoral positions are described below:

Physiologically Based Pharmacokinetic Modeling for Risk Assessment (RA)

- developing models to address species and route extrapolating
- assessing human variance in biochemical, physiological and/or anatomic factors affecting risk
- identifying chemicals/PBPK outputs which reduce uncertainties in RA and assessing databases
- developing and validating models for human variance that may modulate risk

Microbiology, Health, Pathogenic Microorganisms

NCEA-Cin is seeking a well-qualified Microbiologist with Ph.D. or equivalent degree to serve as leader in the assessment of risks from pathogenic microorganisms. They will work in a multidisciplinary team environment across organizations.

Assessing the Causes of Impairment in Aquatic Ecosystems

- developing methods to determine causes of observed impairments of aquatic ecosystems
- determining effects, exposure response relationships, diagnostic measures for stressors of these systems, and creating guidance for their use and interpretation.

A Spatial Approach for Assessing and Managing Nonpoint Sources of Nutrients and Pathogens in Surface Waters

NCEA is presently obtaining high spatial resolution, hyperspectral imagery of the Little Miami River Watershed in Southwest Ohio. These data will be used to explore effects of land cover/land use on nutrient and pathogen export to streams and effects on human and ecological receptors. The position includes:

- collaborating with other scientists in classifying this imagery; analyze in relation to other data
- developing predictive models for analyzing hypothetical landscapes and publishing work

Applicants with degrees in toxicology, pharmacology, biomathematical modeling, environmental science, environmental engineering, biostatistics, or related fields are encouraged to apply. These positions will begin immediately at a starting salary range of \$46,724 - \$72,796 commensurate with qualifications. Those selected candidates will be eligible for a **full benefits package**. Preferred candidates will have earned a Ph.D. in one of the above disciplines in the past five years, or be eligible for degree no later than August 31, 2002. Must be a United States citizen. To apply, send a curriculum vitae, transcripts, letter of recommendation from your senior research advisor or other comparable official, additional reference(s), and a letter indicating your research focus to: **Dr. Glenn Suter, National Center for Environmental Assessment (MS-117), ATTN: Post-Doctoral Positions, U.S. Environmental Protection Agency, 26 W. Martin Luther King Drive, Cincinnati, Ohio 45268**. Applications will be received and evaluated by NCEA on an ongoing basis.

The U.S.EPA is an Equal Opportunity Employer

GRADUATE PROGRAMS

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

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

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



**4TH INTERNATIONAL CONFERENCE ON
BONE MORPHOGENETIC PROTEINS**

**October 17-21, 2002
Sacramento, California**

**Organizer: A.H. Reddi, Director
Center for Tissue Regeneration and Repair
University of California, Davis**

**Conference Coordinator: Lana Rich
Phone: (916) 734-5015 Fax: (916) 734-5750 USA
E-mail: ctr@ucdmc.ucdavis.edu**

Sessions include: Cell and Molecular Biology of BMPs, BMP Receptors and BMP Antagonists. Transgenic Approaches, Tissue Engineering and Clinical Applications of BMPs in Orthopaedics and Dentistry

Registration: \$400.00 – For Scientists from Universities
\$700.00 – For Scientists from Industry and
\$200.00 – Students/Residents/Postdocs

**For Further Information and Abstract Forms:
Visit our web page: <http://ctr.ucdmc.ucdavis.edu>**

ABSTRACT DEADLINE JUNE 1, 2002

Most presentations will be selected from submitted abstracts.

POSITIONS OPEN

**DEPARTMENT OF AGRICULTURE (USDA)
Agricultural Research Service (ARS)**

VETERINARY MEDICAL OFFICER/MICROBIOLOGIST, Animal Disease Research Unit, Pullman, Washington. The research objectives are to define the molecular biology and pathogenesis of the transmissible *spongiform encephalopathies scrapie* and chronic wasting disease. The successful candidate will have demonstrated an ability to plan, conduct, and document hypothesis-based research concerning persistent infectious diseases. Training should include multiple disciplines to reflect the interdisciplinary approach necessary for success. *Must be a U.S. citizen.* Salary (\$54,275 to \$99,150 per annum) based on qualification and experience. For more information on research program and/or position, contact: **D. Knowles, USDA-ARS, 3005 ADBF, Washington State University, Pullman, WA 99164-6630. Telephone: 509-335-6022; e-mail: dknowles@vetmed.wsu.edu; FAX: 509-335-8328.** Applicants must address and meet specific requirements defined in the official Vacancy Announcement ARS-X2W-2215. The vacancy announcement and application forms can be obtained through the website: <http://www.ars.usda.gov> or by contacting **Pam Dean; Telephone: 509-335-8663.** Applications must be postmarked by May 31, 2002. *USDA is an Equal Opportunity Provider and Employer.*

