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For questions or additional information, please visit our web site at www.operon.com or call customer service at 1-800-688-2248.

Custom DNA Synthesis Prices				Purification Options		Sequence Modifications	
Scale	Price/base	Set-up	Maximum Length	Method	Price	Modification	Price
0.05 µmole	\$0.60	\$5.00	60-mer	Sephadex	free	Amino Modifier Biotin	\$25 \$50
0.2 µmole	\$1.20	\$10.00	80-mer NEW	HPLC	from \$30	Fluorescein	\$50
1.0 µmole	\$2.40	\$20.00	100-mer	PAGE	from \$45	HEX, TET, 6-FAM Phosphate	\$70 \$25



Circle No. 28 on Readers' Service Card

NEW PRODUCTS

ANTIBODIES

Polyclonal antibodies are available specific for α -synuclein and β -synuclein. Synucleins are found in the Lewy bodies present in neurodegenerative disorders such as Parkinson's disease and may contribute to neuronal malfunction. The peptide-derived antibodies are suit-



able for use in protein immunoblotting and immunohistochemical applications.

The prion protein is a large membrane protein that occurs normally in human brain neurons, but it has received considerable at-

CHEMICON International For more information call 800-437-7500 or circle 143 on the Reader Service Card tention because of its link to bovine spongiform encephalopathy (mad cow disease) and scrapie in sheep. A polyclonal antibody is available that is made against a synthetic peptide that corresponds to amino acids 79 to 97 of the

amino terminus of the human prion protein PrP_{27-30} . It is immunoreactive to the immunizing peptide by enzyme-linked immunosorbent assay.

DNA POLYMERASE

Native *Pfu* DNA polymerase is recommended for polymerase chain reaction (PCR) applications requiring high fidelity,

such as cloning, DNA expression, and mutation analysis. The enzyme is tested for activity, contaminating nucleases, and PCR performance, and comes with a satisfaction guarantee.

Promega For more information call 800-356-9526 or circle 144 on the Reader Service Card

KITS FOR SIMULTANEOUS CYTOKINE QUANTITATION

The MultiFlow-IFA immunoassays are for the simultaneous quantitation of hIL2,

Bio-Ergonomics For more information call 800-350-6466 or **circle 145** on the Reader Service Card s quantitation of hIL2, hIL4, and hIFN-γ in biological fluids by flow cytometry. Multiple analyte quantitation, unique to flow cytometry, provides rapid and consistent results while preserving precious sample volumes. Appropriate for a variety of sample types, MultiFlow-IFA has a wider dynamic range than enzymelinked immunosorbent assay

ULTRASONIC HOMOGENIZER

The XL2000 MICROSON is a compact, powerful ultrasonic homogenizer that features a

convenient thumb-activated pulsing switch that permits a wide variety of applications. The unit is suitable for cell disruption, particulate dispersion, mixing and homogenizing samples, and focused cleaning of



intricate instrument parts or production equipment. The 100-watt portable unit



measures 7.5 by 13 by 7 inches and features automatic tuning, variable amplitude control, and a digitally displayed wattmeter. It comes supplied with a 1/8-inch tip diameter and a 5-inch-long alloy probe. The probe is also available with diameters of 3/32, 3/16, and 1/4 inch.

BUFFER CONCENTRATES FOR ION CHROMATOGRAPHY

These mobile-phase buffer concentrates simplify the preparation of ion chromatog-

Hamilton

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raphy buffers by making preparation of buffers for PRP-X100 (anions) and PRP-X200 (cations) columns as easy as adding water. Two concentrates are available. The first makes 2 liters of 4.0 mM p-hydroxy-

benzoic acid, pH 8.5, with 2.5% methanol. This mobile phase is used for the separation of eight common anions (fluoride, carbonate, bromide, chloride, nitrite, nitrate, phosphate, and sulfate). The second concentrate makes 2 liters of 4.0 mM nitric acid in 30% methanol for the separation of monovalent cations (lithium, sodium, potassium, and ammonium).

AUTOMATED DNA EXTRACTION FROM PLANTS

The AutoGen automatically purifies high quality genomic DNA

from plant material with yields comparable to manual purification. The DNA recovered from the AutoGen is ready to use in techniques such as polymerase chain reaction,

AutoGen For more information call 800-292-5678 or circle 148 on the Reader Service Card

cloning, and restriction digest with no further treatment necessary.

LITERATURE

Non-radioactive labeling of nucleic acids describes the FastTag system, which can be used to couple a variety of non-radio-

Vector Laboratories For more information call 650-697-3600 or circle 149 on the Reader Service Card isotopic labels to DNA, RNA, and oligonucleotides. The advantages and applications of this simple, reproducible method are shown along with comparisons with ³²P, digoxigenin, and enzyme labeling methods. The PHOTOPROBE Bi-

otin labeling method and new reversible and irreversible binding matrixes for isolating labeled nucleic acids are also presented.

TechNotes is a newsletter from Ambion. A recent issue focuses on the topic of in vitro transcription. The lead article is "Mega Yields of RNA: Maximize In Vitro Transcription with MEGAscript Technology."

Ambion For more information call 800-888-8804 or circle 150 on the Reader Service Card

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Recruitment Advertisement Directory



Building Work Force

The following organizations have placed full-page recruitment advertisements in the Diversity for the 21st Century Supplement.

ADVERTISERS	PAGE
Bayer	2112
Boehringer Ingelheim Pharmaceuticals, Inc	2117
Genentech, Inc	2123
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Large Scale Biology Corporation	2126
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Millennium Pharmaceuticals, Inc.	2118
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Building Work Force Diversiti)for the 21st Century

Ptizer Central Research · Boehringer Ingelheim Pharmaceuticals, Inc. · Genentech, Inc. · American Association for the Advancement of Science · National Institutes of Health · National Medal of Technology Program by Michael Woods

he biopharmaceutical work force is more diverse than ever before. Big strides have occurred in recruiting, retaining, and promoting women and individuals from underrepresented minority groups. Everyone agrees: diversity has infused biopharmas with new ideas, new perspectives, and new realms of creativity.

But there's a long road to travel before the 21st century workplace truly reflects diversity in the outside world. Clouds are gathering on the horizon as well, with hints of a decline in the number of African American and Hispanic students pursuing graduate study in the sciences.

Fortunately, there is near-unanimous agreement on one solution: more effort by industry, scientists, educators, and professional groups to encourage science careers for girls and minorities; grow the

applicant pool; start at the elementary and secondary school levels, before career choices are made. That's the key to increasing workplace diversity. We heard that message time and again from experts consulted for this snapshot.

We spoke with scientists and human resources professionals at Pfizer Central Research and Boerhinger Ingelheim Pharmaceuticals, Inc. Then we crossed the country to visit Genentech, Inc. To enrich and expand on the industry perspective, we went to the



National Institutes of Health, the American Association for the Advancement of Science, and the U.S. Department of Commerce.

JOHN LAMATTINA, PFIZER CEN-TRAL RESEARCH: DIVERSITY-IMPORTANT IN DRUG DISCOVERY As worldwide head of discovery research for Pfizer Central Research, in Groton, Connecticut, John LaMattina is constantly aware of the scientific benefits of a diverse work force. LaMattina oversees Pfizer drug discovery programs across three continents. The endeavors, he said, thrive on the diversity in gender, cultural heritage, and ethnicity that these scientists bring to the laboratory bench and computer workstation.

"Pharmaceutical research is a highly creative enterprise," LaMattina said. "To get optimal solutions, it's essential to look at

problems from many different perspectives. You get one perspective and one type of solution from a very homogenous work force. But I think the insights are much more profound, and the solutions more creative, in a heterogeneous workplace. The blending of perspectives is wonderful, and it can be a very powerful factor in building and crafting a research portfolio."

After getting a Ph.D. in organic chemistry and doing a postdoc at Princeton University, LaMattina came to Pfizer in 1977 as a bench Over the years, there have been some amazing discoveries made at Bayer Corporation, Pharmaceutical Division. When you join us, you become part of an exciting, fast-paced health care organization that helps improve the lives of millions around the world.

As a fast-growing division of Bayer Corporation, we have ambitious goals for a promising future. We assume worldwide responsibility for researching and developing treatments for cancer, diabetes, osteoporosis and obesity. Our future is becoming a reality.

Most important in this vision is unleashing the potential of our people. That's why we provide our scientists with the very best resources, as well as an innovative environment that fosters autonomy and professional development. We strive for a diverse workforce made up of the best and brightest people to continue in our important mission – talented people who enjoy a challenge and are enthusiastic to develop themselves to their full potential.

At Bayer the possibilities are endless. We help make it possible for you to further your education. Our comprehensive training programs will help you improve your professional and technical skills. We also offer great work-life programs such as our on-site child care center, flexible work hours, and job sharing to help our employees balance work and personal responsibilities.

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There are numerous career paths and opportunities available at Bayer for:

Ph.D. Scientists

- Qualifications include a Ph.D. degree and 0-2 years experience.
- Bone Pharmacology
 Combinatorial Chemistry
- Instrumentation Integration Engineering
- Medicinal Chemistry
- Synthesis Chemistry

BS/MS Scientists

Qualifications include a BS and/or MS degree and 0-2 years experience.

- Biochemistry
- Biological Sciences
- Chromatographic Separations
- Combinatorial Chemistry
- Protein Biosciences
- Synthetic Organic Chemistry

Overall, Bayer is the place to be, and our employees heartily agree. Along with career advancement opportunities, we offer a generous and flexible package of benefits to enhance our employees' health and financial well-being. For confidential consideration, please send your resume, including position of interest and salary requirements, to: Bayer Corporation, Pharmaceutical Division, Dept KLS-C28, 400 Morgan Lane, West Haven, CT 06516. No phone calls please. For more information on Bayer, please visit: www.bayerpharmana.com

An Equal Opportunity Employer M/F/D/V. Bayer Corp. is committed to enhancing and maintaining cultural diversity within our work environment.



Division



Millennium is a leading biopharmaceutical company employing large-scale genetics, genomics, high throughput screening and informatics in an integrated science and technology platform. In addition, we have several major pharmaceutical partners spanning numerous disease areas. Our goal is to make breakthrough therapies available faster for a full range of major under-served diseases. Based on the success of a number of recent initiatives, we are expanding our disease focus in the areas of: cancer, pain, cardiovascular disease, hematology and enzymology. Given the challenges still to be faced, and the breakthroughs still to be discovered, there's no better time than now to bring your spirit of innovation to a company that reflects it, respects it, and rewards it.

All Positions Are For Our Cambridge, MA Facilities

Enjoy the rewards of a collaborative environment, the challenge of progressive science, the incentive of stock ownership, opportunities for career growth and a generous compensation package.

Scientists

Ligand Biochemist

PhD and 2-6 years' postdoctoral experience in protein biochemistry, assay development and characterization of receptor-ligand interactions required for our program to identify ligands for orphan receptors. Experience in the pharmaceutical industry, particularly with moving novel receptor-based targets into screening, is highly desired.

Senior Medicinal Chemists

Millennium is seeking senior level synthetic or medicinal chemists with broad-based industrial experience who will develop patentable chemical series against novel biological targets in a variety of therapeutic areas. These senior researchers will employ state-of-the-art medicinal chemistry tools to develop lead series, contribute to building the infrastructure, and develop and supervise associate level chemists. Candidates should have extensive experience in: designing and executing multi-step synthesis of novel compounds with biological interest, a broad range of synthetic chemistry techniques and modern analytical methods to determine structure and purity of compounds, analyzing structure activity data, and developing ligand-target interaction hypotheses. A PhD in synthetic chemistry and 5+ years' medicinal chemistry experience in a drug discovery organization is required. A strong record of achievement (e.g. patents, publications, etc.) must be demonstrated.

Fungal Molecular Biologist

Highly motivated individual with management and leadership skills especially in the areas of priority setting, allocation of resources, tracking progress against goals, and coaching of team members to utilize S. cerevisiae genetics in conjunction with Millennium's technology platform to accelerate the discovery and development of new antifungal agents. You will be tasked with developing novel approaches and achieving ambitious goals. Requires a PhD in biochemistry or microbial genetics; 3+ years' industry experience in drug discovery, including assay development; and demonstrated productivity, innovation, scientist supervision and leadership. Experience in S. cerevisiae genetics, molecular biology, cell biology, and biochemistry are essential, as is proficiency in harnessing genomic information.

Neuroscientist

Interesting opportunity to study the molecular mechanisms of pain, with a focus on gene identification, functional analysis and assay development. PhD and/or MD, 3-5 years' postdoctoral experience, good communication skills, and an outstanding record of publication are required. Experience with animal models of hyperalgesia is necessary. Preference will be given to applicants with behavioral and electrophysiological recording techniques for peripheral and central neurons. Familiarity with molecular biological and anatomical techniques is a plus.

Computational Biologist

Experienced scientist to identify novel gene functions. Requires PhD in biology and 3-5 years' postdoctoral experience in computational biology. Knowledge of C/C++, UNIX, Perl; and deep familiarity with essential algorithms for function prediction are essential. Database experience helpful.

Molecular/Cellular Biologist

Our biotherapeutics subsidiary is looking for an individual to investigate the role of novel secreted proteins using molecular/cellular biological approaches to elucidate gene function. At least 4 years' academic or industry postdoctoral experience and a background in the regulation of cellular proliferation and differentiation including: growth factors and/or cytokines; signal transduction pathways; intercellular communication; and the development and implementation of new methodologies for understanding gene function is required. Experience in animal models of human diseases such as inflammation, oncology or cardiovascular is desirable.

Clinical Pathology

Clinical Studies Coordinator

You will assist in overseeing the many clinical sample collections that are currently being established at Millennium as they relate to target by class and disease profiling. Additional responsibilities include establishing new collections specifically interacting with outside collaborators/clinicians to determine sample size, distribution, target population and appropriate clinical disease setting, plus reviewing existing collections and determining their efficacy in the disease process and other parameters that would help in the discovery/validation process. You will interact with an oversight committee composed of a variety of experts in medicine and pharmacology, as well as with groups dealing with the appropriate disease in order to insure that information flows freely and is appropriately used. RN, MD or PhD with clinical background required.

Business

Senior/Licensing Managers

We have several excellent openings for experienced professionals to be responsible for evaluating new technology opportunities in the biotechnology industry and academia, structuring licensing and scientific collaboration relationships with academic or corporate partners, and negotiating deals. Reporting to the Senior Director, you will contribute to efficient communication of licensing priorities/strategies to business and scientific members throughout Millennium. Requires a background in life sciences/chemistry, with at least 2 years' technology evaluation, licensing and business development experience in pharmaceuticals, biotechnology, instrumentation or academia. Advanced scientific or business degree preferred.

Patent Counsel

Excellent opportunity for career growth, plus exposure to diverse leading edge technologies, and complex emerging patent law. You will advise, identify, and develop patent strategies for multiple new technologies; oversee and manage preparation of patent applications; and provide overall creative approaches, expertise, and counsel. Requires a BS, JD and patent bar; 4-8 years' experience in a law firm or corporate biotechnology environment; and an excellent knowledge of science.

Qualified candidates should send resumes in confidence, using one of the following:

Please be sure to include Source Code SC32699 on all submissions. If including cover letter, please place/paste after resume.

- For fastest consideration, visit the "Careers" page of our website at www.mlnm.com and apply on-line.
- Via e-mail at millennium@webhire.com. Please reference Source Code on "Subject" line.
- Via toll-free fax at 1-800-370-6925. Please reference Source Code on the fax cover or page 1.
- Via mail: Millennium Pharmaceuticals, Inc., Resume Processing Center,
- Source Code SC32699, PO Box 798, Burlington, MA 01803.
- No agency submissions please.



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At Boehringer Ingelheim, we believe that the future is not an event to be anticipated ... but an opportunity to be shaped. We're ready to transform your innovation and drive into the power to define an industry - to

Information Technology

Information Technology is an important partner in the BIPI R&D process. Current projects involve implementation of state-of-the-art pharmaceutical industry related software, substantially based on Oracle Database, and Internet/Intranet web enabling technologies. IT professionals with experience in these skills are strong candidates. Additionally, scientists with solid computer skills and an interest in combined R&D/IT careers are also encouraged to inquire. We are now actively staffing for projects in the following areas:

- Process Automation
 - Electronic Notebook
- Combinatorial Chemistry
- Bioinformatics
- Document Management
- Web Development

Medical Department

Our Medical Department plans, conducts and reports the results of clinical tests designed to determine the efficacy and safety of the company's prescription drug candidates. Working with clinical investigators in major academic centers across the U.S., our professionals have earned a solid reputation for their high standards and productivity. Opportunities exist for highly motivated professionals in the following positions:

- Clinical Research Associate
- Director of Virology
- Regional Data Center
- Clinical Database Specialist
- Analyst

Pharmaton Natural Health Products

As part of Boehringer Ingelheimis international self-medication unit, Pharmaton is one of the world's largest and most successful companies in the over-the-counter dietary supplement business. As Pharmaton continues to grow, we are adding product and marketing professionals with a desire to make a mark representing some of the best products in a consumer industry that is undergoing rapid growth.

At our Ridgefield, CT campus, we offer a dynamic, collaborative environment where insight, inspiration and commitment create opportunity on an entirely new

bipi@bi-careers.com; or send to: Boehringer Ingelheim Staffing Center, Po Box 534, Waltham, MA 02454-0534; or fax (781) 663-2431. Including Job Code AD-SCI/0899 in your cover letter or subject line will help us to expedite your request and avoid delays in routing your resume. Please, principals only. Unsolicited agency referrals will not be accepted. We are a proud Equal Opportunity Employer and are committed to offering a healthy, non-smoking work enviroment, M/F/D/V.

scale. For immediate consideration, please e-mail your resume and salary history to:

- Product Manager
- Project Manager

 Clinical Design Specialist Statistician

Marketing Manager

Technical Operations

Our Production Technologies Department works in conjunction with R&D groups in the development of both branded products and generic products. The department is responsible for various scale-up and technology transfer activities and has involvement with both drug substance and drug product. We currently have opportunities for candidates in the following positions:

- Process Engineers
- Packaging Engineers
- Validation Engineers
- Manufacturing Engineers Area Engineers

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- Boehringer Ingelheim

develop and market breakthrough pharmaceuticals that enhance the quality of human life. Bring your ambition into focus and your goals within reach by contacting Boehringer Ingelheim today.

Sales & Marketing

If you're an individual who thrives on challenge, change and rewards, Boehringer Ingelheim is the place to be. With a goal of tripling sales in the next five years, the company is launching new products and posting record sales revenues with more growth expected into the next century. We're adding marketing and sales professionals at an unprecedented rate to position, launch and sell new products in addition to supporting a strong line of well-established pharmaceuticals.

- Professional Sales Representatives Countrywide Opportunities
- Managed Care positions

Research & Development

Transforming laboratory discoveries into effective therapeutics is a common goal of the nearly 600 research, development and clinical staff members on our team. To meet the challenge of providing new therapeutic agents, we will be significantly increasing our RED staff by the turn of the century. We are currently seeking candidates in the following areas:

• Drug Metabolism Analytical Science Genetics and/or

4010

Biotechnology

 Chemistry Biology

• IT Biochemistry





Disease knows no boundaries. Why should we?

Our greatest resource is not shown on our financial statements. Instead, it is embodied in the creativity and energy of our people. We recognize the importance of drawing upon the entire range of talent and potential available in our workforce. That means providing all employees with the opportunity to contribute to their full potential. Our success depends on it.

We are looking for candidates that share our core research values in the development of innovative medicines for the treatment of disease. Send your qualifications and cover letter to: Merck & Co., Inc., One Merck Drive, P.O. Box 100, WS1F-55, Source Code: COSMTG206, Whitehouse Station, NJ 08889-0100. Fax: (908) 423-2592. Women and minorities are encouraged to apply. Merck is an Equal Opportunity Employer, M/F/D/V.



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scientist. In 1986, he started a steady rise up the management ladder, becoming head of Pfizer discovery research in the United States in 1993 and worldwide head last year.

LaMattina has straightforward advice for employees eyeing a similar rise to management positions in either the scientific side of the pharmaceutical industry or the business side: "Work hard, keep learning, add value to any project you undertake, have an impact." Impact

may involve contributions to a scientific project, or it may come in other forms: helping with recruiting talent, serving on a task force to design a new facility, lending a hand with community projects to encourage more young women and members of underrepresented minority groups into science careers.

Pfizer is involved in a wide range of such programs at the pre-college and college levels. In its own community, for instance, Pfizer supports science education at area schools and training programs for teachers; supplies equipment for school laboratories; and hosts a science fair for 1,500 junior high school students. At this annual event designed to expose these students to the excitement of scientific research, LaMattina can be found among the Pfizer personnel who demonstrate entertaining chemical reactions.

"Junior high school is a real window of

opportunity," LaMattina said. "Most kids have not made their career choices yet. There's still time to take those important science courses in high school. Contact with real, live scientists in a work environment can demonstrate that science is not for nerds. It's a real career opportunity where real people have fun and make a difference."

LaMattina described outreach efforts as simply the right thing for pharmaceutical companies to do, because they benefit the community. But companies also benefit by helping to increase the number of underrepresented minority scientists in the applicant pool.

With demand high and supply low, female and minority scientists often can afford to be very choosy about job offers. Many have their pick of several positions. LaMattina advises them to pick carefully. Salary, benefits, and commuting time are important. But so are the intangibles:

"An individual can do good science at any major pharmaceutical company," LaMattina pointed out. "Successful companies



John L. LaMattina and the Pfizer Pharmaceuticals, Inc., Respect for People Group, L to R.

(back row) John Osborn, Lisa Harding, John LaMattina, Dannette Hill, (tront row) Annette Silvia, Todd Blumenkapt, Daniel Vohannes, (not shown) Marta Andino, Yesook Kim, Ted Liston, Frioz Nilam, Ricardo Ochoa, Armelde Pitre.

With demand high and supply low, temale and minority scientists often can afford to be very choosy about job offers.

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and acts to institute

Research environment

changes that increase

productivity, job satis-

faction, and motivation

of its employees in

Pfizer's core values.

accordance with

have good research facilities and the best instrumentation. But there are certain intangibles that enter into the decision. Remember that scientists almost live in the workplace. Benchside research isn't a 40-hour-a-week job for many scientists. People devote a lot of blood, sweat, and tears to their science and to their mission of discovering new drugs. They should be in an environment that welcomes and makes them comfortable.

"They should be in an environment in which they can make meaningful contributions that are utilized and enhanced by their colleagues, that supports managing their work/life balance, and which demonstrates that respect for people is more than just words with a proven track record of attracting and retaining a talented and diverse work force."

CASSANDRA NIKITUK AND CAS-WALL PRICE, BOERHINGER INGELHEIM PHARMACEUTICALS, INC. A DIALOGUE ON DIVERSITY

Cassandra Nikituk is director of corporate staffing for the Boerhinger Ingelheim Corporation with U.S. headquarters in Ridgefield, New Jersey. In that position, Nikituk oversees a range of programs intended to attract and retain the most tal-

ented individuals. Among them are corporate diversity and affirmative action efforts. Caswall Price, senior human resource specialist, works in scientific staffing for the firm's research and development center. We chatted with Nikituk and Price recently about a few of the core questions that all biopharmas ponder as they move toward a work force that is as diverse as the global marketplace.

Extended Set I How does a diverse work force benefit a company? **Nitrue (M)** Diversity is good business. That's the first answer. I believe it will help assure that we are competitive in the 21st century. As an international company, we must foster global thinking, and find ways to attract and retain individuals from different cultures, with different backgrounds, and life experiences. Pharmaceutical companies survive and prosper through innovation. In companies that value diversity, employees are certainly better able to express creativity, contribute ideas and solutions,

and tackle new challenges and opportunities. Diversity fosters creative problem solving, and opens the way to excellent science and innovation.

Everyone seems to be competing for women scientists and members of underrepresented minority groups. How can a biopharma show applicants that it values diversity?

The employment market is very strong right now. We recognize the value of having a diverse work force, and so does our competition. So the competition for top minority talent, especially in scientific fields, is absolutely fierce. We use several approaches. One, for instance, involves team interviews. We try to have diverse representation on the interviewing team so that applicants get different perspectives about Boerhinger Ingelheim. Applicants can see female scientists, and minority scientists, who have productive, fulfilling careers here. We're

continued >



Director, Office of Vaccines Research and Review DHHS/PHS/FOOD AND DRUG ADMINISTRATION **CENTER FOR BIOLOGICS EVALUATION** AND RESEARCH

The Center for Biologics Evaluation and Research, Bethesda, Maryland is searching for a candidate for the position of Director, Office of Vaccines Research and Review. The Director is responsible for planning and directing research and review policy and program objectives of the Office, concerning vaccine-related biological products, including those related to AIDS, and those prepared by genetic engineering and synthetic procedures. Responsibilities also include overseeing research program designed to develop and maintain a scientific base for establishing standards. These standards are directed at ensuring the continued safety and efficacy of biological products for use in treatment and prevention of disease common to man. Manges the Center's activities related to the National Vaccine Program in coordination with other Offices. Is responsible for the formulation and continual evaluation of Office policy to effectively strengthen regulations covering vaccine-related biological products. Assures changes in policy and/or procedures necessary to improve the efficiency and responsiveness of the Center's regulatory responsibilities and research programs in other FDA and DHHS organizations. Makes management decisions pertaining to changes in course of approach, degree of program emphasis, allocation of resources, internal cooperative ventures, and similar matters.

QUALIFICATIONS: All applicants must be U.S. or naturalized citizens. Applicants must be able to evaluate the safety, efficacy, and public health significance of vaccine-related biological products, demonstrate leadership and managerial ability in the administration of science based programs, and deal effectively with government and industry officials and representatives of the scientific and academic communities. Candidates must possess an M.D. and/or Ph.D. degree with subsequent training and professional experience in microbiology, immunology, chemistry, biochemistry, molecular biology, pediatrics, infectious disease, allergy or epidemiology. 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 of Foreign Medical Graduates (ECFMG) certificates.

LOCATION: Offices and laboratories are located on the campus of the National Institutes of Health in Bethesda, Maryland and at other locations in Rockville, Maryland.

SALARY:

Physicians: Salary range for Physician Special Pay at the GS-15 level is up to \$151,800 based on experience, qualifications, and medical specialty.

Scientists: (other than M.D.) Civil Service salary range for the GS-15 is \$80,658 to \$104,851 per annum. Scientists may be eligible for the Senior Biomedical Research Service (SBRS) which pays up to maximum of \$151,800. Positions may be filled by appointment in the U.S. Public Health Service Commissioned Corps with commensurate salary and benefits.

How To Apply: Call: Please call Sylvia Lucero at (301) 827-1400 for application procedures and additional instructions.

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Purdue Biopharma L.P.

Purdue Biopharma L.P. is establishing a research and development facility located in Princeton, NJ where 60+ scientists will be required to develop synthetic antibody therapeutics and recombinant protein vaccines. Positions will include

Head, Antibody & Vaccine Discovery Research

The successful candidate will have 10 or more years of relevant experience in immunotherapeutics research and be responsible for target identification, validation, and drug evaluation for our synthetic antibody and vaccine programs. Experience managing teams of Scientists is strongly desired. Candidates holding M.D. or Ph.D. degrees, or with highly relevant academic experience are highly encouraged to apply.

Head, Molecular Biology

The successful candidate will have 8-10 years of demonstrated ability to design and construct novel antibody-based proteins as drug candidates and the ability to oversee work in targeted identification and engineering systems for high-throughput screening and molecular modeling. The molecular biology group will enjoy extensive interaction with the protein production and purification group.

Head, Protein Production

The successful candidate will have 5-10 years of industry experience developing small and large-scale protein production methods. Extensive knowledge of transient expression and stable expression strategies is important, as is knowledge and experience with the regulatory aspects of cell banking and cGMP production.

Head, Protein Purification

The successful candidate will have 5-10 years of industry experience developing small and large-scale protein purification methods, and have extensive knowledge of regulatory requirements and cGMP production.

Laboratory Heads

Successful candidates will have at least 2 years of post-doctoral experience in one of the areas listed above.

Research Associates

Successful candidates will hold B.A., B.S., or M.S. degrees and have relevant experience in one of the areas listed above.

For immediate consideration, qualified applicants should mail or fax resumes indicating position of interest and salary requirements, to: Associate Director, Human Resources Services, Dept-SM, Purdue, 100 Connecticut Avenue, Norwalk, CT 06850; Fax: (203) 851-5300. Corporate standards require drug testing and background investigation. An Equal Opportunity Employer M/F/D/V.



Science into Practice

The University of Michigan Postdoctoral Fellowships for Diversity in the Sciences

The purpose of the program is to enhance the intellectual and social diversity of scholars in the sciences. The fellowships provide postdoctoral research opportunities for members of groups historically under-represented in the sciences.

Awards: Fellows will be selected on the basis of their proposed research, scholarly promise, and past achievements. Departmental and institutional needs will also be strong considerations. Each fellowship will be awarded for one year, renewable for a second year based on academic progress. Details of appointment as to research, teaching, and service commitments will vary within the host department.

Compensation: Fellows will receive a competitive annual salary, a full benefits package, and up to \$5,000 toward research supplies, travel, or assistance.

Eligibility: Applicants must have received a doctorate no more than two years before the start of the appointments on September 1, 1999. Applicants must be US citizens or permanent residents who are members of ethnic or racial groups historically under-represented in the fields of physics, biology, chemistry, astronomy, geology, mathematics, and statistics. Fellows must show promise toward a future career in academia.

Applicants should submit the following materials in order to be considered:

- 1. Letter on research, career plans, qualifications, and diversity information
- 2. Curriculum Vita
- 3. Official graduate school transcript
- 4. Indication of faculty with whom you would collaborate and/or research area
- 5. Detailed statement of proposed research (maximum of three pages)
- 6. Sample publications and dissertation chapters

7. Three letters of reference, one of which must be from the dissertation advisor Application materials, including reference letters, must be received by May 1, 1999. Awards will be announced at the end of May 1999.

Mail applications to:

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Associate Dean Anthony H. Francis / ATTN: (Field of Interest) University of Michigan College of Literature, Science, and the Arts 500 S. State Street, Room 2009A Ann Arbor, MI 48109-1382

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Research Biologist

Suggest, develop and carry out in vitro and in vivo methods to lead to drug discovery and basic knowledge in the areas of vascular biology, diabetes and thrombosis; independently perform intricate small animal surgery and supporting in vitro testing to test for mechanisms and efficacy of selected compounds; assist others in intricate studies involving animal surgery; pursue new approaches in research by utilizing transgenic mice; plan, perform and analyze primary and secondary screens aimed at development and characterization of research leads; suggest, develop and perform special in vitro and in vivo testing procedures involving small animals.

Required qualifications: Bachelor of Science in Biology. Experience in using animal models, in vitro testing vascular biology, diabetes and/or thrombosis. Skills in small animal surgery. Desired qualifications: Master of Science degree. Experience with transgenic mice strongly desired.

For consideration, please submit your resume to: Monsanto Life Sciences Company, c/o Searle, 4901 Searle Parkway, Skokie, IL 60077. Fax: 847/982-4637. Please visit our website at: www.monsanto.com. EEO/AA Employer M/F/D/V.



VIROLOGIST



seeks applicants with a Ph.D. or M.D. degree and at least two years of postdoctoral training in Viral Pathogenesis for a tenure track appointment at the Assistant or Associate Professor level. The successful applicant will receive a generous start-up package and will be expected to develop a vigorous, extramurally-funded research program.

Fox Chase offers state-of-the-art, Core-grant supported research services, including a nationally recognized laboratory animal facility, postdoctoral training grants, endowed fellowships, and an outstanding funding record for investigator-initiated grant applications. The successful applicant will join an established group of Virologists and Immunologists including Drs. Ann Skalka, John Taylor, Susan Astrin, William Mason, Thomas London, Mel Bosma, Randy Hardy, Christoph Seeger, Kyoko Hayakawa, Dietmar Kappes, Glenn Rall, David Wiest, and Kerry Campbell. To apply please send CV and description of research plans to: Dr. Ann Skalka, Senior Vice President, Fox Chase Cancer Center, 7701 Burbolme Avenue, Philadelphia, PA 19111.

For additional information, visit http://www.fccc.edu. Fox Chase Cancer Center, is an Affirmative Action/Equal Opportunity Employer.

University of Alaska Fairbanks Dean

College of Science, Engineering, and Mathematics

The University of Alaska Fairbanks (UAF) is a Land, Sea, and Space Grant Institution. It is the sole Ph.D. granting university in the State. The College of Science, Engineering, and Mathematics (CSEM) consists of eight departments and employs 105 faculty and currently enrolls 780 undergraduate student majors and 190 students in graduate study. The school has undergone dramatic growth in research capabilities in the past decade, and the majority of faculty have joint appointments with research institutes and programs.

The Dean of the College of Science, Engineering, and Mathematics is responsible for providing vision, leadership, and administration for the College. Duties include academic planning, administrative leadership, and decisionmaking in matters of personnel and budget. She or he facilitates the development and enhancement of quality teaching, research, and service of the College, coordinates with separately administered research institutes, and holds a tenured, full-professor appointment in an academic discipline of the College.

Minimum qualifications for the position are:

- An earned doctorate in science, engineering or mathematical sciences
- Qualifications for rank of Professor
- A record of progressively responsible administration including a history of successful budgetary and personnel administration
 - A record of excellence in classroom teaching, research, and service.

More information about UAF, Departments within CSEM, and a fuller description of the position may be found at http://www.uaf.edu/ and http://www.uaf.edu/ csem/. Information about Fairbanks may be found at http:// www.fairbankschamber.org/.

Applicants should send a curriculum vitae; a statement of interest and educational philosophy; and names, addresses, e-mail addresses, phone and fax numbers for yourself and five references to: Ronald Dearborn, Chair, Dean Search Committee, College of Science, Engineering and Mathematics, University of Alaska Fairbanks, 99775-5940: fax: (907) 474-6285, e-mail FYCSEM@uaf.edu. The Search Committee will begin reviewing applications on April 15, 1999. The position will be available July 1, 1999 or as soon thereafter as the successful candidate can begin. Applicants must be eligible to work in the U.S.

The University of Alaska Fairbanks is an equal employment opportunity/ affirmative action employer and educational institution. Your application for employment with the University of Alaska is subject to public disclosure under the Alaska Public Records Act. Women and minorities are encouraged to apply.



AWARDS FOR INTERNATIONAL RESEARCH AND TRAINING FROM THE FOGARTY INTERNATIONAL CENTER AT NIH

The following new and ongoing programs are available:

INTERNATIONAL RESEARCH SCIENTIST DEVELOPMENT AWARDS

This individual award supports basic, behavioral and clinical postdoctoral scientists for mentored research in infectious, chronic/degenerative or mental health disorders at centers of excellence in developing countries.

Deadline: May 21

INTERNATIONAL MATERNAL AND CHILD HEALTH RESEARCH AND TRAINING PROGRAM

This institutional award supports collaborative research and training programs in maternal and child health threats that impact developing country populations.

