PRODUCTS & MATERIALS

Chemiluminescent Nucleic Acid Detection Kit

The Gene-Lite kit is designed for high-sensitivity single-copy gene detection applications. The protocol involves a two-step hybridization procedure within an unlabeled single-stranded primary probe, which is detected by an alkaline phosphatase-conjugated oligonucleotide secondary probe. The conjugate activates the chemiluminescent substrate, which generates autoradiograms with low background and high signal after overnight exposures with as little as 2 mg of genomic DNA. The two-step protocol eliminates the problem of inadequately labeled probes and the high backgrounds associated with avidin or anti-digoxigenin-alkaline phosphatase conjugates. Bio-Rad Laboratories. Circle 91.

Second-Generation Bioreactor

CelliGen Plus is a second-generation bioreactor with the versatility to propagate almost any cell line, with cell densities in excess



of 5.0×10^7 cells per milliliter and viabilities approaching 95%. For production of whole cells, the system builds on the proven stirred tank cell lift technology of the original design, with the addition of a variety of interchangeable accessories including a doublescreen gas exchange impeller and a marine blade or pitched blade, which accommodates hybridoma, insect, and mammalian cells. For secreted products, a packed basket accessory enables high cell densities for either suspension or anchorage cultures by entrapping cells and protecting them from shear. New Brunswick Scientific. Circle 92.

DNA Sequencing Program

Sequencher is a user-friendly software package for DNA sequencing with the Apple Macintosh. The fast alignment algorithm in Sequencher detects overlapping ends in sequencing fragments and assembles them into a consensus sequence. The program is designed to be used in assembling data generated by directed sequencing protocols as well as random cloning sequencing. In addition, Sequencher is the first assembly program to support transposon-facilitated sequencing with specific artifact screening functions. Gene Codes. Circle 93.

Filtration Membranes

Surfactant-free cellulose acetate (SFCA) and Turbo cellulose nitrate (Turbo CN) are two new filtration membranes. SFCA, a tissue culture-grade membrane, offers excellent flow rates, no surfactants or wetting agents, very low protein binding, and non-cytotoxicity. SFCA is available on all NALGENE disposable bottletop filter units, 90-mm filter units, the new 115-ml filter unit, and selected encapsulated products. Turbo CN offers higher throughput and faster flow rates than traditional cellulose nitrate membranes, according to the manufacturer. It is available on NALGENE 50-mm and 90-mm bottle-top filter units and as a separate 47-mm-diameter membrane for use with NALGENE reusable filter holders and bottletop units. Nalge Co. Circle 94.

Nucleic Acid Sequencer

The Base Runner 100 nucleic acid sequencer has a flexibleheight gel assembly that accommodates either 30-, 45-, or 60-cm gel formats, allowing up to 400 bases to be resolved per template. The patented thermocore plate is



comprised of a glass-aluminumglass design such that a gel is cast and run directly on the plate, eliminating "hot spots" and uneven heating in the gel. The unit's small footprint and angled design save bench space, but allow for easy visibility and access to the gel. IBI. Circle 95.

Noncontact Manipulation of Living Cells

A new optical cell trapping system can be used to manipulate microscopic particles, such as living cells or chromosomes, for observation and research. The system couples the LaserTweezer 1000 device of Cell Robotics with the Olympus IMT-2 Inverted Microscope. The LaserTweezer technology makes use of the photon pressure of an infrared laser beam to levitate and manipulate particles. Once the particles are isolated in the target on the video monitor screen, the system's unique three-dimensional stage provides the user with a complete microrobotic capability within an enclosed manipulation chamber. A series of computer-controlled inlet valves permits the introduction of nutrients, reagent, and so forth, into the sealed chamber. Olympus Corp. (in conjunction with Cell Robotics). Circle 96.

Sequence Analysis System

INHERIT is a software-hardware product for high-speed, intensive analysis of DNA sequences. Based on the client-server computing model, INHERIT links multiple Macintosh "clients" to a "server," consisting of a SUN Microsystems work station and an Applied Biosystems database search system. The Macintoshes are used for initiating sequence comparisons and searches and interacting with extracted data to determine their biological significance. The server is a central resource where genetic databases and powerful computing are accessible to each client on the network. Applied Biosystems, Inc. Circle 97.

Henelium

Literature

Products for Western Blotting reviews products and systems for enhanced chemiluminescent protein immunoblotting and a range of methods for immuno-detection, including autoradiography and colorimetric development. Amersham International. Circle 98.

Camag's Bibliography Service No. 68 reports on a variety of applications from thin-layer chromatography publications. The report abstracts 220 publications, including details of the separation system, detection method, and quantitative evaluation procedures. Camag Scientific. Circle 99.

Capillary Zone Electrophoresis of Underivatized Carbohydrates is an application note on how capillary electrophoresis separates borate complexes of mono- and disaccharides. Spectra-Physics. Circle 100.

Newly offered instrumentation, apparatus, and laboratory materials of interest to researchers in all disciplines in academic, industrial, and government organizations are featured in this space. Emphasis is given to purpose, chief characteristics, and availability of products and materials. Endorsement by *Science* or AAAS is not implied. Additional information may be obtained from the manufacturers or suppliers named by circling the appropriate number on the Readers' Service Card and placing it in a mailbox. Postage is free.



An Employment Exchange will be held at:

Science Innovation '92: New Techniques and Instruments in Biomedical Research Moscone Convention Center, Rooms 100–101

The Employment Exchange is an on-site job referral service for job candidates and employers, providing position posting, résumé referral, a message center, and interview facilities (including private interview booths) during the week of July 21–24, 1992.

EMPLOYER BENEFITS:

- ▼ Hundreds of top-notch candidates. Access to all résumés cross-referenced by discipline.
- ▼ On-site interview facilities and scheduling services at no extra charge.
- ▼ Unlimited position postings.
- ▼ Special rates for Science Innovation '92 exhibitors, nonprofit organizations, and AAAS Corporate Members.

CANDIDATE BENEFITS:

- ▼ **FREE** enrollment for AAAS members who enroll by the advance enrollment date: July 15, 1992. Low \$10 fee for nonmembers.
- ▼ Hundreds of current position openings in a variety of disciplines and experience levels.
- ▼ On-site interview facilities, including on-the-spot interviews.
- Access to full descriptions of all available positions.*



▼ <u>Newly introduced!! EMPLOYMENT EXCHANGE ONLY</u> fee for non-conference attendees: \$25 for AAAS members, \$50 for Nonmembers. (Fee includes admittance to the Employment Exchange and the Science Innovation '92 Exhibits.)

If you are presently in the job market, a student anticipating graduation in 1992, or if you are an employer with positions to be filled, and wish to take advantage of our efforts on your behalf, contact: Jacquelyn Roberts, AAAS Employment Exchange, 1333 H Street, NW, Washington, DC 20005. Phone: 202-326-6737. Fax: 202-842-1065.

*Applies to candidates attending the meeting. Candidates who are unable to attend the meeting may obtain a copy of posted positions for a \$10 additional fee.

Science

PERSONNEL PLACEMENT

LINE CLASSIFIED ADVERTISEMENTS

- ✓ Deadlines: Ads are due by Thursday, 10 a.m., 2 weeks prior to the issue date. *Science* is published each Friday, except the last Friday of the year. Call for holiday deadlines. Advertisements must be submitted in writing.
- How to Submit a Classified Ad: Prepare double-spaced typewritten copy. Do not include any abbreviations. Science will edit and typeset ads according to Science guidelines. Deadline for applications stated in ad must be at least 2 weeks after date of publication. Include billing information, and desired publication date. Available categories: Positions Open, Meetings, Announcements, Courses and Training.

 Mail or FAX materials to: Science Classified Advertising 1333 H Street, N.W., Room 814 Washington, DC 20005 Telephone: 202-326-6555 FAX: 202-682-0816

- Rates: Ads are \$42 per line; \$420 minimum. One line equals 52 characters and spaces; centered headings equal 32 characters and spaces. A 3% cash discount is granted to all prepaid ads. If you would like *Science* to give estimated cost, indicate on letter.
- Ads from Outside the U.S.: Prepayment made in U.S. dollars by checks drawn on U.S. banks is required.
- Credit Cards: Science accepts MasterCard and VISA. Discount does not apply to credit cards.
- Cancellations: Deadline for cancellation is 10 a.m., Tuesday, 10 days prior to issue date.

DISPLAY PERSONNEL ADVERTISEMENTS

For rates and information about fractional display ads (all ads ½ page and larger) and all Marketplace listings, contact: Science Classified Advertising Deborah Cummings Telephone: 202-326-6541

> Janis Crowley, Recruitment Advertising Manager Telephone: 212-496-7704 FAX: 202-682-0816

CONDITIONS: Personnel advertising is accepted only with the understanding that the advertisers do not discriminate among applicants on the basis of race, sex, religion, age, color, national origin, handicap or sexual preference. The AAAS encourages employers to actively recruit and employ underrepresented minority groups. *Science* reserves the right, at its discretion, to decline to publish advertisements submitted to it.

POSITIONS OPEN

The Division of Endocrinology and Metabolism at the UNIVERSITY OF CALIFORNIA, IRVINE (UCI), invites applications and nominations for a tenure-track faculty position at the ASSISTANT PROFESSOR level. Candidates should have expertise in molecular and cellular approaches to study aspects related to the endocrine system. Applicants must have an M.D. or M.D./ Ph.D. degree, and have a strong record of research accomplishments, with the potential to develop an independent research program. The Division is committed to excellence in endocrinology while providing a fertile environment for interactive research at UCI and affiliated institutions.

Interested applicants should send their curriculum vitae, a statement of research interest, and names and addresses of at least three references to: Dr. Murray Korc, Chief, Division of Endocrinology and Metabolism, Department of Medicine, UCI Medical Center, P.O. Box 14091, Orange, CA 92613–1491. UCI is an Affirmative Action/Equal Opportunity Employer.

SENIOR STAFF FELLOW (Assistant Professor Equivalent) available immediately at the National Institutes of Health, Bethesda, Maryland to study effects of anticancer drugs on cell cycle regulatory elements, including the cyclin-dependent kinase family and related phosphatases. Training and experience required in appropriate areas of molecular/cellular biology, protein chemistry and pharmacology of DNA-reactive anticancer drugs. Send résumé, bibliography and names of three references to: Dr. K. W. Kohn, Building 37, Room 5C25, Bethesda, MD 20892. An Equal Opportunity/ Affirmative Action Employer.