**HYDROLOGY/BIOGEOCHEMISTRY
Smithsonian Environmental Research Center**

Seeking a **POSTDOCTORAL ASSOCIATE** to contribute to a three-year study of interactions between elevated CO₂ and hydrology in a brackish marsh on the Chesapeake Bay, Maryland (website: <http://www.serc.si.edu>). Expertise may be in hydrology, biogeochemistry, ecosystem ecology, or plant ecophysiology. Mail a letter of interest and curriculum vitae by June 4, 2002, to: **Dr. Patrick Megonigal; e-mail: megonigal@serc.si.edu.**

POSITIONS OPEN

POSTDOCTORAL POSITION available to study molecular mechanisms of compensatory lung growth. Areas of interest: nitric oxide signaling, angiogenesis, alveolar cell proliferation and differentiation, growth factors, and cell signaling. Cellular, molecular, and biomedical imaging techniques will be utilized in rat and gene knockout mouse models. Applicants must have Ph.D. and molecular or cell biology background. The candidate will work with faculty in both medical and basic research as well as graduate students and other Postdoctoral Researchers. Our laboratory is productive, the research environment stimulating, and interaction with other laboratories is encouraged. Send curriculum vitae and a description of current research to: **Victor E. Laubach, Ph.D., University of Virginia Health System, Department of Surgery, P.O. Box 801359, Charlottesville, VA 22908. E-mail: vel8n@virginia.edu; website: <http://www.med.virginia.edu/medicine/inter-dis/cvrc/Faculty/Laubach.html>.**

An Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL FELLOWSHIPS are available at The University of Texas Medical Branch (UTMB) in Galveston to implement novel technologies to combat highly pathogenic and potential bioterrorist microorganisms and elucidate their molecular pathogenesis. This research focuses on obligate intracellular bacteria (*rickettsiae* and *orientia*) and utilizes recent advances in genomics, proteomics, and structural biology. Excellent research facilities are available for this research (see website: <http://www.utmb.edu>). This research funded by the U.S. Army.

Applicants must have research experience in structural and cell biology, protein biochemistry, and microbiology. E-mail curriculum vitae and three letters of reference to: **Juan P. Olano, M.D.; e-mail: olano@utmb.edu.** *UTMB is an Equal Opportunity/Affirmative Action Employer; Minorities/Females/Disabled/Veterans. Minorities and females are encouraged to apply. UTMB is a smoke-free/drug-free workplace. UTMB hires only individuals authorized to work in the United States.*

POSITIONS OPEN

**POSTDOCTORAL FELLOW
Intercellular Interactions Section**

The Laboratory of Cellular and Molecular Biophysics (LCMB), National Institutes of Child Health and Human Development (NICHD), is offering a Postdoctoral position in the area of HIV pathogenesis. The Section has a strong research effort in studying HIV pathogenesis in various experimental systems, especially in explants of human lymphoid tissues. Other pathogens are also studied in this system, and the Section is interested in expanding these studies.

Interested candidates should possess a Ph.D. in virology, immunology, or cell biology and less than five years of postdoctoral experience; have knowledge of basic laboratory techniques; and be familiar with flow cytometry and cell cultures. Candidates should submit curriculum vitae; bibliography; statement of research interests and goals; and three letters of recommendation by May 1, 2002, to:

**Leonid Margolis, Ph.D.
National Institute of Child Health
and Human Development
National Institutes of Health
Building 10, Room 9D58, MSC 1580
Bethesda, MD 20892-1580
E-mail: margolis@helix.nih.gov**

NIH is an Equal Opportunity Employer.