Deadline: May 18

INTERNATIONAL TRAINING IN MEDICAL INFORMATICS

This institutional award supports training for Sub-Saharan African and Latin American scientists, in the context of an international research program, to apply state-of-the-art information and communication technologies to research and health surveillance activities in their home countries. **Deadline: May 20**

MINORITY INTERNATIONAL RESEARCH TRAINING

This institutional award supports scientific training programs at U.S. universities to offer international research opportunities for minority undergraduate and graduate/medical school students. **Deadline: May 7**

FOGARTY INTERNATIONAL RESEARCH COLLABORATION AWARD

This individual award provides funding to foster international research partnerships between NIH-supported U.S. scientists and their collaborators in developing countries.

FIRCA Deadlines: November 25, March 25, and July 25 AIDS-FIRCA Deadlines: January 2, May 1, and September 1

SENIOR INTERNATIONAL FELLOWSHIP

This individual award supports opportunities for mid- and senior-career level U.S. scientists to conduct biomedical and behavioral sciences research at foreign institutions. **Deadlines: April 5, August 5, and December 5**

Information may be obtained from the Fogarty International Center web site: http://www.nih.gov/fic/opportunities or by contacting: Fogarty International Center Division of International Training and Research Building 31 Room B2C39 National Institutes of Health Bethesda, MD 20892-2220 Tel: 301-496-1653 Fax: 301-402-0779

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Challenging Opportunities at Center for Biologics Evaluation and Research **Chief**,

Laboratory of Hemostasis Food and Drug Administration Center For Biologics Evaluation and Research Office of Blood Research and Review Department of Hematology

The Center for Biologics Evaluation and Research, Office of Blood Research and Review, Division of Hematology, Bethesda, Maryland is searching for a candidate for the position of Chief, Laboratory of Hemostasis. The laboratory chief is responsible for overseeing research programs that are focused on the safety, potency, purity and efficacy of blood coagulation products. Areas of research interest include evaluation of plasma derivative products, development of coagulation factor standards, and solving problems arising from regulatory activities. The Laboratory Chief also has regulatory responsibilities which include reviewing coagulation product license applications and investigational new drug applications, providing guidelines for the standardization of coagulation products, and performing other duties as assigned.

QUALIFICATIONS:

Applicants must be able to evaluate the safety, efficacy and public health significance of blood products, demonstrate leadership and managerial ability, and deal effectively with government and industry officials and representatives of the scientific and academic communities. **Physician:** Applicants must have a Doctor of Medicine or equivalent degree from an accredited institution and additional clinical and/or research training in hematology, chemistry, microbiology or pharmacology. Graduates of foreign medical schools must submit a copy of their permanent Education Commission of Foreign Medical Graduates (ECFMG) certificates.

Scientist: (other than M.D.) Applicants must have professional experience or directly related post graduate education in microbiology, immunology, biochemistry, molecular biology, cellular biology, or a related field and additional research training.

All applicants: Must be U.S. OR NATURALIZED CITIZENS

LOCATION: Laboratories and offices are strategically located on the National Institutes of Health campus in Bethesda, Maryland.

SALARY:

Physicians: Salary range for civil service postions at the GS-14 level is \$74,162 to \$93,233 per annum. In addition, physician may also be eligible for a Physicians Comparability Allowance up to \$20,000 per annum OR a Physicians Special Pay up to \$151,800 based on experience, qualification, and medical specialty.

Scientists: (other than M.D.) Civil Service salary range for the GS-14 is \$68,570 to \$89,142 per annum. Scientists may be eligible for the Senior Biomedical Research Service (SBRS) which pays up to maximum of \$151,800. Positions may be filled by appointiment in the U.S. Public Health Service Commissioned Corps with commensurable salary and benefits.

How to Apply, CALL:

Carolyn Curtis at 301-496-4396 1401 Rockville Pike, HFM-330 Rockville, Maryland 20852-1448 Attn: Carolyn Curtis

FDA IS AN EQUAL OPPORTUNITY EMPLOYER AND HAS A SMOKE FREE ENVIRONMENT Human Genome Sciences is the Maryland-based biopharmaceutical company that created and introduced functional genomics as the new paradigm for drug discovery. Our functional genomics technology is based on rapid discovery, DNA sequencing, and demonstrating the medical utility of novel human and bacterial genes.

HGS holds exceptional career challenges for world-class scientists and professionals who share our vision of the future -- a future of victory over disease.

We have positions available in the following areas:

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PROTEIN ENGINEERING AND PRODUCTION

HGS is located in Rockville, Maryland, and employs scientists and physicians, as well as business professionals and occupies wellequipped research and development and manufacturing facilities.

HGS encourages the pursuit of excellence in science and pharmaceuticals and offers competitive benefits including educational reimbursement, subsidized health club membership, medical/dental/life/disability insurance programs and a 401(k) plan with cmployer match. For immediate consideration, please send or fax resume to Human Resources Dept., Human Genome Sciences 9410 Key West Avenue Rockville, MD 20850 (301) 309-8504

TGJ Fax: (301) 309-1845

UAMS

Visit our Web site to learn more about us: http://www.hgsi.com

POSTDOCTORAL POSITIONS

Department of Pharmacology and Toxicology University of Arkansas for Medical Sciences

NITRIC OXIDE RESEARCH – one NIH-funded position to study the role of nitric oxide and nitric oxide synthase in renal pathophysiology. Experience in renal pharmacology/ toxicology or nitric oxide biology/chemistry preferred but not required. Contact Philip R. Mayeux, Ph.D. at mayeuxphilipr@exchange.uams.edu.

EXPERIMENTAL THERAPEUTICS – two NIH-funded positions are available to develop monoclonal antibody-based medications for drug abuse. Candidates should have training or research interest in pharmacokinetics/pharmacodynamics, analytical biochemistry or a related field. Contact Michael Owens, Ph.D. at owenssamuelm@exchange.uams.edu.

PHARMACOKINETICS – one NIH-funded position to study the role of pharmacokinetics in determining the behavioral effects of dextromethorphan. Experience with one of the following areas essential: pharmacokinetic studies in rodents, HPLC techniques, or pharmacokinetic modeling. Contact William D. Wessinger, Ph.D. at wdwessinger@life.uams.edu.

For more information write to Department of Pharmacology and Toxicology, UAMS, 4301 West Markham, Little Rock, AR 72205 or visit http://www.uams.edu/pharmtox/ pharmtox.htm. Proof of US Permanent Residency required. UAMS is an Equal Opportunity Employer.

RESEARCH SCIENTISTS

Gillette Research Institute, a division of The Gillette Company, seeks creative and highly motivated Research Scientists who will be involved in research leading to the development of new personal care products. Experience in academic or industrial research is highly desirable.

Biochemist - Candidates must have a Ph.D. in Biochemistry or related discipline, a strong chemistry background, and a minimum of 2 years of postdoctoral research experience.

Chemist - Candidates must possess a Ph.D. in Chemistry with a strong biochemistry background. A minimum of 2 years of post-doctoral or industrial experience is required.

Formulation Chemist - Candidates must possess a Ph.D. in Chemistry with experience in formulating tolletries products.

Located in suburban Maryland, the Gillette Research Institute is part of a growing high tech community that has formed in the Washington D.C, metropolitan area. We offer an excellent compensation and benefits package, Qualified candidates should forward a resume to:

> Gillette Research Institute Human Resources Department 401 Professional Drive Gaithersburg, MD 20879 Fax: (301) 590-1575 Email: nancy_richards@gillette.com

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You will train/evaluate supervised staff, plan work schedules and help to ensure safe and efficient laboratory operation. Join a team of Scientists evaluating the role of growth factor receptor signaling in ocular disease. Requires a Bachelor's degree and 8 years related experience, a Master's degree and 6 years experience or a Ph.D. and 2 years experience. Must have strong scientific background and demonstrated performance in

initiating and solving complex research questions. Additionally, we require solid technical expertise in selected scientific disciplines as well as the use of theories, concepts and principles of biochemistry, molecular biology

and associated technologies. Direct experience with protein kinases and techniques for evaluating small molecule/protein interaction is

desirable. Excellent interpersonal and verbal/written communication skills are essential.

We reward our employees with a competitive salary, an excellent benefits package and a great working environment. Please send resume (e-mail preferred) to: klaus_jennifer@allergan.com If unable to e-mail, send to:

Allergan, Attn: JK/T2-1B, 2525 Dupont Dr., Irvine, CA 92612. No phone calls please. EOE.







Parke-Davis, a division of Warner-Lambert, is devoted to discovering, developing, manufacturing and marketing quality pharmaceutical products.

ANN ARBOR, MICHIGAN

Parke-Davis Pharmaceutical Research, a division of Warner-Lambert, has maintained an outstanding track record of innovation through scientific research to discover drugs for unmet medical needs. Focused on the future, we continue our global success in an environment that recognizes and rewards the individual and team contributions of our diverse colleagues.

Our research facility is adjacent to the University of Michigan in Ann Arbor, MI. This location offers a vibrant research environment and a very attractive residential setting and quality of life. If you are interested in continuing your professional development, consider one of the following positions:

POSTDOCTORAL FELLOW Job Code: RJB-974164

A postdoctoral position is available in the Department of Cell Biology for a highly motivated, independent scientist in the area of intracellular signaling. The department is highly interactive with interests in basic and applied aspects of signal transduction. The opportunity is available in the laboratory researching mechanisms of insulin action; regulation of protein kinases and phosphateses.

MANAGER, COMPOUND MANAGEMENT Job Code: DB/HYM

Supervise the processes involved in registering new chemical compounds, processing requests for chemical samples for preclinical research purposes. Use new technologies and scientific knowledge to devise new systems that will add value to Compound Management functions and increase the use of the proprietary information. Experience in database management and/or application development is preferred. BS/MS degree in Chemistry is required.

SENIOR ASSISTANT SCIENTIST/ASSOCIATE SCIENTIST Job Code: CJM-98767

You will function as a Senior Assistant Scientist/Associate Scientist in our Analytical Development Department: performing analyses and experiments to provide analytical support of drug substance development, and contribute to method development, stability evaluation, properties determination, and characterization of degradation products. Requires an MS or BS in Chemistry, and 3+ years' experience in Analytical or Organic Chemistry. HPLC experience is required, as well as experience in synthesis/purification and LC-MS.

ALAMEDA, CALIFORNIA

The Parke-Davis Laboratory for Molecular Genetics (PDLMG) is a new research center dedicated to genetics and genomics research and involves the identification and characterization of disease genes using a diverse set of molecular and genetic approaches, including gene mapping, positional cloning, large-scale mouse mutagenesis and transgenesis, expression profiling bioinformatics.

SCIENTIST/SENIOR SCIENTIST Job Code: CJM-99080

You will participate in developing mouse models of human complex diseases, gene mapping, positional cloning and expression analysis programs leading to novel gene discovery. To qualify, you must have a Ph.D. in Genetics or Molecular Biology, 2 years' postdoctoral experience, and extensive experience using the mouse as a tool to understand the genetics of complex or simple disorders. A strong interest and extensive experience with bioinformatics approaches for data mining is highly desirable.

Equal opportunity in action. Smoke-free environment.

www.parke-davis.com

SCIENTIST/SENIOR SCIENTIST Job Code: CJM-99006

As part of a highly collaborative research team, you will design and develop transgenic animal models. Duties will include design and assembly of transgene and knockout constructs, analysis of gene expression in cell lines and tissues including Northerns, Southerns, Westerns and immunoprecipitations, and participation in the development of novel transgenesis and knockout technologies. Experience with functional genomics technologies such as high density differential expression assays, cDNA library construction, and/or bioinformatics tools is preferred. Research management experience is also a plus. To qualify, you must have a Ph.D. in a relevant biological science with 0-3+ years' postdoctoral experience in the development or application of transgenic animal models.

ASSOCIATE SCIENTIST/ SENIOR ASSOCIATE SCIENTIST Job Code: CJM-99004

As part of a research team developing transgenic and knockout mouse models of human genetic disorders, you will perform zygote and blastocyst microinjections. To qualify, you must have a BS/MS in a relevant field, with 2+ years' transgenic animal production experience. Must have extensive experience with all aspects of transgenic animal production, including hormone priming, mating, embryo harvest, injections, embryo transfers, and animal tracking. Preference given to highly organized candidates with transgenics production facility experience, and/or research experience in genetics or developmental biology.

SENIOR ASSOCIATE SCIENTIST/SCIENTIST Job Code: CJM-99005

You will maintain an ES cell tissue culture facility. Duties include preparation and maintenance of ES and feeder cell line stocks, media, and reagents, electroporation of ES cells and processing of transfectant clones. To qualify, you must have a BS/MS in a relevant field, with 5+ years' mammalian cell culture experience. Requires experience with mammalian cell culture, preferably with ES cells. Experience with ES cell line derivation, FISH, cytogenetics, primary cell culture is beneficial.

SCIENTIST/SENIOR SCIENTIST Job Code: CJM-99075

As part of a team which will work directly with scientists in our genetics and molecular biology facilities to analyze DNA and protein sequences, you will work with genotype data and perform analyses. The job will involve all aspects of bioinformatics, from algorithm development, tool development to analysis, and development of experimental paradigms.

To qualify, you must have a Ph.D. in the Biological Sciences, and a strong interest in genetics or molecular biology. The ideal candidate will have 1-2 years' experience in bioinformatics, especially in areas such as sequence assembly, ORF prediction, contig assembly. Knowledge of programming languages such as PERL and shell scripting is required. Demonstrated facility with GCG and other standard sequence analysis tools is essential.

We offer competitive salaries, outstanding benefits, and an environment that's conducive to professional growth. For consideration, please forward your resume with Job Code, to: Parke-Davis, Resume Processing Center, P.O. Box 92242, Los Angeles, CA 90009-2242. Fax: 310-337-3367, E-mail: parkedavis@isearch.com.



looking for the kind of employee who acknowledges the validity of individuals with differing viewpoints and backgrounds. We also have a number of innovative work and family life programs that appeal to all employees. We have very liberal flextime. We have paid time off. Employees can take time off without explaining why. We have telecommuting. Scientists find it very useful when they're away from bench-side research, and need a block of uninterrupted time to write a report.

What about efforts to encourage young people toward science careers?

Price [P]: We recognize the need to have more female scientists and individuals from underrepresented groups in the applicant pool. Industry clearly has a responsibility to help. Boerhinger Ingelheim has several initiatives in this area. One, for instance, is a partnership with historically black colleges and universities to assist minority scientists. There's a wonderful program called STARS-Science, Technology, and Research Students. Nearby Yale University is using it to develop minority students, and we partner with Yale

in the program. We support a minority scientists program at the University of Rochester. Boerhinger Ingelheim also sponsors minority students to attend national meetings, such as the National Organization for Black Chemists and Chemical Engineers. We recruit at these meetings, as well.

A lot of studies suggest that the pipeline problem starts earlier, in secondary schools.

Often it does. We have several other programs to encourage science career choices at the high school level. One in the Danbury-Ridgefield area, for instance, is ACE, or Alternative Center for Education. ACE is an urban high school program for students who can benefit from a nontraditional curriculum. It involves internships in our labs, counseling to develop scientific skills, and other efforts. We support other high school programs like Scientific Scholars, Science Horizons, and Partners in Science.

Scientific Scholars is a scholarship program that supports local high school students who excel in science. With Science Horizons, Boerhinger Ingelheim sponsors science fairs and symposia for high school and middle school students to present the results of their science projects. Partners in Science brings high school juniors and seniors from 10 area schools to Boerhinger Ingelheim for a six-week program of seminars and lab tours. They are eligible for summer internships. Our scientists work with these students, invite them into our labs, and act as mentors and role models.

JOAN CRONIN, GENENTECH, INC.: FOSTERING A WORKPLACE ATTRACTIVE TO INDIVIDUALS FROM DIVERSE BACKGROUNDS

For a reality check on diversity in the West Coast's thriving biotechnology industry, we visited the company that started it all. Here are some reflections from Joan Cronin, director of human resources for Genentech, Inc., South San Francisco, California.

"At Genentech, we value a diverse work force because it means a diversity of backgrounds, experiences, and skills that generate new ideas and discoveries and ultimately saves lives.

"We try to attract employees from diverse backgrounds by maintaining strong ties to universities in the San Francisco Bay area for internships and full-time employment. In 1998, minority students held about 50 percent of our internships. This year we're working with INROADS, a national organization that arranges internships with sponsoring companies, to increase minority

> internships. We attend many minorityspecific events to increase awareness about Genentech, and ultimately increase our diverse talent pool.

"Members of employee groups work with Human Resources in community outreach and some college recruiting. These include African Americans in Biotech; Latinos Unidos; Filipino Americans Coming Together; and Gay, Lesbian, Bisexuals, and Friends.

"Genentech also is a major sponsor of the Bay Area Chapter of American Women in Science, which provides networking opportunities for female scientists.

"Maintaining a work environment attractive to people of diverse back-

grounds is important in both recruiting and retaining employees. We have a values statement, a diversity statement, and an internal Affirmative Action Plan. They help keep us focused on optimizing the available talent. Training and career development opportunities are available for managers and employees. Genentech's long tradition of offering extensive and creative employee benefits also helps. We have a flexible benefits package, for instance, that includes domestic partners' benefits. Special cultural awareness events on our campus enhance the inclusive atmosphere-Black History Month, Pride Month, and Cinco de Mayo.

"Mentoring programs help. We work with Menttium Organization to pair high-potential female employees with mentors from other Bay Area companies. An internal mentoring program for the entire work force begins this year. A mentor can be especially important for any new employee, including females or minorities, who want to get on the fast track and advance rapidly to more senior positions. Mentors can help in learning the unwritten rules for success, in understanding a corporate culture, and in learning about the business in its totality.

"With our inclusive work environment, career development opportunities, and increased efforts to recruit from nontraditional sources, I'm confident that we will see more female and minorities in scientific positions at Genentech in the future."

SHIRLEY MALCOM, AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE: "DIVERSITY IS GOOD BUSINESS ... THE RIGHT THING TO DO

"Most successful companies are already convinced about the value of diversity. They know that it makes good business sense to have a diverse work force. They know that it is the right thing to do from a legal and moral standpoint. The major part of the problem, I think, is that public policy has shifted, and is on the other side now."

Shirley Malcom, head of the American Association for the Advancement of Science (AAAS) Directorate for Education and Human Resources Programs, certainly knows. For years now,



Boehringer Ingelheim Pharmaceuticals, Inc., L. to R:

Cassandra Nikituk, Director of Statting.

Caswall Price, Senior Human Resource Specialist;

Phuong Do, Scientist; Carlos Quimbaya, Scientist;

Biological Chemistry Postdoctorate

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UNILEVER, one of the world's largest consumer goods companies is

dedicated to bringing quality skin care products to market, and maintaining their high standards. To meet these goals, Unilever Research U.S. has made a strong commitment to breakthrough skin research at our world-class Skin Care Research Center in Edgewater, NJ, where a postdoctoral position is now available in biological chemistry. As part of the effort, you will study the mechanisms of oxidative processes in the skin. Applicants must have a strong background in the determination of complex reaction kinetics in

heterogeneous media, preferably biological. A PhD in biochemistry, physical organic or physical chemistry is required. Experience with advanced measurement techniques is also highly desirable.

As an international leader, Unilever offers a competitive salary, comprehensive benefits, unique challenges, and the opportunity to share your ideas with some of

the industry's brightest professionals. For consideration, please respond, citing DEPT. ORG-SCIENCE, to: Human Resources Dept., Unilever Research U.S., 45 River Road, Edgewater, NJ 07020. E-MAIL: job.mca@unilever.com typing:

ORG-SCIENCE in the subject header. Equal Opportunity Employer m/f/d/v.

Unilever Research For more information about Unilever Research and Unilever visit our Internet Web Site at http://www.unilever.com

Unilever

COLUMBIA UNIVERSITY Senior Faculty Position in Ecology

The Columbia Earth Institute (CEI) and the Center for Environmental Research and Conservation (CERC) are seeking applications and nominations for a Senior Ecoologist to be appointed at the **Professor** level in the Department of Earth and Environmental Sciences. The ideal candidate will be a senior scientist with (1) a significant international reputation in an area of ecology that is directly related to the understanding of the dynamics and conservation of ecosystems and/or the species they support; (2) demonstrated skills, preferably quantitative, to link his or her own area of expertise to the study of larger, biotic and abiotic systems; (3) proven ability to develop substantial intellectual links between ecology and other related disciplines; and (4) a well-established, extramurally funded, ongoing research program. We seek a candidate who has the capacity to work well with others and an interest in helping to build a powerful multidisciplinary, multi-institutional academic group in ecology, evolution, and conservation biology.

CEI is a multidisciplinary, multi-school organization at Columbia that brings together the biological, physical, and social sciences to galvanize research efforts on a variety of pressing global environmental issues that require a broad range of theory and skill. CEI catalyzes intellectual activities in the areas of climate, geology, chemistry, biology, economics, political science, and anthropology, with the aim of gaining greater understanding of how the Earth works and how human activities are affecting the functioning of Earth systems. Additional information may be found at Web site: http://www.earthinstitute.columbia.edu/.

CERC is a five-institution consortium of Columbia University, the American Museum of Natural History. The New York Botanical Garden, the Wildlife Conservation Society, and Wildlife Preservation Trust International, whose principal goal is to educate, train, and do research in ecology, evolution, and conservation biology. CERC currently offers an undergraduate major in Environmental Biology, a Ph.D. in Ecology and Evolutionary Biology, a Certificate in Conservation Biology, and will launch two Master's programs in the Fall of '99. Additional information may be found at Web site: http://www.columbia.edu/cu/cerc/.

Applications will be reviewed beginning immediately and continue until the position is filled. Qualified applicants should apply by sending a curriculum vitae, and a letter of intent setting forth a research and teaching agenda (of no more than 2 pages) to:

> Senior Ecologist Search Committee Columbia Earth Institute 535 W. 116th Street, MC 4335 New York, NY 10027

Columbia University is an equal opportunity/affirmative action employer and encourages applications from women and minority candidates.

HOWARD HUGHES HMI MEDICAL INSTITUTE

The Howard Hughes Medical Institute conducts biomedical research in the areas of cell biology, genetics, immunology, neuroscience and structural biology at over seventy locations around the United States. HHMI regularly has positions open for research and administrative personnel.

Laboratory Positions:

- Postdoctoral Fellowships
- Research Specialists/
- Technicians
- Research Secretaries

Administrative Positions:

Managers

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GLADSTONE INSTITUTE OF VIROLOGY AND IMMUNOLOGY

UNIVERSITY OF CALIFORNIA SAN FRANCISCO

M.D. and/or Ph.D. scientists with demonstrated research accomplishments in the field of immunology with an interest in HIV biology are invited to apply for a faculty position at the Assistant, Associate, or full Investigator level within the Gladstone Institutes, with comparable faculty appointment at UCSF. The successful candidate will receive salary and research support from the Gladstone Institutes and also will have a unique opportunity to develop a program focusing on the immune response to HIV infection, vaccine development, or immunopathogenesis. Please submit a curriculum vitae and the names of three references to:

Chair, Immunologist Search Committee Gladstone Institute of Virology and Immunology UCSF, P.O. Box 419100 San Francisco, California 94141-9100.

On the internet: http://gladstone.ucsf.edu

The Gladstone Institutes and UCSF are affirmative action/equal opportunity employers. Gladstone and the University undertake affirmative action to assure equal employment opportunity for underutilized minorities and women, for persons with disabilities, and for Vietnamera veterans and special disabled veterans.

LONG TERM COLLABORATIVE RESEARCH POSITION

A position is available immediately for a supporting research scientist in the Laboratory of Molecular and Developmental Biology in the National Eye Institute, National Institutes of Health. This position involves collaborative experimentation on the various projects within the laboratory, including research on novel mechanisms for introducing subtle mutations into the mouse genome, and studying the function of alpha crystallin/small heat shock proteins using gene knockout and transgenic mice. This is intended to be a long term appointment and the chosen individual will have a major role in maintaining research continuity within the laboratory. The applicant must be a US citizen or permanent resident, have a PH.D and/or M.D. degree, and have previous experience in molecular biology, cell biology, tissue culture and/or biochemistry. The researcher will have the opportunity to attend national scientific meetings to present research and keep abreast of latest scientific developments. Salary ranges from \$58,000 to \$89,000 depending upon previous postdoctoral experience and education. The position is indefinitely renewable depending on mutual agreement. Please send curriculum vitae, bibliography, and names of three references to: Dr. Eric Wawrousek, Laboratory of Molecular and Developmental Biology, NEI, NIH, 6 Center Drive - MSC 2730, Building 6, Room 218, Bethesda, MD 20892-2730. Tel: (301) 496-8841; Fax: (301) 402-3603; e-mail: ericw@helix.nih.gov. NIH IS AN EQUAL OPPORTUNITY EMPLOYER

Genome Systems, Inc., a wholly owned subsidiary of Incyte Pharmaceuticals, Inc., is a leader in providing genetic engineering products, reagents and services for the general scientific community.

Group Leader - Mapping This senior level management position will be responsible for operation of the Mapping, Fingerprinting, and Oligo Synthesis groups. This position's primary task will be to define, implement, and monitor QA/QC measures. Strong strategic planning skills and trouble-shooting ability a plus. This position will be the contact person for interactions with other Incyte Pharmaceutical organizations for the group. The candidate will possess either a Ph.D. with 2 - 5 years experience or MS with 5 years industry experience. High level of scientific knowledge and communication skills required. Strong management experience preferred.

If you recognize these qualities in yourself, we want to hear from you. We offer competitive salaries, an outstanding benefits package and significant opportunities for professional growth. Mail/fax your resume with cover letter specifying position to Human Resources Dept., Genome Systems, Inc., Reference: Job #GS0504, 4633 World Parkway Circle, St. Louis, MO 63134 FAX (314) 506-6421, No phone calls please. An Equal Opportunity Employer, M/F/V/D



NRC-CNRC

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You can make a difference at NRC!

Research In Tumor Antigen Discovery Institute for Biological Sciences (IBS) Ottawa, Ontario

Applications are invited from immunologists, molecular biologists and bioanalytical mass spectrometrists to join our established Immunochemistry Program in the Institute for Biological Sciences of the National Research Council (NRC) of Canada. NRC is Canada's principal science and engineering R&D organization. The research activities of the Institute for Biological Sciences' Immunochemistry Program are directed towards molecular level studies of the pathogenesis of infectious diseases and other disease states. The Program brings together a large multi-disciplinary team with a focus on the design of novel glycoconjugate-based vaccines, diagnostics and immunotherapeutics reagents. Group activities include the study of bacterial pathogenesis, cellular immunology, vaccine design and recombinant novel antibody research. Our research team collaborates with major research centres around the world and has strong interactions with industrial partners.

The following opportunities are currently available at the Institute for Biological Sciences (IBS) in our tumor antigen discovery program. This is a collaborative project with a major vaccine development company aimed at the identification and characterization of tumor-associated antigens for use in active immunotherapy against specific cancer types. English is essential.

Research Associate/Officer, Tumor Immunology

Working with the Institute's Cellular Immunology team, this senior researcher will design novel methods to identify specific peptide epitopes from prostate tumors. You must possess a Ph.D. in immunology or biological sciences with a strong record of research in tumor immunology.

Research Associate, Bioanalytical Mass Spectrometry

As a member of the Institute's Bioanalytical Mass Spectrometry (MS) team, you will design and exploit nano electrospray MS-based strategies for the identification and characterization of novel tumor-associated antigens and oncoproteins. You must possess a Ph.D. in analytical chemistry, biochemistry or immunology, with experience in affinity purification methods for the isolation of MHC-peptide complexes, and knowledge of protein separtion techniques such as gel electrophoresis.

Research Associate, Molecular Biology

As a member of the Institute's Antibody Engineering team, you will generate phage antibody libraries from the antibody V-genes of immunized animals, pan these libraries for antibody fragments that recognize tumor-associated antigens and characterize selected antibodies with respect to tumor-binding specificity. You must possess a Ph.D. in biochemistry, immunology or molecular biology and experience in immunohistochemical and protein engineering techniques.

NRC offers excellent research facilities and technical support, and the opportunity to work within a large focussed group having varied scientific backgrounds. NRC offers competitive salary, benefits programs and compensation for relocation expenses.

As an employer who values diversity in its workforce, we encourage candidates to self identify as members of the following designated groups: women, visible minorities, Aboriginal peoples and persons with disabilities.

To explore one of these positions, please submit a detailed curriculum vitae with salary requirements and date of availability electronically to: **www.nrc.ca/careers**; **reference number 65-98-51** before April 23, 1999.

We thank all those who apply and advise that only those selected for further consideration will be contacted.

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Postdoctoral (MD/PhD/DVM) Research Training in Emerging and Reemerging Infectious Diseases The University of Texas Medical Branch at Galveston

The NIH-supported program offers multi-disciplinary training opportunities in the epidemiology, immunology, structural biologyand pathogenesis of emerging infections: viral infections (T Chonmaitree, MW Cloyd, R Garofalo, SM Lemon, WA O'Brien, J Patel, NJ Roberts Jr, C Shih); tropical viral infections (JF Aronson, ADT Barrett, CF Fulhorst, RE Shope, RB Tesh, SC Weaver); bacterial infections (A Chopra, P Ernst, CW Houston, GR Klimpel, DW Niesel, JW Peterson, V Reyes, DH Walker); parasitic infections (B Doughty, L Soong, JM Vinetz); vector biology(GC Lanzaro)

Further program and faculty contact information is provided at: http://stem.utmb.edu/id/emerg-id.htm

or contact: Norbert J. Roberts, Jr., Program Director UTMB, Division of Infectious Diseases 301 University Blvd. Galveston, TX 77555-0835 Tel: 409-747-0236; Fax: 409-772-6527 E-mail: nroberts@utmb.edu

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Pathology Chair UCI

University of California, Irvine invites application and nominations for the Chair of the Department of Pathology. We are seeking an outstanding individual with (I) an active, internationally-recognized research program and (II) the proven leadership and personal skills to direct a research-oriented department with important educational and clinical responsibilities in the College of Medicine and at three teaching hospitals. The new chair will have the resources to expand the research, educational, and clinical missions of the department. Applications and nominations should be sent to:

Alan Barbour, M.D., Chair, Pathology Chair Search Committee, Department of Microbiology & Molecular Genetics, University of California, Irvine, CA 92697-4025.

E-mail: abarbour@uci.edu. The University of California is an Equal

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SOUTHERN RESEARCH

SENIOR LEVEL POSITIONS IN BASIC RESEARCH FOR BIOLOGICAL SCIENTISTS Southern Research Institute Birmingham, AL

The Drug Discovery Division of Southern Research Institute invites applications from senior level biological scientists with interests in basic research with the eventual goal of drug discovery for the treatment of cancer or infectious diseases. We are particularly interested in attracting scientists with outstanding research programs and a desire to join a dynamic organization that takes an interdisciplinary approach to converting basic research into new FDA-approved drugs.

Applicants will be expected to obtain grant-based funding for their research investigations, though transition funding and technical support will be available if appropriate. Applicants with an ongoing internationally recognized program may be considered for one of two endowed chair positions that are currently open.

Future Institute goals include establishment of a subsidiary drug discovery company committed to anticancer and anti-infectives development, with the active participation of Institute investigators. Consequently, the positions offer the opportunity to participate in this venture from an early stage, and could result in future funding derived from outside investment capital, in addition to grant-based support.

The Division performs over \$6 million of NIHfunded basic research aimed at target identification and the discovery of novel pharmaceutical agents for the treatment of cancer, viral diseases, bacterial diseases, cardiovascular diseases, and for prevention of or relief from drug addiction. Areas of specialty include: cancer biology, purine and pyrimidine and alkylating agent biochemistry and pharmacology, retinoid biochemistry, protein crystallography, organic synthesis, and mycobacteriology. Southern Research Institute has a successful record of development of FDA-approved drugs derived from its multidisciplinary research programs

Southern Research Institute, a not-for-profit research organization, has revenues of approximately \$50 million, and employs approximately 600 pro fessional, technical, and support personnel. As part of the large biomedical research community in Birmingham, Alabama, we are committed to providing a stimulating and rewarding work environment. Close proximity to the University of Alabama at Birmingham allows for interactions with members of the UAB basic science departments, Comprehensive Cancer Center, Cell Matrix and Adhesion Center, Center for AIDS Research, and Center for Mac romolecular Crystallography. Birmingham has a high standard of living afforded by a moderate climate, beautiful, wooded terrain, outstanding residential communities and schools, world-class healthcare, below average cost of living, and a vibrant arts and entertainment scene. Southern Research Institute offers an excellent compensation and benefits package.

Application letters, accompanied by a curriculum vitae, names and addresses of three references, and a summary of current research activities and support should be sent to Dr. John A. Secrist III, Vice President, Drug Discovery Division, Southern Research Institute, P.O. Box 55305, Birmingham, AL 35255-5305.

Preliminary, informal and confidential inquiries are also welcomed and can be directed to Dr. Secrist by telephone (205-581-2442) or by e-mail (secrist@sri.org), or Dr. William Parker (parker@sri.org), Dr. Brahma Sani (sani@sri.org), Dr. Francis Kern (kern@sri.org), Dr. William Barrow (barroww@sri.org) or Dr. Robert Struck (truck@sri.org).

Applied Biotechnology

Our mission... DuPont Pharmaceuticals will be the most exciting Company to work for on the planet. Ideas, oustanding performance and the growth and caring of our people will be at the center of our value system. We will be a top-tier Company driven with a powerful R&D engine through customerdriven marketing innovation. The following opportunities are available at our facilities in Wilmington, DE:

Associate/Staff Scientist

We are seeking a biologist with a BS/MS degree and a minimum of 2 years experience in the pharmaceutical/biotechnology industry or in an academic laboratory. The candidate should have expertise in general eukaryotic cell culture techniques with emphasis on recombinant protein production at the plate, flask, and preferably bioreactor scale. Familiarity with multiple protein expression systems/scale-up is desirable. Code: SR/S399

Staff Scientist

A candidate is sought with expertise in the processing and handling of human blood products in support of ongoing protein purification projects. The successful candidate will have experience with a range of biochemical techniques, extensive experience with the handling of blood products and a broad knowledge of biochemistry. Experience with protein purification and/or GMP is desirable. A BS/MS degree in biochemistry or related field and 1-3 years experience is necessary. Code: RW/S399-1

Staff Scientists

Candidates are sought with expertise in protein purification and characterization. The successful candidates will have experience with a range of biochemical techniques, extensive experience in protein purification and a broad knowledge of protein chemistry. Experience with scale-up, GMP or analytical methods is desirable. A BS/MS degree in biochemistry or related field and 1-3 years experience is necessary. Code: RW/S399-2

Associate Scientist/Staff Scientist

The qualified applicant will have a strong background in fluorescence-based DNA sequencing technology, DNA sequence analysis, DNA sequence editing and assembly, and a working knowledge of molecular biology. The successful candidate will be part of the core DNA sequencing group and share responsibility for the set up and operation of various automated DNA sequencing machines. The individual is expected to interact with the various therapeutic areas by providing sequencing expertise to enhance ongoing research. Good communication (oral and written) and interpersonal skills are required to effectively perform this job. BA/BS in Molecular Biology or a related field is required with 1-3 years of experience. Code: KA/S399

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Student Training Programs

College

• Summer Internship Program in Biomedical Research

Postbaccalaureate

- Postbaccalaureate Intramural Research Training Award (IRTA) for recent college graduates who plan to apply for graduate or medical school
- Technical IRTA for individuals with a bachelor's or master's degree who aspire to careers as research support professionals

Graduate

- Summer Internship Program in Biomedical Research
- Predoctoral IRTA for students in doctoral programs
- Interim or Year-Off IRTA for graduate students who desire an interim or year-off research experience
- NIH/George Washington University Graduate Program in Genetics
- NIH/University of Maryland Predoctoral Visiting Fellow program
- Technical IRTA for individuals with a bachelor's or master's degree who aspire to careers as research support professionals

Medical and Dental School

- Summer Research Fellowship Program for first and second year medical and dental students
- Clinical Electives Program clinical rotations for third and fourth year medical and dental students
- Interim or Year-Off IRTA for medical students who desire an interim or year-off research experience
- Clinical Research Training Program for medical and dental students who have completed their clinical rotations

Postdoctoral Fellows Program

The focus of this program is on biomedical laboratory research. It is designed to provide advanced research training to doctoral level scientists who are at the beginning stages of their research careers.