ASSISTANT PROFESSOR

The Department of Ophthalmology and Visual Sciences at the University of Illinois at Chicago (UIC) is seeking candidates to fill two (2) tenured track Assistant Professorships in Molecular Biology research. Requires a minimum of a Ph.D. in Biochemistry, Biology, or related field and at least two years of postdoctoral research. A successful publications and research record is strongly recommended. Salary commensurate with training and experience. Positions available September 1, 1992. Application deadline is August 1, 1992. Please send curriculum vitae to:

Ms. Jovita Banks (#001) UIC Eye Center, M/C 648 1855 West Taylor Chicago, IL 60612

The UIC is an Affirmative Action/Equal Opportunity Employer.

ASSISTANT/FULL PROFESSOR. Three or four tenure-track positions are available for individuals or an established group to expand an interdepartmental research program in MOLECULAR AND CELLULAR NBUROSCIENCE/BIOLOGY. Priority areas include CNS-specific gene expression and function, molecular mechanisms of cognitive function and disease, cell structure or signalling, developmental neurobiology, or neuroimmunology. Successful candidates will become a part of a unique interactive research environment spanning molecular to human cognitive research. Please send curriculum vitae and research program description to: Neuroscience/Biology Program, Rutgers, The State University of New Jersey, 197 University Avenue, Newark, NJ 07102 or call Dr. Ian Creese, Center for Molecular & Behavioral Neuroscience, (201) 648-1080 x3300 or Dr. Harvey Feder, Department of Biological Sciences, (201) 648-5858. Equal Opportunity/Affirmative Action Employer.

PROFESSOR AND CHAIR, DEPARTMENT OF BIOLOGICAL CHEMISTRY. The University of California, Irvine (UCI), College of Medicine, seeks outstanding scientist in molecular biology or biochemistry, including, but not limited to, disciplines such as developmental biology, neurobiology, and human genetics. The candidate must be of great distinction, and lead an active research program. Send nominations or applications to: Professor Francisco J. Ayala, Chair of Search Committee, c/o Janet Nash, Room 246 Irvine Hall, College of Medicine, University of California, Irvine, CA 92717. Nominations and applications will be accepted through October 1992. UCI is an Affirmative Action/Equal Opportunity Employer. Nominations of and applications from women and minorities are encouraged.

POSITIONS OPEN

FACULTY POSITION IN PHARMACOLOGY/TOXICOLOGY DARTMOUTH MEDICAL SCHOOL

The Department of Pharmacology and Toxicology is seeking applications for a position at the **ASSISTANT PROFESSOR** level. Candidates should hold a Ph.D. and/or M.D. degree and have several years of postdoctoral experience. Preference will be given to individuals with an exciting research program in molecular therapeutics (including gene therapy) or in other areas in which modern techniques of molecular or structural biology are used. In addition to developing a funded research program, the candidate will help the Department fulfill its academic responsibilities in medical and graduate education. The Department consists of approximately 11 faculty with research expertise in cellular and molecular pharmacology and toxicology. The Department has strong ties to the Norris Cotton Cancer Center, an NCI-funded comprehensive cancer center.

Candidates should submit curriculum vitae, a statement of research interests and accomplishments, a record of grant funds (if available), and a list of at least three references. Applications should be sent to: Dr. Edward Bresnick, Professor and Chair, Department of Pharmacology and Toxicology, Dartmouth Medical School, HB 7650, Hanover, NH 03755-3835. Equal Opportunity Employer/Affirmative Action.

EAST TENNESSEE STATE UNIVERSITY

ASSISTANT/ASSOCIATE PROFESSOR in Department of Microbiology for Ph.D. molecular biologist. Research experience and applications in regulation of gene expression required. Department strengths: cyto-kines, regulation of cell function, regulation of viral genes and microbial pathogenesis. Applicants must apply molecular biology techniques to one or more of these areas, must establish/maintain independent and collaborative research programs, and teach medical and graduate students. Non-tenure-track position. Competitive salary, start-up funds, location in geographically desirable area. Send curriculum vitae, statement of research interests, and three reference letters to: Dwight W. Lambe, Jr., Ph.D., Chairman, Department of Microbiology, James H. Quillen College of Medicine, East Tennessee State University (ETSU), Box 70,579, Johnson City, TN 37614-0579. ETSU is an Equal Opportunity/ Affirmative Action Employer.

PHARMACOLOGIST

Fox Chase Cancer Center, a nationally recognized biomedical research facility in Northeast Philadelphia, is currently seeking a dynamic individual at the **ASSIS-TANT** or **ASSOCIATE PROFESSOR** level with interest in the pharmacokinetics and pharmacodynamics of anti-cancer drugs. Facility with modeling of individual and population data will be an advantage. A close interaction with clinical and basic researchers will afford the opportunity for growth over broad range of applications. Position will have supervisory responsibility for methods development and analysis of biological samples from clinical and preclinical sources. The successful applicant will have a central role in the development of pharmacology based therapies for cancer. Interested individuals should forward curriculum vitae with cover letter to: **Dr. Peter O'Dwyer**, c/o: **The Personnel Office**, **Fox Chase Cancer Center**, 7701 **Burholme Avenue**, **Philadelphia**, **PA 19111**. *We are an Equal Opportunity Employer*.

An ASSISTANT PROFESSOR/ASSOCIATE PRO-FESSOR faculty position in Gynecological Surgical Pathology/Cytopathology exists in the Department of Pathology, Magee–Womens Hospital, University of Pittsburgh School of Medicine. Magee–Womens Hospital is one of the largest academic women's health care facilities in the country. The Department of Pathology is part of expanding oncology, reproductive and research programs for women including a Comprehensive Breast Care Program and a new Research Institute. Opportunities exist for close collaboration with basic scientists in molecular and cancer biology. Faculty are expected to develop an independent research career in Gynecological Pathology or Reproductive Biology. Applications should be addressed to: Trevor Macpherson, M.D., Chief of Pathology, Magee–Womens Hospital, 300 Halket Street, Pittsburgh, PA 15213.

The University of Pittsburgh is an Equal Opportunity Employer.

POST DOCTORAL FELLOWSHIPS IN AGING RESEARCH

The University of Missouri-Kansas City (UMKC), the University of Kansas (KU) and Marion Merrell Dow Foundation have established a *Scientific Education Partnership* dedicated to developing a regional center of excellence in modern biological and biomedical research related to diseases and treatment of the aging population.

A key element of the Partnership continues to be the awarding of Post Doctoral Fellowships in the following areas of basic research:

- Molecular immunobiology
- Protein structure and function
- Neuroscience
- Molecular genetics
- Molecular pharmacology
- Developmental molecular biology

Research activities may be conducted in the laboratories of university mentors at either UMKC or KU.

Appointments will be for 2 years at a stipend of \$30,000 (year 1) and \$35,000 (year 2), less fringe benefits costs.

For further information, individuals with background and interest in these areas of basic science should write or fax (816-966-4400):

Anthony J. Hancock, PhD Director, Scientific Partnerships Marion Merrell Dow Inc. P.O. Box 8480 Kansas City, MO 64114-0480

Inquiry for information should be received no later than September 15, 1992. Deadline for completion of application is February 1, 1993.

MARION MERRELL DOW FOUNDATION THE UNIVERSITY OF KANSAS UNIVERSITY OF MISSOURI-KANSAS CITY

Without <u>you</u>, this would be impossible to swallow.

In fact, without people like you many of today's most innovative drugs might not even reach the market. It takes real insight, confidence and persistence to monitor the drug development process...to get these important pharmaceuticals to the people who need them most. That's why your strengths are so important to our business.

DRUG DELIVERY SCIENTIST – PHYSIOLOGIST/BIOCHEMIST

You will carry out *in vivo* studies aimed at understanding and optimizing the delivery of new drug candidates to the systemic circulation via the oral, nasal, intramuscular, and sub-cutaneous routes. Also, support the development of drug candidates which have challenging absorption problems, and carry out research aimed at enhancing delivery of drugs via various routes. As an active member of an interdisciplinary team, you will participate in efforts to improve the absorption of current drug candidates and to discover new chemical entities which have superior drug delivery characteristics.

In addition to a PhD in physiology, biochemistry, pharmaceutics or the equivalent, you should have an interest in drug delivery problems. A background in gastrointestinal physiology, biopharmaceutics, or quantitative biology helpful.

This position offers a superb professional environment in an attractive southeastern Connecticut shore area, complemented by a competitive salary/benefit/relocation package. For confidential consideration, please send resume with salary history to: Lorraine C. Corr, Supervisor, Employee Resources, Pfizer Inc, Central Research Division, Eastern Point Road, Groton, CT 06340. An equal opportunity employer.



ASSOCIATE DIRECTOR

Biological Process Sciences

SmithKline Beecham Pharmaceuticals, a world leader in pharmaceutical research, seeks a distinguished Process Development Scientist to lead the Bioanalytical Development and Protein Purification Scale-Up Groups in the Biological Process Sciences Department in Biopharmaceutical R&D. The Associate Director will provide managerial direction and scientific oversight to a group of 18 experienced and accomplished professionals responsible for developing the purification technologies for protein agents derived from recombinant mammalian and microbial cells.

The successful candidate will have a Ph.D. in Protein Biochemistry, Biochemical Engineering, or other related field, with a minimum of 10 years experience beyond the Ph.D., (at least 5 years experience in an industrial R&D position) a significant record of achievement in the purification of protein products at pilot plant or manufacturing scales, familiarity with modern analytical methods for the assay and characterization of proteina, extensive experience with process validation and current Good Manufacturing Practices, highly developed scientific managerial skills involving staff at all levels of scientific training, and superior oral and written communication skills.

Our state-of-the-art research facility is located in suburban Philadelphia near Valley Forge, PA. We offer a competitive compensation/benefits/relocation package, as well as a stimulating work environment in which to grow and excel. For confidential consideration, please send your resume, along with three references, to: Marilyn Leggieri, #L0134, Associate Employment Administrator, SmithKline Beecham Pharmaceuticals, P.O. Box 1539, King of Prussia, PA 19406-0939. We are an Equal Opportunity Employer, M/F/H/V.