POSTDOCTORAL FELLOWSHIP available to study structure-mechanism relationships in terpenoid cyclases using X-ray crystallography (e.g., see **Rynkiewicz et al., PNAS 98:13543-13548, 2001**). Applicants must have Ph.D. in biochemistry or chemistry and experience in protein chemistry and protein crystallography. Qualified applicants should submit curriculum vitae and the names of three references to: **Professor David W. Christianson, Roy and Diana Vagelos Laboratories, Department of Chemistry, University of Pennsylvania, Philadelphia, PA 19104-6323.**

FELLOWSHIPS

UNCF•Pfizer Biomedical Research Initiative Postdoctoral Fellowships



**United Negro
College Fund**



The United Negro College Fund and Pfizer Global Research and Development have established an initiative to support the career development of under-represented minority post-graduates in the biomedical research fields.

- **Four (4) Fellowships Awarded in 2002**
- **Fellowships up to \$53,500**
- **Support for 12-24 Months**
- **Mentoring by Pfizer Staff Scientists**

Applicants must be:

- A Ph.D. or equivalent degree recipient in a life or physical science currently or by September 1, 2002
- Appointed as a postdoctoral fellow during the 2002 calendar year at an academic or non-academic research institution in the USA, including Pfizer (other private industrial labs are excluded)
- A member of a minority group that is under-represented in the biomedical research fields

Submitted applications must be postmarked by April 15, 2002

For application forms and more information, please contact:

Jerry L. Bryant, Ph.D., Director, Science Education Initiatives

United Negro College Fund, 8260 Willow Oaks Corporate Drive, Suite 110, Fairfax, VA 22031-4511

Phone: (703) 205-3503 Fax: (703) 205-3574 E-Mail: uncfpfizer@uncf.org Website: www.uncf.org

A mind is a terrible thing to waste.

CAREERS IN GENETICS RESEARCH



THE
AMERICAN
SOCIETY
OF HUMAN
GENETICS

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<http://www.ashg.org/> (click on *52nd Annual Meeting Information*, then on *2002 Call for Abstracts*)

- **Deadline for receipt of abstracts: June 10, 2002**

The American Society of Human Genetics
9650 Rockville Pike, Bethesda, Maryland
20814-3998

telephone: (301) 571-1825
toll free: (1-866) HUMGENE
fax: (301) 530-7079
e-mail: mryan@ashg.org

GRANTS

Invitrogen's Research Tools Development Grants Program

Creating the future of biotech — together

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

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

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POSITIONS OPEN

DIRECTOR OF GENE TARGETING. Xenogen Biosciences, a biotechnology company, has an opening for a Director with responsibilities of managing molecular biology, animal colony, and chimeric production groups. The successful candidate will be responsible for the gene targeting and transgenic experiments at our Missouri facility. Candidates must have a Ph.D. in biology or related field with eight to 12 years of experience. Knowledge of knockout mouse and transgenic production is preferred. Excellent management skills required as well as the ability to design experiments and troubleshoot system problems. Please mail or FAX your curriculum vitae to: **Xenogen Biosciences Human Resources, Department 2033, Westport Center Drive, St. Louis, MO 63146. FAX: 314-754-4501; website: <http://www.xenogen.com>.**

RESEARCH ASSOCIATE/ MICROINJECTIONIST

Qualified candidates should have B.S. in biology or related scientific discipline with three to five years of experience in a core transgenic facility. Extensive experience and proficiency required in pronuclear microinjection and blastocyst injection for the generation of transgenic and gene-targeted animals. Excellent computer and communication skills are required. Tissue culture embryo/sperm cryopreservation experience is desirable. Please mail or FAX your curriculum vitae to: **Xenogen Biosciences, Human Resources, Department 5, Cedar Brook Drive, Cranbury, NJ 08512. FAX: 609-860-8977; website: <http://www.xenogen.com>. Equal Opportunity Employer.**

POSTDOCTORAL POSITIONS ENZYMOLGY/GENETICS/PROTEOMICS Penn State, University Park, Pennsylvania

Postdoctoral position is available for training in the genetic and/or biochemical exploitation of genomic sequences of the *Archaea* domain with the goal to characterize novel proteins and determine the role they play in governing metabolic processes of universal importance to biology. Experimental approaches include state-of-the-art methods for enzyme structure/function, genetics, and genomic/proteomic analyses. Postdoctoral Associates are affiliated with the Penn State Center for Microbial Structural Biology and the Penn State Astrobiology Research Center. Send résumé and three references to: **James G. Ferry, Department of Biochemistry and Molecular Biology, Position Number: S-12657, Penn State, University Park, PA 16802. Telephone: 814-863-5721; e-mail: jgf3@psu.edu; website: <http://www.bmb.psu.edu/deptpage/Ferry.htm>. Résumés accepted until position filled. Affirmative Action/Equal Opportunity Employer.**