Clinical Fellows Program

This program allows physicians and dentists the opportunity to combine subspecialty and advanced residency training with biomedical research training in a variety of disciplines. The first year is spent engaged in clinical rotations on wards at the NIH. Certain subspecialty programs utilize clinical opportunities at affiliated hospitals in the Washington, D.C. area. In the second and optional third year, the fellow is trained in basic and clinical research and subspecialty training requirements are completed as appropriate.

Tenure-Track Program

The Tenure -Track program is intended to provide a uniform and equitable mechanism for identifying and promoting outstanding scientists to the ranks of permanent intramural researchers at the NIH. The goal of the program is to provide the necessary resources and encouragement to tenure-track scientists, thus providing them an opportunity to demonstrate their creativity and productivity as independent investigators.



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Malcom has been in the thick of efforts to attract women and individuals from underrepresented minority groups to careers in science and engineering. AAAS programs begin at the pre-kindergarten level and extend through the graduate and postdoctoral stages of training.

So where does much of the problem lie?

Malcom is concerned about assuring an adequate flow of wellqualified students through the educational system—tomorrow's scientists who will populate biopharmaceutical workplaces internationally. Concerns involve both the number of women and underrepresented minorities who choose science as a career, and the adequacy of their preparation.

Study after study has shown that small proportions of female and minority students take advanced science courses in high school, and pursue undergraduate majors in science or engineering. A 1998 AAAS report raised another red flag. It found that the number of first-year graduate enrollments of African Americans in science and engineering fields dropped more than 20 percent between 1996–97. The number of Hispanic Americans entering graduate studies fell by 16.2 percent. The study surveyed graduate enrollments at 93 major research universities.

"If this is real, and not just a blip, there's a problem ahead," Malcom said. "Students

entering graduate school today will be the leadership of the next generation. With demographic shifts currently underway, society will be more diverse in the future. Yet there may not be adequate numbers of minority scientists to make the work force reflective of the larger world."

Malcom pointed out that the preparation issue relates to everyone, not just underrepresented minorities or women. It involves both technical and nontechnical skills. First and foremost, of course, are excellent scientific skills. But interpersonal and communication skills also are essential, and will grow in importance as work forces become more international and diverse. In particular, Malcom cited the importance of fluency in other languages; the ability to write clearly and speak effectively before groups of people; and the negotiating and influencing skills needed for being an effective member of a diverse team.

Recent challenges to affirmative action programs in colleges and universities may make it more difficult for students to acquire such skills, Malcom pointed out. "It presents a problem, of course, for the minority student who may be denied an opportunity for admission. But it also presents a problem for the majority student who may be denied an opportunity to interact with a diverse population in an educational setting. This interaction can foster greater understanding of issues of culture, language, and customs. Students can then take those kinds of skills, that kind of understanding into the workplace."

Industry can play a major role in improving both the supply and preparation of students, Malcom said. She sees a need for scientists to begin mentoring underrepresented minority students at a much earlier age. Mentoring helps students understand that there are a wide range of opportunities for employment in science and engineering. It also provides role models who are living proof that excellent careers await underrepresented minorities with the right preparation.

LEVON O. PARKER, NATIONAL INSTITUTES OF HEALTH: ADVICE TO MINORITY STUDENTS ON A CAREER IN BIOMEDICAL RESEARCH

Get research experience in a summer internship.

Few pieces of career advice are heard more often. Research experience in high school or college can be especially important for minority students, according to Levon O. Parker. He directs the Summer Program in the Neurological Sciences at the National Institute of Neurological Disorders and Stroke. It is among a number of programs, spread out among the NIH institutes, that bring 900–1,100 students to the Bethesda campus each summer.

> "It's a golden opportunity," Parker said, noting that an internship allows students to participate in research projects and have contact with mentors and role models who can encourage research careers for minority students. Among the other benefits: contact with the world where leading scientists work; understanding of what goes on in a research laboratory; and salary ranging from \$800 per month for high school students to \$2,000 per month for graduate or medical students.

> Parker has seen summer research experience enhance the credentials of scores of students over the years. "We've had a number of individuals who came into our program as high school students and now are in Ph.D. or M.D. programs at some of the most

prestigious, research-intensive universities in the country," he noted.

In addition to laboratory work, students participate in seminars held by their own labs; attend institute-wide lectures and symposia dealing with the newest advances in health research; and prepare and deliver a poster on their research.

Parker advises students applying for any summer research program to include a strong cover letter describing their interest in health-related research, future academic plans, and reasons for seeking the internship. Be sure to include information on previous research experience, awards, and honors, and attach copies of other poster sessions, abstracts, or papers.

ALLISON ROSENBERG, NATIONAL MEDAL OF TECHNOLOGY PROGRAM: SEEKING MORE ROLLS MODELS FOR TOMORROW'S INNOVATORS

Everyone agrees on the importance of role models in attracting young people to science careers—especially girls and members of underrepresented minority groups.

The Technology Administration of the U.S. Department of Commerce, which administers the National Medal of Technology, has begun an outreach program to encourage more nominations of women and minority scientists to receive the nation's highest award for technological innovation. Recipients can be an inspiration for the next generation of innovators.

"We're encouraging scientists, especially those in the biopharmaceutical industry, to nominate female and underrepresented minority candidates," Allison Rosenberg said. Rosenberg directs the NMT program. She noted that three women and two African Americans have been among 115 individuals or teams of individuals who have received the award since 1985.

The effort includes contacts with women-in-science groups, historically black colleges and universities, and a public-awareness advertising campaign.

For further valuable career leatures, go to www.scienceonline.org, click on SCIENCE Careers, then click on Advice and Perspectives.

With demographic shifts currently underway, society will be more diverse in the future.

Trudeau Institute has Postdoctoral Positions in Immunology:

Dr. Karen Aguirre — 1) mechanisms of immunity to infectious disease in the central nervous system in the mouse model, 2) the identification of T cell-stimulatory antigens of the fungal pathogen Cryptococcus neoformans.

Dr. Marcia Blackman — 1) T cell reactivity during latent infection with MHV-68, a murine gammaherpes virus, 2) the synergistic effect of bacterial superantigen exposure on pulmonary immunopathology during influenza virus infection and 3) the effect of bacterial superantigens on pre-established virus-specific T cell memory. Experience in cellular immunology, virology, molecular biology and/or in vivo murine models is desirable.

Dr. Richard Dutton — The role of Tc1 and Tc2 CD8 T cells and the generation and maintenance of CD8 T cells.

Dr. Allen Harmsen — Immunopathogenesis of influenza, Pneumocystis carinii and other infectious diseases of the lung. Studies include determination of mechanisms of resistance and immune-mediated damage to the lung.

Dr. Frances Lund — 1) the molecular role of ectoenzymes such as coreceptor CD38 in immune responses and 2) the role of regulatory B lymphocytes in pulmonary infectious diseases. Experience in cellular immunology, molecular biology and/or signaling is desirable.

Dr. Troy Randall — 1) lymphocyte biology studying the role of CD40 and other novel TNFR family members in the regulation of lymphocyte effector and memory functions (Immunity 8:733-742) and 2) hematopoietic stem cell biology using the cre/lox system to mark stem cell populations and to study the lifespan, turnover, and lineage committment of stem cells in vivo.

Dr. Susan Swain — 1) CD4 T cell function in influenza and 2) development of CD4 T cell immunodeficiency.

Trudeau Institute is a well-financed, notfor-profit, basic biomedical research institute with an active faculty, and seminar and visiting scientist programs. Operating in modern facilities, with in-house animal production, and an international reputation for excellence, it is located in an upstate New York resort community in the Adirondack Mountains, over-looking mountain vistas and a private beach on Saranac Lake. Competitive salary and fringe benefits are offered with the possibility of on-site institute housing.

Please send a curriculum vitae, indicating three references, and a letter describing research interests to Sheila Kent, Assistant to the Chief Administrative Officer, P.O. Box 59, Saranac Lake, NY 12983. Further information is available at www.trudeauinstitute.org, or by written or telephone request.

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Associate Director, Process Development Marietta, PA

The selected individual will direct the development of processes that support the production and clinical evaluation of new vaccine candidates. This includes the production of viral vaccines and recombinant and natively expressed virus-like particles and proteins. The candidate's leadership skills will help us enhance understanding of the interaction between viruses and the process being developed. We require a Ph.D. in Biochemical Engineering, Microbiology or a related discipline with academic or work experience in virology. At least eight years of biotechnology or pharmaceutical experience with expertise in the development and scale-up of biological production processes, along with multiple project management skills, a familiarity with Good Manufacturing Practices and regulatory requirements is essential, as is the ability to prepare documents for governmental regulatory submissions and make recommendations on direction based upon data. *Job Code E2*

Please forward your resume, for the above position, with salary requirements, referencing job code, to: Wyeth-Ayerst, P.O. Box 304, Marietta, PA 17547; Fax in fine mode to: (717) 426-4501.

Behavioral Pharmacology - Research Scientist CNS Disorders Princeton, NJ

We are seeking a Research Scientist to conduct studies using basic and complex operant procedures. The ideal individual must possess a BS or MS with a minimum of 5 years of experience in behavioral pharmacology including basic and complex operant procedures. Additionally, strong analytical, computer and communication skills are required. Experience with stereotaxic surgery is preferred. Job Code OPSCI-4848

Molecular Biology - Postdoctoral Fellow CNS Disorders Princeton, NJ

We are seeking a postdoctoral fellow to investigate mechanisms and regulation of G-protein subunit signal transduction, primarily G β and G γ as well as RGS proteins. Expertise in molecular biology, protein domain mapping, signal transduction systems, mammalian cell transient transfections and basic biochemical skills are required. Additionally, a strong background in localization techniques, protein interaction techniques, yeast two-hybrid and knowledge of neurobiology are highly desirable. *Job Code OPSCI-4309*

Purification Scientist/Process Engineer Malvern, PA

We are seeking a new member for our Process Development and Manufacturing Department in the DNA Vaccine Group. Primary responsibility will include supporting the development and scale-up processes for the purification of DNA plasmid vaccines. This individual should have a PhD or MS in Chemical/ Biochemical Engineering or Biology/Biochemistry. Also required are at least 3 years experience in large-scale downstream processing of biologicals; experience in bioprocess engineering at the production and/or pilot scale; background in engineering and biochemistry or molecular biology; and good communication skills. Job Code OPSCI-4323

Please forward your resume, for the above three positions, with salary requirements, referencing appropriate job code, to: **Wyeth-Ayerst, P.O. Box 7886, Philadelphia, PA 19101-7886. Fax in fine mode to: (610) 989-4854. E-mail: jobs@RAMAIL1.wyeth.com** (ASCII format, no attachments, subject: resume).

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Research

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St. Jude Children's Research Hospital, located in Memphis. Tennessee, is one of the world's premier research centers for research and treatment of catastrophic diseases in children, primarily pediatric cancers. St. Jude is a learning environment offering professional growth and diversity for the research technologist and postdoctoral fellow where biomedical education extends beyond the laboratory and clinical experience. Workshops, seminars and lectures are regularly presented by both the St. Jude faculty and distinguished visiting investigators. Our non-faculty research staff career ladder provides several levels of promotion and financial compensation for talented and motivated technologists to advance in their field. Experienced technologists may assist the principal investigator by performing research experiments. developing new procedures, participating in the publication of research results, managing laboratory operations and training laboratory personnel. Opportunities are available in a wide variety of programs.

For additional information, please refer to our website: www.stjude.org

Candidates may also call our Job Hotline at: 800-545-6292

he Many Faces

Resumes may be sent to: St. Jude Children's Research Hospital Human Resources Dept. SC326 332 N. Lauderdale, Memphis, TN 38105 Fax: 901-495-3123 E-mail: human.resources@stjude.org

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CELLULAR IMMUNOLOGIST

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DYNAVAX TECHNOLOGIES

RESEARCH POSITIONS

The University of Mississippi Medical Center Department of Surgery, Division of Otolaryngology, invites applications for two full-time tenure-tract positions in research at the assistant or associate professor level. Applicants in all areas of otolaryngology research are encouraged to apply. Preference will be given to candidates with expertise in sensory systems physiology and tumor biology. Training in molecular or cellular biology techniques is desirable. Candidates must have the potential for developing a funded, independent research program and participate in resident research and teaching. A curriculum vitae, statement of research goals and names of three references should be sent to Vinod K. Anand, M.D., Professor and Chief, Division of Otolaryngology, University of Mississippi Medical Center, 2500 North State Street, Jackson, MS 39216-4505.

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COLLABORATIVE RESEARCH POSITION

A position is available immediately for a collaborative research scientist in the Immunopathology Section, Laboratory of Immunology in the National Eye Institute, National Institutes of Health, Bethesda, MD. This position involves collaborative experimentation on the various projects within the laboratory including several ocular infectious and non-infectious inflammatory models and ocular tissues with various human disorders. The chosen individual will have a major role in maintaining research continuity within the laboratory, will have the possibility to carry on an independent research project, attend scientific meetings and training courses to keep abreast of latest scientific developments. The applicant must be a US citizen or permanent resident, have a Ph.D. or M.D. degree, and previous experience in molecular biology, cell immunology, ocular pathology, immunohistochemistry, microsurgery, and knowledge of computers and sophisticated scientific equipment usage. This is a renewable position with an initial 5 year appointment. Salary ranges from \$58, 000 to \$89,000 depending upon previous experience and education. Please send curriculum vitae, bibliography, and names of three references to the following address by July 15, 1999:

Chi-Chao Chan, M.D., Laboratory of Immunology, NEI, NIH, Bldg. 10, Rm. 10N103, 10 Center Drive - MSC 1857, Bethesda, MD 20892-1857. Fax: (301) 402-8664.

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Research Scientist

The successful applicant will be responsible for designing and implementing new technologies that will accelerate the drug discovery process. This position is expected to provide leadership in the evaluation and development of highly integrated automation systems and new assay technologies that will be required to design ultra-high-throughput screens for molecular targets identified through genomics research. Experience designing and performing biochemical and cellbased high-throughput screens is required. Candidates should possess extensive informatics experience for data management and pattern recognition. Applicants must be committed to HTS approaches for drug discovery, have a strong desire to be at the forefront of ultra-HTS technology development, and have the ability to contribute scientifically in many different therapeutic areas. This position requires excellent verbal/written communication skills and the ability to work with a diverse group of collaborators.

Ph.D. in Biochemistry, Cell Biology, Molecular Pharmacology, Molecular Biology, Biomedical Engineering, or related science with at least 2 years of experience developing and performing high-throughput screens. A broad knowledge of biochemistry, enzymology, and cell biology is required. **POSITION #990055**

Research Biochemists

As key members of the HTS team, the successful candidates will be responsible for the design, development, validation, automation, and performance of highthroughput screens to discover novel therapeutic agents in any of the Corporate discovery research areas. Familiarity with various assay formats such as scintillation proximity/radioisotopic, fluorescent, cell-based, and immunoassay is required. The selected candidate will possess contemporary skills in molecular pharmacology and cell biology, and sensor technologies that are required to design and implement ultra-high-throughput screens in support of our genomics initiative. Strong informatics skills for data file management are required. Hands-on experience with high-throughput assay design, development, and performance is an absolute requirement. The qualified candidate will have excellent interpersonal and communication skills, and will be an independent worker who has a strong desire to participate enthusiastically in ultra-HTS approaches to drug discovery

MS degree in Biochemistry, Molecular Pharmacology, Cell Biology, Molecular Biology, or a related science, or BS degree with 2 to 3 years of HTS experience. The individual must be competent in biochemical assays, cell biology, molecular biology, robotic HTS equipment, and data analysis/management. POSITION #990056

Pharmacia & Upjohn offers a competitive salary and benefits. For confidential consideration, please send your resume, including Position #, to: Pharmacia & Upjohn, Staffing, 5003-24-0, 7000 Portage Road, Kalamazoo, MI 49001. FAX: 616-833-9655. Or you may e-mail your resume (no attachments, please) to: recruit@am.pnu.com. We are an equal opportunity employer with a commitment to workplace diversity.



DIRECTOR, LABORATORY ANIMAL RESEARCH CENTER

The Rockefeller University invites applications for the position of Director, Laboratory Animal Research Center (LARC). The successful applicant will provide leadership as the institutional veterinarian and director of a modern, diverse, AALAC accredited research resource.

Responsibilities include directing a research support staff of 40, maintaining accredited standards and the responsibility for the development and implementation of policies regarding the humane care and use of laboratory animals. The Director is a full voting member of the Institution Care and Use Committee. Additional responsibilities include budget planning and monitoring, acquisitions, facility space management and resource allocation, assisting research scientists with the development of animal models and techniques. The Director also manages a variety of research support core functions including a comprehensive transgenics program, gene targeting facility and an immunology core.

In addition to possessing excellent communication and managerial skills, the successful candidate's qualifications will include a DVM or VMD from an accredited school of veterinary medicine. Candidate must be ACLAM board-certified and be eligible for licensure to practice in the State of New York. The job requires experience in the development of research support programs, and a demonstrated ability to work effectively with faculty, academic administrators and affiliated constituencies. A thorough knowledge of advanced biomedical and biotechnological research techniques and methodologies is essential.



Salary is competitive and commensurate with qualifications and experience. Persons wishing to apply for this position should send a letter of interest, a current curriculum vitae and the names, address and phone numbers of three references to: **Professor Michel Nussenzweig, Co-chair, Search Committee, The Rockefeller University, 1230 York Avenue, c/o Box 125, New York, NY 10021.** AA/EOE.

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POSTDOCTORAL POSITION MAYO CLINIC ROCHESTER, MINNESOTA

A position is available for a postdoctoral fellow with an interest in the molecular mechanisms of cancer development in the Department of Pediatrics. Major emphasis will be on cell-cycle control and regulation of gene expression. Individuals with a strong background in biochemistry or molecular biology, and experience or interest in the use of knockout animals are encouraged to apply. Salary will be determined by the successful candidate's experience. There is also an attractive benefit package. Mayo Foundation is a non-profit physician lead clinical practice integrated with education and research in a unified multi-campus system. Applications including a curriculum vitae, summary of past accomplishments and the names of three references should be sent to:

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

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RESEARCH SCIENTISTS

Amgen is looking for molecular biologists to join a team that is focused on the discovery and evaluation of therapeutic target candidates using cutting-edge, high-throughput technologies. Successful candidates will have a record of using novel approaches to identify therapeutic proteins or drug targets, as demonstrated by relevant publications and/or patents. Although therapeutic area is less of a concern than the right molecular strengths, the current focus of the department is on metabolic and endocrine disorders and neurodegenerative diseases.

Positions are available from entry to senior levels and require a Ph.D. in Molecular Biology or related discipline with appropriate years of experience in a drug discovery environment. Experience in applied high-throughput biology, such as gene expression analysis using DNA microarrays, expression cloning or drug screening is desired. Excellent leadership and communication skills are essential and some supervisory experience is preferred.

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Advertisement for Tenure Track Position

The Laboratory of Immune Cell Biology (LICB) in the Division of Basic Sciences (DBS), National Cancer Institute (NCI), National Institutes of Health (NIH), is recruiting for a tenure track scientist to establish an independent research program in the area of molecular immunology and cell biology. The Laboratory has an active research environment and includes groups currently focusing on the molecular mechanisms of apoptosis, T cell signaling and development, and the process and consequences of ubiquitination. Extensive collaborative possibilities exist both within and outside the Laboratory at NIH. Applicants should have an M.D., M.D./Ph.D., or Ph.D. and strong research credentials with a substantial number of quality, peerreviewed published reports and invited presentations at national and international conferences. Applications must include CV and bibliography, letter of interest stating research goals, a two-page outline of proposed research, and three letters of reference. The completed application should be mailed to: Ms. Carolyn Darden, Building 10, Room 1B40, 31 Center Drive, MSC 1152, Bethesda, MD 20892-2440 or faxed to 301-480-1550 and received by July 1, 1999.

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Successful candidate should have a Ph.D. and/or M.D. with proven ability to direct an immunological monitoring laboratory that will serve as a central collection facility and repository for clinical samples, including tumors, lymph nodes, peripheral blood (cells and serum) and RNA/DNA extracted from those specimens. Applicants should have extensive experience in the preparation of cell products for infusion into patients enrolled on immunotherapy trials. Candidate will, in collaboration with other Laboratory Chiefs and clinical researchers, provide consultation for protocol design and supervise the assessment of immunological endpoints including mAb staining and multi-parameter flow cytometry analysis, cell proliferation, cytotoxicity, limiting dilution analysis and cytokine production.

Competitive compensation package available. Applications, which should include curriculum vitae and letter stating research goals, should be sent to: Walter J. Urba, M.D., Ph.D., Director, Franz Cancer Research Center, Earle A. Chiles Research Institute Providence Portland Medical Center, 4805 NE Glisan Street, 5F40, Portland, OR 97213. Fax: (503) 215-6841. EOE.

Providence Health System



CORPORATION

VIRXSYS is a start-up biotechnology company located at Gaithersburg, Maryland. The company has two issued patents of utilizing novel vectors to combat HIV and other infectious diseases. Positions for all scientific levels are available: Ph.D with postdoctoral experience, post-doctoral position, and MS/ BS technician positions. The company is recruiting highly motivated scientists to join the team to work on the following areas.

- Vector development and improvement: You will join the team to modify the vectors to improve their anti-HIV activity. New vectors will be developed based upon the company's proprietary platform technology for treatment of other infectious diseases in future. Experience in molecular biology and/or retrovirology is highly desired. Job code V1
- 2. Synthetic vector development: You will take the lead to test and develop synthetic vectors (lipids and or polymers) for transducing bone marrow cells. Experience on lipid formulation is desired. Job code V2
- 3. Immunotherapy: You will join the team to develop vectors that carry immunomodulators (such as cytokine genes) to boost patient's immunity against the infectious agents. Knowledge and experience on immunology is required. HIV experience is highly prefered. Job code V3
- 4. Cell Biology: You will develop stem cell therapy approaches to treat AIDS patients. Hematopoietic stem cell, mesenchymal stem cell and/or dendritic cell biology experence is highly desired. Job code V4
- 5. Animal modeling: You will utilize existing SCID mouse model and other animal models for testing new vector therapies to HIV. Experience in the handling of HIV is preferred. Job code V5
- 6. **Pharmacologist/Toxicologist:** You will coordinate the safety/toxicity testing of the vectors for clinical trials. Job code V6

Send your résumé and the names of three references to:





Postdoctoral Position

Applications are invited for a NIH-funded postdoctoral position, available 7/1/99. Studies will incorporate molecular, cellular, and biochemical approaches to study the biology of molecular chaperones that reside in the endoplasmic reticulum. Specific projects include 1) elucidating the mechanisms that control folding and assembly of nascent ER proteins and the role of molecular chaperones in these processes, and 2) identifying the signal transduction pathways that regulate the transcription of ER chaperones during normal and stress conditions.

Applicants should have a recent Ph.D. or M.D. with experience in protein biochemistry, cell biology, or molecular biology. Please forward your curriculum vitae, a statement of research interests and experience, and the names, addresses, and phone numbers of three references to: Linda M. Hendershot, Ph.D., Dept. of Tumor Cell Biology, St. Jude Children's Research Hospital, 332 N. Lauderdale, Memphis, TN 38105. SJCHR is an Equal Opportunity/Affirmative Action Employer

RESEARCH FELLOWSHIP POSITION

The Centers for Disease Control and Prevention is seeking qualified applicants for a Microbiologist position in the Immunology & Molecular Virology Section, Influenza Branch, Division of Viral & Rickettsial Diseases, National Center for Infectious Diseases. The successful candidate will be responsible for conceiving, organizing, performing and managing independent research projects investigating in human or animal systems: i) humoral and cellular immunity to influenza infection and vaccination, ii) the development and evaluation of improved techniques for the detection and evaluation of immunity to influenza.

Qualifications include: a Ph.D. with a minimum of 4 years post-doctoral experience in the field of immunology, microbiology or a closely related field. Experience in viral immunology or cellular immunology is preferred. Experience in influenza virus research is desirable but not essential.

The position will be an initial two-year Research Fellow appointment with the possibility for extensions. Annual salary range from \$57,381-\$74,594 depending on qualifications. Interested applicants should send their CV, indicating position of interest and names of three references (including current supervisor), by May 31, 1999 to: Ms. Janie L. Oddy, Human Resources Management Office, Centers for Disease Control & Prevention, 1600 Clifton Rd., NE (C-12), Atlanta, GA 30333. E-mail: jlo0@cdc.gov.



To Commemorate the Opening of the Tsukuba International Congress Center

Science Frontier Tsukuba 999 Challenging new frontiers of scientific and technical importance



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Scientific Program

<u>Opening Plenary</u> The Future of the Molecular Biosciences: Consequences of the Massive Parallel

Approach Hartmut Michel Director, Max-Planck-Institut für Biophysik, Germany

Susumu Tonegawa

Professor of Biology and Neuroscience, Massachusetts Institute of Technology Director, RIKEN-M.I.T. Neuroscience Research Center, USA

Plant Genome Research and Breeding Strategies for Sustainable Food Production in 21st Century

Gurdev S. Khush Principal Plant Breeder & Head of Plant Breeding, Genetics and Biochemistry Division, International Rice Research Institute, Philippines

<u>Sessions</u>

• Structural Biology Taking a Hard Look at the Essence of Life Phenomena on the Basis of Molecular Structures Chairperson: Susumu Nishimura, Banyu Pharmaceutical Co., Ltd., Japan

Brain Science

The Brain That Grows and Develops Chairperson: Masao Ito, The Institute of Physical and Chemical Research (RIKEN), Japan

Agricultural Science

Plant Genome Studies: the Challenges and Directions for the Next Century **Chairperson: Keiji Kainuma**, *Bio-Oriented* Technology Research Advancement Institution, Japan





Holding Atoms and Biomolecules with Laser Steven Chu Professor, Physics and Applied Physics, Stanford University, USA

Coordination of Science and Technology for Seismic Hazard Mitigati on in Urban Area

Hiroo Kanamori Professor, California Institute of Technology, USA

Future of Information System -Imparting to Machines the Human Capacity for Commonsense Reasoning Marvin Minsky

Marvin Minsky Professor, Massachusets Institute of Technology, USA

Materials Science
 Nanostructures: Breakthrough in Materials
 Science

Chairperson: Eilchi Maruyama, Angstrom Technology Partnership, Japan

• Earth Science The Role of Earth Science in the Coexistence of Nature and Man

Chairperson: Mizuho Ishida, National Research Institute for Earth Science and Disaster Prevention, Japan

• Information Science Computer and Internet for Science in the Next Century

Chairperson: Motoi Suwa, Electrotechnical Laboratory, AIST, MITI, Japan

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- Appointed as a postdoctoral fellow during the 1999 calendar year at an academic or non-academic research institution in the USA, including Parke-Davis (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 30, 1999

For application forms and more information, please contact:

Jerry L. Bryant, Ph.D., Director, Science Education Initiatives The College Fund, 8260 Willow Oaks Corporate Drive, P.O. Box 10444, Fairfax, VA 22031-4511 Phone: (703)205-3503 Fax: (703)205-3574 E-Mail: uncfpd@uncf.org Internet: www.uncf.org

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Enthusiastic, goal-oriented individuals needed to work in our Analytical and Pharmaceutical R&D departments. BS/MS or equivalent in Chemistry, Pharmacy, Chemical Engineering or other scientific discipline plus relevant experience required. Experience in an academic or industrial laboratory essential. Strong background in Physical and Analytical Chemistry with laboratory research and industrial formulation experience is preferred.

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Develop methods of analysis for new drugs and devise tests for assuring the potency and identity of bulk drugs, dosage forms as well as track drug stability.

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RESEARCH ASSOCIATE (Job #99-074B)

ANALYTICAL BIOCHEMISTRY – KIT DEVELOPMENT/TRANSGENIC PROTEIN ANALYSIS Pioneer's Protein Analysis Group is seeking an individual to join a team responsible for the analysis of proteins in transgenic plants. This individual will contribute to the group's success by developing and producing immunoassay based analytical kits in formats optimized for use by personnel at winter nursery locations, research stations and other locations outside of the central analysis laboratory. In addition, this individual will be involved in assessing new technologies for diagnostic kits and immunoassays and for making recommendations for application of these new technologies. Requirements include a B.S. in biological sciences or closely related field and 3-6 years of immunoassay or kit development and/or protein analysis experience. Experience with analysis of transgenic plants and statistical QC methods would be extremely useful.

RESEARCH MANAGER (Job #98-332B)

ANALYTICAL BIOCHEMISTRY – REGULATORY SCIENCE/TRANSGENE ANALYSIS Pioneer's Protein Analysis Group is seeking a candidate to manage the Regulatory Science/Assay Validation Group. This individual will work closely with Pioneer Regulatory Affairs Group to develop appropriate work study plans and to coordinate research activities in support of product registration/approval applications. Will have overall responsibility for regulatory studies including the conduct of study, interpretation, analysis, documentation, and reporting of results and will ensure GLP compliance of studies. The successful candidate will also interact with the Protein Analysis Group by contributing to the development of validation and statistical QC parameters and by developing and managing SOPs. We are seeking an individual with a Ph.D. in biological sciences or biotechnology plus at least 5-7 years appropriate research/supervisory experience including knowledge and implementation of GLP guidelines. Excellent working knowledge of immunoassay and protein analysis is also required. Working knowledge of nucleic acid analysis and transgenic plants useful.

RESEARCH MANAGER (Job #99-097B)

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

RESEARCH SCIENTIST (Job #99-080B)

APOMIXIS RESEARCH

We are seeking a highly motivated individual to join the Plant Reproductive Biology group. The successful candidate will conduct research and manage external collaborations to isolate or to genetically engineer genes responsible for apomixis in maize. Furthermore, the candidate will manage the effort required to integrate and to express these genes in maize. This position requires extensive expertise in plant reproductive biology and experience in molecular biology and gene cloning, as well as in genetic engineering. The candidate will be expected to develop a research program that builds on our extensive genomic database, as well as interacting closely with external collaborators worldwide and members of the Plant Reproductive Biology group. Candidates with post-doctoral experience in apomixis research and molecular biology are favored. This position requires a Ph.D. with two to three years relevant experience.



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RESEARCH

Research Scientist – Mass Spectrometry: Developing and conducting automated high-throughput LC-MS/MS characterization of proteins separated via proprietary 2-D gel and other methods, maintaining automated and analytical instrumentation (HPLC, autosampler, LC detectors, mass spectrometers), and keeping good laboratory records. Successful candidate has a Ph.D. in chemistry, biology or related field, expertise in LC-MS/MS (LCQ ion trap preferred), at least 1-2 years of postdoctoral experience and working knowledge of Windows NT and MS Office. Job code JL3991.

Research Scientist – Protein Chemist: Fractionating proteins in serum and tissue samples using chromatography (including affinity methods), centrifugal separations, other advanced technologies complementary to 2-D electrophoresis, and developing methods suitable for high-throughput automation. Successful candidate has a Ph.D. in protein chemistry or related field and at least 4 years' experience in protein fractionation. Experience with preparation of affinity media, use of commercial automated chromatography workstations, instrument development and Windows NT environments desirable. Job code LA 3991.

Research Scientist – Virologist: Developing methods and systems for the isolation and characterization of novel viruses using LSB's proprietary technology. Offers unique opportunity to routinely discover new viruses. Successful candidate has a Ph.D. in virology, biochemistry or molecular biology and at least 3 years' experience in a related field. Requires ability to interact closely with collaborators, mass spectrometrists and instrumentation developers. Job code NA3991.

Research Scientist – Manager, Protein Data Analyst Group: Supervising a group performing the statistical analysis, biological interpretation and reporting on results of proteomics research into selected pharmaceutical effects and disease states. Must integrate statistical models appropriate for routine data analysis, coordinating efforts with bioinformatics group. Successful candidate has a Ph.D. in biochemistry, molecular pharmacology or toxicology, at least 3 years' postdoctoral experience in a related field and strong statistical analysis skills. Job code SS3991.

Research Scientist – Senior Protein Data Analyst: Developing, testing and implementing new methods and analytical tools to interpret proteome data. Frequent interaction with scientists and data analysts in charge of proteomics projects. Successful candidate has a Ph.D. and strong background in statistics and bioinformatics. Previous experience in proteomics or genomics highly desirable. Job code SS3992.

SOFTWARE & BIOINFORMATICS

Database Developer / Manager: Involving the design, optimization, and maintenance of relational databases including Oracle RdB and MS SQLServer. Successful candidate has at least 4 years' working experience with large relational databases, programming and writing scripts. Bioinformatics knowledge and experience a plus. Job code JP3991.

Laboratory Automation Specialist (LabVIEW): Developing laboratory automation applications for large-scale protein separation and analysis through the design and programming of software applications to control various automated instruments. Successful candidate has at least 5 years of software development experience, a minimum 2 years' experience with LabVIEW and NT programming, and familiarity with CCD image data acquisition, IEEE488, multiple axis motor control, and bar codes. Job code LA3992.

Network / System Manager: Maintaining network of computers running Windows NT, Unix, and OpenVMS, system security and user support. Successful candidate will be expert in networks and management of NT workstations and servers with at least 3 years' working experience, be familiar with Unix and/or OpenVMS operating systems, firewalls and web servers and have experience in programming and writing scripts. Experience maintaining relational databases a plus. Job code JP3992.

Senior Software Developer: Developing client/server applications in a mixed environment of NT, Unix, and VMS machines. Successful candidate has broad experience programming in the MS NT environment and familiarity with network programming, WEB applications, windowing systems, C++, Visual Basic, Access, Corba, DCOM, Java, relational databases, OpenVMS and/or Unix operating systems. Job code JP3993.

LSB is a subsidiary of Biosource Technologies, Inc. The Company offers competitive benefits including a 401(k) plan with employer match and fully paid health, optical, dental, life and disability insurance, and encourages continuing advancement of its employees via a tuition cost sharing program. For immediate consideration, please send your résumé to personnel@lsbc.com (please specify job code) or Large Scale Biology Corporation, 9620 Medical Center Drive, Rockville, MD 20850. No faxes or phone calls please. EOE





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• Scientist - Embryonic Stem Cells (0799)

Optimize growth and differentiation of primate derived embryonic stem/germ cells, develop and optimize assays for monitoring ES cell differentiation into multiple lineages for cell and gene therapy applications. Requires a Ph.D. in a cell biology related discipline with 2 years experience in research/industry environment; strong background in developmental biology and gene regulation; technical expertise in tissue culture, immunocytochemistry and molecular biology techniques. Flow cytometry experience a plus. Experience with ES cells and/or cardiomyocyte differentiation/development highly desirable.