Inflammation Pharmacology Research Scientist

Discover the value of your innovative ideas.

Constant innovation is a crucial element in pharmaceutical advancement, and a significant commitment at CIBA-GEIGY. In fact, our Pharmaceuticals Division is currently completing a new 440,000 square foot state-of-the-art Life Sciences facility within our suburban Summit, New Jersey research complex. Here, you'll find every opportunity to bring your innovative ideas to life.

Working alongside some of the most talented scientists in the field, the selected candidate will develop novel approaches to the discovery of therapies for effectively treating arthritis and inflammatory diseases.

To qualify, candidates must have a PhD in Biochemistry, Cell Biology or Immunology and 2-5 years' postdoctoral experience. Familiarity with molecular biology techniques and supervisory skills are desirable.

CIBA-GEIGY offers a competitive salary, comprehensive benefits and an environment conducive to professional achievement. Please forward resume with salary requirements, in confidence, to: **Staffing Center, Box 340358, CIBA-GEIGY Corporation, Pharmaceuticals Division, 556 Morris Avenue, Summit, New Jersey 07901.** We Are An Equal Opportunity Employer M/F/H/V.

Science Serving Mankind

CIBA_GEIGY

We'll Help You Build A New Lab



Let the free Science product information service put you in touch with the vendors whose products you will need.

Simply write us a letter stating the specifics about your proposed lab and the instruments and supplies you need. We will do the rest.

Write to:

SCIENCE Magazine New Lab Service Department 1333 H Street, N.W., Rm 830 Washington, DC 20005



USDA Forest Service Forest Environment Research Fisheries, Wildlife, and Rangeland Ecology Staff Assistant \$46.210-\$54.607

The USDA Forest Service will be seeking ap-plicants for the position of Staff Assistant to provide leadership and coordination of national programs in fisheries, wildlife, and rangeland research. The incumbent assists in formulating policies related to fisheries, wildlife, and range-land resources, develops research program objectives and budgets, and reviews and coor-dinates research programs of eight regional experiment stations. The Staff Assistant coor-dinates Forest Service research programs with other public agencies and private institutions. other public agencies and private institutions and consults with land management agencies on the application of research results. Major areas of emphasis for Forest Service fisheries, wildlife, and rangeland research include threatwildlife, and rangeland research include threat-ened, endangered, and sensitive species; bio-diversity; habitat selection; monitoring; the ecology of sensitive ecosystems; and big game/livestock interactions. Candidates may game/ivestock interactions. Candidates may represent a variety of professional back-grounds including wildlife biology/ecology, fish-eries biology, rangeland ecology, or plant ecol-ogy. Experience in conducting research and managing research programs is preferred. The position is located at Forest Service Headquar-tes in Webliettes. ters in Washington, DC, and frequent travel is required

For additional information contact Michael R. Lennartz, Forest Environment Research, USDA, Forest Service, 14th and Indepen-dence, SW, Washington, DC 20250 (202-205-1524). To receive a copy of the vacancy an-nouncement along with application materials please call 202-205-1524.

The Forest Service is an Affirmative Action/ Equal Opportunity Employer. Cultural diversity in the workplace is welcomed, and women, members of minority groups, and people with disabilities are encouraged to apply.

Two tenurable positions, full-time, general funds, to begin September 1992. ASSIS-TANT or ASSOCIATE ENVIRONMENTAL BIOCHEMIST, R3 or R4, #83177. Duties: BIOCHEMIST, H3 or H4, #83177. Duties: Develop a research program in environmen-tal biochemistry with emphasis on mecha-nisms of actions of environmental pollutants. Develop an upper division/graduate course in the field of environmental biochemistry. *Minimum Qualifications:* For R3, Ph.D. in biochemistry, toxicology or related discipline with publications relevant to duties. For R4, four weare at Assistant level at a maior four years at Assistant level at a major university or research institute. Desirable: university or research institute. *Desirable:* Postdoctoral and teaching experience, re-search supported by extramural funding. (2) ASSISTANT or ASSOCIATE PESTICIDE CHEMIST, R3 or R4, #83034. *Duties:* De-velop a research program related to the metabolism, degradation, persistence and analysis of pesticides in the Hawaiian envi-ronment. Direct the Pesticide Residue Re-coarch L aboratory which experts resistence search Laboratory which supports registra-tion of new agrochemicals for Hawaii. Direct QA/QC activities. Teach an upper division/ graduate course on pesticide residue analygraduate course on pesticide residue analy-sis or environmental chemistry. *Minimum Qualifications:* For R3, Ph.D. in analytical chemistry or environmental chemistry/toxi-cology or related discipline with publications relevant to duties. For R4, four years at Assistant level at a major university or re-search institute. *Desirable:* Postdoctoral and teaching experience, experience in residue analysis, method development, mass spec-trometry, laboratory supervision under GLP, pesticide regulation. *Salary Range for-R3:* \$40,524 to \$59,976 per annum; for R4 \$51,264 to \$75,888 per annum. Specify po-sition sought and send a letter of application, c.v., names and addresses/phone/FAX of sition sought and send a letter of application, c.v., names and addresses/phone/FAX of three referees to: Search Committee, De-partment of Environmental Biochemistry, College of Tropical Agriculture and Human Resources, University of Hawaii at Manoa, 1800 East-West Road, Henke Hall 329, Ho-nolulu, Hawaii 96822. *Closing date:* July 29, 1992. EEO/AA.

THE NATIONAL RESEARCH COUNCIL **ANNOUNCES POSTDOCTORAL & SENIOR RESEARCH ASSOCIATESHIP AWARDS**

The awards sponsored by the National Research Council are available at the U.S. Army Institute of Dental Research. The mission of this program is to develop "readyto-use" products which can be directly implanted at the wound site to induce bone regeneration in situ. The research opportunities include physiology and biochemistry of bone regeneration (which also includes studies of growth factors using bone cell cultures), purification and characterization of bone-inductive proteins and monoclonal antibodies, engineering of predictably degrading bone-regenerating systems, biodegradable polymer chemistry and microencapsulation and time-release drug delivery systems. Doctoral degree in life sciences or biomedical sciences is required. Annual stipend for recent graduates is \$27,750 and is appropriately higher for those with more than 5 years of experience. Support for relocation and funds for professional travel are available, and a health insurance program is offered. Awards are for 1 year with possible renewals to a total of 3.

For further information contact: Dr. Jeffrey Hollinger at (202) 576-3764 or Dr. Anshumali Chaudhari at (301) 621-0765 or (410) 677-2279 Their mailing address is: U.S. Army Institute of Dental Research Walter Reed Army Medical Center Washington, D.C. 20307-5300 For application materials, write to:

Associateship Programs (GR 430/SDR)



NAS NATIONAL RESEARCH COUNCIL 2101 Constitution Avenue, NW Washington, D.C. 20418 FAX: (202) 334-2759

Application Deadlines are August 15, 1992 and January 15, 1993

Research Scientist/Ph.D. Biological Development

Wyeth-Ayerst Laboratories, a major division of Fortune 100 American Home Products Corporation, is a leading multinational ethical pharmaceutical, vaccine and nutritional manufacturer. Currently, we have an exceptional opportunity in our Biological Development Subdivision at our Marietta, Pennsylvania facility.

As Research Scientist, you will design, execute and document validation studies of biological manufacturing facilities, equipment and processes. You will have overall responsibility for coordinating, monitoring and providing technical support pertaining to scale-up and transfer of biological manufacturing technology. This will include troubleshooting production, testing and process development problems and improving production procedures. In addition, you will assist in the overall management of the current and planned Biological Development Subdivision.

Candidates must have a Ph.D. in microbiology or a related biological science and a minimum of three years experience in the pharmaceutical industry. Knowledge of pharmaceutical validation principles, understanding of biological manufacturing processes including mammalian cell culture technology and familiarity with GMPs and FDA regulations applicable to biologicals is required. Prior experience in a biological manufacturing, validation or development operation preferred.

We offer a competitive salary and an excellent benefits package. Qualified candidates should submit a resume, including salary requirements to: Personnel Section, Wyeth-Ayerst Laboratories, ATTN: RES.SC., P.O. Box 304, Marietta, PA 17547. Equal Opportunity Employer, M/F/D/V responses encouraged.



POSITIONS OPEN

ASSISTANT PROFESSOR—ENTOMOLOGY UNIVERSITY OF MINNESOTA

The Department of Entomology, University of Minnesota, is seeking applicants for a 12-month, tenuretrack, extension-research position in urban entomology. The successful applicant will develop an active extension program, with complementary research, on insect pest management in the urban environment. A Ph.D. in entomology or related field and experience in outreach education and IPM research are required. Excellent communication skills, demonstrated extension and/or research productivity and experience in urban entomology are desired. Detailed position description available. Interested individuals should send a letter of application, statement of extension/research goals, curriculum vitae, transcripts plus names and addresses of five references by 31 July 1992 to: Kenneth Ostlie, Search Committee Chair, c/o Department of Entomology, University of Minnesota, St. Paul, MN 55108. Telephone: 612-624-9272, FAX: 612-625-5299.

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

DIRECTOR OF DIAGNOSTIC IMMUNOLOGY

The Department of Pathology and Laboratory Medicine is seeking a Director of The Diagnostic Immunology Laboratory at Emory University. This is a full service laboratory which conducts assays in protein chemistry, auto-immune and infectious disease serology, tumor markers and lymphocyte sub-set analysis. This person will be expected to work with the medical staff to develop new assays and diagnostic programs to serve a developing and sophisticated patient care environment. In addition, he/she will participate in the teaching of pathology residents, fellows and students. Finally, the successful candidate will be expected to participate in ongoing research projects and to develop an independent scholarly program in the area of diagnostic immunology. The minimum requirements are a Ph.D. degree and experience in diagnostic immunology. Supervisory experience in a diagnostic immunology facility is highly desirable. Please send your curriculum vitae plus names of four professional references to: Kenneth W. Sell, M.D., Ph.D., Professor and Chairman, Department of Pathology, Room 703 Woodruff Memorial Building, Emory University, Atlanta, GA 30322. Emory University is an Affirmative Action/Equal Opportunity Employer. Women and minorities are encouraged to apply.