Optical Mapping: Position available for POSTDOCTORAL RESEARCH ASSOCIATE in the optical mapping laboratory in the cardiovascular REAP research program. Candidate should be familiar with small animal surgery and perfused heart preparation and have expertise in computer-based data acquisition and analysis. Ideal candidate would have practical experience in multisite mapping using fluorescent dyes and a background in biophysics or engineering. Please send curriculum vitae and reference to: **Nabil El-Sherif, VA Medical Center, Brooklyn, NY 11209. FAX: 718-630-3740; e-mail: nelsherif@aol.com.**

Four **POSTDOCTORAL POSITIONS** are immediately available to study the role of angiotensinogen gene in human hypertension. Experience in molecular biology, transcriptional regulation, transgenic mice, and genomic analysis. Send curriculum vitae to: **Dr. Ashok Kumar, Pathology Department, New York Medical College, Valhalla, NY 10595. E-mail: ashok_kumar@nyc.edu.**

POSITIONS OPEN

DIRECTOR OF CHEMICAL LIBRARIES SCREENING FACILITY University of Massachusetts Medical School

We are seeking a dynamic leader for the position of Director of Chemical Libraries Screening Facility. The screening facility includes state-of-the-art screening robotics and diverse sets of chemical libraries. We are seeking innovative individuals with strong research accomplishments in chemistry, biology, and/or high-throughput screening. Responsibilities of the Director will include assisting various groups to develop high-throughput screening assays, organizing and supervising screening experiments, analyzing and interpreting data, and communicating experimental plans and results with various multidisciplinary groups. UMASS Medical School offers a unique and exciting research environment and opportunities for creative collaboration with groups in chemical biology, biophysics, molecular biology, immunology, pharmacology, genetics, cell biology, cellular biochemistry, and structural biology. UMASS Medical School is well equipped with modern instrumentation. The facility is located in the Department of Biochemistry and Molecular Pharmacology in a newly completed 350,000-square-foot research building. A Scientist with a Ph.D. degree, a Postdoctoral Fellowship, and two to five years of experience in combinatorial chemistry or chemical libraries screening is required. A highly competitive salary and benefit package will be commensurate with the high level of accomplishment expected for successful applicants. Applicants are invited to submit a letter of interest, curriculum vitae, and names of three references to: **Christine Fanion, Department of Biochemistry and Molecular Pharmacology, University of Massachusetts Medical School, LRB RM-827, 364 Plantation Street, Worcester, MA 01605-2324. E-mail: christine.fanion@umassmed.edu. The University of Massachusetts is an Affirmative Action/Equal Opportunity Employer.**

ACADEMIC COORDINATOR (RESEARCH SCIENTIST), permanent, nine month (paid over 12 months), at the University of California, Berkeley, in the College of Natural Resources associated with the Richard B. Gump South Pacific Research Station (Moorea, French Polynesia). Available 1 June 2002. Salary range: Academic Coordinator, \$54,240 to \$59,436. Initial appointment dates are June 1, 2002, through May 31, 2003, with expectations of yearly reappointment depending upon availability of funds. Candidates should have a Ph.D. in an appropriate field including biological, physical, social, or human sciences; two years of postdoctoral experience; as well as experience as a Director or Manager. The Research Director will develop and coordinate research programs focused on French Polynesia as a model system to study the interaction of biological, cultural, and physical processes in the construction and maintenance of biocultural communities. She or he will lead the Polynesia Education and Research Laboratories at the Gump Station in Moorea and will spend extended periods of time in French Polynesia. Applicants should have experience of working in an international setting (preferably in Polynesia), preferably island systems, and have familiarity with field stations. A working knowledge of French is essential. The appointee will help to develop innovative undergraduate and graduate teaching programs in Moorea and can apply for Adjunct Faculty status. The candidate must have strong oral and written communication skills, demonstrated leadership abilities, and a proven record in obtaining research grants and other fundraising. Applicants should submit curriculum vitae, statement of research and teaching interests, and names and addresses of three references to: **George Roderick, Director, Gump Station, College of Natural Resources, 201 Wellman Hall, MC 3112, University of California, Berkeley, CA 94720-3112. Additional information can be found at website: <http://nature.berkeley.edu/gump>. Applications must be received by 15 May 2002. The University of California is an Equal Opportunity/Affirmative Action Employer.**