• Scientists - Cell Biology (0999 & 1398)

Establish, transfect and characterize human primary cell cultures for cell and gene therapy, initially focusing on T, hematopoietic, and dendritic cells. Requires a Ph.D. in a cell biology related discipline with minimum 2–4 years experience in research/industry environment. Demonstrated expertise in tissue culture, gene delivery, and immunology. Flow cytometry experience necessary; molecular biology expertise and experience with *in vivo* model desirable. Supervisory experience nece preferred.

Contact us at: Geron Corporation Attn: HR Dept. 230 Constitution Drive Menlo Park, CA 94025 www.geron.com FAX: 650/473-7750 E-mail: hr@geron.com





Director Research & Development

Reporting to the Vice-President, Medical, Scientific & Clinical Management, you will plan, direct and lead the CBS Research and Development Program. Since CBS assumed operation of Canada's national blood supply in September 1998, the Research and Development Program has been ranked as one of the organization's top priorities, and the research and development budget is expected to grow exponentially over the next 3 to 5 years. Key responsibilities will include the development and implementation of the research and development strategic plan by coordinating and directing research priorities in keeping with the mission and vision of the CBS, attracting and retaining recognized researchers, fostering research partnerships and exploiting outside funding opportunities.

We are seeking a scientist with widely recognized expertise in transfusion medicine research obtained through a PhD in Biology, Biochemistry or a related transfusion field, or an MD degree with specialty training in hematology/transfusion medicine. At least 6 to 10 years of related experience is also required.

Participation in an active research program is mandatory, as is leadership experience in a large research and development group. The Director, Research and Development, will be expected to obtain a university faculty appointment. The CBS Research and Development Program is national and applicants should be prepared to travel across Canada as required.

Strong communication skills in English are essential, and fluency in French is an asset.

Qualified applicants are invited to send their résumés, in confidence, quoting competition number CBS-55, to: Canadian Blood Services, Head Office, Human Resources, 1800 Alta Vista Drive, Ottawa, Ontario K1G 4J5. Fax: (613)739-2290

Canadian Blood Services is the not-for-profit charitable organization mandated to deliver safe, reliable blood services to Canadians and their healthcare systems.

We thank all applicants for their interest, but only those selected for an interview will be contacted. Candidates must be legally entitled to work in Canada.

<u>CHAIR</u> <u>Department of Biochemistry</u> <u>School of Medicine and Biomedical Sciences</u> <u>School of Dental Medicine</u>

State University of New York at Buffalo

The School of Medicine and Biomedical Sciences is seeking applications and nominations for the post of Chair, Department of Biochemistry. The Department fulfills research, teaching and administrative functions within the Schools of Medicine and Biomedical Sciences and Dental Medicine, and is involved in interdisciplinary research within University centers.

The successful applicant will have the administrative experience and personal skills necessary to direct this important academic unit, and will have an internationally-recognized record of achievement in research. He/she will have a commitment to professional, graduate and undergraduate teaching. Salary, laboratory space and all other resources are negotiable. Candidates will have the Ph.D., MD or equivalent, and should be eligible for tenure at the level of Professor.

Applications and nominations should include a current *curriculum* vitae and the names and addresses of at least three referees. They should be sent to: Dr. John Hay

Biochemistry Chair Search Committee 138 Farber Hall SUNY at Buffalo School of Medicine 3435 Main Street Buffalo NY 14214

Applications will be reviewed until the position is filled.

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The Cell Cycle June 18 - 22, 1999 **The Salk Institute** San Diego, CA

Organizers: Susan Forsburg, Tony Hunter, John Newport and Paul Russell

Topics to be covered include: Proteolysis • DNA replication • Checkpoints • Mitosis • Cdk regulation • Development and differentiation • Cytokinesis / cell polarity • Chromosomal dynamics • Growth control and cell cycle

This meeting is an ongoing series held at Cold Spring Harbor Laboratory every other year. It is planned to hold the meeting at the Salk Institute in alternate years in the future. The meeting will have the same format of short talks and poster sessions. Speakers will be selected from those who submit abstracts.

> Information on registration can be found at http://www.salk.edu/meetings.html

Application and abstract forms can be obtained from Sheila Moles, The Salk Institute 10010 N. Torrey Pines Rd., La Jolla, CA 92037 (619)453-4100 Fax (619)546-0838. Email:moles@salk.edu

NATIONAL INSTITUTES OF HEALTH

POST-DOCTORAL and TECHNICIAN POSITIONS MOLECULAR MECHANISMS OF GENETIC RECOMBINATION AND DNA REPAIR

Postdoctoral and technician positions are available in the Genetics & Biochemistry Branch at the National Institute of Diabetes, Digestive and Kidney Diseases, NIH, in Bethesda, MD. Applicants for Technician (Biologist) positions must be US citizens and should have experience in molecular biology. The Biologist position will be filled at the GS-7/9 level. This is a Term Appointment not to exceed 4 years. Areas of interest include:

R. Daniel Camerini-Otero -- Biochemistry and molecular biology of homologous recombination in eukaryotes and prokaryotes (including structural studies of some of the proteins and DNA-protein complexes involved and the generation of mouse knockouts of genes encoding recombination proteins), new methods for gene mapping and cloning (e.g., RARE) and gene targeting in mammalian cells and novel approaches to gene therapy (including the use of small molecules that promote gene targeting, such as miniRecAs). (Ferrin and Camerini-Otero (1991) *Science* 254: 1494; Voloshin et al. (1996) *Science* 272: 868; *Wang* et al. (1998) *J. Mol. Biol.* 277: 1; Ferrin and Camerini-Otero (1998) *PNAS* 95:2152; *Hortnagel* et al. (1999) *J. Mol. Biol.* 286: 1097)

Peggy Hsieh -- Alterations in chromatin structure during recombination and DNA repair; functions of recombination proteins that target the Holliday junction; structure-function studies of DNA mismatch repair proteins. (Grigoriev and Hsieh 1997 *Mol Cell Biol* 17: 7139; Biswas and Hsieh 1997 *J Biol Chem* 272: 13355; Malkov et al. 1997 *J Biol Chem* 272: 23811; Grigoriev and Hsieh 1998 *Mol Cell* 2:373)

The NIH offers a competitive salary and benefits package. Applications should include a CV with list of publications, a brief description of research experience and the names and addresses of 3 references. Send applications to R. Daniel Camerini-Otero or Peggy Hsieh at;

National Institutes of Health Bldg. 10 Rm. 9D20 10 Center Dr. MSC 1810 Bethesda, MD 20892-1810 USA

Technician applications should be mailed to:

Peggy Hsieh National Institutes of Health, Bldg. 10 Rm. 9D04, 10 Center Dr. MSC 1810 Bethesda, MD 20892-1810 USA Tel: 301 496-0306 Fax: 301 496-9878 hsieh@ncifcrf.gov



• FDA CAREER OPPORTUNITIES •

THE FOOD AND DRUG ADMINISTRATION, CENTER FOR DRUG EVALUATION AND RESEARCH (CDER) IS RECRUITING * PHYSICIANS * SCIENTISTS * CONSUMER SAFETY OFFICERS * MATHEMATICAL STATISTICIANS * COMPUTER SPECIALISTS * to serve in the dynamic, highly challenging and innovative atmosphere of drug development and research. CDER's public health mission is to protect and enhance the health of the public through the review and evaluation of scientific data submitted by pharmaceutical manufacturers in support of new drug and investigational new drug applications (NDA/INDs), render an approval or disapproval for human use, and monitor events on marketed drug products.

GENERAL INFORMATION: The following positions may be filled as civil service or U.S. Commissioned Corps which requires U.S. citizenship. Permanent U.S. residents can apply for Staff Fellowship appointment in physician, scientist and mathematical statistician positions. Graduates of foreign colleges/universities must provide proof of U.S. education equivalency certification. Employment opportunities offer competitive salaries and excellent benefits.

* **PHVSICIANS** (Various medical specialties): Evaluate data involving the animal testing and human clinical trials of new drugs to determine their safety and effectiveness. Basic qualification is a Doctor of Medicine or Doctor of Osteopathy. Graduates of foreign medical schools must be ECFMG certified. Board certification/eligibility in a medical specialty and experience in conducting clinical trials are highly desired for these positions. Civil Service Salary GS-14, \$74,162 to \$93,233 plus an additional Physician Comparability Allowance of \$14,000 to \$16,000 may also be paid.

* SCIENTISTS: Biology, Chemistry, Microbiology (requires a degree or combination of education and experience equivalent to a major degree, plus appropriate experience or additional education); Pharmacology, Pharmacokinetics, Toxicology, Epidemiology (requires an appropriate degree): Scientists evaluate portions of NDAs/INDs that pertain to their particular discipline. They determine the scientific validity of manufacturers' tests, drug safety and efficacy claims. A doctorate degree in the scientific discipline with at least two years postdoc experience are highly desired for these positions. Civil Service Salary GS-12/13, \$48,796 to \$75,433.

* CONSUMER SAFETY OFFICERS: Perform management and liaison responsibilities in conducting records maintenance, monitoring the work effort and advising review team members on regulatory requirements, and coordinating information with pharmaceutical industry officials. Qualifications; a degree or combination of education and experience which includes at least 30 semester hours in any combination of courses in the fields of biological science, chemistry, pharmacy, physical science, food technology, nutrition, medical science, epidemiology, engineering, veterinary medical science, or related scientific field. Project management experience in the health care/pharmaceutical industries is highly desired for these positions. Civil Service Salary GS-9/11/12, \$33,650 to \$63,436.

* MATHEMATICAL STATISTICIANS: Provide statistical support to the drug review divisions. Employ a broad variety of statistical procedures relevant to the regulatory and scientific preclinical and clinical drug development and approval decision processes. A doctorate degree in mathematics/statistics and experience in the design, performance and evaluation of clinical trials or related biomedical or pharmacokinetics investigations are highly desired for these positions. Civil Service Salary GS-12/13, \$52,776 to \$78,895.

* **COMPUTER SPECIALISTS:** Provide ADP infrastructure, application and technology services to CDER in support of automated drug review, administrative, data storage/retrieval and training processes. Experience that demonstrated accomplishment of computer project assignments that required a wide range of knowledge and techniques such as application development, network administration, end user support, MS Access, programing or VB, NT server, web development tools, Oracle, WAN, or other advanced office automation tools are highly desired for these positions. Civil Service Salary GS-9/11/12/13, \$33,650 to \$75,433.

HOW TO APPLY: Submit curriculum vitae with cover letter indicating that you are applying under **source code 99032** (Science Magazine) to:

FOOD AND DRUG ADMINISTRATION 7520 Standish Place, MPN1, Rm. 225, HFD-64 Rockville, MD 20855 Attn: Recruitment Staff

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MEMORY Pharmaceuticals Corp.

MEMORY Pharmaceuticals Corp. is an emerging pharmaceutical company whose mission is to discover and develop novel mechanism-based treatments for memory and learning disorders. We are seeking highly motivated and qualified individuals for the following positions:

• ELECTROPHYSIOLOGIST, B.S./M.S. level required. Candidate must have a strong background in general neurophysiology. Experience with brain slice techniques, particularly extra- or intracellular recording, is required. Pharmaceutical experience is a plus, but not required.

• CELL/MOLECULAR BIOLOGIST, B.S./ M.S. level required. Candidate must have a strong background in cell biology and molecular pharmacology. Requisite experience includes cell-based assays (G-protein coupled receptor binding, reporter gene, and cAMP assays) and molecular approaches (DNA cloning and establishing stable cell lines) to screen compounds. Pharmaceutical experience is a plus, but not required.

We offer a competitive salary and benefits package commensurate with experience. Applicants should send *curriculum vitae*, indicating position of interest, to: **MEMORY Pharmaceuticals Corp. Human Resources Dept. 3960 Broadway** New York, NY 10032

MPC is an Equal Opportunity Employer

Plant Genome Bioinformatics at the USDA/ARS Center for Bioinformatics and Comparative Genomics, Ithaca, NY

Two permanent USDA-ARS positions are available for plant genome database curators at the USDA ARS Center for Bioinformatics and Comparative Genomics (CBCG) on the campus of Cornell University in Ithaca, NY. Successful candidates will have primary responsibility for either SolGenes (a database for the Solanaceae) or for RiceGenes (for rice and related grasses). Both databases contain a wide variety of scientific information and emphasize comparisons between species. Curators will be responsible for database content, design and evolution and are expected to coordinate closely with the scientific advisors for the database projects, Dr. Steven Tanksley (SolGenes) and Dr. Susan McCouch (RiceGenes) and their research programs. Interactions and opportunities for collaborations with researchers within the CBCG and other ARS units, the Institute for Computational Genomics a the Cornell Theory Center and with other researchers involved with the Cornell Genomics Initiative are strongly encouraged. Candidates must be US citizens and have research experience in biology (Ph.D. preferred). Familiarity with databases and scripting languages helpful. Salary commensurate with experience (\$39,960-\$74,035). For information on the CBCG or positions contact: Dr. Samuel W. Cartinhour, sc167@cornell.edu. For application procedures and other information, call Tiffany Fisk (315-787-2307) or download from www.ars.usda.gov, Job Opportunities. Applications must be postmarked by April 19, 1999. USDA-ARS IS AN EQUAL OPPORTUNITY

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Scientist/Sr. Scientist Biophysics/Formulation

The Liposome Company, Inc. is currently seeking a Scientist/Sr. Scientist with a Ph.D. in Biophysics, Biochemistry, or a related area with a minimum of 2+ years postdoctoral experience in the characterization and development of lipid based assemblies for its Molecular Mechanisms Group. The successful candidate will possess a thorough knowledge of the physical behavior/properties of lipids, have experience with HPLC, and should be familiar with NMR, fluorescence, and TEM/cryo-TEM techniques.

We offer a competitive compensation package. To be considered please forward or fax your resume to: The Liposome Company, Inc., 1 Research Way, Dept. WP, Princeton, NJ 08540; Fax: (609) 951-0286. Equal Opportunity Employer.



Transplantation Research Lab Head

Innovative. Progressive. Responsive. This best describes our philosophy at Novartis Pharmaceuticals Corporation, a Novartis Group Company formed from the merger of Ciba and Sandoz. Novartis is a world leader in Life Sciences with core businesses in Healthcare, Agribusiness and Nutrition. Focused on novel healthcare solutions, we sustain our leadership position by discovering, researching, developing and manufacturing innovative prescription drugs that treat a wide variety of diseases and conditions, and in the process, help people live longer, healthier lives. To do this effectively, the Novartis Group invests more than \$2 billion annually in healthcare research and development. In Pharmaceuticals, our technologies and focus is on finding cutting-edge solutions in the therapeutic area of transplantation/immunology, among others.

If you are seeking a unique, leadership opportunity to work with an impressive international group in a state-of-the-art research facility, within a company committed to cutting edge technology, consider the following:



As an integral member of our Transplantation Research team, you will call upon your expertise to design, perform and supervise experiments, identify issues and devise creative and workable solutions. The Cellular Immunologist/Pharmacologist we seek will have demonstrated expertise (2+ years postdoctoral) in *in vitro* and *in vivo* models of transplantation and cellular immunity. A Ph.D. in Life Sciences and a strong record of relevant publications are required. Postdoctoral experience in the biotechnology/pharmaceutical industry is strongly preferred.

PRINCIPALS ONLY: send your resume/curriculum vitae and letter of interest, indicating Position HB-6011 on resume AND envelope, or as the subject of the e-mail, to: R&D Staffing, Novartis Pharmaceuticals Corporation, 556 Morris Avenue, Building SEF 1029, Summit, NJ 07901; hrstaffrd.phusch@pharma.novartis.com. We are an equal opportunity employer M/F/D/V. We appreciate your interest in our Company. Unfortunately, we will only be able to respond to those candidates chosen for interviews or additional follow-up.

Please visit our website at www.novartis.com.

DIRECTOR OF SCIENTIFIC RESEARCH LABORATORIES

NATIONAL HEART, LUNG, AND BLOOD INSTITUTE

THE POSITION: Director of Scientific Research Laboratories. The Division of Intramural Research (DIR) conducts basic research in a number of areas related to the disciplines of biochemistry, cell biology, molecular biology, structural biology, and spectroscopy, among others. It also conducts clinical research programs in heart, lung, and blood diseases. The Director of Scientific Research Laboratories serves as the principal advisor to the Director, NHLBI, concerning all ongoing and projected intramural research programs conducted in the laboratories of the Institute and is fully responsible for broad decisions concerning program planning, budget and policy formation and budget allocation to the laboratories. He/she shares responsibility with the Director for Clinical Research for administrative matters concerning the DIR and jointly with the Director for Clinical Research, represents the NHLBI in discussions of NIH-wide intramural policies and programs, and serves as a vital member of the senior staff of the Institute. In addition to the managerial/administrative responsibilities outlined above, the Director of Scientific Research Laboratories will carry out her/his own research program. Resources commensurate with the proposed program will be provided.

THE CHALLENGE: To provide strong and effective leadership in the overall scientific management of an innovative basic research program involving 12 Research Laboratories with a combined budget of approximately \$39 million and a staff of over 311 persons. The NHLBI is currently pursuing cutting edge research across a broad spectrum of investigations ranging from basic biological processes to underlying mechanisms of heart and vascular, lung, and blood diseases, and sleep disorders.

THE IDEAL CANDIDATE: Will have demonstrated scientific leadership and research experience in programs of national and international standing in an area relevant to heart, lung and/or blood diseases. Applicants must have an M.D. and/or Ph.D. degree.

SALARY: The Director of Scientific Research Laboratories will be appointed in the Senior Biomedical Research Service or under Title 42, at a salary commensurate with the candidate's background and experience.

HOW TO APPLY: An application accompanied by a current curriculum vitae and bibliography should be submitted to: Dr. Allen M. Spiegel, Chair, Search Committee, c/o The National Heart, Lung, and Blood Institute, Attn: NHLBI Personnel Office, Building 31, Room 5A-28, 31 Center Drive, MSC 2484, Bethesda, MD 20892-2350. For further information, please call Ms. Kim Westervelt or Ms. Rosa Snell at (301) 496-6477.

NIH is an Equal Opportunity Employer

APPLICATIONS MUST BE POSTMARKED BY MAY 31, 1999 AND RECEIVED BY CLOSE OF BUSINESS JUNE 7, 1999



CHAIR DEPARTMENT OF PHYSIOLOGY AND BIOPHYSICS University of Washington School of Medicine

The University of Washington seeks a Professor and Chair of the Department of Physiology and Biophysics. Successful candidates must have a Ph.D. or M.D. degree or equivalent, an outstanding record of research accomplishment in physiology, biophysics, or related fields, strong leadership potential, and commitment to excellence in teaching and graduate student training. The Department of Physiology and Biophysics at the University of Washington has excellent research programs in neuro-, cardiovascular/respiratory, and endocrine physi-ology as well as in neurobiology, biophysics, and cell biology. For more information, see the departmental home page on the World Wide Web at website: http:// weber.u.washington.edu/~pbiopage. The department actively participates in teaching of medical students and other health professional students and in research training of graduate students. For full consideration, please submit applications or nominations by May 31, 1999, to: William A. Catterall, Ph.D., Chair, Physiology and Biophysics Search Committee, Department of Pharmacology, University of Washington, Box 357280, Seattle, WA 98195-7280. The University of Washington is building a culturally diverse faculty and strongly encourages applications from female and minority candidates. The University of Washington is an Affir-mative Action/Equal Opportunity Employer.

FACULTY POSITIONS MEDICAL GENETICS DIVISION OF PEDIATRIC GENETICS University of Michigan Department of Pediatrics

A newly organized Division of Pediatric Genetics is soliciting Physician Scientists to apply for a faculty position with research and clinical medical genetic responsibilities. Applicants should have either a M.D. or M.D.-Ph.D. degrees, and demonstrated clinical and research expertise in the molecular genetics of human disease. We are recruiting tenure-track faculty in broad areas of human genetic research including (but not limited to) developmental genetics, neurogenetics, functional genomics, and computational genomics. Applicants should be certified or eligible for certification in clinical genetics by the American Board of Medical Genetics. Positions will be filled by Investigators at the ASSISTANT, ASSOCI-ATE, or FULL PROFESSOR of pediatrics level depending on qualifications.

Interested applicants should send curriculum vitae, a short statement of research plans, and the names of three references to: Jerome Gorski, M.D., Division of Pedi-atric Genetics Search Committee, Department of Pediatrics, 3570 MSRBII, Box 0688, The University of Michigan, Ann Arbor, MI 48109-0688. Telephone: 734-763-5276; e-mail: jlgorski@umich.edu. The University of Michigan is an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.

NORTH CAROLINA STATE UNIVERSITY DEPARTMENT OF STATISTICS

FACULTY POSITIONS at all levels in bioinformatics in a large department with expertise in statistical genetics, core statistical theory, biometry, biomedical statistics, and biomathematics, and with plans to lead in the development of new statistical approaches to genomic data and to offer comprehensive training in bioinformatics. Hires to affiliate with the proposed Research Center for Bioinformatics and to teach in the university's graduate program in genomic science and in the statistics program.

Applicants must have a Ph.D. in statistics or related field, and research experience in bioinformatics. Send a letter of application, curriculum vitae, and the names of at least four references to:

Dr. Thomas M. Gerig Department of Statistics, Box 8203 North Carolina State University Raleigh, NC 27695-8203 E-mail: search@stat.ncsu.edu Website: www.stat.ncsu.edu/admin/positions.htm

Affirmative Action/Equal Opportunity Employer/ADA.

POSITIONS OPEN

DIRECTOR, SCHOOL OF NATURAL RESOURCE SCIENCES

The University of Nebraska-Lincoln invites applica tions and nominations for Director of the new School of Natural Resource Sciences. An exceptional opportunity to lead a newly created multidisciplinary faculty (55) and support staff (50) in establishing a reputation as a leader in natural resource and environmental sciences both regionally and nationally, we are seeking a recognized scientist with proven academic and administrative skills to provide leadership in program planning and implementation consistent with our mission of excellence in teaching, research, and extension, and in creating and maintaining effective relations with federal and state agencies and a diverse clientele throughout the state. Candidates should have a strong record of achievement in these areas and a commitment to an interdisciplinary approach to address existing and emerging ecological and environmental issues

Applications should include a résumé, and the names, addresses, and telephone numbers of five references sent to (also the address for nominations): Dr. Kyle D. Hoagland, Search Committee Chair, Institute of Agriculture and Natural Resources, University of Nebraska, 113 Nebraska Hall, P.O. Box 880517, Lincoln, NE 68588-0517. Telephone: 402-472-8182; FAX: 402-472-4608. Review of applications will begin on May 15, 1999, and continue until an appointment is made.

UNL is committed to a phuralistic community through Affirmative Action/Equal Employment Opportunity; is responsive to the needs of dual-career couples; and assures reasonable accommodation under the ADA. Contact Dr. Hoagland for assistance.

FACULTY POSITIONS IN **BIOLOGY AND CHEMISTRY**

Nova Southeastern University (NSU), located on a 232-acre campus in Fort Lauderdale, is the largest independent institution of higher education in Florida and is renowned for its baccalaureate, graduate, and professional programs. NSU is also known as a pioneer and innovator in distance education and on-line learning environments.

NSU invites applications for three faculty with Doctorates (two Biologists and one Chemist) to teach full-time (nine and one-half months) undergraduate students majoring in life science (pre-med) and ocean studies. Programs are delivered by the Farquhar Center for Under-graduate Studies and the NSU Oceanographic Center. The biology positions require teaching from among the following courses: introductory biology, genetics, cell biology, and electives (e.g., immunology, embryology, neurobiology, and physiology). The chemistry position requires teaching undergraduate general and organic chemistry. Individuals with outstanding teaching abilities and capability for research are sought. Developing or bringing a research program is encouraged for summer salary; a 50 percent match for externally funded salary is provided

We offer competitive compensation and benefits. Please send or e-mail résumé, a letter of interest, transcript, and three work-related references, indicating position of interest to: (BLG) Nova Southeastern University, Office of Human Resources, 3301 College Avenue, Ft. Lauderdale, FL 33314. E-mail in MS Word or Word/ Note Pad format, e-mail: nsujobs@nsu.nova.edu. Visit our website: www.nova.edu. Affirmative Action/Equal Opportunity Employer. A smoke-free campus.

CHAIRPERSON DEPARTMENT OF PATHOLOGY

Case Western Reserve University is seeking a Chair of the Department of Pathology. The Chair serves as the academic leader of the Case Western Reserve University Department of Pathology. The Department has a long-standing tradition of excellence in training and investiga-tion and is currently ranked third in NIH funding nationally. The faculty have broad expertise in molecular biology and virology, cell biology, and immunology. The candi date must demonstrate academic leadership and possess a proven track record in basic research.

Interested candidates should submit their curriculum vitae no later than April 15, 1999, to: Richard A. Walsh, M.D., Professor and Chair of Medicine, Search Committee Chair, University Hospitals, 11100 Euclid Av enue, Cleveland, OH 44106-5029

Case Western Reserve University is an Affirmative Action/ Equal Opportunity Employer. Applications from qualified women and minorities are encouraged.



GORDON D. CAIN ENDOWED CHAIR IN AGRICULTURE College of Agriculture Louisiana State University, Baton Rouge

The candidate must hold the Ph.D. degree and be a nationally or internationally recognized scientist and scholar. The field of concentration is open; however, preference will be given to candidates with excellent research credentials in plant biotechnology. The incumbent will teach at the undergraduate and/or graduate levels, direct graduate students, counsel other faculty, and conduct research in association with the Louisiana Agricultural Experiment Station. The incumbent will be expected to develop cooperative research efforts with Geneticists, Molecular Biologists, Pathologists, and other scientists on campus. The candidate will serve as leader to establish a successful and innovative plant molecular working group at Louisiana State University. Applicants should submit a letter of application, curriculum vitae, statement of research and teaching interests, and names of at least three references to: Dr. J. P. Snow, Chair of the Search Committee, Department of Plant Pathology and Crop Physiology, Louisiana State University, Ref: #014964, Baton Rouge, LA 70803. Nominations of potential candidates will be appreciated. Application deadline is July 1, 1999, or until candidate is selected. LSU is an Equal Opportunity/Equal Access Employer.

FACULTY POSITION IN TUMOR AND TRANSPLANT IMMUNOLOGY

The Eppley Institute for Research in Cancer of the University of Nebraska Medical Center (UNMC) is seeking Ph.D. or M.D. applicants at all levels for a tenuretrack position in the general area of tumor or transplant immunology. The Eppley Institute is involved in a multi-disciplinary effort focused on research in cancer and is part of the NCI-designated UNMC/Eppley Cancer Center. In addition to directing an independent research program, the successful applicant will be able to interact with clinical faculty that are nationally recognized for the use of transplantation to treat malignant, inherited, and autoimmune diseases. Opportunities exist to collaborate in nationally funded programs of basic and clinical research in immunotherapy and immunobiology. It is also anticipated that Eppley faculty be involved in the training of graduate students and Postdoctoral Fellows through Eppley's NCI-supported Cancer Research Training Program.

Applicants should send their résumé, names of three references, and a letter detailing their research goals to: Dr. Barry Gold, Interim Director, Eppley Institute for Research in Cancer, University of Nebraska Medical Center, 986805 Nebraska Medical Center, Omaha, NE 68198-6805. The University of Nebraska Medical Center is an Equal Opportunity/Affirmative Action Employer.

The University of Minnesota Cancer Center and Department of Medicine/Division of Hematology, Oncology, and Transplantation invite applications for tenuretrack ASSISTANT or ASSOCIATE PROFESSOR for translational breast cancer research. Applicants with a Ph.D. who have demonstrated potential for an independent investigation career will be considered. Appropriate areas of investigation include, but are not limited to, growth regulation of breast cancer by peptide and steroid hormones, gene therapy, invasion and metastasis, and cell cycle control. The successful applicant will establish their own independent research program and will also participate in multidisciplinary investigation focused on breast cancer biology. Evidence of independent research funding is highly desirable. Faculty teaching opportunities will be balanced with basic research responsibilities.

Interested individuals should submit a curriculum vitae, a summary of research goals, and the names and addresses of three references to: Douglas Yee, M.D., Search Com-mittee Chair, University of Minnesota Cancer Center, Box 806 Mayo, 420 Delaware Street, S.E., Minneap-olis, MN 55445, Attn: Jacqueline Sterling. Review of applications will commence April 26, 1999, and continue until the position is filled. For full consideration, applications should be postmarked April 24, 1999.

The University of Minnesota is an Equal Opportunity Educator and Employer.



NATIONAL INSTITUTE OF ARTHRITIS AND MUSCULOSKELETAL AND SKIN DISEASES (NIAMS) NATIONAL INSTITUTES OF HEALTH (NIH) PUBLIC HEALTH SERVICE (PHS) BETHESDA, MARYLAND

POSTDOCTORAL POSITION IN SIGNAL TRANSDUCTION

The Arthritis and Rheumatism Branch (ARB) Cellular Immunology Section, NIAMS, has a position available in the Fall of 1999 to pursue studies on molecular aspects of signal transduction in the immune system. We use the Fc receptor for IgE on mast cells as a useful paradigm for defining, qualitatively and quantitatively, how a topological event - aggregation of the receptor - is translated into a signaling cascade. A variety of approaches ranging from genetic, cell biological, biophysical, protein chemical, and mathematical modeling techniques, are used. More information is available at http://www.nih.gov/niams/about/irp/metzger.htm. Applicants must have a doctorate degree in chemistry, biochemistry, molecular biology, medicine and other relevant disciplines, have less than 5 full years of postdoctoral experience when they begin. Submit a CV, one- page summary of interests, and names of three potential references to H. Metzger, Section on Chem. Immunol., ARB, NIAMS, Building 10, Room 9N-228, 10 Center Dr. MSC 1820, BETHESDA, MD 20892-1820. Tel: 301-435-6126, Fax: 301-402-0012 or metzgerh@mail.nih.gov.

NIH IS AN EQUAL OPPORTUNITY EMPLOYER



TENURE-TRACK POSITION

The Division of Intramural Research, National Institute on Deafness and Other Communication Disorders (NIDCD), is seeking a tenure-track scientist to establish an independent research program in auditory/vestibular system development. Understanding the molecular mechanisms of these developing systems will be a primary goal of the program. The successful candidate will join a dynamic group of scientists in a growing intramural division. The NIDCD offers an excellent working environment including well-equipped research laboratories and numerous opportunities for collaboration. Candidates for this position must have a Ph.D. and/or MD, post-doctoral experience, and outstanding publications in peer-reviewed journals. US citizenship or permanent residency is required. Salary is commensurate with education and experience. Applications must be postmarked by May 7, 1999. Please submit a curriculum vitae including bibliography, three reprints of recent relevant publications, statement of research interests, an outline of your proposed research, and the names and addresses of three references to:

Patricia Jennings, NIDCD Personnel Office 31 Center Drive, Building 31, Room 3C11, MSC 2320 Bethesda, MD 20892-2320 301-402-0508, 301-402-1562 (TTY) NIH is an Equal Opportunity Employer

The Department of Ophthalmology at the University of Oklahoma Health Sciences Center invites applications for a 12-month tenure-track position at the ASSIS-TANT PROFESSOR level. Special consideration will be given to individuals with expertise that complements the activities of members of the Molecular Pathogenesis of Eye Infection Research Center (website: http://w3. uokhsc.edu/MPEIR/); however, outstanding scientists in all areas of vision research are encouraged to apply. A Ph.D. or equivalent degree with at least two years of postdoctoral training are required. The successful candidate will be expected to develop a robust, extramurally funded research program in their area of study. Limited teaching responsibilities include participation through potential joint appointments in a basic science department. Submit a curriculum vitae, description of research in-

terests and teaching experience, and names of three references to: Michael S. Gilmore, Ph.D., Chair of the Search Committee, Department of Ophthalmology, University of Oklahoma Health Sciences Center, P.O. Box 26901, Oklahoma City, OK 73190. The University of Oklahoma is an Equal Opportunity/Affirmative Action Employer, Applications from women and ethnic minorities are strongly encouraged.

An introductory-level TENURE-TRACK POSI-TION is available in the Department of Neuroscience at Tufts Medical School for an individual with an outstanding record of training and publication to develop an in-dependent research program. Intermediate-level faculty with current grant support also will be considered. Areas of interest include, but are not limited to, signal transduction, genetics, sensory systems, development, systems neurobiology, and immunology/virology/neurobiolo-gy. Expertise in cutting-edge techniques is sought. Tufts Neuroscience grants a Ph.D. in neuroscience, including students in a M.D.-Ph.D. track. The department is interactive and has ties with clinical research programs as well. Teaching responsibilities include both graduate and medical students. Send a current curriculum vitae, a statement of research interests, and at least three letters of reference to: Search Committee, Department of Neuroscience, Tufts University School of Medicine, 136 Harrison Avenue, Boston, MA 02111. Applications are requested by June 1, 1999, but may be accepted until September 15, 1999. Interviews will begin in May 1999. For more information, visit website: www.neurosci.tufts.edu. Tufts is an Equal Opportunity/Affirmative Action Employer.

BIOLOGIST

The University of the South, also known as Sewanee, invites applications for a VISTING ASSISTANT **PROFESSOR** to fill a one-year sabbatical replacement in immunology and microbiology. The successful candidate will also be expected to participate in the introductory biology program. Candidates should be broadly trained in biology and should have an appreciation for the liberal arts tradition in education. The University, with an undergraduate enrollment of 1,300, has a highly selective program and is located on a forested 10,000-acre campus on Tennessee's Cumberland Plateau. Review of applicants will begin on April 15, 1999, but applications will be accepted until a suitable replacement is found. Send a letter of application, curriculum vitae, transcripts, and three letters of reference to: Dr. David Haskell, Chair of the Search Committee, Biology Department, 735 University Avenue, The University of the South, Sewanee, TN 37383. Website: http://www.sewanee. edu/biology; e-mail: dhaskell@sewanee.edu. The Uniresity of the South is an Equal Opportunity Employer. Minorities and women are encounaged to apply.

JUNIOR FACULTY POSITION CENTER FOR SLEEP UNIVERSITY OF PENNSYLVANIA

The Center for Sleep at the University of Pennsylvania is accepting applications for a junior faculty position to study mechanisms controlling sleep. We are looking for a scientist with strong commitment to biomedical research and significant postdoctoral experience in the area of molecular biology, preferably in an area of neuroscience. Applicants must have a Ph.D. in a relevant field and at least two years of postdoctoral research experience.

Interested candidates should submit a curriculum virae, a statement of research interests, and three letters of reference to: Allan I. Pack, M.D., Ph.D., Director, Center for Sleep, 991 Maloney Building, 3600 Spruce Street, Philadelphia, PA 19104-4283.