DIRECTOR/PHARMACEUTICAL SCIENCES to direct all aspects of dosage form, drug delivery and clinical trial activities globally to support new chemical entities and line extension developments worldwide, specifically in areas of parenteral, nasal, oral and pulmonary dosage form development, including research, financial management and management within intracompany R&D collaborations. Integrate and coordinate all aspects of international drug research and development including management of formulation, technology (including database), process, budget, personnel and interface with worldwide drug regulatory agencies. Ph.D. in Pharmaceutical Sciences plus 3 years in job or 3 years of hands-on experience directing all aspects (including research, financial management, and management within intracompany R&D collaborations) of international drug dosage development operations supporting new chemical entities and line extension developments specifically in areas of oral, parenteral, nasal, pulmonary dosage development and interface with worldwide drug regulatory agencies. Forty hours per week. Monday to Friday. 8:30 a.m. to 4:30 p.m. Salary: \$98,900.00 per year. Send résumés to: Judy Owens, H37, Rhone-Poulence Rorer Central Research, 500 Arcola Road, Collegeville, PA 19426. Equal Opportunity Employer.

TEAM LEADER/FLOW CYTOMETRY

We are seeking a person who will direct an aggressive research group in commercializing new technology in the field of prenatal diagnosis. Requires a Ph.D. with at least 5 years of experience in flow cytometry and flow sorting. Expertise in cell immunology and/or human genetics is particularly desirable. Proven management experience is also required. Please send full curriculum vitae to: **Box** 22, SCIENCE, 1333 H Street, NW, Suite 814, Washington, DC 20005. CHAIR, BIOCHEMISTRY AND MOLECU-LAR BIOLOGY. Search reopened for Chair of Department of Biochemistry and Molecular Biology in School of Medicine. Candidates must: (1) hold Ph.D. or M.D. degree with training/experience in biochemistry, molecular biology or related areas, (2) be principal investigator of active grant supported research program, and (3) qualify for appointment as Professor in this Department. Consideration will be given to prior experiences on NIH study sections, in teaching and research in a medical school environment, and in academic administration. Demonstrated leadership, people skills, and commitment to institutional priorities will also be considered. Department currently has 17 faculty (10 full-time), active Ph.D. and postdoctoral training programs, and received research support of 0.6 to 1.0 million dollars per year over the past five years. Selection of candidates for interview will begin 31 July 1992, and continue until the position is filled. Send applications (cover letter, curriculum vitae and names of three references) to: Dr. Kenneth L. Barker, Chairman, Biochemistry and Molecular Biology Chair Search Committee, Texas Tech University, Health Sciences Center, HSC Room 2B106, Lubbock, TX 79430. Telephone: 806-743-2556; FAX: 806-743-2656.

UNIVERSITY OF SOUTHERN CALIFORNIA SCHOOL OF MEDICINE CHAIR OF DEPARTMENT OF CELL AND NEUROBIOLOGY

The University of Southern California School of Medicine is seeking to fill the position of Chair of the newly established Department of Cell and Neurobiology. This position is a focus of the planned multidisciplinary initiative in neurosciences. The successful candidate will have opportunities to develop an outstanding neurosciences program, which complements the existing resources on the campus. A new building for the neurosciences initiative is planned. The Chair will be responsible for the recruitment of faculty in the disciplines of cell and neurobiology, for coordinating the teaching responsibilities of the Department, and for interacting with other departments. Candidates should have vigorous scientific leadership in cell and neurobiology, including neuropharmacology, neurophysiology and any other disciplines of neurobiology, as demonstrated by their scientific accomplishments, international recognition, and good perspectives on modern cell and neurobiology. Candidates should also have a track record in training outstanding students as well as proven ability to counsel young scholars. Candidates should send curriculum vitae and statement of research interests, and names of three references to: Dr. Brian Henderson, Director, Kenneth Norris Jr. Comprehensive Cancer Center, University of Southern California, 1441 Eastlake Avenue, Los Angeles, CA 90033–0800. The University of Southern California is an Equal Opportunity Employer; women and minorities are especially encouraged to apply.

DIVISION OF BIOLOGY CALIFORNIA INSTITUTE OF TECHNOLOGY

The Division of Biology at California Institute of Technology seeks applicants for a FACULTY POSI-TION in integrative neurophysiology/computational neuroscience. Preference is given to individuals who combine behavioral, physiological, and computational approaches. Women and minority candidates are encouraged to apply. Applicants should send curriculum vitae, a statement of research interests, selected reprints, and also have at least three letters of recommendation sent directly to: Ms. Marilyn Tomich, Division of Biology, 156-29, California Institute of Technology, Pasadena, CA 91125. The deadline for application is 15 August 1992. California Institute of Technology is an Equal Opportunity/ Afirmative Action Employer.

TEMPORARY LECTURER POSITIONS (3) available in Department of Cell Biology and Human Anatomy to teach in the Developmental, Gross, and Radiologic Anatomy course offered to first-year medical students. The course is team taught in the fall quarter (October to December). Salary is negotiable. Send curriculum vitae and names of three references to: Dr. Kent Erickson, Department of Cell Biology and Human Anatomy, School of Medicine, University of California, Davis, CA 95616–8643.

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

POSITIONS OPEN

DIRECTOR, CANCER CENTER

Nominations and applications are invited for the position of Director, Cancer Center, University of Rochester Medical Center. The Cancer Center is a National Cancer Institute-funded Clinical Cancer Center and is a clinical department of the Medical Center. It serves the population (over 1 million) of the Rochester-Finger Lakes Health System area. The clinical treatment and research programs operate through a consortium of five hospitals in Rochester. There are over eighty full-time Cancer Center faculty, and all Cancer Center faculty hold joint appointments in academic departments of the School of Medicine and Dentistry. The Cancer Center occupies about 55,000 square feet of space in the Medical Center and includes outpatient treatment clinics, research laboratories, and the administrative offices of the Cancer Center. The Director is responsible for planning, development, implementation, and evaluation of the patient care, nursing, clinical and basic science research, and educational activities of the Cancer Center. Applicants should hold an M.D. degree or M.D. and Ph.D. degrees, a significant record of achievement in clinical or basic oncologic sciences, an active research program, administrative experience, and excellent management and communication skills. Applications should include a current curriculum vitae and the names of three referees and should be sent to: Dr. M.W. Anders, Department of Pharmacology, University of Rochester, 601 Elmwood Avenue, Rochester, NY 14642. Review of applications will begin on 1 July 1992 and will continue until the position is filled. *The University of Rochester is an Equal Opportunity Employer*.

FACULTY POSITION IN ACADEMIC CLINI-CAL BIOCHEMISTRY. The Department of Clinical Biochemistry, Hadassah Hospital and Hadassah-Hebrew University Medical School is seeking an academic biochemist with experience in clinical biochemistry for a full time faculty position. The candidate should have an M.D. and/or Ph.D. degree and at least five years of experience in academic setting with documented interest in research and teaching. Responsibilities include teaching, establishment of an independent research program and laboratory administration. Send curriculum vitae to: Dr. Michael Mayer, Professor and Head, Department of Clinical Biochemistry, Hadassah Hospital, P.O. Box 12000, Jerusalem, Israel 91120.

NEUROANATOMIST/EXPERIMENTAL NEU-ROPATHOLOGIST. Outstanding independent RE-SEARCH FACULTY POSITION in the Department of Psychiatry at the renowned Mount Sinaj School of Medicine. Experience with modern neuroanatomical techniques is required; an interest in psychiatric disorders is preferred. A sophisticated morphometry facility and other laboratory equipment are provided. Excellent salary and benefits. Please send your curriculum vitae, a brief outline of research plans, and names of at least three references, in confidence, to: Dr. Kenneth L. Davis, Chairman, Department of Psychiatry, Box 1230, The Mount Sinai Medical Center, One Gustave L. Levy Place, New York, NY 10029–6574. An Equal Opportunity Employer.

POSTDOCTORAL POSITION in immunology to study mechanisms that control T cell development and function, T cell repertoire selection, and cellular signals which determine cell fate. Emphasis on comparative studies of $\alpha\beta$ and $\gamma\delta$ T cells. Experience in molecular biology, biochemistry, and/or immunology desirable. Starting date negotiable. Send curriculum vitae to: Dr. A. Augustin, Division of Basic Immunology, National Jewish Center for Immunology and Respiratory Medicine, 1400 Jackson Street, Denver, CO 80206.

POSTDOCTORAL POSITION

Postdoctoral Position(s): One or two positions will be available in the Fall of 1992 to study the roles of the multiple G protein α , β and γ subunits in signal transduction. Major emphasis will be placed on expressing the subunits using the baculovirus/Sf9 cell system and reconstituting G proteins of defined subunit composition with receptors and effectors. A strong background in protein chemistry/molecular biology and an interest in hormone action are desired. Please send curriculum vitae including the names of three references to: Dr. James C. Garrison, Department of Pharmacology, Box 448, University of Virginia Medical Center, Charlottesville, VA 22908.

National Cancer Institute • National Institutes of Health • Public Health Service

CANCER PREVENTION FELLOWSHIP PROGRAM

The Division of Cancer Prevention and Control (DCPC) is accepting applications for the Cancer Prevention Fellowship Program (CPFP). The purpose of this program is to train individuals from a multiplicity of health science disciplines in the field of cancer prevention and control. The program provides for: Master of Public Health training (at accredited universities); Participation in the DCPC Cancer Prevention and Control Academic Summer Course; Working at NCI directly with individual preceptors on cancer prevention and control programs at other institutions. Funding permitting, as many as ten Fellows will be accepted for up to three years of training, beginning July 1, 1993. Benefits include selected relocation and travel expenses, paid federal holidays, and participatory health insurance.

ELIGIBILITY

M.D. or D.D.S. from a U.S., territorial, or Canadian Medical School. Foreign medical graduates must have current ECFMG/FMGEMS certification and appropriate experience, e.g., one year residency in a training program approved by the Accreditation Council for Graduate Medical Education.

OR

Ph.D., Dr. P.H. or other doctoral degree in a related discipline (epidemiology, biostatistics, and the biomedical, nutritional, public health or behavioral sciences). Foreign education must be comparable to that received in accredited U.S., territorial, or Canadian institutions.