POSITIONS OPEN

Five **POSTDOCTORAL POSITIONS** available at the Hormel Institute, University of Minnesota, Austin, Minnesota, to study the signal transduction in tumor promotion, chemoprevention, and early development (JBC 272:4187, 1997; JBC 272:9962, 1997; JBC 272:26325, 1997; JBC 272:27753, 1997; JBC 273:32176, 1998; JBC 274:12229, 1989; JBC 274:14595, 1999; JBC 15389, 1999; JBC 29672, 1999; JBC 274:30611, 1999; JBC 275:9143, 2000; JBC 275:20444, 2000; JBC 275:20980, 2000; JBC 275:32250, 2000; JBC 276:14572, 2001; JBC 276:12932, 2001; JBC 276:11775, 2001; JBC 276:20913, 2001; JBC 276:25558, 2001; JBC 276:33213, 2001; JBC 276:46722, 2001; JBC 276:46624, 2001; JBC 277:3124, 2002; PNAS 94:5826, 1997; PNAS 94:11957, 1997; PNAS 95:156, 1998; PNAS 98:5786, 2001; PNAS 98:7510, 2001; Cancer Res. 57:2873, 1997; Cancer Res. 57:4414, 1997; Cancer Res. 58:711, 1998; Cancer Res. 58:4102, 1998; Cancer Res. 59:1884, 1999; Cancer Res. 59:3053, 1999; Cancer Res. 59:4610, 1999; Cancer Res. 61:850, 2001; Cancer Res. 61:1604-2001; Cancer Res. 61:3908, 2001; Cancer Res. 61:4084, 2001; Cancer Res. 61:5749, 2001). We are seeking self-motivated Ph.D.s with experience in biochemistry and molecular, and cellular biology. Experience in signal transduction functional genomics, Xenopus early development, stem cells, mouse transgenics, and knockouts 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: zigangdong@hi.umn.edu. 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, creed, religion, national origin, sex, age, marital status, disability, public assistance status, veteran status, or sexual orientation.**

POSTDOCTORAL ASSOCIATE/FELLOW JM USDA/HNRCA at Tufts University Nutritional Immunology Laboratory

Postdoctoral Fellow needed immediately to work on projects that focus on determining the molecular mechanisms of age- and antioxidant-induced changes in macrophage and/or T cell signal transduction. Ph.D. in biochemistry, molecular biology, immunology, nutrition, or related fields is required. Prior experience in signal transduction with regard to immune cells is highly desirable. The Jean Mayer USDA Human Nutrition Research Center on Aging at Tufts University is a state-of-the-art research facility dedicated to the study of nutrition and aging. Position type: full-time/regular. Salary: commensurate with experience. Send résumé and three letters of recommendation to:

**Dr. Simin Nikbin Meydani
Nutritional Immunology Laboratory
JM USDA/HNRCA at Tufts University
711 Washington Street
Boston, MA 02111
E-mail: smeydani@hnrc.tufts.edu**

Tufts University is an Equal Opportunity Employer.

POSTDOCTORAL position is available for antibacterial drug design involving pathogenic bacteria, including *Mycobacterium avium* and *M. tuberculosis*. Individuals should possess a Doctoral degree with training in molecular biology, biochemistry, and/or microbial pathogenesis. Experience with cloning and expression, site-directed mutagenesis, and protein purification is highly desired. Salary is commensurate with experience and training. Send curriculum vitae and names of three references to: **Postdoctoral Position, Department of Veterinary Pathobiology, College of Veterinary Medicine, 250 McElroy Hall, Oklahoma State University, Stillwater, OK 74078. E-mail: dgmjds@okstate.edu. Applications should be received by July 1, 2002, to receive full consideration. Oklahoma State University is an Affirmative Action/Equal Opportunity Employer. Applicants must be compliant with U.S.A. Patriot Act (HR3162).**