POSITIONS OPEN



Search extended. Tenure-track. Teach clinical and practical microbiology with emphasis on bacteria and viruses and associated laboratories; advise biology/health-related programs majors; pursue promotion/tenure requirements; active membership on department/college committees. Required: Earned Doctorate in biological sci-

Required: Earned Doctorate in biological sciences with clinical microbiology emphasis; evidence of good communication skills; successful teaching experience. Preferred: Grant writing experience. Teaching is the first priority at University of Nebraska at Kearney with evidence of potential to conduct reviewable research expected.

Starting date August 1999, Salary and benefits are competitive.

Submit applications on/before April 15, 1999, to assure consideration. Send letter of application, current curriculum vitae, three current professional letters of reference, and official transcripts to: Chair, Search Committee, Dr. Linda Spessard, Department of Biology, University of Nebraska at Kearney, Kearney, NE 68849-1140. Telephone: 308-865-8617; FAX: 308-865-8045; website: http://www.unk.edu/.

The University of Nebraska at Kearney is an Affirmative Action/Equal Opportunity Institution.

TENURE-TRACK FACULTY POSITIONS

Applications are invited for two tenure-track positions, beginning October 1, 1999, at the **ASSISTANT** or **AS-SOCIATE PROFESSOR** level in the Department of Cell Biology at Georgetown University Medical Center, Washington, D.C. The Department is seeking individuals with research interests in developmental and/or reproductive biology. Applicants should have postdoctoral experience, a record of high-quality research, and a strong commitment to research and graduate education. The successful candidate is expected to establish an independent research program with extramural support and to participate in teaching in the anatomical sciences program of the Department. Individuals with a background in gross anatomy are encouraged to apply. A curriculum vitae, representative publications, and the names of three referees should be sent to:

Dr. V. Papadopoulos Department of Cell Biology Georgetown University Medical Center 3900 Reservoir Road N.W. Washington, DC 20007

Georgetown University is an Equal Opportunity/Affirmative Action Employer.

FACULTY POSITION UNIVERSITY OF WISCONSIN-MADISON Gene Regulation/Intracellular Signaling

The Department of Comparative Biosciences, School of Veterinary Medicine invites applications for a tenuretrack faculty position (ASSISTANT or ASSOCIATE **PROFESSOR**) in cell/molecular biology with emphasis on gene regulation/intracellular signaling. Qualifications include a Ph.D., postdoctoral experience, ability to develop and sustain an extramurally funded research program, and a commitment to excellence in teaching. Preference will be given to candidates with research interests that complement existing departmental strengths. Teaching responsibilities include participation in veterinary medical and graduate education. To apply, send a curriculum vitae, brief statements of research interests/goals and teaching experience/philosophies, and three letters of reference to: Gordon S. Mitchell, Chair, Department of Comparative Biosciences, University of Wisconsin, 2015 Linden Drive West, Madison, WI 53706. To assure full consideration, apply by June 1, 1999. For additional information, see website: http://www. vetmed.wisc.edu/cbs/. Eqnal Opportunity/Affinnative Action Employer.

POSITIONS OPEN

PROFESSOR OF PHARMACEUTICS DIRECTOR OF DRUG DELIVERY THE OHIO STATE UNIVERSITY

The Division of Pharmaceutics invites applications for a tenured position at the Professor level. The Director will initiate an interdisciplinary program of research in the delivery of therapeutic entities, collaborate with faculty in the drug delivery area, and engender collaborative research among Program faculty participants. The Director will be expected to maintain an innovative and dynamic research program, teach professional, graduate, and postdoctoral students, and participate in committee and service functions. Joint appointments with other academic units are possible.

Applicants should have the personal characteristics to form and lead the Program, an established and funded research program in drug delivery, and be influential in the field. A research program in drug delivery is preferred, along with the potential to collaborate with very active research programs in oncology, heart-lung, neurology, biomaterials, or bioengineering.

biomaterials, or bioengineering. Review of applications will begin July 1, 1999; the position becomes available October 1, 1999. Applicants should provide a letter of application, a curriculum vitae, the names and addresses of three references, and a statement of research interests and professional goals. Please contact:

> William L. Hayton, Chair Division of Pharmaceutics College of Pharmacy The Ohio State University 500 West 12th Avenue Columbus, OH 43210-1291 Telephone: 614-292-1288 E-mail: hayton.1@osu.edu

The Ohio State University is an Equal Opportunity/Affirmative Action Employer. Women, minorities, Vietnam-era veterans, disabled veterans, and individuals with disability are encouraged to apply.

VISITING ASSISTANT PROFESSORS PLANT BIOLOGY/ECOLOGY AND CELL BIOLOGY

The Department of Biology, Hamilton College, invites applications for two one-year positions at the Assistant Professor level, effective August 1999. Ph.D. preferred; teaching experience expected. The successful plant biology applicant will teach (1) the plant part of a team-taught introductory course in biology, (2) a course in plant biology, and (3) part of an upper-level course in ecology. The successful cell biology applicant will teach (1) the cell part of a team-taught introductory course in biology, (2) an upper-level course in cell biology. Excellent facilitics and financial support for student-faculty research are available, and supervision of two senior projects is also expected with each position. Send curriculum vitae, a statement about teaching, and names of three references to: Ernest H. Williams, Chair, Department of Biology, Hamilton College, 198 College Hill Road, Clinton, NY 13323-1292. Review of application materials will begin April 1, 1999, until the positions are filled. *Women and members of minority groups are encouraged to apply*. Hamilton College is an Equal Opportunity/Affinnative Action Employer.

POTATO BREEDING/GENETICS

The Department of Plant Breeding, Cornell University, invites applications for a tenure-track ASSISTANT **PROFESSOR** position (70 percent research, 30 percent teaching). Responsibilities: (1) direct an innovative program on genetic improvement of potato, combining breeding, cell/molecular biology, and genomics; (2) par-ticipate in our teaching program. The appointee will contribute to Cornell's interdisciplinary work on pathogen and pest resistance and to programs on genomics of solanaceous crops. Candidates must have a Ph.D. in plant breeding/genetics, plant molecular biology, or related discipline and the ability to direct a breeding program. Postdoctoral and/or other relevant experience is desirable. Applicants should send a letter of application, curriculum vitae, and copies of transcripts, and have three letters of reference sent, to: Chair, Potato Search Com-mittee, Department of Plant Breeding, Cornell Uni-versity, Ithaca, NY 14853-1901. Additional information can be obtained at website: www.plbr.cornell.edu. Cornell University is an Affirmative Action/Equal Opportunity Employer.



State University of New York

The Department of Physiology and Biophysics, University at Buffalo, SUNY, invites applications for a tenure track position at the rank of Associate or Assistant Professor to fill the first of several new faculty positions in neuroscience that the medical school expects to fill over the next few years. The Department is seeking an outstanding individual who uses contemporary molecular biological and/or biophysical and physiological approaches to study the function of the nervous system. A successful candidate will be expected to maintain an independent and vigorous research program, and participate in the department's graduate and undergraduate programs. The Department and School provide a very supportive environment for research and teaching, and there are excellent opportunities for participation in interdisciplinary programs. Send curriculum vitae, statement of research plans and three letters of recommendation.

The Department of Physiology and Biophysics, University at Buffalo, SUNY, invites applications to two tenure track positions at the rank oProfessor, Associate or Assistant Professor The Department is seeking an outstanding individual with an interest in single molecule biophysics and who uses experimental or theoretical approaches. Of particular interest are individuals working on molecular motors and the computational chemistry of ion channels. A successful candidate will be expected to maintain an independent and vigorous research program, and participate in the department's graduate and undergraduate programs. The Department and School provide a very supportive environment for research and teaching, and there are excellent opportunities for participation in interdisciplinary programs. Send curriculum vitae, statement of research plans and three letters of recommendation.

Dr. Harold C. Strauss, Chairman, Department of Physiology and Biophysics, University at Buffalo, SUNY, School of Medicine and Biomedical Sciences, 124 Sherman Hall, Buffalo, NY 14214. University at Buffalo, SUNY is an Affirmative Action/Equal Opportunity Employer.

MOLECULAR BIOLOGY OF AGING AUGUST 10-27 1999 at the Marine Biological Laboratory, Woods Hole

This two-week lecture and laboratory course features the newest and most exciting ideas in aging research, with emphasis on molecular approaches. A distinguished faculty will lead 15-20 students in discussion, hands-on experiments and analysis of data. The course is intended for graduate students, post-docs, junior faculty and senior investigators alike

Planned lecture topics include: Model Systems (Yeast & C. elegans); DNA Mutation and Repair; Telomeres and Cellular Senescence; Mammalian Aging; and Evolutionary Considerations

Research topics to be addressed in laboratory exercises are, in week 1, Model Systems: S. cerevisiae and C. elegans will be used to illustrate how to isolate and study old organisms. DNA comparisons of old versus young will be carried our for mitochondrial, ribosomal, and other DNA species. In week 2, Mammalian Aging: various tissues of old and young mice of inbred strains will be isolated and analyzed. Cells will be stained to compare morphology, and DNA isolated for analysis as above. In addition, various knockout mice (Werner's, SOD) will be examined

Course Directors: Leonard Guarente, Massachusetts Institute of Technology, and Douglas Wallace, Emory University

Full funding for the course, including all expenses for attending students, is generously provided by the Ellison Medical Foundation. Application Deadline: April 19. For further information about the course, contact the MBL Admissions Coordinator: (508) 289-7401, admissions@mbl.edu

COLLOQUIUM ON THE BIOLOGY **OF AGING-** AUGUST 12-14

Run in conjunction with the above course, this two and one-half day program features presentations from leading researchers in the field. Sponsored by the Ellison Medical Foundation and the National Institute on Aging. For further information about the colloquium, please contact the MBL Communications Office: (508-289-7423), comm@mbl.edu

Marine Biological Laboratory, 7 MBL Street, Woods Hole, MA 02543-1015.

Visit our website for details on research & education programs, application materials and travel information.



The MBL is an EEO Affirmative Action Institution



CHAIR DEPARTMENT OF GENETICS DARTMOUTH **MEDICAL SCHOOL**

Dartmouth Medical School invites applications for the Chair of the newly formed Department of Genetics. This position presents a unique opportunity in which the new chairperson will be the primary leader in the development of the new department, encompassing human genetics, genetics of model organisms, and genomics and structural biology. Applicants should have an outstanding, internationally recognized record of achievement and innovation in the broadly defined area of genetics research and a strong vision for the development of the new department, including design of facilities, recruitment of faculty, and scientific focus. Applicants should also have a commitment to developing premier genetics teaching programs at the undergraduate and graduate levels. Candidates are encouraged to apply whose research is in any area of fundamental genetics including (but not limited to) genomics, medical genetics and the integration of genetics with other rapidly advancing disciplines such as structural biology. The successful applicant will be expected to foster productive interactions with other Dartmouth Medical School basic science and clinical departments and with Dartmouth College.

Review of applications will begin immediately and continue until the position is filled. Applicants should submit a letter of interest, curriculum vitae and contact information for three references to Bill Wickner, Genetics Search, Department of Biochemistry, Dartmouth Medical School, 7200 Vail Building, Hanover, NH 03755-3844.

Dartmouth Medical School is an equal oppportunity/affirmative action employer and encourages applications from women and members of minority groups.

ASSISTANT PROFESSOR MEDICINAL CHEMISTRY University of Minnesota Cancer Center and the College of Pharmacy

The University of Minnesota Cancer Center and the Department of Medicinal Chemistry, College of Pharmacy announce a new tenure-track Assistant Professor posi-tion. Essential qualifications include a Doctoral degree in organic, bioorganic, or medicinal chemistry and a minimum of two years of related postdoctoral experience. The successful applicant will develop an independently funded research program focused on chemical aspects of cancer research; within three years he/she will be expected to generate a portion of his/her salary. Appropriate research areas could include, but are not limited to, cancer chemoprevention, carcinogen activation/detoxification, mechanisms of DNA adduction and repair, signal transduction mechanisms, structural biology, and application of mass spectrometry or nuclear magnetic resonance spectrometry to problems in cancer research. The applicant will participate in the medicinal chemistry graduate program and teach in the College of Pharmacy professional program.

Interested individuals should submit a curriculum vitae, a summary of long-term research goals, and three reference letters to: Stephen S. Hecht, Ph.D., Search Committee Chair, University of Minnesota Cancer Center, Box 806 Mayo, 420 Delaware Street S.E., Minneapolis, MN 55455, Attn: Jacqueline Sterling. Review of applications will commence on July 5, 1999, and continue until the position is filled. For full consideration, applications should be postmarked by July 3, 1999.

The University of Minnesota is an Equal Opportunity Educator and Employer.

UNIVERSITY OF MARYLAND

The Department of Pharmaceutical Sciences is seeking a qualified candidate for a full-time, tenure-track position at the ASSISTANT or ASSOCIATE PROFESSOR level beginning in the fall 1999. The position will complement our rapidly growing research and teaching pro-grams at the Ph.D., Pharm.D., and Pharm.D.-Ph.D. levels. Applicants should have a Ph.D. in biochemistry or a related biological or chemical science with a minimum of two years of postdoctoral experience. Areas of interest include, but are not limited to, structural biology, mechanistic enzymology, metabolism, drug design, and neurosciences. Successful applicants are expected to establish an independent and innovative research program and contribute to teaching at both the professional and graduate levels. Review of applications will begin in April 1999 and will continue until the position is filled. Please submit a letter of intent, curriculum vitae, statement of research and teaching objectives, and addresses of at least three references to

Dr. A. D. MacKerell, Jr., Chair Biochemistry Search Committee Department of Pharmaceutical Sciences University of Maryland School of Pharmacy 20 North Pine Street Baltimore, MD 21201-1180

For additional information about the Department, see our website: www.pharmacy.ab.umd.edu.

The University of Maryland is an Affirmative Action/Equal Opportunity/ADA Employer. Minorities and women are encouraged to apply.

VISITING POSITION IN BIOCHEMISTRY SEARCH EXTENDED ST. LAWRENCE UNIVERSITY

A one-year **SABBATICAL REPLACEMENT** appointment is available for a Biochemist (Ph.D. or A.B.D.) with primary teaching responsibilities in the two-semester biochemistry sequence. Additional teaching duties determined based on interests and strengths of the appointee and needs of the department. Supervision of undergraduate research projects is encouraged.

Submit curriculum vitae, graduate and undergraduate transcripts, statements of teaching philosophy and research plans, and three letters of reference to: **Professor Larry French**, **Chair**, **Department of Chemistry**, **St. Lawrence University**, **Canton**, **NY** 13617. E-mail: **Ifre@music.stlawu.edu**. Review of applications is in process and will continue until the position is filled.

St. Lawrence University is an independent, private, coeducational institution in New York State. Website: http://www.stlawu.edu. Equal Opportunity Employer/Affinative Action Employer.

POSITIONS OPEN

TENURE-TRACK ASSISTANT PROFESSOR TENURE-TRACK ASSOCIATE PROFESSOR EXPERIMENTAL PATHOLOGY

The Department of Pathology, Immunology, and Laboratory Medicine at the University of Florida College of Medicine is seeking applicants for two positions at the Assistant Professor rank or above. These are full-time, tenure-track positions in the Division of Experimental Pathology with a focus on hepatobiliary or alimentary tract pathobiology. The University of Florida serves a major portion of north-central Florida, and has nationally recognized clinical and research programs in hepatobiliary alimentary disease. The major focus of these two positions will be in basic research. Additional commitments will include teaching, institutional, and potentially clinical activities. The successful applicants for the Associate Professor rank should possess an M.D.-Ph.D. degree or an M.D. or Ph.D. degree, a national reputation for investiand funding. The Associate Professor should be capable of building a nationally prominent investigative unit within the department. The successful applicants at the Assistant Professor level should possess an M.D.-Ph.D., M.D., or Ph.D. degree, a proven record of productivity and nationally recognized investigation. For both positions, Board-certification or Board-eligibility in anatomic pathology, with subspecialty training in hepatic and gastrointestinal pathology, is an additional advantageous qualification. For both positions, salary will be commensurate with experience and qualifications. Anticipated start date will be July 1, 1999. Please send by May 1, 1999, curriculum vitae, and names of four references to:

Gregory Y. Lauwers, M.D. c/o James M. Crawford, M.D., Ph.D. University of Florida College of Medicine Department of Pathology, Immunology, and Laboratory Medicine Box 100275 JHMHC Gainesville, FL 32610-0275 Telephone: 352-392-3741 FAX: 352-392-6249

Affirmative Action/Equal Opportunity Employer.

The Center for the Study of Race and Ethnicity in Medicine at the University of Wisconsin Medical School is seeking applicants for faculty positions at the **ASSIST**-**ANT**, **ASSOCIATE**, and **FULL PROFESSOR** levels, with tenure- or clinical health science-track appointments possible. Successful candidates will have appointments in the department best suited to their expertise, with an affiliate appointment in the Center. Candidates should hold an M.D. or Ph.D. or other professional degree, and have research, teaching, or service experience in issues of race, ethnicity, and medicine. Interested individuals should send curriculum vitae to: Vanessa Northington **Gamble**, M.D., Ph.D., Director, Center for the Study of Race and Ethnicity in Medicine, 1224 Medical Science Center, 1300 University Avenue, Madison, WI 53706-1532. Unless confidentiality is requested in writing, information regarding applications must be released upon request. *The University of Wisconsin is an Equal Opportunity Employer*.

ASSISTANT/ASSOCIATE RESEARCH PRO-FESSOR. Institute of Marine and Coastal Sciences/Rutgers, The State University of New Jersey. Grant-funded position reporting to the Center Director, serves as Science Director for the National Undersea Research Program for the Mid-Atlantic Bight. Maintains own research program in area of expertise in marine sciences and participates in teaching programs for undergraduate and graduate students. Send résumé and the names of three references by April 30, 1999, to: Michael P. De Luca, Rutgers, The State University of New Jersey, Institute of Marine and Coastal Sciences, 71 Dudley Road, New Brunswick, NJ 08901-8521. Rutgers is an Equal Opportunity/Affinative Action Employer.

ASSISTANT to FULL PROFESSOR. Behavioral Medicine Division, Wayne State University School of Medicine, Department of Psychiatry and Behavioral Neurosciences. Ph.D. or M.D. with strong research record sought to conduct independent and collaborative research in cardiovascular physiology, genetics, hormones and vascular function, menopause, or related areas. Demonstrated funding ability required. Send curriculum vitae, reprints, and statement of research interests to: Robert R. Freedman, Ph.D., Professor and Director, 275 East Hancock, Detroit, MI 48201. Wayne State University is an Equal Opportunity/Affinative Action Employer.

POSITIONS OPEN

MICROBIOLOGY, IMMUNOLOGY, OR DEVELOPMENTAL BIOLOGY

The Department of Biology at Middlebury College invites applications for a one-year term appointment as a sabbatical replacement, beginning September 1999, in either microbiology, immunology, or developmental biology. Responsibilities include teaching the genetics portion of an introductory biology course (one-half course both fall and spring); an intermediate-level course in either microbiology, immunology, or developmental biology; and an additional upper-level course in the successful applicant's area of expertise. Appointments will be made at the rank of **VISITING ASSISTANT PRO-**(A.B.D.). Candidates should provide evidence of commitment to excellence in teaching and scholarship. Send letter of application with a statement of both teaching and research interests, curriculum vitae, copies of undergraduate and graduate transcripts, samples of scholarly work, and three current letters of recommendation, at least two of which must speak to teaching ability, to: Dr. Stephen C. Trombulak, Department of Biology, Middlebury College, Middlebury, VT 05753. See website: www. middlebury.edu/~bio/sabbatical.html for more details about the position. Interviews will begin April 16, 1999, and will continue until the position is filled. Middlebury College is an Equal Opportunity Employer, and it encourages applications from women and members of minority groups.

The Department of Psychiatry of the University of Pittsburgh School of Medicine/Western Psychiatric In-stitute and Clinic, is seeking an M.D. or Ph.D. applicant for a full-time faculty position at the rank of **ASSIST**-ANT PROFESSOR in systems neuroscience. Applicants should be accomplished in the use of a range of neuroanatomical, molecular, and/or neurochemical tech-niques, and interested in the application of these skills to the study of cortical organization and development in both normal and disease states. The successful candidate will work in a large and highly interactive community of Neuroscientists, including faculty in the Department of Neuroscience (website: http://www.pitt.edu/~ neurosci) and the Department of Neurobiology (website: http://www.neurobio.pitt.edu), who share inter-ests in cortical structure and function and in the pathophysiology of schizophrenia and related disorders. Interested candidates should send or FAX a letter of inquiry, a curriculum vitae, a statement of research interests, and three letters of recommendation to: David A. Lewis, M.D., Department of Psychiatry, University of Pittsburgh, W1650 BST, 3811 O'Hara Street, Pittsburgh, PA 15213. E-mail: lewis@cortex.psychiatry.pitt.edu; FAX: 412-624-9910.

The University of Pittsburgh, as an Educational Institution and as an Employer does not discriminate on the basis of race, color, religion, ethnicity, national origin, age, sex, marital, veteran, or disabled status. This commitment is made by the University and is in accordance with federal, state, and local laws and regulations.

ASSISTANT PROFESSOR IN MOLECULAR BONE ONCOLOGY UNIVERSITY OF MINNESOTA Medical School

The University of Minnesota Cancer Center and the Department of Orthopaedic Surgery invite applications for a tenure-track position at the level of Assistant Professor. Applicants must have a Ph.D., M.D., or foreign equivalent and must have completed a minimum of three years of Postdoctoral Fellowship training. This position is for a full-time basic science researcher who will be expected to develop an independent basic research program studying in the general area of bone cells, the bone marrow microenvironment, and metastatic tumor cells. The applicant should have experience in both cellular and molecular biology. In addition, this position is for an individual who will be expected to participate as a member of a multidisciplinary team of researchers studying in this same general area.

Please send a curriculum vitae and names of three references to: Search Committee Chair, Dr. Denis Clohisy, c/o Jacqueline Sterling, University of Minnesota Cancer Center, Box 806, 420 Delaware Street S.E., Minneapolis, MN 55455-0392 USA.

Applications accepted until May 24, 1999, or until position is filled.

The University of Minnesota is an Equal Opportunity Educator and Employer. Women and minorities are encouraged to apply.

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The Pacific Northwest National Laboratory, located in Richland, Washington and operated by Battelle for the U.S. Department of Energy has employment opportunities available. The Laboratory employs 3,400 and has an annual budget of more than \$500 million.

Currently laboratory staff are engaged in 2,000 research projects. We are currently seeking highly skilled and motivated individuals in the following areas:

To apply for specific jobs at Pacific Northwest National Laboratory, visit our external employment website: http://www.pnl.gov/jobseeker/jobseeker.asp.

PNNL is an Affirmative Action/Equal Opportunity Employer and supports diversity in the workplace. Applicants will receive consideration for employment without regard to race, color, religion, sex, or national origin.



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- Lighting Engineering
- Computer Science
- Contract Management
- Chemical Engineering
- Mechanical Engineering
- Industrial/Systems Engineering
- Power System Engineering
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MJ RESEARCH is a rapidly growing manufacturer of instrumentation for molecular biology research.

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We seek a self-motivated individual with demonstrated excellence in lab techniques and problem-solving skills. Must have a BS or MS in molecular biology or a related field, with strong research experience in DNA amplification and/or sequencing. Familiarity with materials fabrication and electronic test equipment is preferred. Code DT-1

Associate Product Manager, Consumables

We seek a self-motivated individual with demonstrated excellence in organization and communication. Must have an MS degree or equivalent research experience in molecular biology or related field, with strong background in DNA amplification and/or sequencing. Prior business/ marketing experience is preferred. Code DT-2

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MEETING

CANADIAN BIDINFORMATICS WORKSHOPS

The Canadian Genetic Diseases Network and Biotechnology Human Resources Council offer a workshop on

Bioinformatics

University of Calgary, August 2 - 14, 1999

Instructors include: Christopher Hogue, Mt. Sinai Hospital, Toronto; François Major, Université de Montréal; Francis Ouellette, Centre for Molecular Medicine & Therapeutics, University of British Columbia; Christoph Sensen, Institute for Marine Biosciences, National Research Council of Canada; David Wishart, University of Alberta.

WHO SHOULD APPLY

For those interested in bioinformatics with either a computer science/engineering or life science background, an introduction to the methodology and algorithms that underlie successful development and use of these tools.

ADVANCED WORKSHOPS

Three continuing one-week workshops will be available on Genomics (Vancouver, Jan 2000), Proteomics (Toronto, May 2000) and Developing the Tools (Montreal, Jul 2000).

FOR MORE INFORMATION AND TO APPLY

Visit www.cmmt.ubc.ca/bioinformatics

CGDN, 351-2125 East Mall, Vancouver, BC V6T 1Z4, Canada Tel: 604-822-1386 Fax: 604-822-7945 COURSES & TRAINING

ADVANCED BIOLOGY TRAINING COURSE IN ANTARCTICA



This National Science Foundation sponsored course will be held in Antarctica at the United States' McMurdo Station for one month, starting January 2000. This is an international course, open to all nationalities. Applications are invited from graduate students, postdoctoral fellows, and other research scientists who are interested in the biology of Antarctic organisms. The course will accommodate up to 24 students. Full scholarships are available to each student accepted into the course to cover the cost of travel from home institution to Antarctica, and room and board while in Antarctica.

The emphasis of the course is on integrative biology with laboratory and field based projects focused on adaptations in an extreme polar environment. Modern laboratory facilities for experimental work, sophisticated operational support for field collection, and offering the program in Antarctica, make this course unique. A diverse teaching faculty will offer students the possibility of working on a wide range of Antarctic organisms (bacteria, algae, invertebrates, and fish), as well as working at different levels of biological analysis (molecular biology to physiological ecology and species biodiversity).

For additional information about the themes of the course in January 2000, the teaching faculty, and the application process, see the Antarctic Support Associate's Web

site at www.asa.org (use the link option to the Biology Course). Deadline for receipt of completed applications and letters of reference is June 15, 1999.

ANTARCTIC SUPPORT ASSOCIATES

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You'll manage the process for identifying and establishing research collaborations and technology licenses in the field of biotechnology. You'll use your communication and negotiation skills as you identify and develop potential licensing and collaboration opportunities. Emphasis will be on the biotechnology components and licenses required to secure freedom to operate.

You've earned a Ph.D. and complemented it with at least 7 years in a similar role. You have an understanding of bioscience and you like to stay abreast of industry developments and new technologies. The ability to develop relationships and information sources from a wide network makes you a familiar figure in the biotech community. If you can lead a negotiating team, work in a somewhat unstructured environment, and overcome obstacles through creative thinking and collaboration, you're our candidate.

Home base will be our Western Research Center in the San Francisco Bay Area. Frequent interaction with internal and external contacts worldwide and the chance to travel make this an exceptionally diverse opportunity.

Our comp package, which includes competitive salary, relocation assistance, and a 401(k) plan, reflects the importance of this role. Combine that with the fact that you'll be part of a small, focused team working for a global organization and you'll see plenty of room to advance professionally.

For consideration, send resume and cover letter to: Human Resources, Job Code SO/LM, 1200 S. 47th St., Richmond, CA 94804. E-mail: wrcjobs@agna.zeneca.com. FAX: (510) 231-1348. Equal Opportunity Employer.

To learn more about Zeneca, visit our web site at: www.usa.zeneca.com.



NATIONAL INSTITUTES OF HEALTH NATIONAL CANCER INSTITUTE ORGAN SYSTEMS BRANCH

PROGRAM DIRECTOR OF SPECIALIZED PROGRAMS OF RESEARCH EXCELLENCE

CA-99-1929 GS-601/602-13/14 Opening Date: March 29, 1999 Closing Date: April 26, 1999

The National Cancer Institute is seeking qualified applicants for a Program Director position at the Organ Systems Branch (OSB). The OSB manages an extramural multi-disciplinary translational research program termed Specialized Programs of Research Excellence (SPOREs). SPOREs are teams of extramural basic, clinical, and population scientists who focus on a single organ-site cancer and dedicate themselves to translational research that will have an impact on early detection, prevention, diagnosis and treatment of human cancer. The NCI defines translational research as the movement of laboratory discoveries into patient and population research settings or observations in patients and populations back into research laboratories. The incumbent will function as a key member of the OSB extramural staff and will be responsible for the management, planning, implementation, and coordination of breast, ovarian, prostate, lung, or gastrointestinal SPOREs. In addition, the incumbent will be responsible for promoting and facilitating interactions among SPOREs, between SPOREs and the scientific community, and between the SPORE program and other extramural units of the NCI, and the NIH.

SALARY RANGE AND FRINGE BENEFITS: Salary ranges from \$58,027 to \$89,142 per annum. Benefits include health and life insurance, retirement, paid holidays, vacation and sick leave. Salary includes locality pay.

BASIC QUALIFICATIONS: U.S. Citizenship is required. Applicants must meet the basic experience and educational qualifications for U.S. Government Medical Officer and/or Health Scientist Administrator positions. In order for qualifications to be validated and considered, it is mandatory that you submit the following with your application: a) an undergraduate and graduate transcript or course list which includes grades and semester hours received per course for all courses; b) a current curriculum vitae, and c) a description of your proficiency in the following Knowledge, Skills and Abilities (KSAs):

- 1.) Knowledge of Federal Grant application, review and management process, including site visit planning, organization and execution.
- 2.) Knowledge of basic, clinical and/or population cancer research.
- Ability to plan, develop and evaluate research programs, including the formulation of program objectives and goals and assessing research programs.
- 4.) Ability to establish and maintain professional relationships with scientists in academia, industry and government.
- 5.) Ability to communicate scientific information orally and in writing.

APPLICATION PROCEDURES: The NCI recruitment bulletin for this position contains complete application procedures and lists all mandatory information which you must submit in your application. To obtain the recruitment bulletin, call 1-800-728-JOBS (for local calls, 301-594-2953). When prompted, enter the "Fax ID Number" 1878. You will be prompted for your fax machine number. If you have any questions on qualification requirements or application procedures, or if you wish to obtain a position description or other information, please call (301) 402-2812.

Please submit your resume, SF-171 Application for Federal Employment or OF-612 Optional Application Form by the closing date to:

NATIONAL CANCER INSTITUTE NATIONAL INSTITUTES OF HEALTH HUMAN RESOURCE AND CONSULTING BRANCH 6120 Executive Boulevard, MSC 7211 Executive Plaza South, Suite 550 Rockville, Maryland 20852-7211

NIH IS AN EQUAL OPPORTUNITY EMPLOYER

MANAGING EDITOR

he John Templeton Foundation seeks a talented Managing Editor to create, publish and oversee a savvy new magazine quality newsletter as part of an innovative, independent enterprise to be subsidized by the Foundation. The purpose of the newsletter will be to disseminate the Foundation's news, information and opinions via a vibrant in-print vehicle designed to cover the rapidly expanding Foundation activities and to provide a high quality forum to expand theme issues. The position will provide a very exciting and attractive start-up opportunity for an entrepreneurial writer/ editor/manager.

The Managing Editor will be expected to take a hands on approach to the creation and writing of the newsletter, capitalizing on opportunities to report attractively on a wide range of events and symposia worldwide. Candidates should possess experience in magazine publishing, writing, editorship, and be able to demonstrate competency to cover state-of-the-art topics in the subject areas of science and religion.

Please contact: Ms. Karyl J. Wittlinger, Office Manager/Human Resources, John Templeton Foundation, c/o S032699, P.O. Box 8322, Radnor, PA 19087-8322.



JOHN TEMPLETON FOUNDATION

FUNCTIONAL NEUROIMAGING **MEDICAL COLLEGE OF** WISCONSIN

Two POSTDOCTORAL POSITIONS are available to study the physiological and biophysical transduction mechanisms leading to changes in fMRI signal. The first position uses animal models (both MRI and physiological procedures) to study how neuronal-induced changes in blood flow/volume/oxygenation contribute to the fMRI signal. The second position examines fMRI contrast mechanisms and the nature/role of physiological fluctuations. Strong background in physiology, physics, mathematics required. Both positions are part of an NIMH Program Project Grant supporting the laboratories of Drs. Kathleen Donahue, Andrew Greene, Anton Hudetz, James Hyde, and Elliot Stein. Individuals must have an earned Ph.D. and/ or MD degree and be a permanent US resident. Send CV, statement of research background, interests, and three letters of reference to Dr. Elliot Stein, Medical College of Wisconsin, 8701 Watertown Plank Road, Milwaukee, WI 53226. For more information email: estein@mcw.edu or visit http:// www.biophysics.mcw.edu

The Medical College of Wisconsin is an Equal Opportunity/Affirmative Action Employer - M/F/D/V



The Helen C. Levitt **Endowed Annual** Visiting Professorship

The University of Iowa College of Medicine seeks applicants to fill the Helen C. Levitt Endowed Annual Visiting Professorship for an academic year. Established scientists at the rank of Associate Professor, Professor or equivalent rank having a Ph.D., M.D., or M.D./Ph.D. degree(s) are invited to apply Areas of emphasis include 1) women's health; 2) macular degeneration and blindness; and 3) viral pathogenesis and disease. Areas in women's health include but are not confined to cardiovascular disease, osteoporosis, breast and gynecologic cancer, reproductive endocrinology, maternal and fetal medicine, menopause, and urogynecology. Applicants with established records as independent investigators are desired. Candidates who would interact and/or collaborate with established scientist(s) at The University of Iowa are desired. The successful applicant will have a variety of opportunities to interact with scientists, physicians, educators and students at The University of Iowa, and will receive faculty salary support. Salary and faculty rank will be commensurate with experience and qualifications. The departmental affiliation of the applicant's faculty appointment will be based on the applicant's academic discipline and research orientation.

The Visiting Professor will lecture, consult with staff and students of various departments in the College of Medicine, and participate in research and educational activities

Candidates should send 1) curriculum vitage 2) a statement of research interests: and 3) the names of three individuals who could be contacted as references:

Allyn L. Mark, M.D. Associate Dean for Research **College of Medicine** The University of Iowa 220 CMAB lowa City IA 52242-1101

The University of Iowa is an Equal Opportunity/Affirmative Action Employer Women and Minorities are strongly encouraged to apply.

AREA MANAGER, SOUTH POLE



Antarctic Support Associates, principal research support contractor to the National Science Foundation Office of Polar Programs, is seeking an Area Manager to oversee operations at our South Pole Station.

This is a challenging opportunity for a project manager and leader to function in a full-time capacity

by spending the Austral Summer at South Pole Station as the senior site employee and the balance of the year at our headquarters in Denver, Colorado

Responsibilities include management of all station activities, administrative oversight, international relations, staff recruitment, and coordi-nating multidivisional planning efforts with an emphasis on environmental, safety, and health issues

Candidates should have:

- Proven abilities in leadership, administration and project management B.A./B.S. in Business Management/Construction Management or
- Applied Science Min. of 5 yrs' increasingly responsible and autonomous exp. in project management
- Experience with diversified remote field operations, Admin.
- Management and logistics Polar operations and facilities maintenance/construction exp. is desirable Career record must include the demonstrated ability to work with and independently manage a multiple-skilled workforce

Proof of U.S. citizenship is required. The ability to pass stringent physical and dental exams prior to traveling to Antarctica is a contractual precondition of employment. This is a full-time position requiring deployment to Antarctica during the austral summer months, October to February. We offer a competitive salary/benefits package. ASA is an Equal Opportunity Employer. For consideration, please send your resume by April 16, 1999, to:

Antarctic Support Associates Response Code: LD/DF 61 Inverness Drive East, Suite 300 Englewood, CO 80112 Fax: 303-662-8770 E-mail: resume@asa.org





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BAYLOR COLLEGE OF MEDICINE ASSISTANT VICE PRESIDENT FOR RESEARCH



Baylor College of Medicine, the only private medical school in the Greater Southwest, is a research intensive independent, nonsectarian, non-profit College located in Houston's Texas Medical Center, a 675-acre complex of 42 independent Institutions.