PLUS

U.S. citizenship or resident alien eligible for citizenship within four years.

For details and application catalog, send a postcard or letter with your name and home address to:

Douglas L. Weed, M.D., M.P.H., Ph.D. Director Cancer Prevention Fellowship Program

Division of Cancer Prevention and Control

Deadline for Receipt of Applications: September 1, 1992

Further Inquiries: Mrs. Barbara Redding, (301) 496-8640

NATIONAL CANCER INSTITUTE



Executive Plaza South, T-41, Bethesda, MD 20892 NIH is an Equal Opportunity Employer

CHAIRMAN Department of Pediatrics The University of Chicago

The Division of the Biological Sciences, which includes The Pritzker School of Medicine, at The University of Chicago is soliciting nominations and applications for the position of Chairman of the Department of Pediatrics. This is a multidisciplinary department with approximately 100 full-time faculty in the fields of Cardiology, Endocrinology, Emergency Pediatrics, Gastroenterology, Genetics, Hematology/Oncology, Infectious Disease, Neonatology, Pulmonary, and Rheumatology as well as others.

The Chairman reports to the Dean of the Division, and is responsible for providing academic and administrative leadership in research programs, clinical activities, and the teaching of undergraduate, graduate, post graduate and medical students, as well as interns and residents. The successful applicant will be a nationally recognized Pediatrician with a significant research background, an outstanding record of scientific accomplishment and demonstrated teaching and administrative abilities that will qualify him/her for the rank of Professor. Please send curriculum vitae by October 1, 1992 to:

> Dr. Thomas Brasitus Chair, Pediatric Search Committee 5841 S. Maryland Avenue, MC 4076 Chicago, IL 60637



THE UNIVERSITY OF CHICAGO

An Affirmative Action Equal Opportunity Employer

Nucleic Acid Chemist/Manager-Japan

Cruachem is a rapidly expanding biotechnology company, specializing in the development, manufacture and sale of instruments and reagents for DNA/RNA synthesis. We have established an excellent reputation for supplying high quality products with fast, attentive customer service.

We are now seeking to establish an operation in Kyoto, Japan with a view to providing a base for technology transfer with Universities in Japan, small scale manufacturing, and technical support for our Japanese distributor and customers.

The successful candidate will be responsible for the day to day management of this operation including technical support and administration. This position will allow excellent scope for development and advancement within the Company.

Candidates should possess a PhD or MSc in Chemistry and be working in Nucleic Acid Chemistry.

Salary and benefits are negotiable, commensurate with experience. Location will be in Kyoto, Japan.

Please apply in writing, giving full details of your career to date together with summary of relevant experience to:

or

- Ian Wilkie Chief Executive Cruachem Holdings Ltd Todd Campus West of Scotland Science Park Acre Road GLASGOW G20 0UA Scotland
- Joseph Hall President Cruachem Inc 45150 Business Court Suite 550 STERLING VA 22170 USA

DIRECTOR, **INTERNATIONAL INSTITUTE OF** ENTOMOLOGY



The International Institute of Entomology (III.) is an Institute of CAB International, an intergovernmental organisation that provides information and scientific services for agriculture and the environment throughout the world.

The Institute is a major international reference centre providing identification, information, research, training and other entomological taxonomic services in support of world agriculture, horticulture, forestry and related disciplines. IIE is located at 56 Queen's Gate, London SW7, UK but a team of taxonomists and support staff is at present maintained at the Natural History Museum, London

The vacancy of Director arises due to the retirement of Dr Keith Harris, in late 1992.

Candidates will be expected to have an international reputation for research in entomology, with special interest in insect biosystematics related to pest management. They should have experience of managing scientific research, developing research opportunities and have a proven ability to win research grants. A knowledge of the workings of funding agencies would be an advantage as would experience of pest management, especially in tropical climates.

The Institute is currently undergoing a major internal review which could lead to significant changes in its remit and activities. A person of both vision and practical managerial ability is sought to guide the institute through a period of change. Applications from candidates seeking secondments from their current employers would therefore be particularly welcome. The appointment would be for a period of from two to five years, with a possibility of renewal.

The appointment will attract a salary in the region of UK £35,000 per annum plus a London Weighting Allowance of £2,500 per annum, along with a generous pension scheme. Limited assistance with relocation costs will also be available. CABI staff are not subject to UK immigration restrictions

Further particulars, including a full job description, are available on request.

Applications in the form of a full resume with a covering letter and the names of three referees should be submitted to:

Andrew Harris, Personnel Department, CAB International, Wallingford, Oxfordshire, OX10 8DE, United Kingdom. Fax +(0491) 33508, no later than 31 August 1992.

This is a re-advertisement. Previous applicants will automatically be considered.



Assistant Research Scientists

Two post-doctoral positions are immediately available in our Department of Cell Biology.

One project investigates the nature of peptide epitopes expressed by bacterial pathogens which can elicit T cell immune response. The goals of this project are to purify T cell reactive peptides and to derive cDNA clones encoding those epitopes. Preparation of anti-pathogen vaccine by several means will be attempted. Experience in preparation and use of murine T cells is required.

The second project investigates the nature of autoantigens expressed in rodent models of diabetes. The goals of this project are to create immortal pancreatic beta cells and to purify autoantigens using T cells derived from diabetic rodents. Experience in eukaryotic tissue culture is required, with specific experience in eukaryotic tissue culture of primary cells helpful.

Please send C.V. to Ms. Singh, Human Resources Dept., NYU Medical Center, 550 First Avenue, New York, NY 10016. Or call (212) 263-6659. EOE. M/F.



Worcester Foundation for **Experimental Biology**

FACULTY POSITIONS CELL BIOLOGY, NEUROBIOLOGY & REPRODUCTIVE BIOLOGY

Positions are available at the Worcester Foundation for Experimental Biology at both junior and senior faculty levels. We are seeking investigators whose expertise will fortify or complement our existing strengths. The areas in which we seek applicants include:

Tumor Suppressor Genes/Oncogenes Cell Cycle/Growth

Control

- Development/
 - Differentiation Cell-Cell Interactions
 - **Receptors/Signal**
- Cell Motility Gene Expréssion
- Transduction
- The Synapse/Ion Channels

We are particularly interested in individuals employing molecular and genetic approaches, although overall scientific excellence and promise will be the primary criteria.

Faculty appointments at the Worcester Foundation carry institute-backed salary guarantees and liberal start-up pack-ages for personnel, equipment and operating costs. One or more of these appointments may include membership in the Foundation's NCI-designated Cancer Center.

Submit a detailed C.V., a one- to two-page summary of current and near-term research, and the names of at least three scien-tists who have a knowledgeable opinion of your research. We intend to fill the first of these positions in early 1993.

Send your application to Faculty Search Committee, c/o Personnel Office, Worcester Foundation for Experimental Biology, 222 Maple Ave., Shrewsbury, Massachusetts 01545. An Affirmative Action/Equal Opportunity Employer M/F/H



INTRACELLULAR CALCIUM AND ISCHAEMIC HEART DISEASE

DEPARTMENT OF BIOCHEMISTRY & MOLECULAR BIOLOGY and DEPARTMENT OF PHYSIOLOGY

POSTDOCTORAL RESEARCH ASSISTANT

The British Heart Foundation has awarded three year funding for this collaborative venture between our research groups. We will focus on the recently discovered involvement of cyclosporin A binding proteins in cell injury. The successful applicant will apply microfluorimetric techniques for the measurement of [Ca2+], and mitochondrial inner membrane potential in single cells. The project will also involve photoaffinity labelling of cyclosporin A binding proteins and the use of novel inhibitors of mitochondrial Ca2+ transport to be synthesized and screened in subcellular fractions and patch clamped cells. Starting salary on the RAIA scale to £14,359 p.a. plus £2,042 London Weighting. Informal enquiries to Dr. Martin Crompton (tel. 071 387 7050 ext. 2207) or Dr. Michael Duchen (ext. 3207). Applications with CV naming two referees to Dr. M. Crompton, Department of Biochemistry and Molecular Biology, University College London, Gower Street, London WC1E 6BT. Equal Opportunities Employer.

ILLINOIS MATHEMATICS AND SCIENCE ACADEMY

A Pioneering Educational Community

The Academy is a three-year, public, residential school for Illinois students highly gifted in mathematics and science. The student body totals 650 students. First year students enter having completed the equivalent of the ninth grade and engage in a comprehensive, challenging and rigorous curriculum that is concept-centered and outcome-based. Teaching is defined as "facilitating discovery through interconnecting", with new models of student achievement and success serving as the criteria for outcome-based assessment.

Faculty members are expected to be exemplary educators in their discipline and instructional skills, committed to interdisciplinary approaches, and innovative in pedagogical practices assuring student learning and success. A minimum of a Masters degree is required for members of the faculty.

Faculty

Chemistry–Applicants must be able to teach college level chemistry. Concept-centered courses emphasize active student learning, focus on activities requiring experimentation, demonstrations, and problem-solving. Experience in writing curriculum is beneficial.

Applications available from:

Illinois Mathematics and Science Academy Personnel Office 1500 West Sullivan Road Aurora, Illinois 60506 "An Equal Opportunity Employer" National Institutes of Health Public Health Service Department of Health and Human Services

DIRECTOR

National Center for Human Genome Research

The National Institutes of Health (NIH) invites nominations and applications for the position of Director of the National Center for Human Genome Research (NCHGR). This is a Civil Service position in the Senior Executive Service (SES), with a salary range of \$90,000 to \$112,100 per annum. The person selected may also be eligible for Physician's Comparability Allowance of up to \$20,000 per year. A recruitment bonus of up to 25 percent of base pay may be available to a non-federal candidate selected for this position, subject to individual approval. A relocation bonus of up to 25 percent may be available to a permanent federal employee who must relocate to accept this position, subject to individual approval. A one year probationary period must be served if the individual selected is not currently in the Senior Executive Service. Members of the Commissioned Corps of the U.S. Public Health Service will be considered.