POSITIONS OPEN



POSTDOCTORAL RESEARCH ASSOCIATES

Microbiology and Prion Detection

A two-year position is available immediately at the Foodborne Contaminants, Research Unit, U.S. Department of Agriculture, Agricultural Research Service, Albany, California, to develop techniques for detection and isolation of *Mycobacterium avium paratuberculosis* (MAP) from manure and environments influenced by waste management practices. The candidate will determine the environmental prevalence of MAP and identify factors for survival, proliferation, and transmission from manure to crops. A recent Ph.D. in microbiology, biochemistry, or biology is required. Expertise in cultural, immunological, or molecular aspects of mycobacteria is desirable. A separate position is also available to study prion detection and biology. For details on MAP, see website: <http://www.afm.ars.usda.gov/divisions/hrd/hrdhomepage/vacancy/02023.htm>. For details on both, contact: Dr. Subbarao Ravva; e-mail: subba@pw.usda.gov. USDA is an Equal Opportunity Provider and Employer.

An NIH-funded POSTDOCTORAL POSITION is available immediately to study the interaction of inhaled anesthetics with small synthetic water-soluble and membrane-soluble α -helical bundle proteins. The research project involves protein design, protein synthesis, and the high-resolution structural characterization of protein-anesthetic complexes using NMR spectroscopy and X-ray crystallography. The applicant must have an M.D. and/or a Ph.D. degree and be skilled in biochemistry or spectroscopy. Send curriculum vitae and names and e-mail addresses of three references to:

Jonas S. Johansson, M.D.
Department of Anesthesia
Hospital of the University of Pennsylvania
Dulles 778
3400 Spruce Street
Philadelphia, PA 19104 U.S.A.
Telephone: 215-349-5472
FAX: 215-349-5078
E-mail: johanssj@uphs.upenn.edu

LABORATORY INVESTIGATOR and POSTDOCTORAL POSITIONS. The Molecular Cardiology Institute, a small, not-for-profit laboratory, seeks Ph.D.s currently working in cardiovascular research. Experience with cardiomyocytes isolation, culture, microinjection, immunocytochemistry, signal transduction, and general molecular biology. Must be U.S. citizen or permanent resident. Write or e-mail to: Jose Marin, M.D., Director, 75 Raritan Avenue, Highland Park, NJ 08904. E-mail: tmci@att.net.

CytoGenix, Inc. (website: <http://www.cytogenix.com>), located in Houston, Texas, is an emerging biopharmaceutical company developing and commercializing its proprietary single-stranded DNA expression vector systems. We are currently seeking POSTDOCTORAL-LEVEL SCIENTISTS to join our research team. Candidates must have Ph.D. in molecular biology, biochemistry, or virology. CytoGenix, Inc. offers competitive salaries and equity incentives. Please send your résumé to e-mail: ssdna@cytogenix.com.

BIOELECTRICITY LABORATORY Harvard Medical School

The Laboratory seeks a POSTDOCTORAL FELLOW to study the transcriptional regulation of cardiac potassium channel genes. Please send curriculum vitae to: Gideon Koren, Brigham and Women's Hospital, 75 Francis Street, Boston, MA 02115. E-mail: koren@calvin.bwh.harvard.edu; website: <http://bioelectricity-lab.bwh.harvard.edu>.

POSITIONS OPEN

POSTDOCTORAL FELLOWSHIP Mammalian Development

A Postdoctoral position is currently available in the Mammalian Development section of the Cancer and Developmental Biology Laboratory under the leadership of Dr. Colin Stewart. The interests of the laboratory are in genomic imprinting, organization of the nucleus in development, and disease and early development of the mammalian embryo. Up-to-date techniques in genome analysis and the genetic manipulation of mice are utilized in addressing these areas of research. Applicants should have experience in molecular biology, and those with experience in mouse embryology will be given preference. More information about the CDBL and its research programs may be found at their website: <http://ccr.cancer.gov/staff/staff.asp?staffID=5>. The position is part of the Center for Cancer Research, National Cancer Institute, and is located in Frederick, Maryland. Salary range for this position is \$32,004 to \$38,628. If interested, please send or e-mail a cover letter and your curriculum vitae to: Colin L. Stewart, D. Phil., Laboratory Chief, CDBL, CCR, NCI-Frederick, P.O. Box B, Frederick, MD 21702. E-mail: stewartc@mail.ncicfcrf.gov.