POSITION

We seek an Assistant Vice President for Research to provide dynamic leadership and direction for all aspects of the College's research administration. The position reports to the Vice President and Dean of Research. The primary responsibility will involve implementation of an aggressive plan to promote service and support for the College's research agenda. Initiative in people management to ensure positive teamwork for the department, as well as beneficial results for the faculty and the College, is essential.

REQUIREMENTS

Bachelor's degree in business management or related field required. Advanced degree is desirable. Must have a minimum of five years senior research adminstration experience; strong financial and analytical abilities; and excellent interpersonal/communication skills. Extensive management experience in a large, complex organization; preferably in an academic medical or health care environment is helpful.

COMPENSATION

This position provides a competitive salary and comprehensive benefits package. Qualified candidates may submit resumes in person, by mail, fax or e-mail to:

Baylor College of Medicine Human Resources, Room T101 One Baylor Plaza Houston, Texas 77030-3498 Fax Number: (713) 798-7350 E-mail Address: employment@bcm.tmc.edu

Baylor College of Medicine is an Equal Opportunity, Affirmative Action Employer.

RESEARCH DIRECTOR



TerraGen Diversity Inc., is a leader in the field of combinatorial biology seeking to discover and develop new microbial-based therapeutic products through genetic engineering technologies. The Company is based in Vancouver, BC and is backed by international venture capital.

Reporting to the CEO, the Research Director will provide scientific and administrative leadership to group leaders for broad based, multidisciplinary research programs, and expand in-house capabilities in molecular biology, microbiology, chemistry and assay development. Responsibilities will also include the set up and direction of program timelines and budgets, implementation of strategic collaborations, corporate presentations, and support for the development of intellectual property.

The successful candidate will have in depth knowledge and experience in directing the research function of a pharmaceutical and/or biotech company, be able to communicate well with scientists, strategic partners and the senior management team. Must be a selfstarter who is goal oriented. Skills such as demonstrated leadership, initiative, ability to listen, and to communicate and build interactive teams will be necessary, as will a desire to work in an atmosphere of high-growth with multiple activities with strict timelines. The candidate will have 10–15 years experience showing progressive career growth and will have built and directed a successful research team. A Ph.D. is required in a scientific discipline with specialization in molecular genetics, molecular biology, microbiology or natural product chemistry, and peer recognized international status in the field.

All applications will be held in strictest confidence. We regret that only successful applicants will be contacted.

Reply to the attention of Ms Leila Neale before April 19th to: TerraGen Diversity Inc. Suite 300-2386 East Mall (UBC) Vancouver, B.C. V6T 1Z3 Fax: (604) 221-8881



Texas A&M University Toxicology Faculty Position Department of Veterinary Physiology and Pharmacology

The Department of Veterinary Physiology and Pharmacology, College of Veterinary Medicine, Texas A&M University invites applications for a tenure track state funded position in Toxicology at the Assistant/Associate Professor level. The successful candidate will have an ongoing research effort with experience in molecular, genetic or environmental toxicology. Primary criteria for appointment will be a terminal degree in a biomedical or physical science, a publication record in peer-reviewed journals, demonstrated accomplishments in securing funding, and evidence of successful teaching.

Texas A&M is a land, sea and space grant university with more than 43,000 undergraduate and graduate students, plus medical and veterinary students. The Department of Veterinary Physiology and Pharmacology consists of 22 full-time faculty with interest in endocrine, cardiovascular and reproductive biology. A broad range of interdisciplinary research is possible with established campus-wide programs in toxicology, cardiovascular sciences, genetics, neuroscience, reproduction and nutrition. The graduate program in toxicology is supported in part by an NIEHS Training Grant in Environmental Toxicology. The new faculty member will also have access to research core facilities supported by the department, the NIH Center for Environmental and Rural Health and the Superfund Basic Sciences Program. College Station, home to Texas A&M University, is a mid-sized city located within an hour and a half of both Houston and Austin, Texas.

Candidates should send a curriculum vitae, letter of application, and names and addresses of three references to Dr. Kenneth S. Ramos, Chair, Toxicology Search Committee; Department of Veterinary Physiology and Pharmacology; College of Veterinary Medicine; Texas A&M University, College Station, Texas 77843-4466. Review of applications will begin on April 30, 1999 and continue until position is filled. Texas A&M University is an Affirmative Action/Equal Opportunity Employer committed to excellence through diversity.



At Southern Research, our people separate us from our competition. We're seeking more unique people to continue our tradition of excellence.

For more than 50 years, the people of Southern Research Institute have improved technologies and developed products to enhance quality of life through scientific research. Our scientists and engineers specialize in drug development, drug discovery, engineering, energy and the environment. Every day we identify needs and provide solutions in these areas using creative concepts, innovative products and breakthrough processes.

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Our Drug Development Division provides comprehensive pre-clinical drug development and testing capabilities as well as basic research in drug design and synthesis, pharmaceutical formulations, toxicology, virology, microbiology, and pharmacology. For this division, we are currently seeking **Staff Toxicologists** to conduct toxicology studies, serve as a Study Director; develop protocols; interact with sponsors on study design; manage and monitor studies; prepare interim reports and final reports as required by contract; participate as team member on special projects for the Toxicology Unit and the Department of Safety Assessment. This position requires a Ph.D. in Toxicology or related field; D.V.M. or PharmD with Toxicology experience acceptable; ability to design and manage toxicology and related studies and projects for government and commercial clients, interpret data and produce reports; 5 years experience as a toxicologist with a minimum of 3 years as a study director for GLP toxicology studies.

Southern Research Institute offers an excellent compensation package that includes a competitive salary and comprehensive benefits package. Please send your resume to Sheryl H. Brown, Human Resources, Dept. 488, P.O. Box 55305, Birmingham, AL 35255-5305. Phone: (205) 581-2512. Fax: (205) 581-2880. E-mail: s.r.brown@sri.org *EOE/AA*

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East Tennessee State University, Department of Environmental Health. ASSISTANT/ASSOCIATE PRO-FESSOR. (Two nine-month, tenure-track positions) Position One: Minimum qualifications include terminal degree in an appropriate discipline; ability to teach a variety of undergraduate and graduate courses including general sanitation, food sanitation, soils, shelters, vectors, policy, or law; and experience with funded research programs. Position Two: Minimum qualifications include terminal degree in an appropriate discipline; ability to teach a variety of undergraduate and graduate courses including industrial hygiene, hazardous materials or solid waste management, and radiological health or ergonomics; and ability to establish a funded research program. Applicants should send a current curriculum vitae and names, addresses, and telephone numbers of at least three references to: Dr. Larry Curtis, Chair, Depart ment of Environmental Health, College of Public and Allied Health, East Tennessee State University, Box 70682, Johnson City, TN 37614-0682. Review of applicants will begin immediately and continue until a suitable candidate is found. An Equal Opportunity/Affirmative Action Employer.

THE SANTA FE INSTITUTE ANNOUNCES A VISITING RESEARCHER PROGRAM

In evolutionary dynamics supported in part by the W M. Keck Foundation.

The program supports short-term visits to Santa Fe Institute (SFI) to engage in collaborative, interdisciplinary research on topics including evolution of complex structure and form; dynamics of evolutionary search; molecular and genetic insights into evolution; evolutionary, developmental, and ecological aspects of biodiversity; and social and cultural evolution.

Researchers above the postdoctoral level in all scientific disciplines are encouraged to apply for visits ranging from a few days to several months. To submit an application, see website: http://www.santafe.edu/sfi/visitor/ or contact: Chris Clary, e-mail: cnc@santafe.edu. Applications will be considered on a rolling basis, but we expect 1999–2000 academic year visitor funds to be allocated in the main by August 1999.

Financial assistance for visitors' travel and living expenses may be available. Salary support is not provided. For more information on SFI, see website: http:// www.santafe.edu.

The Department of Pharmacology of the University of Tennessee, Memphis is enlarging its neuropharmacology faculty. The Department is seeking to fill a tenure-track position at the ASSOCIATE or ASSISTANT PRO-FESSOR level. Applicants must have a Ph.D. or M.D.-Ph.D. and demonstrated capability to support and direct a competitive research program that pertains to mechanisms underlying drug abuse and/or mental illness. Individuals using molecular, cellular, and/or electrophysiological approaches, who look forward to collaboration in a highly interactive research environment with a large, well-funded neuroscience community, will be given preference. This is a 12-month appointment that includes teaching responsibilities in both the professional and graduate colleges. Excellent laboratory facilities and startup funding are available. Applicants should submit curriculum vitae, three reference letters, and a detailed descrip tion of their research program by June 1, 1999, to: Burt Sharp, M.D., Chairman, Department of Pharmacology, University of Tennessee, Memphis, 874 Union Avenue, Memphis, TN 38163. The University of Tennessee is an Equal Employment Opportunity/Affirmative Action/Title VI/Title IX Section 504/ADA/ADEA Employer. Women and minorities are especially encouraged to apply.

POSTDOCTORAL RESEARCH ASSOCIATE/ INSTRUCTOR available immediately to delineate novel inhibitory neural pathways regulating bronchial mucosal function. The person will conduct studies in animals to measure bronchial mucociliary clearance, tracheal mucus velocity, airway secretory output, ciliary bear frequency, and mucus rheology during localized administration of various specific excitatory and inhibitory agonists and antagonists in combination with and without vagal blockade. SO2 will be used as a test irritant. This work is being funded by a five-year NIH grant that runs until December 2003. Send curriculum vitae and the contact information to: Donovan Yeates, Ph.D., Pulmonary Biophysics and Bioengineering Laboratory, Department of Medicine, University of Illinois at Chicago, M/C 788, 1940 West Taylor Street, Room 212, Chicago, IL 60612. E-mail: yeates-d@uic.edu.

POSITIONS OPEN

DIRECTOR CENTER FOR ENVIRONMENTAL RESOURCE MANAGEMENT The University of Texas at El Paso

The University of Texas at El Paso (UTEP) invites applications and nominations for the position of Director of its Center for Environmental Resource Management (CERM). CERM provides university-wide leadership and coordination for environmentally related academic, policy, research, and service activities. Its mission is to address the environmental problems that threaten the health, safety, well-being, and economic development of the southwest border region of the United States and northern Mexico. CERM currently administers approximately 10 million dollars in federal, state, and private project funds. CERM focuses university resources to address hazardous waste, air quality, water availability and quality, ecosystem, and policy issues through an active program of research, outreach, policy, and academic programs. An important part of CERM's mission is to provide support for a culturally diverse student population to develop the skills necessary to become Environmental Engineers and Scientists, CERM administers the university's multidisciplinary Ph.D. in environmental science and engineering and works with faculty throughout the university in the implementation of this program. The successful candidate should show evidence of outstanding leadership capability in administering complex research and academic programs; have progressively responsible experience with public sector agencies or institutions; have substantial knowledge of environmental issues and policies affecting the United States-Mexico border region; have demonstrated the ability to secure and direct major externally funded programs; and be committed to UTEP's mission of providing a quality education. Situated in the largest metropolitan region on the United States-Mexico border, UTEP provides Doctoral, Master's, and undergraduate programs to over 14,000 students. Please send a letter summarizing your interest and capabilities, a de tailed résumé, and list of three references to: Dr. Paul C. Maxwell, Associate Vice President for Research and Sponsored Projects, The University of Texas at El Paso, Administration Building Room 209, El Paso, TX 79968-0587. Applications will be accepted until the position is filled. UTEP does not discriminate on the basis of race, color, national origin, sex, religion, age, or disability in employment or the provision of services.

SYSTEMATIC ENTOMOLOGIST/CURATOR FOR LEPIDOPTERA

The American Museum of Natural History is seeking an outstanding Researcher in the systematics of the Lepidoutera, who will be steward to its 2.5 million-specimen collection of world moths and butterflies. The collection is among the most comprehensive collections of macrolepidopterans for the Western hemisphere. Qualified applicants must have a Ph.D. by the time of appointment and show achievement and promise in the following areas: morphologically and phylogenetically based revisionary systematics; monographic work; field work and growth of collections; and potential sponsorship of research projects by various granting agencies. Some involvement in public programs and mentoring of graduate students is expected. This is a tenure-track appointment to be filled at the ASSISTANT CURATOR level. Please send a curriculum vitae; statement of research interests and professional goals; names, addresses, and e-mail numbers of four individuals qualified to write letters of recommendations; and a copy of all publications, by April 13, 1999, to: Dr. David Grimaldi, Chairman, Department of Entomology, American Museum of Natural History, Central Park West at 79th Street, New York, NY 10024-5192 **USA**. For inquiries, e-mail: grimaldi@amnh.org. The AMNH is an Equal Opportunity Employer.

The University of Florida seeks an ASSISTANT SCI-ENTIST for the Department of Medicine, Division of Infectious Disease. 1.00 FTE, non-tenure-track position. Ph.D. degree with a minimum of one year of postdoctoral experience required. Responsibilities include tissue culture, microinjection, immunofluorescence, generation of recombinant proteins, Western blot analysis, and ligandbinding assays required. Salary and benefits commensurate with experience. Please reply with curriculum vitae to: Bradley Bender, M.D., Professor, Department of Medicine, Division of Infectious Disease, Box 100277, JHMHC, Gainesville, FL 32610. Recruiting deadline: April 22, 1999. Anticipated start date: May 14, 1999. An Equal Opportunity/Affinative Action Employer.

TENURE-TRACK OPPORTUNITIES AT THE CENTER FOR BIOLOGICS EVALUATION AND RESEARCH, FDA

POSITIONS OPEN

Several outstanding opportunities are available for conducting research at the Center for Biologies Evaluation and Research (CBER). The Division of Hematology in the Office of Blood Research and Review of CBER is searching for candidates to fill three STAFF FELLOW-SHIP POSITIONS. The Staff Fellows are to carry out biomedical research and perform scientific review of submissions pertaining to the regulation of biological products under the purview of the Division. The laboratories are located on the NIH campus in Bethesda, Maryland. An applicant must have a Doctoral degree, limited or no postdoctoral experience, and familiarity with biochemical techniques. The mailing address is: Food and Drug Administration/Center for Biologics Evaluation and Research, 1401 Rockville Pike, Suite 200 North, Rockville, MD 20852-1448 with attention to the appropriate Principal Investigator listed below.

(1) In the Laboratory of Hemostasis, the Staff Fellow will perform research in the hemostasis, preferably related to the hemophilias, provide guidelines for the standardization of coagulation products, and advise other parts of the CBER about these products. Contact: Dr. Mark Weinstein, HFM-340; e-mail: weinstein@cber.fda.gov.

(2) In the Laboratory of Plasma Derivatives, a Staff Fellowship is available for protein folding studies of a physiologically important serine protease inhibitor. The folding of the normal form and that of a naturally occurring mutant are to be compared. Studies of a yeast prion system are to be initiated in an effort to interconvert cellular and scrapic protein forms. Contact: **Dr. Andrew Shrake, HFM-345; e-mail: shrake@cber.fda.gov.**

(3) In the Laboratory of Plasma Derivatives, the Staff Fellow will be working on oxidative reactions of hemoglobin and/or myoglobin and the effects of nitric oxide, both *in vitro* and in cultures of endothelial cells. Also, this position offers the opportunity to participate in the development and approval process for hemoglobin-based blood substitutes. Contact: **Dr. Abdu Alayash, HFM-345; e-mail: alayash@cber.fda.gov.**

POSTDOCTORAL AND RESEARCH COORDINATOR POSITIONS AVAILABLE IN SENSORY TRANSDUCTION Mount Sinai School of Medicine

NIH and NSF-funded positions are available immediately to join research programs in sensory transduction (see: Science 267:1502; JBC 273:26820; Nature 381:796; Nature 376:80; Nature 376:85; Nature 357:563). Ph.D. or M.S./B.S. in molecular biology, biochemistry, or transgenics required. Preference will be given to candidates with experience with G-proteins and their coupled receptors, recombinant adenovirus, or generation of transgenic and knockout mice.

For consideration, please send your curriculum vitae, along with names and addresses of three references to: Dr. R. F. Margolskee and Dr. M. Max, Box 1677, Department of Physiology and Biophysics, The Mount Sinai School of Medicine, One Gustave L. Levy Place, New York, NY 10029. FAX: 212-849-2599.

For more information, visit these websites: http: //www.mssm.edu/physbio/local/primfac/max. html, http://www.HHMI.org/science/neurosci/ margolskee.htm, http://www.mssm.edu/physbio/ local/primfac/margolskee.html.

We are an Equal Opportunity Employer fostering diversity in the workplace.

SCIENTIST

Neose Technologies, Inc., a leader in the development of oligosaccharide-based therapeutics, is currently seeking a Ph.D.-level scientist with three to five years of postgraduate training to join our Molecular Biology Department. The successful candidate will be involved in the metabolic engineering of oligosaccharide synthesis and regulatory pathways in bacteria. Experience in molecular biology, microbiology, or bacterial genetics is desired. The position requires the ability to interact with a diverse group of scientists across several disciplines including biochemistry, microbiology, and cell biology. Please send curriculum vitae and the names of three references to: Human Resources Department MB399, Neose Technologies, Inc., 102 Witmer Road, Horsham, PA 19044. Email: skeller@neose.com.

Two Positions for Researchers in the Diabetes Branch National Institute of Diabetes and Digestive and Kidney Diseases National Institutes of Health

We are recruiting two investigators to carry out research related to diabetes and/or obesity. One position is for a clinical investigator to conduct research involving direct interactions with human subjects. The other position is for a tenure-track laboratory-based investigator to conduct research with clear relevance to some aspect of either diabetes or obesity. Current research in the Diabetes Branch addresses questions related to diabetes, insulin action, insulin resistance, and obesity. The Division of Intramural Research, NIDDK, will provide appropriate research support without the need to apply for external grant support. **Clinical Investigator**

The ideal candidate would have outstanding training in clinical research with a track record of significant accomplishments. Ideally, the candidate would be certified in the sub-specialty of Endocrinology & Metabolism.; at a minimum, the candidate must have a license to practice medicine in the U. S. Although this recruitment is targeted to fill a tenure-track position (equivalent to Assistant Professor), we are also willing to consider excellent candidates at a more senior level. The position carries with it the opportunity to admit patients to The Clinical Center, a fully equipped clinical research center. Although the candidate is not expected to collaborate with laboratory-based investigators in the Diabetes Branch and elsewhere within the National Institutes of Health.

Laboratory-based Investigator

The ideal candidate would have outstanding scientific training and a track record of carrying out state-of-the art scientific work as demonstrated by publications in excellent journals. Preference will be given to physician-scientists licensed to practice medicine in the U.S., but we will also consider applications from Ph.D.'s who propose particularly promising projects with clear relevance to diabetes or obesity. This recruitment is targeted to fill a tenure-track position (equivalent to Assistant Professor).

To apply for either position:

Please send the following information to the address listed below: 1. curriculum vitae; 2. three letters of recommendation; 3. reprints of two published articles; 4. a brief description of proposed research (maximum length, one page single-spaced). The Search Committee will review applications as they are received. The application process will remain open until the positions are filled.

Derek LeRoith, M.D., Ph.D., Chairman, Search Committee Chief, Molecular and Cellular Endocrinology Branch, National Institutes of Health Building 10, Room 8S-235B, Bethesda, MD 20892

Vacancy Announcement National Institute on Aging Laboratory of Neurosciences

Staff Scientist

The Laboratory of Neurosciences within the Intramural Program of the National Institute on Aging (NIA) in Bethesda, MD, invites applications for a position of Staff Scientist within the Cerebral Physiology and Metabolism Section. We are seeking an outstanding scientist to develop and apply quantitative methods and mathematical models to examine and describe dynamic aspects of brain phospholipid structure, function and metabolism. Candidates with a Ph.D. should have a strong research background in brain phospholipid metabolism using biochemical, autoradiographic and positron emission tomographic (PET) techniques. Research applications should also include phospholipid fatty acid enzymology and molecular biology. Candidates should have a record of outstanding research accomplishments and demonstrated ability to maintain effective interactions between basic science and clinical disciplines related to the study of brain phospholipid metabolism. Applicants should have ability to define, design and pursue research as evidenced by a record of published research accomplishments and experience in assisting with the management of a research laboratory.

How to apply: Applicants should send curriculum vitae, bibliography and 3 letters of references (two from non-collaborators) to: National Institute on Aging Laboratory of Neurosciences c/o Gerontology Research Center Attn: Karen L. Maben, Box 26 Vacancy #AG-99-12 5600 Nathan Shock Drive Baltimore, MD 21224

The deadline for application is 4/26/99

NIH IS AN EQUAL OPPORTUNITY EMPLOYER

GLOBAL OPPORTUNITIES



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

Departments Physiology and Pharmacology

Assistant/Associate or Full Professors in Physiology or Pharmacology Teachers of Physiology or Pharmacology

Established in 1986 and recently moved to a completely equipped new building, the FMHS provides an integrated problem-oriented undergraduate medical curriculum with English as the medium of instruction for approx 60 students per annum.

Applicants must possess a PhD or MD degree obtained by research, and have experience of teaching physiology or pharmacology to undergraduates in North America, Europe or Australasia. Successful candidates will show evidence of competitive research with a strong publication record in international journals, an interest in joining collaborative interdisciplinary research teams, and be familiar with USMLE and MCCEE.

Appointees will receive a tax-free salary, accommodation, generous annual leave, annual air tickets, an annual allowance of 8.6% of salary, furniture allowance and contribution towards children's education.

Further information can be obtained from our web site (http://www.uaeu.ac.ae), or from Professor John Morrison, Chairman, Departments of Physiology and Pharmacology by fax: +971 3 671966, or email: john.morrison@uaeu.ac.ae.

Applications should include a full CV, publication list, names, phone, and addresses (fax and email) of five referees, and a comprehensive letter indicating the position sought, depth of interest, research and teaching experience, and suitability for the position, to:

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

Applications will close ten weeks after the advertisement; previous applicants need not apply.

COLBY COLLEGE

The Department of Biology at Colby College invites applications for a two-year National Science Foundation (NSF) **AIRE FELLOWSHIP** beginning in the fall semester 1999. As one of 10 NSF AIRE award recipient institutions, Colby College has been recognized as a leader and innovator in creating integration of its research and educational missions. This position is one of four AIRE Fellowships in the Natural Sciences Division at Colby College.

The successful candidate will participate in the development of a non-majors biodiversity course in the first year and will team-teach the course in the fall of the second year. The Fellow will teach in several biology major courses over the two-year period, including teamteaching the sophomore-level mammalian anatomy and physiology course in the spring of the first year. Candidates with research interests in field ornithology or intertidal ecology will be given preference. Some research and travel funds will be provided.

Applicants should send a letter of application, curriculum vitae, and statements of teaching and research interests, and arrange for transcripts and three letters of recommendation to be sent to:

> Professor Herb Wilson Department of Biology Colby College 5739 Mayflower Hill Drive Waterville, ME 04901-8857 E-mail: whwilson@colby.edu Telephone: 207-872-3432

Review of applications will begin on April 19, 1999, and will continue until the position is filled. *Colby College is* an Affirmative Action/Equal Opportunity Employer committed to excellence through diversity.

RESEARCH PATHOLOGIST

The United States Department of Agriculture (USDA), Agricultural Research Service (ARS), Clay Center, Ne braska is accepting applications for a permanent, full-time Research Pathologist. The objective of this position will be to investigate pathogen-host interaction at mucosal surfaces with particular emphasis on population variability in host responses to infection. Highly qualified candidates will have a Ph.D. in pathology or a related field, and professional training in morphologic pathology, with an emphasis on molecular aspects of inflammation, immunity, or other responses to infection. A professional degree in veterinary medicine is required as well as experience and working knowledge of molecular biology, cell biology, and immunology. Applicants must be U.S. citizens. Salary range is \$47,891 to \$74,035. For a copy of Announcement Number ARS-D9W-9226 and an application package, please call: USDA, ARS, Human Resources Divi-sion, Telephone: 301-504-1484 or print it from the Internet at website: http://www.ars.usda.gov. Specific questions regarding the position may be directed to: Dr. William Laegreid, U.S. Meat Animal Research Center, Telephone: 402-762-4177; e-mail: laegreid@ email.marc.usda.gov. All applications must be post-marked by April 26, 1999. USDA-ARS is an Equal Opportunity Provider/Employer.

Ferring Research Institute Inc., San Diego Division, is a research organization in the field of therapeutic peptide products.

RESEARCH SCIENTIST

Ferring is seeking an experienced scientist to create and manage an *in vivo* pharmacology laboratory. The qualified candidate holds a Ph.D. in pharmacology or physiology. A minimum of two years of postdoctoral experience in either an industrial or academic laboratory is preferred. The fields of expertise preferred are urology, gynecology, obstetrics, physiology of reproduction, gastroenterology, and pain. Responsibilities include the development and implementation of new *in vivo* primary screening assays for selection of drug candidates within current drug discovery programs. Position open as of May 1, 1999.

Ferring Research Institute Inc. offers competitive compensation and benefits packages. Qualified applicants are encouraged to send or FAX curriculum vitae, salary history, and names of three references to: Ferring Research Institute Inc., 3550 General Atomics Court, Building 2, Room 442, San Diego, CA 92121. FAX: 619-455-3190.

POSITIONS OPEN

AVIAN PHYSIOLOGIST (#99054-A)

A TENURE-TRACK POSITION (rank open) is available for a broadly trained Ph.D. with demonstrated expertise in avian physiology. While the specific area of research is open, the develop-ment of an independent research program that is focused on one or more areas of poultry physiology is required. Areas of expertise may include, but are not limited to, neurophysiology, muscle physiology, gut physiology, endocrine physiology, or female reproductive physiology. Applicants at the Associate or Full Professor levels must have an established, nationally recognized research program with evidence of consistent external support. The successful applicant will be expected to teach graduate and undergraduate students. Competitive salary, start-up, research, and office space will be available. Candidates must submit a letter of application, current curriculum vitae with bibliography, statement of proposed research, statement of graduate and undergraduate education philosophy. Applicant must arrange to have three letters of reference sent to the address below. Review of Applications will begin June 1, 1999, and continue until a suitable candidate is identified. For information contact: John Kirby, Ph.D., Telephone: 501-575-8623; e-mail: jkirby@comp.uark.edu.

All materials should be sent to: Dr. John Kirby, Chair, Physiology Search Committee, Department of Poultry Science, Poultry Science Center, Room O409, University of Arkansas, Fayetteville, AR 72701.

The University of Arkansas is an Affirmative Action/ Equal Opportunity Employer and applications will be accepted without regard to age, race, color, creed, sex, or national origin. Applicant must have proof or legal authority to work in the United States.

RESEARCH SCIENTIST and **ASSOCIATE SCI-ENTIST**. American Diagnostica Inc., a 15-year-old company recognized as a worldwide leader in discovery, development, and marketing of diagnostic products for cardiovascular, coagulation, autoimmunity, angiogenesis, and cancer prognosis, has two exciting job opportunities in its Research Department.

Research Scientist. Position requires a Ph.D. in biochemistry, immunology, molecular biology, and one to three years of postdoctoral experience. The successful candidate should have experience in developing immunoassays, protein purification, enzyme kinetics, and molecular biology. Experience in fibrinolysis or hemostasis also helpful. Good oral and written communication skills are essential.

Associate Scientist. Position requires a B.S./M.S. in above fields and two to four years of work experience. The successful candidate should be highly organized and have experience in ELISA, chromatography, immunochemistry, gel electrophoresis, cell culture, MAbs, and enzyme assays.

Please submit full curriculum vitae and salary requirements to: American Diagnostica Inc., Director of Research-Diagnostics, 222 Railroad Avenue, P.O. Box 1165, Greenwich, CT 06836. FAX: 203-661-7784. No agencies or calls, please.

RESEARCH INQUIRIES INVITED

The Smokeless Tobacco Research Council, Inc. invites inquiries regarding **GRANT APPLICATIONS**.

The Council sponsors independent research into questions of smokeless tobacco and health. Research support is through a program of grants-in-aid.

Grant applications are evaluated by the Scientific Advisory Board to the Council and will be judged solely on the basis of scientific merit and relevance.

Deadlines for submission of grant applications are June 30, 1999, for January 1, 2000, funding and December 31, 1999, for July 1, 2000, funding. Address inquiries or requests for applications to:

The Smokeless Tobacco Research Council, Inc. 420 Lexington Avenue New York, NY 10170 Telephone: 212-697-3485 FAX: 212-986-8631 E-mail: strc@mindspring.com POSITIONS OPEN

ASSISTANT/ASSOCIATE SPECIALIST. Vegetable crops. This continuing-track position (75 percent extension and 25 percent research) is available at the Assistant or Associate Specialist level on October 1, 1999. The successful candidate will be a member of the Department of Plant Sciences located at the Yuma Agricultural Center. The individual is expected to develop an extension education and applied research program that addresses the needs of the vegetable crops industry in Arizona, and to take a leadership role in providing technical expertise, training, and educational materials for extension agents and clientele in the vegetable industry. Opportunities exist for collaborations in research and extension education with faculty in the department and in related departments in the College of Agriculture, both in Yuma and on the main campus in Tucson. The successful candidate will also be encouraged to participate in undergraduate teaching and in graduate student training. Qualifications: The position requires a Ph.D. degree in horticulture, crop sciences, or a closely related field with an emphasis in the physiology of vegetable crops. The successful candidate will also have demonstrated excellence in applied research and extension, the communication skills necessary to be effective in teaching, and an ability to attract grant funding. The salary will depend upon qualifications and experience. Application procedure: Send letter of application, résumé with statement of research/extension interests, and copies of transcripts, and have three letters of reference sent to:

Chair, Vegetable Specialist Search Department of Plant Sciences The University of Arizona Tucson, AZ 85721 Telephone: 520-621-7616 FAX: 520-621-7186 E-mail: silver@ag.arizona.edu Website: http://ag.arizona.edu/PLS/

Review of applications begins April 9, 1999, and continues until the position is filled. The University of Arizona is an Equal Employment Opportunity/Affimative Action Employer/ Minorities/Women/Disabled/Veterans.

BACTERIAL PATHOGENESIS

POSTDOCTORAL FELLOW position is available immediately to join a research group studying bacterial pathogenesis. Selected individual will be primarily responsible for conducting independent research on bacterial pathogens and publication of results. Research will emphasize the molecular, cell biological, and biochemical characterization of virulence determinants in mycobacteria and Legionella. Ph.D. required and a record of productive experience in bacterial pathogenesis preferred. Send curriculum vitae and names and addresses of three references postmarked by June 11, 1999 (or until a suitable candidate is found), to: Dr. Jeffrey D. Cirillo, Department of Veterinary and Biomedical Sciences, Univer sity of Nebraska-Lincoln, P.O. Box 830905, 120 VBS, Lincoln, NE 68583-0905. Telephone: 402-472-2952; FAX: 402-472-9690; e-mail: jcirillo1@ unl.edu. University of Nebraska-Lincoln is committed to a pluralistic campus community through Affirmative Action and Equal Opportunity; is responsive to the needs of dual-career couples; and assures reasonable accommodation under the Americans With Disabilities Act.

NATIONAL RESEARCH COUNCIL POSTDOCTORAL AND SENIOR RESEARCH AWARDS

The National Research Council offers awards for postdoctoral scientific research to be conducted in residence at participating U.S. government laboratories. Awardees design their own projects to be compatible with the overall interests of the sponsoring laboratory. Stipends for recent Ph.D. recipients range from \$30,000 to \$50,000 depending upon sponsoring laboratory and are appropriately higher for additional experience. Application deadlines are April 15, 1999, for review in late June 1999, August 15, 1999, review in late October 1999, and January 15, 2000, for review in late February 2000. For further information and application materials, contact: The Associateship Programs, National Research Council (TJ 2114/SS), 2101 Constitution Avenue N.W., Washington, DC 20418. Website: http://rap. nas.edu; e-mail: rap@nas.edu; FAX: 202-334-2759; Telephone: 202-334-2760. Qualified applicants will be reviewed without regard to race, creed, color, age, sex, or national orioin.

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EUROPEAN OPPORTUNITIES

UNIVERSITY OF GENEVA DEPARTMENT OF CELL BIOLOGY PROFESSOR OF CELL BIOLOGY

The Department of Cell Biology is seeking applications for the position of a full or associate professor (starting January 1, 2000 or later). Applicants should possess a Ph.D. or equivalent qualification, an excellent record of productivity and peer-reviewed publications and the potential to develop a strong research program in cellular biology. The successful candidate is expected to teach at the graduate and undergraduate levels. Teaching in French is required, but a period of adjustment can be granted.

Applicants should forward 10 copies of a curriculum vitae, list of publications and statement of current and long-term research plans by May 31, 1999 to

Secrétariat de la Faculté des Sciences Université de Genève 30. qual Ernest-Ansermet CH-1211 Genève 4 Switzerland

Information about the Department of Cell Biology can be found at the web site: http: //www.unige.ch/sciences/biologie/bicel/

The University of Geneva is committed to increasing representation of women and particularly encourages applications from female candidates.

ANNOUNCEMENT

DOES THIS SOUND LIKE YOU OR SOMEONE YOU KNOW!

"I suffered ridicule as I worked long hours in the lab in high school and college, and frank outrage when I received a grant to study bacterial genetics during my summers in college." "I have long been interested in science, and in helping people. During my training, I had a number of clinical experiences which convinced me that I wanted to specialize in immunology at the bench, but still have patient contact." "I was always tinkering with my toys, taking them apart, trying to fit the square peg in the round hole. NIH is the only place to be for cutting-edge training, creativity, and pure excitement."

These are statements excerpted from applications recently submitted to the NIH LOAN REPAYMENT PROGRAM. NIH, the world's leading biomedical research and research training facility, has trained thousands in areas such as neuroscience, pathology, immunology, molecular genetics, developmental biology, cell biology, molecular biology, virology, and structural biology, to name only a sampling of areas in our intramural research program.

NIH Loan Repayment Benefits of \$35,000 Per Year

Have your interests always been to pursue medical research? Do the realities of staggering educational debt appear to prevent you from realizing your dreams? NIH offers a variety of clinical and basic science postdoctoral training fellowships that can be combined with educational loan repayment incentives. You owe it to yourself to know about these programs (or share the information with someone in need!) as you make your career decisions. You owe it to yourself to learn more about what NIH can do for you.

For more information on Loan Repayment Programs and postdoctoral training programs, visit our websites at: http://www.training.nih.gov and



http://Irp.info.nih.gov Toll Free: 1-800-528-7689 ° TTY: 1-888-352-3001

NIH is dedicated to building a diverse community in its training and employment programs.

GLOBAL OPPORTUNITIES



Applications are invited for: Department of Physics Research Associate (carrying the job title of Research Scientist) (Contract) Ref. RASO/3/1/299/SC)

Applicants should have a PhD degree. Duties include fabrication and characterization of high temperature superconductors and superconducting products, as well as the design and building of the equipment for the same purpose. Appointment will be made on a 2-year renewable contract.