The Director administers, manages and oversees the human genome program for the NIH. S/he is the principal advisor to the Director, NIH, on the substance, quality and effectiveness of NIH human genome programs and research policies. The Director is responsible for strategic planning and identifying major areas of human genome research. Incumbent serves as a liaison on human genome research programs with the media, special interest groups, high-ranking scientific and executive officials in other Public Health Service agencies, the DHHS, other Federal agencies, the academic and private sector, and with members of or staff to the Congress. Opportunities to supervise an intramural program are available.

For more information, contact Mary Glynn at (301) 402-1094. The following forms are required: Application for Federal Employment (SF-171) accompanied by a current curriculum vitae and bibliography. These must be submitted to:

Mary Glynn National Institutes of Health National Center for Human Genome Research Building 38A, Room 616 9000 Rockville Pike Bethesda, Maryland 20892



Vacancy extended to: July 13, 1992

All qualified candidates will receive consideration without regard to race, religion, color, sex, age, national origin, lawful political affiliation, marital status, or physical or mental disability.

LABORATORY AND FIELD AUTOMATION

Pioneer Hi-Bred International Inc., a Fortune 500 company and the world's largest developer, producer, and marketer of agricultural seeds, has immediate openings in the Plant Breeding Division Data Management Group in the area of laboratory and field automation. Pioneer is an equal opportunity employer providing a competitive salary, excellent benefits and facilities, plus a cooperative work environment.

LAB AUTOMATION MANAGER

The successful applicant will be part of a lab automation team responsible for the development of automation projects to support lab research activities in the Biotechnology and Research Specialists departments. Automation projects may range from computer-assisted data acquisition, instrument interfacing, image analysis, and software evaluation, to the design, development and implementation of robotic systems. The manager will set the overall direction for the lab automation effort, initiate projects, and engage in the development of new technologies to enhance laboratory research. Requires Ph.D. in biology, biosystems engineering or closely allied biological/agricultural science with experience in instrumentation, automation, and computer technology in a lab research environment.

FIELD AUTOMATION SPECIALIST

The successful applicant will be part of a field automation team responsible for the development of automation projects and support of equipment to enhance the data collection of plant breeding field research scientists. Automation projects include computer assisted data acquisition, instrument interfacing, barcoding, moisture detection, and development of harvest systems. The specialist will provide front line support for field automation hardware and software, assist in the development of projects, and work closely with end users to insure needs are met. Position requires a B.S. in biological sciences, agricultural engineering, electronics or mechanical engineering with experience in instrumentation, automation, and computer technology.



Send resume to: Pioneer Hi-Bred International, Inc. Plant Breeding Division Dept. of Data Management, Attn: Kristy McKenna 7250 N.W. 62 Ave., P.O. Box 1004 Johnston, IA 50131

Tularik, Inc. is a biopharmaceutical company that applies promising new approaches in the field of transcription regulation to the development of human therapeutic products. We have immediate opportunities for individuals in the following areas:

Endothelial Cell Biologist

This position is for an experienced Endothelial Cell Biologist to join our research program on transcriptional regulation of endothelial cell function.

As a member of a multi-disciplinary team, this individual will collaborate with Biochemists and Molecular Biologists to identify novel targets and design sensitive biochemical and cellular assays of endothelial cell adhesion, inflammation and transcription. Candidates must have a Ph.D. or M.D., a minimum of two years post-doctoral experience and a proven record of achievement.

Biochemist Molecular Biologist

This position is for Scientists experienced in transcriptional regulation of gene expression to join our endothelial cell and cardiovascular research programs.

Candidates must have a Ph.D., a minimum of two years post-doctoral experience, and an outstanding publication record. Experience in purification of transcription factors is desirable.

In addition to a challenging and stimulating environment in

the San Francisco Bay area, Tularik offers equity participation and competitive salaries and benefits. For consideration, please submit curriculum vitae to: DSE Confidential Reply Service, Box #300, 601 Gateway Blvd., Ste. 950, South San Francisco, CA 94080. EOE.





Symposia: Plenary Speakers: Joe Coyle Jerome Kagan

CRH-Basic Studies: Huda Akil Garth Bissette Marvin Brown Adrian Dunn Dimitri Grigoriadis Richard Hauger Isabella Heuser Michael Invin Ned H. Kalin George Koob Charles Nemeroff Mike Owens Catherine Rivier Mark Smith Rita Valentino Stan Watson

Eating Disorders and Sexual Dysfunction: Arnold Anderson Framcesca Brambilla Regina Casper Don Fullerton Uriel Halbreich Catherine Halmi Jim Mitchell

Announcing: The XXIII Congress of the International Society of Psychoneuroendocrinology Madison, Wisconsin August 16–20, 1992

Mechanism Underlying Interactions between the CNS and Immune Function: Christopher Coe Errol De Souza Nicholas Hall Michael Irwin Janice Kiecolt-Glaser Neil Schneiderman Rick Weber

Fear Related Behaviors: Animal Studies: Caroline Blanchard Robert Blanchard Seymour Levine Saul Schanberg Lorey Takahashi

Fearfulness and Psychopathology: Richard Davidson Megan Gunnar John Marshall Tom Lihde

Psychopathology in Adults: Molly Carnes Marjorie Klein Roger Meyer Craig Risch Robert Rubin Allan Schatzberg Larry Siever

Effects of Stress on Brain Structure: Eberhard Fuchs Bruce McEwen Hideo Uno

Many others will present free communications and posters. Anyone interested in attending and/or participating is invited to contact: Ned H. Kalin, Chairman, XXIII ISPNE Congress, c/o Department of Psychiatry, University of Wisconsin-Medical School, B6/210 Clinical Science Center, 600 Highland Ave., Madison, WI 53792. (608) 263-6079, or Steve Shelton-Conference Coordinator, (608) 263-2517 or FAX: (608) 265-2665.

The Division of AIDS National Institute of Allergy and Infectious Diseases National Institutes of Health

has an immediate opening for



Vaccine Research and Development Branch

The Office of the Associate Director, Basic Research & Development Program, Division of AIDS, invites applications for the position of Chief, Vaccine Research and Development Branch. The incumbent is responsible for a broad range of scientific, managerial, and supervisory activities encompassing internal affairs and inter-organizational relationships of the Institute in stimulating, developing, operating, and coordinating a national program for the development of vaccines for the prevention of AIDS. The optimal applicant will possess an M.D. or Ph.D. degree, with a comprehensive understanding of issues surrounding vaccine research and development and a current in-depth knowledge of AIDS vaccine research, development, and evaluation efforts. Salary will be commensurate with experience. Interested individuals should send curriculum vitae or an Application for Federal Employment (SF-171) by August 5, 1992 to:

Dr. Margaret Johnston, Associate Director Basic Research & Development Program Division of AIDS

NIAID/NIH - Solar Building 6003 Executive Boulevard Bethesda, Maryland 20892 U.S.A. Telephone: (301) 496-0637 FAX: (301) 402-3211



U.S. Citizenship Required NIH is an Equal Opportunity Employer

Senior Scientist

Oread Laboratories, Inc., a growing pharmaceutical research development company, is seeking a Senior Scientist in our Drug Evaluation Studies Unit. This lab-based position will direct ADME and pharmacokinetic studies using radiolabelled or unlabelled compounds in animals. This position will perform data evaluation, report preparation, & supervise a team of technical staff.

Requirements include: Ph.D in Pharmacology, Pharmacokinetics, Pharmaceutical Chemistry, or related field. Also required is 1-5 years experience in field with a working knowledge of pharmacokinetics. Experience with beta/ gamma counters, minimal computer skills and ability to work independently also required.

Desired qualities: Minimum 6 months in supervisory capacity. Tissue combustion, HPLC, and TLC experience. Experience with small animal surgeries also desired.

Lawrence residents enjoy the conveniences of city living, but also benefit from the character of small town living. The reputation for the University of Kansas, located 1 mile east of Oread, speaks for itself. Lawrence is one of the fastest growing small cities in the country and is located 25 miles east of Kansas capitol, Topeka, and 40 miles west of metropolitan Kansas City.

Resumes only: Human Resources-DES, Oread Laboratories, Inc., 1501 Wakarusa Dr., Lawrence, KS 66047. Deadline: July 17th. AA/EEO.



Recruitment Advertisers

SAVE 25%

Running your recruitment advertisement once may not be enough. Place the same ad again within the next four issues and we will give you 25% off your second insertion.

- Get more attention
- Get more value
- Get more applicants

Reach the global scientific community you need to maximize your recruitment efforts. Science does it bigger and better and now Science does it at greater savings for you.

Call, write, or fax:

Science Classified Advertising 1333 H Street, N.W. Washington, D.C. 20005 Phone: 202-326-6541/6555 Fax: 202-682-0816

NIH RESEARCH **FELLOWSHIP POSITION**

An NIH Intramural Fellowship (Intramural Research Training Award/Visiting Fellow) is immediately available for a vascular cell biologist with Ph.D., M.D., or M.D./Ph.D. degrees at the National Institute on Aging, National Institutes of Health. The scope of the research entails studies of vascular smooth muscle and endothelial cell differentiation, synthesis and remodelling of extracellular matrix proteins, and the elaboration of factors which govern growth and regulation of these constituents during aging and following mechanical injury to the blood vessel wall. Candidates with experience in basic cytochemical techniques, autoradiography, immunohistochemistry, in situ hibridization and electron microscopy will be given preference. Salary is commensurate with experience. The position affords a unique opportunity to interact with a team of scientists in various disciplines (including molecular and cellular biology, physiology, biochemistry, and biophysics) with a commitment to the investigation of vascular disorders and aaina

Applicants should submit an application letter specifying their research interests, curriculum vitae and three letters of recommendation to:

Dr. Edward Lakatta, Chief Laboratory of Cardíovascular Science **Gerontology Research Center** National Institute on Aging 4940 Eastern Avenue Baltimore, MD 21224



Inquiries accepted by FAX: (410) 558-8150. NIH is an Equal Opportunity Employer

CANCER CENTER DIRECTOR

The University of Vermont seeks a Director for the Vermont Cancer Center, an NCI-designated Comprehensive Cancer Center. Candidates with either basic science or clinical orientations will be considered. The Center is searching for a leader with a strong record of research achievement and administrative experience in cancer-related areas. The Director will be expected to have a serious commitment to the development of clinical services and the delivery of patient care; to determine program goals and directions for the teaching and research that take place under the auspices of the Cancer Center; to work with other administrative officers of the University to ensure the integration and continuity of these activities; to direct the preparation of funding applications including the institution's Cancer Center Support Grant; and to participate with the Cancer Center staff in programs relating to prevention, screening, and outreach to the rural Vermont population. The existing strengths of the Center include the Drug Development Program, Genetic Toxicology Program, Growth Control/Signal Transduction Program, Clinical Research Program, and the Cancer Control Research Program. Developing strengths include the Immunobiology Program and the DNA Damage and Repair Program. The Director will hold a tenure-track academic appointment in the appropriate department of the Medical College. The Director reports directly to the Dean of the Medical College and has status equal to that of Department Chair. UVM is an Affirmative Action/Equal Opportunity Employer. Applications from women and people from diverse racial, ethnic and cultural backgrounds are encouraged. Letters of application should include a curriculum vitae with a summary of relevant research, clinical, and administrative experience, and the names of at least three references. Applications will be accepted until the position is filled. Please send letters of application to Susan S. Wallace, Ph.D., Chairperson VCC **Director Search Committee, Department of Microbiology** and Molecular Genetics, The University of Vermont, B202 Given Building, Burlington, Vermont 05477 (802) 656-2164.