Multiple NEUROBIOLOGY RESEARCH TRACK and POSTDOCTORAL POSITIONS. Available immediately to study (1) synaptic integration and sensory processing in mammalian olfactory bulb and piriform cortex. Experience in patch clamping and/or optical of Ca/voltage-sensitive dye imaging required. (2) Neural circuits underlying taste analgesia and changes in central nociceptive/analgesic mechanisms following inflammation. Expertise in *in vivo* electrophysiology, *in situ* hybridization/RT-PCR, and/or immunocytochemistry/tract tracing required. Applicants must have a Ph.D. or M.D. Positions offer highly competitive salary/fringe benefits and interaction with Neuroscientists in the Department (website: <http://neurobiology.umaryland.edu>) and the Neuroscience Program (website: <http://neuroscience.umaryland.edu/>). Send curriculum vitae and names of three references to: Dr. M. Ennis, Department of Anatomy and Neurobiology, University of Maryland School of Medicine, 685 West Baltimore Street, Baltimore, MD 21201. E-mail: mennis@umaryland.edu. University of Maryland is an Affirmative Action/Equal Employment Opportunity/Americans With Disabilities Act Employer.

POSTDOCTORAL POSITION Harvard Medical School

Postdoctoral positions available to investigate the pathogenic mechanism of Alzheimer's and Parkinson's disease using conditional knockouts and knock-ins of presenilins and parkin-null mice. Highly motivated Ph.D.s with rigorous training in molecular genetics, biochemistry, or electrophysiology are encouraged to apply. Send curriculum vitae to e-mail: jshen@rics.bwh.harvard.edu. Interviews are required. For more information, please visit website: <http://www.shenlab.net>.

UCSF/NCIRE POSTDOCTORAL POSITION available in signal transduction, tumor cell biology, and bone metastasis. The successful applicant will have a Ph.D. in molecular and/or cell biology. E-mail or send curriculum vitae and names of two references to: Dr. Lilly Bourguignon, Ph.D., Department of Medicine, VAMC (111N), 4150 Clement Street, San Francisco, CA 94121. E-mail: lillyb@itsa.ucsf.edu.

POSTDOCTORAL POSITION is available to study the role of intercellular communication and intracellular signaling in the eye and/or in the heart by using mouse mutations. Ph.D. with experience in molecular and cell biology preferred. Please send curriculum vitae and names of three references to: Ms. Melissa McCormick, Department of Cell Biology, The Scripps Research Institute, IMM10, 10550 North Torrey Pines Road, La Jolla, CA 92037. E-mail: melissam@scripps.edu.

POSITIONS OPEN

The Department of Pathology of the University of California, San Francisco (UCSF) School of Medicine seeks an outstanding IMMUNOLOGY RESEARCHER with expertise in dendritic-cell biology or a tenure-track faculty position. The successful candidate will have an M.D. and/or Ph.D. (or equivalent) as well as a proven record of excellence and innovation in laboratory research on dendritic cells and will be qualified for appointment at the tenured ASSOCIATE or FULL PROFESSOR level. Clinical duties are not obligatory but are an option for qualified applicants. The candidate will join the interdepartmental UCSF Immunology graduate program and will be provided newly renovated research space and a competitive start-up package. Applicants should send curriculum vitae to: Immunology Faculty Search Committee, Department of Pathology, Box 0506, University of California, San Francisco, CA 94143. UCSF is an Affirmative Action/Equal Opportunity Employer. The University undertakes Affirmative Action to assure Equal Employment Opportunity for underutilized minorities and women, for persons with disabilities, and for Vietnam-era veterans and special disabled veterans.

CONFERENCE



DISSEMINATION CONFERENCE OF CURRENT EUROPEAN RESEARCH ON RICE RicEUconf

June 6-8, 2002, in Turin, Italy; cofunded by EC 5 Framework programme. The conference is organised to provide a forum for discussion on the results and progress of European research on different aspects of rice genetics and biotechnology. Session I: Rice: traditional breeding and biotechnology innovation. Session II: Molecular genetics, gene regulation, molecular markers. Session III: Traditional breeding and biotechnology for biotic and abiotic resistance. Session IV: Rice from the world. Round Table: Rice in Europe and in the Mediterranean basin. For scientific and organisation details, see website: <http://www.riceuconf.org>. Organiser: Fondazione per le Biotecnologie; e-mail: mail@fobiotech.org; Telephone: ++ 39 011 6600187; FAX: ++ 39 011 6600708. Travel grants available for young Scientists/students under age 32. Applications from Eastern European countries will be fostered.