Monthly Salary and Fringe Benefits HK\$20,185---HK\$46,300 by 14 increments. Approx. exchange rate in February 1999: US\$1=HK\$7.75

Benefits include annual leave and out-patient medical care. For the second year of employment onwards, dental care is offered. Further information about the University and

the general terms of service for appointees is available on our World Wide Web home page http://www.cuhk.edu.hk

Application Procedure

Please send a resume, copies of academic credentials, and two recommendations to the Personnel Office, The Chinese University of Hong Kong, Shatin, New Territories, Hong Kong (fax: (852) 2603 6852) before **16 April 1999**. Enquiries can be directed to Professor Yau at kfyau@phy.cuhk.edu.hk. Please quote the appropriate reference number and mark "Application" on cover.



Perth

RESEARCH ASSOCIATE Department of Physiology (REF: A9/99)

A vacancy exists in The Auditory Laboratory at The University of Western Australia, for an ARC funded postdoctoral position, to work under the supervision of Associate Professor Don Robertson. Starting time in 1999 is flexible, so prospective candidates still finishing their PhD could consider applying. The appointment will be until 31 December 2000. The research will use whole-cell patch and microelectrode recording in slices of auditory brainstem, using blind and pre-labelling methods. The goal is to investigate the effect of neuromodulators on synaptic function in the auditory brainstem and to identify the pharmacological and physiological characteristics of different neuronal populations within identified nuclei using pre-labelling with retrograde labels. Applicants must have a BSC (Hons). A knowledge of the auditory system is not required, but experience in brain slice recording and whole-cell patch techniques is essential. For an example of work carried out so far, see articles in J. Neurophysiology, vol.80, p218-229, 1998 and in Hearing Research, vol.116, p86-98, 1998. For further information and copies of the selection criteria please contact Don Robertson on +61 8 9380 3399 or email: drobed@cyllene.uwa.edu.au or access the web link below.

SALARY RANGE: Level A A\$33,563 - A\$45,548 p.a. (Minimum starting salary for appointee with PhD will be A\$42,432 p.a.)

CLOSING DATE: 23 April 1999

Conditions of appointment will be specified in any offer of appointment which may be made as a result of this advertisement.

Written applications quoting reference number, telephone number, qualifications and experience and the names, addresses (including email) and fax/telephone numbers of three referees, who can comment on the applicant's research abilities, should reach the Director, Human Resources, The University of Western Australia, Nedlands WA 6907, by the closing date. http://jobs.uwa.edu.au/

The University is an equal opportunity employer and promotes a smoke-free environment

SYSTEMATIC BOTANIST

The California Academy of Sciences invites applications for its **LINDSAY CHAIR** of Botany in the Department of Botany. Appointment to this newly endowed position may be made at any rank. Applications are solicited from individuals with primary interest in and commitment to active, field- and collection-oriented research in the systematics and phylogenetics of land plants (embryophytes) using contemporary techniques. We seek an individual who will also contribute to the curation, operation, and development of a major herbarium.

Candidates must have a Ph.D., an active research program with demonstrated interest in and competence in a particular group of land plants, and be prepared to participate in a variety of curatorial, administrative, and public educational activities at the Academy. Postdoctoral or equivalent experience is strongly preferred. A detailed position description and other information about the Academy are available through the Academy's website: www.calacademy.org/research. Applicants should forward a curriculum vitae; a cover letter that includes a description of research goals; and the names, mail and e-mail addresses, as well as telephone and FAX numbers of three references to:

> Human Resources Department Attention: Systematic Botanist Position California Academy of Sciences Golden Gate Park

San Francisco, CA 94118-4599.

Deadline for applications is September 1, 1999. The California Academy of Sciences is an Equal Opportunity Employer committed to diversity.

ASSOCIATE RESEARCH SCIENTIST

Researcher needed to identify and define problems within the broad area of brain imaging within the context of major psychiatric illness; develop imaging sequences to explore brain function in normal volunteers and patients with psychiatric illness, e.g., develop new magnetic resonance imaging protocols and pulse sequences for both structural and functional imaging; develop state-of-theart imaging techniques for the purposes of one's own as well as colleagues' imaging research; design scientific computer software for development and implementation by the imaging laboratory. Required: Ph.D., or professional equivalent; evidence of independent research work; a developing reputation as a leader in a particular field or expert in neuroimaging techniques (MRI and PET); evidence of this reputation and independent research in the form of first-author publications in peer-reviewed journals as part of an overall publication record that is current, and in fact increasing; evidence that the individual has begun to receive external funding. Desirable: Considerable knowledge of computer programming, and computer hardware and software; demonstrate ability to develop, execute, and manage a research project of similar magni-tude. Refer résumé to: Marty Fields, Department of Psychiatry, Mental Health Clinical Research Center, 2911 JPP, University of Iowa Hospitals and Clinics, 200 Hawkins Drive, Iowa City, IA 52242. Tele-phone: 319-356-1545. The University of Iowa is an Equal Employment/Affirmative Action Employer. Women and minorities are strongly encouraged to apply.

SALES CAREER OPPORTUNITY TECHNICAL SALES REPRESENTATIVE INTEGRATED DNA TECHNOLOGIES

Integrated DNA Technologies (IDT) is a leading supplier of synthetic DNA/RNA products. We are looking for a dynamic individual to add to our team. Responsibilities include direct outside sales to academic, government, and industry accounts. Maintenance and maturation of the southeast region will be the primary responsibility. Requirements include a M.A. or B.A. in science or engineering and knowledge of molecular biology techniques or three-plus years of sales experience in the life science industry. Interested individuals should contact: **Kevin Wuest, e-mail: kwuest@idtdna.com**.

ASSOCIATE RESEARCH SCIENTIST

Project studying macrophages in atherosclerosis/vascular wall biology. Ph.D., molecular biology experience required. Send curriculum vitae to: Dr. Ira Tabas, Department of Medicine, Columbia University, Box 90, 630 West 168th Street, New York, NY 10032. We take Affirmative Action toward Equal Employment Opportunity.

POSITIONS OPEN

CHIEF SCIENTIST AND TECHNICAL DIRECTOR DUGWAY PROVING GROUND

Dugway Proving Ground is seeking a highly qualified scientist to serve a senior executive role as Technical Director and Chief Scientist. The Chief Scientist reports directly to the Commander and directs the technical aspects of Dugway's important test missions in chemical/ biological warfare defense, smoke and obscurant evaluation, and Dugway's rapidly increasing role in counterterrorism. The Technical Director is expected to interact with numerous federal agency officials at the executive level. He/she serves as the strategic planner and technical authority for the proving ground. The technical staff of Dugway numbers almost 300 and the annual test budget is in excess of \$40 million. The position requires strong and proven technical and management skills. A Ph.D. degree in chemistry, microbiology, or a related field is required. A knowledge of the Department of Defense acquisition system is also critical. The position is civil service career at the GS-15 level.

Dugway Proving Ground is located approximately 80 miles from Salt Lake City in Utah. The proving ground is almost 800,000 acres in size and has a physical plant valued at over \$500 million. Dugway plays an important role in the process used by the Department of Defense to develop and field equipment and procedures for protecting U.S. service men and women from chemical or biological attack. Dugway provides similar assistance in the area of counterterrorism and consequence management for the civilian sector. This latter role is expected to rise dramatically in the next few years, offering opportunities to lead in a growth period. Dugway is physically remote, but entirely self-sufficient as regards housing and community needs. Nevertheless, many of its work force choose to commute from outside communities. Utah is rich in outdoor recreation opportunities and Salt Lake City is cosmopolitan, with many cultural activities. Dugway prides itself on service and professionalism.

Applicants may read a full position description on the World Wide Web at website: www.usajobs.opm.gov or may contact: Minerva Barnes, Telephone: 435-831-2337 for further information.

RESEARCH ASSOCIATE POSITION CANCER GENETICS AND CANCER MUTATION DETECTION

Position available as part of multi-institutional NCIfunded Program Project Grants for (i) expression and mutational profiling of human tumors using DNA chips, and (ii) identification of mutations and new cancer genes associated with tumor development. Applicant should have a Ph.D., preferably with experience in cancer genetics, genomics, and/or automation in DNA and PCR technology. Join translational research team with responsibilities for supervising research and Postdoctoral Fellows. Competitive salary commensurate with experience. Send curriculum vitae and names of three references to: **Professor Francis Barany, Programs of Biochemistry, Structural Biology, and Molecular Biology, Box 62, Cornell University Medical Center, 1300 York Avenue, New York, NY 10021. FAX: 212-746-8587. Or to: Philip Paty, M.D., Department of Surgery, Box 453, Memorial Sloan Kettering Cancer Center, 1275 York Avenue, New York, NY 10021. FAX: 212-717-3678. Equal Opportunity Employer.**

IMMUNOLOGISTS

The University of Washington seeks highly qualified applicants for tenure-track appointments in the Department of Immunology. Applicants must hold Ph.D. or M.D. degrees and have demonstrated the ability to establish an independent research program in immunobiology. Although the emphasis will be placed on recruiting **AS**-**SISTANT PROFESSORS** to the department, outstanding applicants at all levels are encouraged to apply. The Department of Immunology offers excellent laboratory space, flow cytometry, confocal microscopy, and transgenic animal facilities, and access to contemporary analytical tools to address complex systems at the genetic and protein level. Send curriculum vitae, a brief description of proposed research, and names and addresses of three references (by 15 June 1999) to: **Dr. Christopher Wilson, Chairman, Department of Immunology, Campus Box 357650, University of Washington, Seattle, WA 98195-7650.**

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

POSITIONS OPEN

NIH-funded **POSTDOCTORAL POSITIONS** are available to study cytokine signal transduction (*JBC* **27**2: 1032–7, 21334–40, 1997) and a new cytokine-inducible transcription factor with oncogenic potential (*PNAS* **95**: 13555–60, 1998). Candidates with background in molecular biology and/or biochemistry should send their curriculum vitae plus names and addresses of three references to:

Dr. Yu-Chung Yang Indiana University School of Medicine 1044 West Walnut Street R4-272 Indianapolis, IN 46202 Telephone: 317-274-7512 FAX: 317-274-0396 E-mail: ycyang@iupui.edu

POSTDOCTORAL FELLOWSHIP positions available in the Hematology-Oncology Division of Case Western Reserve University School of Medicine. Research focus on the characterization of novel anti-angiogenic compounds. Competence in protein biochemistry, expression of recombinant proteins, and endothelial cell biology required. Send curriculum vitae, names of three references to: Dr. Keith R. McCrae, School of Medicine (BRB3), Case Western Reserve University School of Medicine, **10900 Euclid Avenue**, Cleveland, OH 44106-4937. Candidates eligible for NIH training grant (U.S. citizen or permanent resident) preferred. CWRU is an Equal Opportunity/Affinnative Action Employer.

POSTDOCTORAL POSITION IN MOLECULAR NEUROBIOLOGY

Excellent opportunity for molecular biology/neurobiology/cellular biology Ph.D. to participate in major breakthroughs on the role of nicotinic receptors in memory and learning and neurodegenerative diseases. The new state-of-the-art laboratory is located at the Louisiana State University Neuroscience Center of Excellence. Send curriculum vitae and names of three references to: Dr. Rene Anand, Neuroscience Center of Excellence, Louisiana State University Medical Center, 2020 Gravier, Suite D, New Orleans, LA 70112. E-mail: ranan@lsumc.edu. LSUMC is an Equal Employment Opportunity/Affimative Action Employer.

STAFF FELLOW POSITION is available to study virus detection and viral interactions. Incumbent will develop novel molecular methods to detect adventitious viruses in vaccines, and to study interactions between DNA viruses. Experience with tissue culture, PCR techniques, growth and purification of viruses, and molecular virology techniques are required. Prefer M.D. and/or Ph.D. with a specialty in virology. The laboratory is located on the NIH campus. Contact: Phillip Krause, M.D., Division of Viral Products, Center for Biologics Evaluation and Research, Food and Drug Administration, 1401 Rockville Pike, HFM-457, Rockville, MD 20852. E-mail: kraus@cber.fda.gov. Respond by April 30, 1999.

SENIOR RESEARCH SCIENTIST and SENIOR RESEARCH LABORATORY TECHNICIAN positions available. The successful Senior Research Scientist candidate will have a Ph.D. in molecular biology, with experience in molecular genetics. The Senior Research Laboratory Technician position requires a B.S./M.S. in a relevant field with two years of experience in molecular/ cellular biology, sequencing, and tissue culture techniques. Curriculum vitae and three references to: Personnel, M. D. Anderson Cancer Center Orlando, 110 Bonnie Loch Court, Orlando, FL 32806. FAX: 407-426-9851.

Immediate opening for **POSTDOCTORAL POSI-TIONS** to study novel Ca²⁺-dependent mechanisms of cardiac arrhythmias. Previous experience with voltage clamp, Ca²⁺ imaging, confocal microscopy, or molecular biology required. Send curriculum vitae and three references to: Mark Anderson, M.D., Ph.D., Vanderbilt University, 315 MRB II, Nashville, TN 37232-6300. E-mail: mark.anderson@mcmail.vanderbilt.edu.







arbejdsmiljøinstituttet

AMI er Arbejdsministeriets sektorforskningsinstitut. AMI er et forskningsfagligt samlingspunkt og videncenter. Opgaverne er forskning og udvikling, dokumentation, rådgivning, formidling, videreuddannelse samt forskeruddannelse AMI har ca. 130 medarbejdere. www.ami.dk

FACULTY POSITIONS PHARMACOLOGY & PHYSIOLOGY

The Department of Pharmacology & Physiology of UMDNJ- New Jersey Medical School (NJMS) is currently undergoing a substantial expansion. In the next phase of this process TENURE-TRACK FACULTY POSITIONS are available at the Assistant or Associate Professor level, with the possibility of appointment as full Professor for an outstanding candidate. Investigators with vigorous, funded research programs that extend or complement existing Departmental strengths are sought. Specific area of research is less important than the vitality of the research program and the enhancement of the Departmental and University research environment.

NJMS is investing heavily in the basic sciences and in a strong research infrastructure. Faculty positions will come with competitive salary, startup packages and research facilities. It is expected that the candidates will have achieved national or international recognition for their research accomplishments and have demonstrated the ability to obtain external research funding.

NJMS is located in the University Heights area of Newark, adjacent to Rutgers University, The New Jersey Institute of Technology, and the growing University Heights Science Park. It is also in close proximity to New York City, offering a diversity of scientific and cultural amenities.

Review of applications will begin immediately. Applicants should send a CV, a short description of research interests and future plans, and have three letters of reference sent to: Andrew P. Thomas, Ph.D.; Chair, Department of Pharmacology & Physiology; New Jersey Medical School of UMDNJ; 185 South Orange Ave.;



University Heights; Newark, NJ 07103. UMDNJ is an Affirmative Action/Equal

Opportunity Employer, M/F/D/V, and is a member of the University Health System of New Jersey.

EUROPEAN OPPORTUNITIES

TWO NEW PROFESSORSHIPS AT THE NATIONAL INSTITUTE **OF OCCUPATIONAL HEALTH (AMI) COPENHAGEN, DENMARK**

Applications are invited for a new professorship in work physiology at the Department of Physiology. In co-operation with the Head of the Department, the candidate will be respeonsible for further development of the research profile within the department's strategic program.

Applications are also invited for a new professorship in psychosocial factors at work at the Psychosocial Department. In cooperation with the Head of the Department, the candidate will be responsible for further development of the research profile within the department's strategic program.

The candidates will be employed at the National Institute of Occupational Health for a period of 5 years with a possible extension for 3 years.

Please read more about the professorships and the institutte and its 130 employees at the homepage www.ami.dk.

Candidates should apply in writing to the National Institute of Occupational Health, Lersø Parkallé 105, 2100 Copenhagen, Denmark.

Closing date for applications: 18 May 1999 at noon.

Stress, the HPA axis, and cocaine reinforcement. **POSTDOCTORAL POSITIONS** available immediately on NIDA-supported projects investigating the behavioral neurobiology of cocaine, with special emphasis on receptor systems and brain regions associated with stress and the activation of the hypothalamic-pituitaryadrenal (HPA) axis. In particular, the effects of environmental stress and stress-related hormones on the acquisition and maintenance of intravenous cocaine self-administration, as well as the effects of stress on drug-induced changes in cocaine self-administration and other behavioral effects of the drug, will be investigated. State-of-theart procedures including operant behavioral pharmacology, homogenate receptor binding, and quantitative receptor autoradiography, and *in vivo* microdialysis and neuro-chemistry are available. Candidates must have a Ph.D. in pharmacology, neuroscience, psychology, or a related dis-cipline with relevant laboratory experience. Salary will be commensurate wth postdoctoral experience. Please send curriculum vitae and the names of three references to: Dr. Nick E. Goeders, Department of Pharmacology and Therapeutics, Louisiana State University Medical Center, P.O. Box 33932, Shreveport, LA 71130-3932. E-mail: ngoede@lsumc.edu.

LSUMC is an Affirmative Action Employer.

POSTDOCTORAL POSITIONS HARVARD INSTITUTES OF MEDICINE

Two positions available to study (1) Rho family of small G-proteins and their regulatory proteins in cellular physiology, differentiation, and carcinogenesis; (2) function of novel lysosomal membrane protein in intracellular proteolytic pathways. Strong background in generating and analyzing knockout animals preferred. Solid experience in molecular and cell biology required. Candidates must have broad interest in signaling, immunology, development, and cancer biology. Experience in special techniques (organelle fractionation, protein expression, purification) desirable. Start date: as soon as possible. FAX or mail curriculum vitae and three references to: Dr. Bing Lim, Beth Israel Deaconess Medical Center, Harvard Medical School, 77 Avenue Louis Pasteur, Boston, MA 02115. FAX: 617-667-3299; e-mail: blim@ caregroup.harvard.edu.

POSTDOCTORAL RESEARCH ASSOCIATE

A qualified Ph.D. is sought with an interest in cardiac cellular physiology to study changes in excitation-contraction coupling associated with heart failure. Experience with electrophysiology is desirable. This project is in collaboration with a multidisciplinary group of Investigators associated with the Cardiovascular Research Center. Please submit curriculum vitae with names and addresses of three references to: Dr. Robert A. Haworth, Department of Surgery, University of Wisconsin Clinical Science Center, 600 Highland Avenue, Madison, WI 53792. FAX: 608-263-0454; e-mail: haworth@ surgery.wisc.edu.

POSTDOCTORAL FELLOWSHIP IN MOTOR LEARNING

A position is available to participate in a research program employing several vertebrate animal models of motor learning, including classical conditioning, prism adaptation, and several operant conditioning paradigms. Techniques and approaches include chronic multiple single unit recording, inactivation studies, and experiments employing human subjects. To apply please send curriculum vitae, the names of three references, and a brief overview of your interests and previous work to: James R. Bloedel, Chairman, Division of Neurobiology, Barrow Neurological Institute, 350 West Thomas Road, Phoenix, AZ 85013. E-mail: jbloede@mha.chw.edu. Equal Opportunity Employer.

POSTDOCTORAL POSITIONS

Available to study structural and functional aspects of enzymes involved in blood coagulation and fibrinolysis. Contact: Enrico Di Cera, Department of Biochemistry and Molecular Biophysics, Washington University School of Medicine, Box 8231, St. Louis, MO 63110. E-mail: enrico@caesar.wustl.edu; website: http:// www.biochem.wustl.edu/~enrico.

POSITIONS OPEN

POSTDOCTORAL POSITION CHROMATIN STRUCTURE AND TRANSCRIPTION

A position is available to study the relationship between chromatin structure and transcription using the yeast *HSP82/HSC82* heat shock genes as a model system (*EMBO J.* 12:3931, 1993; *MCB* 13:727, 1993; *MCB* 16:7004, 1996; *MCB* 19:1627, 1999). Ongoing projects include a genetic selection for chromatin remodeling and heat shock response factors, HSF binding to nucleosomes, both *in vivo* and *in vitro*, and position-effect regulation of *HSP82* by *SIR* repression. More information can be found at website: http://biochem-sh.lsumc. edu/html/labpages/Grosslab/subindex.html. Experience in yeast genetics, molecular biology, and protein biochemistry is a plus. Please send curriculum vitae and the names, addresses, and telephone numbers of three references to: Dr. David S. Gross, Department of Biochemistry and Molecular Biology, Louisiana State University Medical Center, 1501 Kings Highway, Shreveport, LA 71130-3932. *LSU is an Equal Opportunity Employer*.

PREDOCTORAL and POSTDOCTORAL POSI-TIONS on an NIH-funded Interdisciplinary Training Grant are available to individuals interested in intracel-Iular signaling, gene transcription, mitogenesis, lipid metabolism, and several other biological processes involved in a variety of cardiovascular diseases. Candidates will have the opportunity to work in the laboratory of one of the 13 Preceptors in the Departments of Biochemistry, Medicine, Pharmacology, and Physiology and Biophysics. Visit our website: http://www.utmem. edu/pharmacology/training for each Preceptor's re-search interest. Applicants must be U.S. citizens or permanent residents. Postdoctoral candidates must have a M.D. and/ or Ph.D. degree in one of the biological sciences. Send résumé with names of three references to: Dr. Tarun B. Patel, Department of Pharmacology, University of Tennessee, Memphis, 874 Union Avenue, Memphis, TN 38163. FAX: 901-448-7300. UT is an Equal Employment Opportunity/Affirmative Action/Title VI/Title IX/Section 504/ADA/ADEA Employer. Minorities and women are especially encouraged to apply.

POSTDOCTORAL POSITIONS in cytokine receptor signaling. Positions available to join an expanding laboratory focused on cytokine receptor (prolactin, growth hormone, GM-CSF) structure/function relationships during the immune response and pathogenesis of breast cancer (*Science* 253:77; *PNAS* 93:5947; *Mol. Cell. Biol.* 18:896). Research opportunities include the study of receptor-associated signaling complexes and the nuclear retrotranslocation of peptide hormones. Molecular biology and cell culture experience required. Recent graduates with U.S. chizenship or permanent residence are encouraged to apply. Please send a curriculum vitae, a statement of research interests, and three references to: Dr. Charles Clevenger, Department of Pathology and Laboratory Medicine, University of Pennsylvania, 509 Stellar-Chance Laboratories, 422 Curie Boulevard, Philadelphia, PA 19104. FAX: 215-573-8944; e-mail: clevengc@mail.med.upenn.edu. Equal Opportunity Employer/Affirmative Action.

POSTDOCTORAL FELLOW position available at Brigham and Women's Hospital/Harvard Medical School to study the function of extracellular matrix degrading cysteine proteases in atherosclerosis using gene targeting and transgenic mouse models. Skills in immunohistochemistry and tissue handling essential. Molecular cell biology experience helpful. Send curriculum vitae, cover letter with interests, and names of three references to: Dr. Guo-Ping Shi, Pulmonary Division, Brigham and Women's Hospital, 75 Francis Street, Boston, MA 02115. FAX: 617-232-4623. An Affinative Action/ Equal Opportunity Employer.

POSTDOCTORAL POSITIONS to study the gating mechanisms of cloned Ca-activiated K channels expressed in oocytes and HEK cells. Applicants should be skilled in patch clamping or the molecular biology of ion channels. Salary will depend on experience. Contact: Karl L. Magleby, The Department of Physiology and Biophysics, University of Miami School of Medicine, P.O. Box 016430, Miami, FL 33101-6430. E-mail: kmagleby@miami.edu; Telephone: 305-243-6236. The University of Miami is an Affinnative Action/Equal Opportimity Employer.

POSITIONS OPEN

POSTDOCTORAL STUDIES IN SOMATOSENSATION

Postdoctoral positions are available immediately in the NIH-funded somatosensory laboratory at the Institute for Sensory Research, Syracuse University. The laboratory has researchers representing the fields of bioengineering, neuroscience, and psychology, and has a 35-year history of somatosensory research exploring the structure, function, and behavioral (psychophysical) aspects of somatosensation. Possible laboratory experiments/experiences include, but are not limited to, electrophysiology of receptor and peripheral nerve; receptor and skin anatomy, the biomechanics of receptors and skin, and an array of human psychophysical studies dealing with taction, thermosensation, and pain. Of particular interest to the ongoing projects would be individuals experienced with patch-clamping techniques. Send curriculum vitae and the names and addresses of three references to: Dr. S. J. Bolanowski, Institute for Sensory Research, Syracuse University, Merrill Lane, Syracuse, NY 13224. E-mail: sandy_bolanowski@isr.syr.edu. Syracuse University is an Equal Opportunity/Affinative Action Employer.

POSTDOCTORAL/RESEARCH POSITION ORTHOPAEDIC RESEARCH LABORATORIES Boston University School of Medicine

Positions to investigate: (1) regulatory mechanisms of skeletal tissue-specific gene expression; (2) molecular signal transduction of mechanical stimuli; (3) molecular biology of fracture repair and bone regeneration.

Two years of experience in molecular biology and *in situ* hybridization needed and/or experience in cell biology and *in vitro* gene expression. Ability to work independently with other members of the laboratory. Potential to further faculty development.

Send curriculum vitae, copies of relevant publications, and three references to: Louis Gerstenfeld, Ph.D., Director of Orthopaedic Research Laboratory, c/o Michael Roper Doctor's Office Building, 720 Harrison Avenue, Suite 808, Boston, MA 02118-2393. FAX: 617-638-8493.

Boston University is an Affirmative Action/Equal Opportunity Employer.

POSTDOCTORAL POSITIONS available beginning July 1, 1999, to study the role of cell surface heparan sulfate proteoglycans in regulating tumor cell growth and metastasis. NIH-funded projects designed to (1) examine proteoglycan structure/function relationships, (2) investigate proteoglycan sas therapeutic agents, and (3) analyze proteoglycan function on tumor cells growing in the SCID-hu mouse. Excellent training environment within the Arkansas Cancer Research Center. Send curriculum vitae and names of three references to: **Ralph D. Sanderson, Ph.D., Arkansas Cancer Research Center, Slot 517, University of Arkansas for Medical Sciences, UAMS is an Equal Opportunity Employer.**

POSTDOCTORAL POSITION

To study the role of oxidative stress and intracellular antioxidant status on endothelial cell signaling. Required skills include experience in modern techniques of signal transduction and molecular biology. Please send curriculum vitae to: John F. Keaney, Jr., M.D., Associate Professor of Medicine and Pharmacology, Boston University School of Medicine, Whitaker Cardiovascular Institute, 715 Albany Street, Room W507, Boston, MA 02118. E-mail: jkeaney@bu.edu.

POSTDOCTORAL POSITION studying rheumatoid arthritis; gene therapy; leukocyte recruitment; angiogenesis; cell adhesion, and cytokines (*Nature* 376:517; *Science* 258:1798; *J. Clin. Invest.* 101:746). Experience with adenoviral vectors, immunoassays, angiogenesis and cell adhesion assays, arthritis animal models, gene knockout mice, and molecular biology desirable. Send curriculum vitae and three reference names to: Dr. Alisa Koch, Northwestern University Medical School, Ward 3-315, 303 East Chicago Avenue, Chicago, IL 60611. FAX: 312-503-0994; e-mail: ae-koch@nwu. edu.

EUROPEAN OPPORTUNITIES

the international weekly journal of science

invites applications for the post of Chief Editor, Biological Sciences

Do you have what it takes to lead a growing team of talented editors publishing the world's finest biological sciences papers? To take on the most demanding and stimulating editorial role in biological sciences publishing? To be responsible for the highest standards in assessment and review? To represent *Nature* in the biological sciences community – and to ensure that *Nature* serves the interests of that community?

If so, we want to hear from you.

The Chief Editor, Biological Sciences, is a senior appointment, reporting directly to the Editor, backed by a strong commitment to investment and expansion. He or she will play a key part in developing *Nature*'s publishing policy. Terms and conditions will be highly competitive, reflecting the critical importance and responsibilities of the role.

The ideal candidate will probably have some editorial experience, but will certainly have intellectual vision and strong leadership qualities. He or she will have significant achievements in biological sciences research; demonstrable interests across a wide range of biological sciences; respect in the scientific community; a capacity for prompt and balanced critical assessment; good communications skills; and imaginative ideas for the future development of *Nature* and their contribution to it.

The job is based in *Nature*'s modern London offices but will involve international travel to meetings and laboratories.

Applicants should write in confidence, marked 'Personal', to: Dr Philip Campbell, The Editor, Nature, 4 Crinan St, London N1 9XW, UK.

They should include a CV, a discussion of relevant experience, and an indication of their specific ambitions for *Nature*. Applications should be sent as soon as possible and no later than 16 April.

EUROPEAN OPPORTUNITIES

morphosys

Combinatorial Biology in Drug Discovery

MorphoSys AG is a leading German biotech company located in Munich. We are dedicated to the generation of human antibodies from our human combinatorial antibody library for target validation, diagnostic as well as therapeutic purposes. We offer a stimulating environment for scientists interested in developing and applying new technologies in pharmaceutical discovery.

Due to the expansion of our business we are offering the following position:

MANAGER TECHNOLOGY LICENSING

for a highly motivated MOLECULAR BIOLOGIST

As a molecular biologist, you will be creative, goal-oriented and capable of rapidly taking over new and complex tasks. Qualified to PhD level, you will have a broad scientific background in molecular biology and detailed knowledge of the most recent developments in the field. Ideally, you will be familiar with screening of biomolecular libraries. Knowledge of patent law and licensing structures are highly welcome, however not a prerequisite.

In your position, you will be responsible for the identification of new developments and opportunities, the establishment of technology transfer activities, and the coordination of in- and out-licensing. In addition, you will assist the Director of Intellectual Property in IP-related matters. For further details on the position, please contact Dr. Bernhard Vimekäs by email (vimekaes@morphosys.de).

MorphoSys' facilities are located in the newly established Biotechnology/Biomedicine campus which includes the Max-Planck Institutes, Munich Gene Centre and University hospitals. MorphoSys offers a competitive compensation and benefits package. To join our team of highly motivated scientists in the creative environment of one of Europe's most exciting biotechnology companies, please send your CV and two letters of recommendation, to arrive no later than 1999-04-30 to:

The Personnel Manager MorphoSys AG Am Klopferspitz 19 82152 Martinsried / Munich, Germany http://www.morphsys.de

Faculty Bacterial Pathogenesis

The Department of Molecular Genetics and Microbiology in the School of Medicine at the State University at Stony Brook invites applications for a tenure track **faculty** position at the **Assistant** or **Associate** level in the field of Bacterial Pathogenesis.

The successful candidate will become a member of the Infectious Disease Institute and will be provided research and office space in the Center for Molecular Medicine, a new state-of-the-art research facility. Applicants must hold a Ph.D or M.D./Ph.D with at least two years of postdoctoral experience in basic biomedical research using molecular biology and cell biology techniques. Preference will be given to candidates who are working at the interface of bacterial and eukaryotic systems. Successful candidate will be expected to establish an extramurally funded independent research program, direct graduate students, and participate in departmental teaching responsibilities. The department and the Infectious Disease Institute provide a highly interactive scientific com munity, well-supported by core facilities and training programs. Collaborative interactions with School of Medicine faculty will be encouraged.

Competitive salary and start-up package available. Applicants should submit a curriculum vitae, a brief description of research interests, names and fax numbers of three references to: Dr. James Bliska,

Search Committee Chair, Molecular Genetics and Microbiology, SUNY Stony Brook, Stony Brook, NY 11794-5222. AA/EOE



AAAS Science AND Technology Policy Yearbook

Albert H. Teich, Stephen D. Nelson, Celia McEnaney, and Tina M. Drake, editors

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O overing major developments during 1998, the new AAAS Yearbook is a concise yet comprehensive source of information on current policy issues affecting science and technology. Included are papers from the 1998 AAAS Science and Technology Policy Colloquium together with other key articles and speeches critical to 1998. Working scientists, engineers, government policymakers and administrators, industrial managers, scholars and students of science and technology policy, and many others will find this book an invaluable resource. Special quantity discounts are available for classroom use. Call AAAS at 202-326-6600 for bulk rate purchases. And now you can browse the full text of the 1999 Yearbook on-line at www.aaas.org/spp/yearbook

1999; 340 pages; \$24.95 (AAAS member price \$19.96) Postage/handling per order \$4.00 AAAS Distribution Center, PO Box 521, Annapolis Junction, MD 20701 Order by phone (VISA/MasterCard only) call 1-800-222-7809 Fax orders to 301-206-9789



American Association for the Advancement of Science

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BIOANALYTIC CHEMIST

The individual chosen for a multidisciplinary research team will concentrate on creating activities focused on the development and implementation of proteomics technology for antigen discovery, as well as bioanalytical technique for product characterization. Qualifications include a Ph.D. in Biochemistry or Analytical Chemistry and expertise in analytical ultracentrifugation and protein/protein interaction. Your background must include 2 years in proteomics technology or 4 years in mass spectroscopy. We also require experience in peptide or protein fragment sequencing, native and recombinant proteins purification and 2-D gel differential display. Prior responsibilities in a supervisory or managerial role are a definite advantage.

Pasteur Mérieux Connaught Canada provides a competitive salary and compensation package. Please forward you resume to: PASTEUR MÉRIEUX CONNAUGHT CANADA, 1755 Steeles Avenue West, Toronto, ON M2R 3T4 Canada. Fax: (416) 667-9391

www.ca.pmc-vacc.com

We want to thank all applicants, however, only those under consideration will be contacted.

SENIOR SCIENTIST

Dendreon Corporation is a privately held biotechnology company utilizing a novel therapy based on the use of dendritic cells. We've developed an innovative platform technology that allows the isolation and activation of dendritic cells from blood and the use of these cells to stimulate immune responses against both virally infected tissue and cancer cells. We are currently seeking a qualified senior scientist who will be involved in programs associated with developing approaches for dendritic cell immunotherapy of cancer:

You will plan, conduct, and supervise research in the field of discovery and engineering of target antigens for immunotherapy of cancer. Familiarity with a wide variety of current molecular cloning techniques is needed for this position along with a scientific track record in gene discovery, cloning and characterization. A Ph.D. in Molecular Biology or related discipline with at least 6 years of postdoctoral experience is required. Previous supervisory experience necessary.