POSITIONS OPEN

POSTDOCTORAL ASSOCIATE

A postdoctoral position is available to study early development in *Xenopus laevis*. Possible projects include the analysis of transcription and translation factors as well as developmentally regulated protein localization. Please send résumé including names, addresses, and telephone numbers of three references to: Dr. Joel D. Richter, c/o Personnel Office, Worcester Foundation for Experi-mental Biology, 222 Maple Avenue, Shrewsbury, MA 01545. An Affirmative Action/Equal Opportunity Employer M/F/H.

TWO POSTDOCTORAL POSITIONS

Available immediately for study of novel human serum Available immediately for study of novel human serum proteins involved in responses of leukocytes to bacterial products. A second position is available for study of the regulation of cell adhesion by intracellular lipid media-tors. Send curriculum vitae with names, addresses, and telephone numbers of three references to:

Dr. Samuel D. Wright The Rockefeller University 1230 York Avenue New York, NY 10021

POSTDOCTORAL POSITION available immediately to conduct research in the general area of cancer experimental therapeutics with particular emphasis on molecular mechanisms of taxol sensitivity and resistance. Position would involve work on transfection and expression of genes that regulate taxol mediated antitumor activity.

Send curriculum vitae and names of three references to Dr. DG. Priest, Department of Biochemistry and Molecular Biology, Medical University of South Carolina, 171 Ashley Avenue, Charleston, SC 29425-2211.

DANA-FARBER CANCER INSTITUTE

Applications are invited for a two year POSTDOC-TORAL POSITION in an ongoing project investigating the cellular and molecular immunobiology of bone marrow transplantation. Work in progress relates to cytokine dysregulation during graft versus host disease and the evaluation of novel cytokine antagonists. The successful applicant will have practical experience in molecular biology and cellular immunology techniques. The position is available immediately with competitive salary and fringe benefits available. Please send curricu-Sataty and time benefits available. Please send curricu-lum vitae and names of three references to: Dr. James Ferrara, Room 1640, Dana-Farber Cancer Institute, Boston, MA 02115. Telephone: 617-732-3528; FAX: 617-735-0483.

POSTDOCTORAL SCIENTIST

Oread Laboratories, Inc., a growing pharmaceutical research and development company in the midwest, is seeking qualified applicants for a Postdoctoral position. The individual hired will work as an Oread employee but will be assigned to a secondary company currently housed in Oread's physical facility. This secondary company is expected to operate under this arrangement up to three years with renewals possible. Incumbent will perform advanced research and experimental work under general direction of Study Director. Initially, focus will be on transdermal drug delivery systems with some focus in the future on gene therapy. Literature searches, analysis of ruture on gene therapy. Literature searches, analysis of research conducted, report writing and other support functions will also be required. **Required Qualifications**: Incumbent must possess a Ph.D. in Biochemistry or closely related field; familiarity with polymer synthesis/ modification and laboratory scale process development; understanding of polymer applications to development of clid autemation of molecular taching and molecular taching and solid systems and understanding of molecular techniques. Minimum six months of work with computers for purpos-es of report writing and technical data analysis also required. Incumbent must be detail oriented, able to work with minimum supervision, and able to perform work in a safe manner utilizing good judgement. Individual must be willing to perform transdermal drug delivery systems development work initially. **Desired Qualifications**: Experience with transdermal delivery and analysis of therapeutic agents; understanding of the application of poly-mer chemistry to solving transdermal delivery problems. To Apply: Send résumé to: Oread Laboratories, Inc. Attn: HR-PDS, 1501 Wakarusa Drive, Lawrence, KS 66047. Equal Opportunity Employment/Affirmative Action.

POSTDOCTORAL POSITION available to study the function and regulation of integrin adhesion mole-cules from platelets and other cells. The work involves protein biochemistry and recombinant DNA technology. Send curriculum vitae, statement of research interests, and names of three references to: Dr. Leslie Parise, Department of Pharmacology, CB# 7365, University of North Carolina, Chapel Hill, NC 27599. Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL POSITION available for investigation of glutamate receptor modulation in rat brain slices and cultured neurons using patch clamp techniques. Setting offers interactive environment and a variety of expertise relevant to research topic. Send curriculum vitae and three letters of reference to: Jon W. Johnson, Department of Behavioral Neuroscience, 446 Crawford Hall, University of Pittsburgh, Pittsburgh, PA 15260. FAX: 412-624-9198.

SENIOR POSTDOCTORAL INVESTIGATOR MOUSE GENOME PROJECT

The Biology Division of the Oak Ridge National Laboratory (ORNL) is seeking a senior postdoctoral investigator for the mouse genome project. The candi-date must have thorough training in both classical and including IB panels, mapping in deletion complexes, cDNA library construction) and in human and/or mouse cytogenetics and in situ hybridization, and should have experience with manipulating preimplantation embryos and with embryonic-stem-cell culture and experimentation. Send curriculum vitae and currice and experimentation. Send curriculum vitae and three letters of reference by 17 August 1992 to: L.B. Russell, Biology Division, Oak Ridge National Lab-oratory, P.O. Box 2009, Oak Ridge, TN 37831– 8077. ORNL, which is managed by Martin Marietta Energy Systems, Inc. for the USDOE, is an Affirmative Action/Equal Opportunity Employer.

POSTDOCTORAL POSITION available immediately in Pediatric Oncology at the Dana-Farber Cancer Institute, Harvard Medical School. Persons interested in gene regulation of interleukin-3 and its receptor are invited to apply to the laboratory of Bernard Mathey-Prevot. Applicants with a strong background in molec-ular biology and protein purification preferred. For consideration, please send curriculum vitae and names of three references to: Dr. Bernard Mathey-Prevot, Ph.D., Dana-Farber Cancer Institute, D1630A, 44 Binney Street, Boston, MA 02115.

MOLECULAR BIOLOGY OF AGING

University of Texas Medical Branch (UTMB) at University of Texas Medical Branch (UTMB) at Galveston. GRADUATE, POSTDOCTORAL, and TECHNICAL positions are available at the B.S., M.S., and Ph.D. levels in the laboratories of Drs. John Papa-constantinou, Joan M. Lakoski, Regino Perez-Polo, and E. Aubrey Thompson from a new 5-year Program Proj-ect Grant, *Effects of Aging on Molecular Responses to Stress*. Research emphasis is on age-related changes in: regula-tion of the acut of these lives researces and tion of the acute phase liver response (JP); serotoni and corticosteroid function in the hippocampus (JML); re-sponsiveness to Nerve Growth Factor in CNS neurons and glia (RP-P); and transcriptional regulation of ribosomal components (EAT). Send curriculum vitae, letter stating career goals and lab of interest, and names/ addresses of three references to: Dr. David A. Konkel, Research Coordinator, Department of HBCG, UTMB, Galveston, TX 77555–0643; FAX: (409) 772-5159. UTMB is an Equal Opportunity/Affirmative Action Employer M/F/H/V. UTMB hires only individuals authorized to work in the United States. UTMB is a smoke free/drug free workplace.

POSTDOCTORAL RESEARCH POSITIONS MOLECULAR GENETICS OF FOREST TREES

Two positions are available immediately with a duration of 36 months. One involves transcriptional regula-tion in vascular development in loblolly pine. The second involves genetic analysis of quantitative traits and disease resistance using molecular markers in loblolly pine. For more information, please send a brief letter of interest. To apply, send curriculum vitae and the names of three references by fax or mail to:

R. Sederoff Raleigh, NC 27695–8008 FAX: 919-515-7801 Telephone: 919-515-7800

POSITIONS OPEN

POSTDOCTORAL FELLOWSHIP

University of Hawaii, School of Ocean and Earth Science and Technology, Hawaii Natural Energy Insti-tute, full-time, federal funds, to begin approximately 2 August 1992, continuation dependent upon availability of funds, annual stipend \$28,000 to \$30,000. DUTIES: Conduct research in the area of biological pretreatment of biomass toward ethanol production. MINIMUM QUALbiomass toward ethanol production. MINIMUM QUAL-IFICATIONS: Ph.D. in microbiology, enzymology, ge-netics, or related area. INQUIRIES: Dr. Kelton McKin-ley at 808-956-2346. To apply, send cover letter, curric-ulum vitae, and three letters of reference to: Personnel Officer, Hawaii Natural Energy Institute, 2540 Dole Street, Holmes 246, Honolulu, HI 96822. Closing data: Useil a quirble candidate in found. date: Until a suitable candidate is found. The University of Hawaii is an Equal Employment Opportunity/Affirmative Action Employer and encourages women, minorities, handicapped, and veterans to apply.

POSTDOCTORAL FELLOW

Required to work in the molecular biology of the human TSH receptor, the primary antigen of Graves' disease. Excellent work environment and compensation/ benefits. Independent research program encouraged. Molecular experience helpful. Active NIH funded pro-grams. Please send curriculum vitae to: Dr. Terry F. Davies, Box 1055, The Mount Sinai School of Medicine, One Gustave L. Levy Place, New York, NY 10029-6574. An Equal Opportunity Employer.