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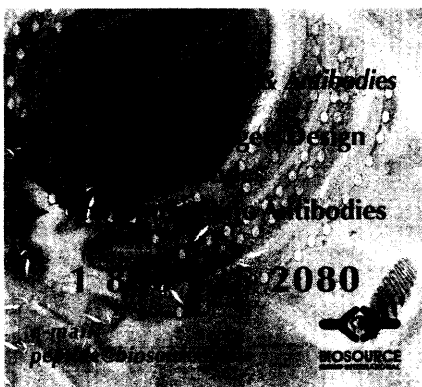
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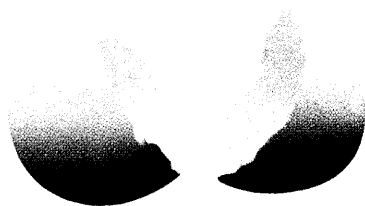
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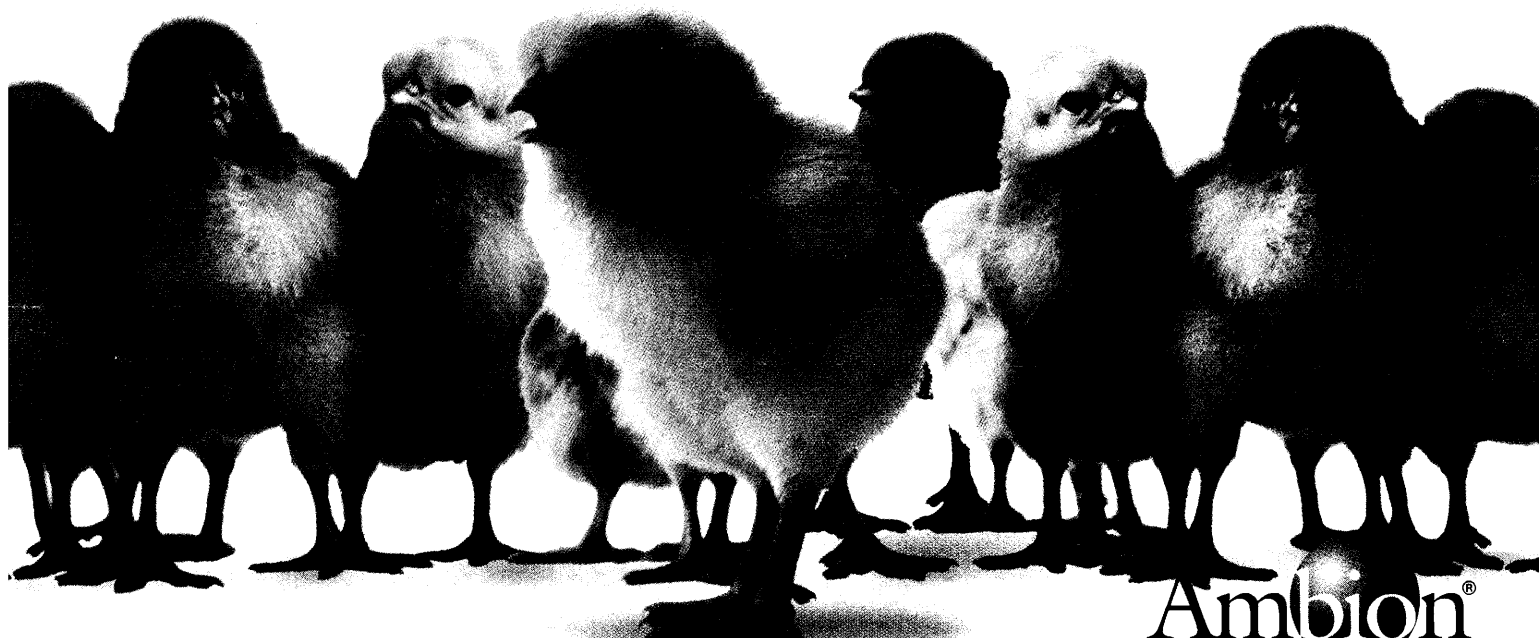
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