We offer a competitive salary and benefits package, including stock options. For consideration, please send your c.v. to Cheryl Fromm, Human Resources Dept., 3005 First Avenue, Seattle, WA 98121. Fax: 206-256-0571

DENDREON CORPORATION



Post Doctoral Positions National Cancer Institute

Signal transduction and mechanisms of tumor cell survival-growth factor stimulated kinases and oxidative enzymes. (Laboratory of Dr. Phillip Dennis, M.D., Ph.D., Dept. of Development Therapeutics)

Chromosome segregation, cell cycle regulation and chromatin structure/function in the yeast *S. cerevisiae* and its human homologs. (Laboratory of Dr. Munira A. Basrai, Ph.D., Dept. of Genetics)

Excellent training opportunities. Candidate must have a Ph.D. and/or M.D. with less than 5 years of post doctoral experience. Send *curriculum vitae* and contact information for 3 references to:

Drs. Dennis or Basrai NCI/National Naval Medical Center 8901 Wisconsin Avenue Bldg. 8, Room 5101 Bethesda, MD 20889-5101

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NATIONAL INSTITUTES OF HEALTH

Postdoctoral Positions in Molecular and Cellular Biology

Postdoctoral Fellowships are available in the Laboratory of Molecular and Cellular Biology, National Institute of Diabetes and Digestive and Kidney Diseases, NIH. The Laboratory is similar to a small academic department and has excellent laboratory facilities. The intramural program of NIH offers an outstanding research environment. The laboratory is located on the main campus of NIH in Bethesda, Maryland, a 20 minute ride from Washington, DC. Applications are invited from qualified individuals with Ph.D., M.D., or M.D./Ph.D. degrees. The current research openings include:

Orna Cohen-Fix (Cell cycle regulation) - immediately: A postdoctoral position is available for studying cell cycle regulation in budding yeast. The project will focus on the mitotic inhibitor Pds1p, including the characterization of its molecular function, its role in the DNA damage checkpoint pathway, and its role in meiosis. (ornacf@helix.nih.gov)

Anthony V. Furano (Mammalian retrotransposons) summer 1999: At least 30% of rodent and primate genomes consists of L1 (LINE-1) retrotransposons. We use molecular biology, molecular evolution, and population genetics to study the replication, and evolution of L1 elements and their effects on the genomes of these species. (avf@helix.nih.gov)

Deborah M. Hinton (Transcription initiation) immediately: We study mechanisms of transcriptional initiation using a simple bacteriophage system. We focus on the protein-DNA and protein-protein contacts needed for an activator and a co-activator to switch the specificity of RNA polymerase to different promoters. (dhinton@helix.nih.gov)

Nancy G. Nossal (DNA replication) - summer 1999: Our research is focused on determining the molecular mechanisms controlling the initiation of DNA replication and the coordination of leading and lagging strand synthesis. (ngn@helix.nih.gov)

Roland A. Owens (Adeno-associated virus) - May 1999: The group performs basic research on the rep gene and Rep proteins of adeno-associated virus type 2 (AAV). The role of these proteins in AAV replication, gene regulation, site-specific integration and inhibition of cell division are being studied using genetic, tissue culture, and biochemical methods. (ro6n@nih.gov)

S. Stoney Simons (Steroid receptors) - summer 1999: The mechanism of steroid receptor action is studied at a molecular level. Projects include modulation of receptor transcriptional activity, role of co-factors, and determinants of agonist vs. antagonist activity. (steroids@helix.nih.gov)

Karen Usdin (Triplet expansion diseases) - immediately: Postdoctoral position available to study the etiology of the triplet expansion diseases and the consequences of expansion in Fragile X mental retardation syndrome and Friedreich's ataxia. (KU@helix.nih.gov)

Applicants should have a Ph.D. or M.D. degree and less than five years postdoctoral experience. Interested applicants should send a copy of their curriculum vitae and list of publications, a statement of their research goals and interests, and the names and addresses of three references to the investigator above, by e-mail, or by mail in care of Ms. Linda Hamilton, Building 8, Room 309, National Institutes of Health, MSC 0840, Bethesda, MD 20892-0840.

NIH IS AN EQUAL OPPORTUNITY EMPLOYER

POSTDOCTORAL FELLOWSHIPS IN CELLULAR AND MOLECULAR IMMUNOLOGY National Cancer Institute

Immediate openings exist for full-time, Postdoctoral Training Fellowships in the Tumor Immunology Section, Surgery Branch, National Cancer Institute, National Institutes of Health, Bethesda, Maryland to study the imnune response to tumors in humans.

One project aims to study immune responses in breast cancer and requires a background in culture of fresh human breast cancers. For additional positions, we seek candidates with experience in cellular immunology, as well as molecular biology. Ongoing projects include the identification of new tumor-associated antigens, the study of immune tolerance to tumor-associated differentiation antigens, the development of synthetic and recombinant anticancer vaccines.

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

Steven A. Rosenberg, M.D., Ph.D. Chief of Surgery National Cancer Institute National Institutes of Health Building 10, Room 2B42 Bethesda, MD 20892-1502 E-mail: sar.nih.gov

Selections for these positions will be based solely on merit, with no discrimination for nonmerit reasons such as race, color, religion, gender, national origin, politics, marital status, physical or mental disability, age, sexal orientation, or membership or nonmembership in an employee organization. NIH is an Equal Opportunity Employer.

OREGON HEALTH SCIENCES UNIVERSITY MOLECULAR BIOLOGY OF MEMBRANE PROTEINS

POSTDOCTORAL POSITION(S) are available to study structural aspects (topology, folding, organization of ligand-binding domains) and dynamics of cation-transporting P-type ATPases. The strategies of mutational analysis using baculovirus-infected insect cell expression systems and protein chemistry are currently employed. Strong background in biochemistry and/or molecular biology required, preferably with some experience in recombinant DNA techniques. Send curriculum vitae and names of three references to:

Professor Jack H. Kaplan, Ph.D., F.R.S. Department of Biochemistry and Molecular Biology, L224 Oregon Health Sciences University 3181 S.W. Sam Jackson Park Road Portland, OR 97201-3098 E-mail: kaplanj@ohsu.edu

COMPUTATIONAL NEUROSCIENCE THE UNIVERSITY OF TEXAS-HOUSTON MEDICAL SCHOOL

The Department of Neurobiology and Anatomy is expanding its computational neuroscience program. Several positions are available, including **POSTDOCTORAL FELLOWS**, **RESEARCH SCIENTISTS**, and **SYS-TEM ADMINISTRATORS**. Areas of investigation include dynamical properties of nonlinear systems, information processing and storage in molecular pathways, adaptive plasticity in neural networks, learning and memory, and the circuitry and adaptive responses of primate retina. Applicants should send a letter of application, curriculum vitae, and names of three references to: Dr. John H. Byrne, Department of Neurobiology and Anatomy, The University of Texas-Houston Medical School, Houston, TX 77030. Affirmative Action/Equal Opportunity Employer.

POSTDOCTORAL POSITION available to study (1) immunopathogenesis of occupational asthma and related disorders; and (2) pathogenesis of pulmonary vasculitis in patients with asthma; using transgenic mouse models. Candidate should have experience in immunology, pulmonary physiology, and/or molecular biology. Future advancement to a faculty position is possible. Send curriculum vitae and references to: Fred Finkelman, M.D., The University of Cincinnati College of Medicine, e-mail: ffinkelman@men.po.com; FAX: 513-558-3799. Univ. Cincinnati is an Equal Opportunity Employer.

POSITIONS OPEN

POSTDOCTORAL POSITIONS

The National Institutes of Health, National Heart, Lung, and Blood Institute has a Postdoctoral position available to study regulation of signal transduction by oxygen radicals. Applicants must have a strong background in molecular biology as evidenced by prior publications. Experience with the yeast two-hybrid system or expression cloning is a plus. For references, see: Science 270:296-299, 275:1649-1652; JBC 273: 25922-25928, 274:7936-7940; Curr. Opin. Cell Biol. 10:248-253. Applicants must have less than five years of postdoctoral experience. Please send curriculum vitae and three references to:

Toren Finkel, M.D., Ph.D. National Institutes of Health 10 Center Drive MSC 1650 Building 10, Room 7B15 Bethesda, MD 20892-1650

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POSTDOCTORAL POSITION IN ELECTROPHYSIOLOGY UCLA

Postdoctoral position available immediately to study synaptic competition and its role in learning and memory. The position will involve electrophysiological recording from synapses of *Aplysia*, both in cell culture and in the central nervous system. Prior experience in intracellular or whole-cell electrophysiology is essential. Candidates must have a Ph.D. degree, and be either a U.S. citizen or a permanent resident of the United States. A strong intellectual interest in learning and memory is desirable.

Interested applicants should post or e-mail a curriculum vitae, a brief statement of research interests, and the telephone numbers or e-mail addresses of three references to: David L. Glanzman, Ph.D., UCLA Brain Research Institute, Gonda (Goldschmied) Neuroscience and Genetics Research Center, Box 951761, Los Angeles, CA 90095-1761. Telephone: 310-206-9972; e-mail: dglanzman@physci.ucla.edu.

POSTDOCTORAL POSITION IN VASCULAR BIOLOGY NIH TRAINING PROGRAM

The Department of Physiology at Jefferson Medical College, Thomas Jefferson University, offers a Postdoctoral Training program in physiology and pathophysiology of cardiovascular disorders. Current research areas for this position include mechanisms of myocardial ischemiareperfusion injury; endothelial mediators in the regulation of vascular biology; nitric oxide physiology, neutrophil migration, atherogenesis, and the role of adhesion molecules in circulatory disorders. Emphasis will be placed on cellular and molecular approaches to these problems.

Candidates must be U.S. citizens or hold permanent resident alien status. Interested candidates are invited to apply to: Dr. Allan M. Lefer, Professor and Chairman, Department of Physiology, Jefferson Medical College, 1020 Locust Street, Philadelphia, PA 19107-6799. E-mail: allan.m.lefer@mail.tju.edu.

Thomas Jefferson University is an Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL POSITION available July 1, 1999, for Ph.D. or M.D. with training in molecular biology or genetics, with an interest in developing novel gene transfer/therapy paradigms for treatment of inherited diseases. Successful applicants will have a strong background in the use of recombinant DNA technology and familiarity with viral and other gene transfer vectors. Please FAX letters of inquiry (one page maximum) with a brief curriculum vitae (two pages maximum) to: Dr. Alfred L. George, Division of Genetic Medicine, Vanderbilt University, FAX: 615-936-2661.

POSTDOCTORAL POSITION available immediately to investigate electrophysiological mechanisms of chemosensory transduction in protozoa. Send curriculum vitae to: Dr. Robin R. Preston, Department of Physiology, MCP Hahnemann University, 2900 Queen Lane, Philadelphia, PA 19129. FAX: 215-843-6516; e-mail: preston@mcphu.edu.

POSITIONS OPEN

POSTDOCTORAL POSITION. Cardiac cell biology. Immediately available to study the mechanisms through which the second messenger cyclic GMP controls calcium handling and function in cardiac myocytes isolated from animals with different disease models. Long-term postdoctoral training position for Ph.D./ M.D. scientist experienced in myocyte cell isolation, culture, and digital fluorescence microscopy. Environment offers close association with Investigators in surgery, physiology, and anesthesiology. Please send your curriculum vitae, reprints, and names and addresses of references to: Peter M. Scholz, M.D., Section of Cardiac Surgery, Department of Surgery, University of Medicine and Dentistry of New Jersey-Robert Wood Johnson Medical School, One Robert Wood Johnson Place, P.O. Box 19, New Brunswick, NJ 08903. E-mail: scholz@umdnj.edu; Telephone: 732-236-7642; FAX: 732-235-7013. Regrettably, we can only respond to those candidates chosen for an interview. UMDNI is an Affirmative Action/Equal Opportunity Employer/Minorities/Fe-males/Disabled/Veterans and a member of the University Health System of New Jersey. Minority/female applicants encouraged.

POSTDOCTORAL FELLOWSHIP UNIVERSITY OF CALIFORNIA, SAN FRANCISCO Departments of Medicine and Cellular and Molecular Pharmacology Biomedical Sciences Program

Position available immediately for qualified individual with interest in the molecular mechanisms of steroid action. Background in molecular cloning techniques essential; experience with either cell culture or biochemical techniques desirable. Excellent environment; NIH-supported salary and benefits for U.S. diizen or permanent resident. E-mail responses encouraged. Please send curriculum vitae to:

Dr. David Pearce Departments of Medicine and Cellular and Molecular Pharmacology Box 0532, University of California, San Francisco San Francisco, CA 94143 E-mail: pearce@cgl.ucsf.edu

NIH-funded **POSTDOCTORAL POSITION** is available at the Research Institute of the Cedars-Sinai Medical Center (UCLA-affiliated). Our goals are to investigate endotoxin (LPS)-induced signaling, Toll-receptor signaling in vascular endothelial cells, and signaling pathways involved in endothelial cell activation in response to various infectious agents. Candidates should have a Ph.D. degree in cellular/molecular biology. The position is for three years and offers a competitive salary based on qualifications. A strong background in cellular/ molecular biology, immunology, signal transduction, transcriptional activation, and gene transfection are required. Submit curriculum vitae and names of three references to: Dr. Moshe Arditi, Cedars-Sinai Medical Center, Department of Pediatrics, Division of Pediatric Infectious Diseases, 8700 Beverly Boulevard, Room 4310, Los Angeles, CA 90048. Telephone: 310-855-4471; FAX: 310-652-0681; e-mail: moshe. arditi@eshs.org.

A POSTDOCTORAL POSITION is available immediately to study the effect of neurotrophins on synaptic plasticity in the brain, particularly on the process involved in protein-protein interaction and phosphorylation. Experience in electrophysiology, biochemistry, and/or molecular biology is required. As this position is 75 percent research and 25 percent teaching biology, strong interest in teaching is desirable. The applications will be reviewed beginning April 20, 1999. To apply, please send or e-mail your curriculum vitae and three references to: Dr. Kentaro Murakami, Department of Biology, University of Vermont, 307 Marsh Life Sciences Building, Burlington, VT 05405. E-mail: kxmuraka@zoo.uvm.edu; website: http://www.uvm.edu/~biology/Faculty/ Murakami.html.

POSTDOCTORAL POSITIONS IN RNA BIOCHEMISTRY

Ph.D. in RNA chemistry to study hexamer RNAs gearing viral DNA packing motor (*Mol. Cell.* 2:147; *Cell* (Minireview) 94:147; *J. Virol.* 71:3864; *RNA* 1:1041, 3:315, 3:1068). o29 DNA packaging is similar to a bolt driven by a hex nut composed of 6 RNA involved in motor ATPase. Contact: Peixuan Guo, Professor, Purdue Cancer Center, HANSEN, West Lafayette, IN 47907. Telephone: 765-494-7561; e-mail: guo@ vet.purdue.edu.

NATIONAL CANCER INSTITUTE



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NIH POSTDOCTORAL POSITIONS HIV Research

Entry Mechanisms, Env Interactions with Receptors & Coreceptors, Novel Treatment and Protection Strategies

1. Mechanisms of HIV entry. Following our initial discoveries of the major HIV coreceptors CXCR4 and CCR5 [Science (1996) 272:872; Science (1996) 272:1955], we identified coreceptor activity for other chemokine receptors and related orphan proteins [J.Exp.Med. (1997)185:2015; Nature (1997) 388:238; J.Biol.Chem. (1998) 273:23799; Ann.Rev.Immunol. (1999) 17:657]. We now seek to unravel the sequential protein-protein interactions and associated conformational changes by which HIV Env uses CD4 and coreceptor to induce membrane fusion and virus entry.

2. Novel HIV therapeutic and prevention strategies. Using our knowledge of Env interaction with target cell molecules, we are devising novel therapeutic and protective agents [Proc.Natl.Acad.Sci. USA (1998) 5:11511].

3. Identification of new viral receptors. Approaches previously developed to identify HIV receptors are being applied to other important pathogenic enveloped viruses.

Experimental approaches: molecular, genetic, immunochemical, and biophysical analyses of molecules involved in HIV entry; hybridoma technology to enhance novel vaccine strategies; in vitro systems and animal models to study novel anti-HIV agents; development of new functional cDNA library screening methods. Experience in molecular biology, protein chemistry, virology, immunology, or membrane biochemistry preferred. Send CV and names of three references to:

Edward A. Berger, Ph.D. Chief, Molecular Structure Section Laboratory of Viral Diseases, NIAID Bldg. 4, Rm. 236, National Institutes of Health Bethesda, MD 20892-0445 Fax: (301) 480-1147, Email: edward_berger@nih.gov

The Future of Genomics

A rapidly growing public biopharmaceutical company located in the heart of Silicon Valley is looking for aggressive and enthusiastic professionals who can make immediate and substantial contributions and who thrive in a



collaborative, fast-paced team environment. Be part of the Hyseq culture that encourages professional and personal growth objectives while searching for new gene-based products through its use of its highthroughput sequencing technology and the world's largest database of partial gene sequences.Immediate openings exist for qualified candidates interested in research on the cutting edge of genomics and computer science. We offer competitive salaries, benefits and significant opportunities for professional growth. If you have the following qualifications and are highly motivated, we would like to hear from you.

Job Title: Scientist

Job Description: Set up high throughput cellular assay screens for novel ligands. Will work closely with the immunology and other research groups to develop and carry out high throughput screens. A Ph.D. in immunology or related fields with 3 years experience in various cellular assays. Extensive tissue culture experience required. Knowledge of cellular immunology and cytokine biology. Must have proven track record in this area. Industry experience is important but not required. Job Code: SCI-0499-SC

Job Title: Protein Bioinformatic Scientist

Job Description: Candidate must be able to use commercial and developed software to identify novel proteins to be developed into protein therapeutics or targets for small molecular pharmaceuticals. Will work with Functional Genomics and Bioinformatics Departments to develop approaches to exploit Hyseq's human sequence database. A Ph.D. in Biochemistry with 5–10 years' experience in protein structure function analysis. Area of expertise in ligand/receptor interactions. Must have proven track record in this area. Industry experience is important, but not required. Immunology background a plus. Job Code: FGPS-0499-SC

Hyseq, Inc. offers competitive salary and benefits. Send, fax or e-mail resume with cover letter and salary history to: Hyseq, Inc. Attn: HR Dept. 670 Almanor Avenue, Sunnyvale, CA 94086; Fax: (408) 524-8129; e-mail: hr@sbh.com (rtf file); www.hyseq.com.

POSTDOCTORAL POSITIONS GENETICS AND MOLECULAR BIOLOGY BRANCH National Human Genome Research Institute National Institutes of Health

Postdoctoral Research positions immediately available in the following areas of molecular genetics:

Dr. Melissa Ashlock. Human artificial chromosome (HAC) development including production and delivery to cells. Studies in human cells involving optimizing transfection efficiency and HAC stability, and assessing gene expression.

Dr. S. Chandrasekharappa. Multiple endocrine neoplasia type 1 (MEN1)—Determination of the function of the MEN1-encoded protein, Menin, involving identification of interacting proteins, characterization of MEN1 orthologues, and utilization of animal models.

Candidates with an M.D. and/or Ph.D. and less than five years of postdoctoral experience should send a curriculum vitae, names of three references, and a onepage statement of research interests to either of the Investigators named above at: NHGRI/NIH, Building 49, Room 3A 14, 49 Convent Drive, Bethesda, MD 20892-4442. Further information may be obtained online at website: http://www.nhgri.nih. gov/Intramural_research/Reople/. The NIH is an Equal Opportunity Employer and applications by women and minorities are strongly encouraged.

POSTDOCTORAL RESEARCH ASSOCIATE IN IMMUNOLOGY

An N1H-funded position is available immediately to study the B lymphocyte-intrinsic Bend-1 gene that causes premature B cell apoptosis, B cell deficiency, and loss of B cell memory in mice. The successful candidate will join a collaborative group mapping and cloning the Bend-1 gene, and biochemically characterizing the Bend-1 signaling pathway. Applicants should have a strong background in immunology and experience in molecular biology and biochemical techniques. Send a letter, curriculum vitae, recent reprint, and the names of three references to: Dr. C. E. Hayes, Professor, Department of Biochemistry, University of Wisconsin, 433 Babcock Drive, Madison, WI 43706-1544. E-mail: hayes@ biochem.wisc.edu.

POSTDOCTORAL POSITIONS are available to study the biochemistry and molecular biology of malaria parasites. Principal projects will include heterologous expression and characterization of antimalarial drug targets, molecular analyses of drug resistance, and/or the evaluation of new approaches toward antimalarial chemotherapy. A strong background relevant to one or more of these areas is required. Send curriculum vitae and the names, telephone numbers, and e-mail addresses of three references to: Dr. Philip Rosenthal, Department of Medicine, Box 0811, University of California, San Francisco, CA 94143-0811. E-mail: rosnthl@itsa.ucsf. edu; FAX: 415-648-8425. UCSF is an Affirmative Action Equal Opportunity Employer. The University undertakes Af-firmative Action to assure Equal Employment Opportunity for underutilized minorities and women, for persons with disability, and for Vietnam-era veterans and special disabled veterans

POSTDOCTORAL POSITION IN HIV GENE THERAPY

Candidate will test retroviral vectors expressing anti-HIV genes in human hematopoietic stem cells and peripheral blood lymphocytes. Technical skills in molecular biology, virology, and hematopoietic cell culture methods are highly desirable. Salary commensurate with experience. Send curriculum vitae to: Dr. Sadhna Joshi, Department of Medical Genetics and Microbiology, University of Toronto, 150 College Street, Room 212, Toronto, Ontario M5S 3E2 Canada. FAX: 416-638-1459; e-mail: sadhna.joshi.sukhwal@utoronto.ca.

POSTDOCTORAL POSITION. The Johns Hopkins University, available immediately, to study the role of small G-proteins and reactive oxygen species in modulating cardiovascular phenotypes in vitro and in vivo using recombinant adenoviruses and transgenic animals. Must have Ph.D. and be U.S. ditzen or permanent resident. Send curriculum vitae to: Kaikobad Irani, Ross 1023, Johns Hopkins University School of Medicine, 720 Rutland Avenue, Baltimore, MD 21205. Telephone: 410-502-6902; e-mail: kirani@jhmi.edu. Equal Opportunity Employer.

POSITIONS OPEN

INTERESTED IN CLINICAL OR POSTDOCTORAL RESEARCH TRAINING?

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

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NIH-funded POSTDOCTORAL POSITIONS available immediately at the Center for Advanced Research in Biotechnology (CARB) for Biochemists/Molecular Biologists with recent Ph.D's to join multidisciplinary team investigating molecular basis of antigen recognition by antibodies and T-cell receptors (TCRs). Projects include (1) study of antibody specificity by site-directed mutagenesis and phage display; (2) X-ray crystallographic and solution-binding studies of recombinant TCRs, MHC mol- Control and Superantigens; and (3) natural killer (NK)
receptors (Science 267:1984, 1995; Nature 374:739, 1995; Nature 384:188, 1996; J. Exp. Med. 187:823, 1998; Biochemistry 37:7981, 1998; Nature 391:502, 1998; Immunity 9:807, 1998; Annu. Rev. Immunol. 17:435, 1999). Experience in heterologous protein expression in bacterial and/or eukaryotic cells, or in BIAcore/sedimentation equilibrium/calorimetry, highly desirable, CARB is a joint research center of the National Institute of Standards and Technology and the University of Maryland. Excellent opportunities for collaborative studies with Crystallographers and Physical Biochemists. Send curriculum vitae and names of three references to: Dr. Roy Mariuzza, Center for Advanced Research in Biotechnology, 9600 Gudelsky Drive, Rockville, MD 20850. E-mail: mariuzza@indigo2.carb.nist.gov

POSTDOCTORAL/RESEARCH ASSOCIATE position available immediately at the University of California, Riverside to study neuronal plasticity and mechanisms of excitability of hypothalamic neuroendocrine cells. Current projects in the laboratory focus on mechanisms underlying the generation of firing patterns in these cells and modulation of excitability by neurotransmitters, as well as glial-neuronal interactions using whole-cell patch clamp recording in brain slice preparations, immunocytochemistry, and confocal microscopy. Applicants should possess a Ph.D., M.D., or equivalent and expertise in patch clamp electrophysiological techniques. Starting stipend is competitive and commensurate with experience. Send curriculum vitae, a statement of research interests, copies of publications, and names of three references to: Dr. Glenn I. Hatton, Professor and Chair, Department of Neuroscience, University of Califor-nia, Riverside, CA 92521. FAX: 909-787-2967; e-mail: glenn.hatton@ucr.edu. Affirmative Action/Equal Opportunity Employer.

POSTDOCTORAL POSITIONS IN SIGNAL TRANSDUCTION Harvard Medical School/ Massachusetts General Hospital

Several positions are available in the laboratory of **Joseph Avruch**, **M.D.**, Departments of Medicine and Molecular Biology now through fall 1999 for recent graduates with strong skills in mammalian molecular biology and/or protein chemistry. Ongoing work involves P13 kinase effectors, mTOR signaling, Raf and novel Ras effectors, and stress-activated protein kinase pathways. Prior experience with protein phosphorylation desirable. Outstanding scientific environment.

Please send curriculum vitae, the names and addresses of three references to: Director of Laboratories, Molecular Biology Department, Massachusetts General Hospital, Boston, MA 02114. FAX: 617-726-5649; e-mail: prendable@helix.mgh.harvard.edu.

POSTDOCTORAL POSITIONS available to study cell cycle control by the breast cancer protein BRCA1 and the role of transcription factors in activation of DNA replication (*PNAS* 94:7186; *MCB* 18:1296; *Genes & Dev.* 13:637). Experience in molecular biology and biochemistry required. Send curriculum vitae and the names of three references to: Rong Li, Ph.D., Department of Biochemistry and Molecular Genetics, University of Virginia, Charlottesville, VA 22908. E-mail: rl2t@ virginia.edu.

POSITIONS OPEN

POSTDOCTORAL FELLOW INFECTIOUS DISEASES RESEARCH IN VIROLOGY National Institutes of Health

National Institute of Allergy and Infectious Diseases

Positions will be available in the Respiratory Viruses Section of the Laboratory of Infectious Diseases, National Institute of Allergy and Infectious Diseases (NIAID). The Research activities involve (1) the development of live attenuated dengue virus vaccine candidates and their characterization in rodents, in nonhuman primates, and in humans; (2) the use of new "rescue" systems for these viruses to examine basic questions of viral genetics, molecular virology, viral pathogenesis, and the molecular basis of attenuation; (3) production of new candidate vaccines using site-directed mutagenesis to introduce desired attenuating mutations into viral genomes; and (4) the evaluation of the immunologic determinants of resistance to infection and illness caused by these flaviviruses. This full-time research position offers a unique opportunity to work on investigations that range from basic molecular biology to applied vaccinology, and they provide excellent laboratory-based experiences for postdoctoral scientists within seven years of receiving the Ph.D. and for M.D's at all levels of training who plan a career in research in infectious diseases. The project will be supervised by Dr. Brian Murphy. Starting salary ranges from \$31,000 to \$118,400 commensurate with experience/present salary

Three (3) letters of recommendation are desired. To ensure consideration for this position contact **Dr. Brian Murphy** at:

Brian Murphy, M.D. RVS, LID, NIAID Building 7, Room 106 7 Center Drive MSC 0720 Bethesda, MD 20892 E-mail: bmurphy@atlas.niaid.nih.gov

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POSTDOCTORAL FELLOWSHIPS in cell and molecular biology, University of Pennsylvania. Postdoctoral positions are available in an NIH training grantsupported program. Appointments are for one to three years and may begin as early as May 1999. Candidates will have a choice of 10 established laboratories in several departments. The focus of the research is transcriptional/ translational control, protein trafficking, exo-/endocytosis, developmental biology, cell membrane receptors, cell signaling, immunotargeting, and related areas. Website: http://www.med.upenn.edu/ifem.

Applications may be submitted electronically:

Website: http://www.med.upenn.edu/ifem/ nrsachoice.htm

Qualifed women and minority candidates are especially encouraged to apply. Affirmative Action/Equal Opportunity Employer.

UCLA POSTDOCTORAL POSITION in molecular pharmacology available in July 1999 to study the pharmacology and signal transduction of G protein-coupled receptors. Work will focus on pharmacology, gene regulation, confocal microscopy, and gene cloning. This work will also involve the generation and analysis of transgenic mice. Knowledge of basic molecular biology, biochemical and cellular biological techniques desirable with a Ph.D. or equivalent degree required. Please send curriculum vitae and references to: Joseph R. Pisegna, M.D., CURE:VA/UCLA DDRC, Building 115, Room 316, West Los Angeles VA Medical Center, 11301 Wilshire Boulevard, Los Angeles, CA 90073.

POSTDOCTORAL POSITION available to study mechanisms of DNA recombination and repair in mammalian cells with a focus on understanding the origin of genomic instability in cancer cells. Experience in molecular biology required. Send curriculum vitae with bibliography, description of research experience, and names, addresses, e-mail addresses, and telephone numbers of three references to: Dr. Alan S. Waldman, Department of Biological Sciences, Coker Life Sciences Building, University of South Carolina, Columbia, SC 29208. E-mail: awaldman@sc.edu.

POSTDOCTORAL POSITION available immediately for a Ph.D. with a strong research background in virus biochemistry to study phospholipid-binding proteins in herpesvirus infection. Closing date April 16, 1999. Please send cover letter, curriculum vitae, and names of three references to: Dr. Ed Pryzdial, Canadian Blood Services, Research and Development Department, 1800 Alta Vista Drive, Ottawa, Ontario K1G 4J5 Canada. E-mail: ed.pryzdial@bloodservices.ca.

SCHOOL OF PUBLIC HEALTH UNIVERSITY OF CALIFORNIA, BERKELEY

POSTDOCTORAL RESEARCH APPOINT-MENTS are occasionally available with individual faculty members in the School of Public Health of the University of California at Berkeley. Appointments are normally made for one year, with the possibility of renewal for a second year. Highly qualified persons may apply for positions to be assumed at the time of, or shortly after, the completion of Doctoral studies. A list of current Berkeley School of Public Health faculty and their areas of research interests is available on the World Wide Web. To view this list, access the School of Public Health homepage at website: http://garnet.berkeley.edu/~sph; refer to the Directory and then to Faculty Profiles for a listing of the School of Public Health faculty. Arrangements should be made for one confidential letter of reference to be sent by the person best able to judge the applicant's research achievements and potential. Applications should include a résumé, a brief statement of research experience, interests, and goals, and the names and the addresses of two additional references. The application should be sent directly to the faculty member with whom the applicant prefers to be associated at the following address:

School of Public Health University of California c/o 140 Warren Hall Berkeley, CA 94720-7360

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POSTDOCTORAL POSITIONS MOBILE SELF-SPLICING INTRONS

Dynamics of self-splicing introns are studied at the levels of RNA, DNA, and protein accessories. Projects include analysis of catalytic RNAs, DNA-based intron mobility, and intron evolution, using genetic, biochemical, and structural approaches. Broad choices of projects. Experience in genetics, DNA recombination, RNA splicing, protein structure, and/or nucleic acid chemistry desirable. Competitive, federally funded salary (through Health Research, Inc.).

Candidates forward curriculum vitae and three letters of reference to: Dr. Marlene Belfort, Wadsworth Center, New York State Department of Health and Department of Biomedical Sciences, State University of New York, Box 22002, Albany, NY 12201-2002. FAX: 518-474-3181; Telephone: 518-473-3345; email: marybeth.nontesan@wadsworth.org.

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The National Eye Institute, National Institutes of Health, has a **POSTDOCTORAL POSITION** available to study the regulation of cyclin-dependent kinases in differentiation and apoptosis of ocular tissues. Current studies focus on Cdk5. Stimulating interactive environment. Travel opportunities. Starting salary ranges from \$27,500 to \$38,000 per year depending upon experience. Applicants must have strong background in moleeular/cellular biology, must have Ph.D. or M.D. with less than five years of postdoctoral experience, and must be U.S. *citizens or permanent residents*. Please send curriculum vitae, bibliography, and names of three references to: Dr. Peggy S. Zelenka, Laboratory of Molecular and Developmental Biology, Building 6, Room 214, MSC 2730, MD 20892-2730. Telephone: 301-496-7490; FAX: 301-435-7682; e-mail: zelenka@helix.nih.gov.

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POSTDOCTORAL POSITION available immediately to study signaling by interferons and other cytokines. Applicants should have a strong background in molecular/cellular biology. Experience with transgenic mice desirable. Candidates should send a cover letter, a curriculum vitae, and names of three references to: Oscar R. Colamonici, M.D., Department of Pharmacology, University of Illinois, 835 South Wolcott, M/C 868, Chicago, IL 60612. FAX: 312-413-4140; e-mail: ocolamon@uic.edu.

POSTDOCTORAL POSITIONS available to study integrins, integrin signaling in cell proliferation and survival, and cross-talk between cell adhesion and growth factor receptor signaling. Experience in molecular biology is essential, and cell/developmental biology background is preferred. Send curriculum vitae and names of three references to: Kristiina Vuori, M.D., Ph.D., La Jolla Cancer Research Center, The Burnham Institute, 10901 North Torrey Pines Road, La Jolla, CA 92037.

POSTDOCTORAL POSITIONS AT NIH

A Postdoctoral position is available immediately to work in the Laboratory of Molecular and Developmental Biology in the National Eye Institute, National Institutes of Health. The research involves studies on developmentally regulated, tissue-specific expression of genes in the lens and/or cornea and on genetic engineering of the cornea. Methodologies include cloning, expression, and molecular analyses of cDNAs and genes, and production and utilization of transgenic mice, gene knockout mice, and transfected cells. *Candidates must be U.S. citizens or permanent residents* and have a Ph.D. or M.D. degree. Salary begins at \$30,000 and increases depending on experience. Please send curriculum vitae and the names of three references to: Dr. Joram Piatigorsky, Laboratory of Molecular and Developmental Biology, Building 6/Room 201, Bethesda, MD 20892-2730. E-mail: joramp@intra.nei.nih.gov.

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POSTDOCTORAL POSITIONS. Cell and molecular biology and pharmacology. Postdoctoral Research positions now open to study (1) endocrine regulation and JAK/STAT signaling in the control of liver P450 gene transcription, and (2) gene therapy applications in cancer pharmacology. Strong research experience in molecular biology, cell biology, or biochemical pharmacology is essential. Flexible start date. Send curriculum vitae, brief summary of research experience, copies of select publications, and names of three references to: Dr. David J. Waxman, Professor of Cell and Molecular Biology, Department of Biology, Boston University, 5 Cummington Street, Boston, MA 02215. Website: http://bio.bu.edu/html/x23213.html. Minority candidates are encouraged to apply.

POSTDOCTORAL POSITIONS available immediately on NIH-funded project to develop new penicillinbinding protein inhibitors. Enzymologists and/or Peptide Chemists encouraged to apply. Please send curriculum vitae, description of research experience, and the names and addresses of three references (e-mail preferred) to: William G. Gutheil, Ph.D., Department of Biochemistry, Meharry Medical College, 1005 D. B. Todd Boulevard, Nashville, TN 37208. E-mail: guthei37@ccvax.mmc.edu. Meharry is an Equal Opportunity Employer.

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The Instituto de Fisica of the Universidad Autonoma de San Luis Potosi, Mexico, invites applications for a tenure-track position at the ASSISTANT PROFES-SOR level in ion channel biophysics. Responsibilities: teach biophysics to physics graduate students, serve as Director's consultant in developing biophysics research, and develop an externally fundable research program. Attractive start-up package is offered. Candidates should have a Ph.D. and two to three years of postdoctoral train-ing in ion channel biophysics. Priority will be given to individuals with expertise in biophysics of ion transport mediated by channel proteins and those able to interact with colleagues of complex fluids and solid state physics. The salary and benefits will be commensurate with expe-rience. Interested candidates should provide application letter, curriculum vitae, concise statements of teaching and research interests including accomplishments and fu ture plans, and three reference letters sent to: J. Arreola, Instituto de Fisica-Universidad Autonoma de San Luis Potosi, A. Obregon 64, San Luis Potosi, SLP **mx**. The appointment is to begin in the fall of 1999. Review of applicants will begin immediately and continue until the position is filled.

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