POSTDOCTORAL FELLOWS

POSTDOCTORAL POSITIONS available immediately for highly motivated scientists with training and research expertise in biochemistry, molecular biology or cell biology to study novel growth factors, growth factor receptors and related signal transduction mechanisms. Applicants should have a doctoral degree with strong background in molecular/cell biology. Send curriculum vitae and names of three references to: Dr. Merle S. Olson, Department of Biochemistry, The University of Texas Health Science Center at San Antonio, San Antonio, TX 78284–7760. An Equal Opportunity/ Affirmative Action Employer.

POSTDOCTORAL RESEARCH POSITIONS are available to study structure, expression and regulation of Beta polymerase. Expertise in molecular biology and recombinant DNA techniques is required. The University of Texas Medical Branch in Galveston is an Equal Oppor-tunity/Affirmative Action Employer, M/F/H/V. The Uni-versity of Texas Medical Branch hires only individuals authorized to work in the United States of America. Interested candidates should send their curriculum vitae and three references to: Dr. Thomas G. Wood, Director Recombinant DNA Laboratory, Center for Molecu-lar Science, 1700 Strand Avenue, Room 3.112, J-82, University of Texas Medical Branch at Galveston, Galveston, TX 77555–1082.

POSTDOCTORAL RESEARCH ASSOCIATE available with the Center for Advanced Invertebrate Molecular Sciences, Entomology Department, Texas A&M University: Study molecular biology and regulation of baculovirus gene expression and function. Retion of baculovirus gene expression and function. Re-quires training in molecular biology/biochemistry, and recombinant DNA techniques. Prefer cytohistochemical background. Salary starting \$27,000 dependent upon qualifications. Send curriculum vitae and three letters of reference by July 31, 1992 to: Max D. Summers, Director, CAIMS, Texas A&M University, College Station, TX 77843–2475 or by FAX: 409-845-8934.

An Equal Opportunity Employer. **RESEARCH ASSOCIATES** POSTDOCTORAL

The Cedars-Sinai Research Institute is recruiting two Postdoctoral Fellows/Research Institute is rectining two Postdoctoral Fellows/Research Associates to join the neurogenetics laboratory. Cedars–Sinai Medical Center is a major affiliate of the UCLA School of Medicine. Will be involved in the molecular-genetic study of neurodegenerative disorders and the molecular analysis

of familial CNS tumors. A Ph.D. or M.D. degree and a strong background in molecular biology and genetics required.

Please send curriculum vitae with names/addresses of three references to: Dr. Stefan M. Pulst, CEDARS-SINAI MEDICAL CENTER, Becker Building, 8700 Beverly Boulevard, Los Angeles, CA 90048. Telephone: 310-855-5166. FAX: 310-967-0119. Affirmative Action/Equal Opportunity Employer.

RESEARCH SCIENTIST

Saint Francis Hospital and Medical Center, located in Hartford. Connecticut, is seeking a candidate to join our Department of Research and Heart Institute to establish a new program in vascular biology. Candidates should have completed a doctorate degree and a postdoctorate fellowship and have prior experience in molecular aspects of vascular cells. Candidates will be eligible for an appointment at the University of Connecti-cut School of Medicine. Interested candidates should send resume and references to: Dr. Ernesto Canalis, Fax (203) 548-5415

SAINT FRANCIS

Hospital and Medical Center 114 Woodland Street Hartford, Connecticut 06105-1299 EOE-AA-MF/D/V Pre-employment drug testing The Science of Medicine – The Art of Caring



RESEARCH DIRECTOR

The Morton Arboretum invites applications for the position of Research Director. The Arboretum is a privately operated museum of woody plants, and is one of the premier arboreta in the world. It is located on 1500 acres in the western suburbs of Chicago, Illinois.

The Research Director, the senior administrator for research at the Arboretum, leads a diverse, balanced program of practical research related to woody plants, coordinated with the Arboretum's Collections and Education Programs. Outstanding, modern research facilities and significant natural and experimental land support the Research Program. The Research Director is responsible for the 14-member Research staff and an annual operating budget in excess of \$500,000.

Minimum qualifications include a Ph.D. degree in the plant sciences, demonstrated research ability and productivity, strong administrative and leadership skills and experience, and excellent people skills in interactions with the public, staff, and other professionals. Desired is a professional background and interest in woody plants, ecology, and horticulture.

Send curriculum vitae and a list of references to Dr. Gerard T. Donnelly, Director, The Morton Arboretum, Lisle, IL 60532.

NIH Research Fellow/Investigator Position

MUSCLE TRANSCRIPTION FACTORS

A Research Position is available in the Laboratory of Cardiovascular Science, National Institute on Aging, National Institutes of Health, to work on the biochemistry and molecular biology of a unique class of transcription factors expressed in differentiated skeletal and cardiac muscle. Recent work in the laboratory has identified a number of factors that are either homologus to or interact with serum response factor (SRF) in skeletal muscle cell cultures and that bind to DNA elements in the 5' flanking region of ventricular/slow alkali MLC gene to control its transcription. We are interested in isolating and cloning these factors using novel screening procedures based on protein expression and in determining how these factors interact with SRF to achieve tissue-specific transactivation and whether the expression of these factors is altered by muscle activity and aging.

Applications are invited from individuals with Ph.D., M.D., or M.D./Ph.D. degrees. Applicants with experience in molecular and/or cellular biology are especially encouraged to apply. Salary is excellent and commensurate with experience.

Interested candidates should send their curriculum vitae and a letter specifying their research interests to:

Dr. Michael T. Crow, Laboratory of Cardiovascular Science, Gerontology Research Center, National Institute on Aging, 4940 Eastern Avenue, Baltimore, Maryland 21224; (410) 558-8202.

Inquiries by FAX will be accepted at 410-558-8150.

NIH is an Equal Opportunity Employer



THE CLEVELAND CLINIC FOUNDATION

MOLECULAR GENETICS OF HYPERTENSION 28–29 September, 1992

Mario R. Capecchi, Key-Note Speaker University of Utah, Salt Lake City Gene targeting by homologous recombination

Kenneth E. Bernstein: Emory University, Atlanta The renin-angiotensin system: a biological machine

Detlev Ganten: Center for Molecular Medicine, Berlin Transgenic rat models of hypertension

Howard J. Jacob: Whitehead Institute, MIT, Boston; and Stanford Univ. Quantitative trait loci (QTL) analysis

Sadashiva Karnik: Cleveland Clinic Foundation, Cleveland Molecular evolution of chymases

Richard P. Lifton: Brigham and Women's Hospital, Boston 11β-hydroxylase/aldosterone synthase mutations

Katsuhiko Mikoshiba: The University of Tokyo Genetic analysis and function of IP₃ receptors

John P. Rapp: Medical College of Ohio, Toledo Genetic analysis of hypertension rat models

John Shine: Garvan Institute, Sydney, Australia Cloning and functional analysis of neuropetide Y receptors

Florent Soubrier: INSERM, Paris Structure and genotype effect of the angiotensin I-converting enzyme gene

Masashi Yanagisawa: Southwestern Medical Center at Dallas, University of Texas

Molecular characterization of endothelin receptors

Fourth Robert C. Tarazi Symposium The Cleveland Clinic Foundation 9500 Euclid Avenue, Cleveland, Ohio 44195 Tel: (216) 444-9370, FAX: (216) 444-8372



Biology of Neurotrophic Factors in Neurodegenerative Disease

If you're looking for exceptional opportunities to enrich your scientific impact on important, high profile research, you can achieve more at Regeneron Pharmaceuticals. You'll be joining an expanding team effort to research and evaluate the therapeutic power of nerve growth factors and their effect on neurodegenerative disorders. As a world leading pharmaceutical company, known for its quality research capabilities, we have immediate challenges for the following scientists:

Behavioral Neuroscientist

To lead and conduct studies measuring behavioral responses to neurotrophic factor administration. Includes developing animal models of Derkinson's and Alabaiman's

models of Parkinson's and Alzheimer's diseases, ALS and peripheral neuropathies using traditional and transgenic approaches. A Ph.D. is required with demonstrated strengths in statistical evaluation, computer proficiency and a publication record reflecting production and creative research. Neuroanatomical and surgical expertise are also essential.

Postdoctoral Research Scientist

Focuses on cellular and molecular mechanisms of potential neuroprotective effects mediated by neurotrophins. Current areas of investigation include in vitro paradigms for study of Parkinson's disease. Requires a recent Ph.D. graduate in biochemistry, cell biology or neurobiology. Must be experienced in areas of cell culture, neurochemistry or molecular neurobiology.

Regeneron is situated on an expansive wooded campus near Tarrytown in Westchester County, 25 miles north of New York City. We offer a dynamic, highly collaborative scientific environment

REGENERON Pharmaceuticals, Inc.

Equal Opportunity Employer

conducive to your professional growth potential. Please send resume and a cover letter indicating immediate career goals and the names of two or more references, in confidence to: Human Resources, Bin TB (Behavioral) or Bin CP (Postdoctoral), Regeneron Pharmaceuticals, Inc., 777 Old Saw Mill River Road, Tarrytown, NY 10591-6707.

Postdoctoral Fellows Oncology Drug Discovery

The Bristol-Myers Squibb Pharmaceutical Institute is at the forefront of oncological research in drug discovery and continues to expand its intensive efforts in this area. Under the direction of Dr. Bernd Seizinger, several postdoctoral fellow positions are available in Princeton, New Jersey.

Qualified candidates will have experience in molecular genetics and/or cell biology. Research will involve elucidating normal and aberrant function of tumor suppressor genes in the mammalian cell such as interactions with other cancer-related and growth-related genes and proteins, regulation by growthcontrol genes etc. Creativity and the ability to work independently are necessary attributes.

A comprehensive benefits package and competitive salary will be offered. Individuals who possess Ph.D. degrees should forward their resume to: **Bristol-Myers Squibb Pharmaceutical Research Institute, Human Resources Dept. 336-BM, P.O. Box 4000, Princeton, NJ 08543-4000.** Equal Opportunity Employer, M/F/D/V

Bristol-Myers Squibb Company



THE SCIENCE RECRUITMENT "FOUR-DAY CLOSE"

Now you can see your ad

in Science four days after submission

Scientific recruiters can now advertise positions almost as soon as the need arises. Instead of reserving space a month or more in advance, you can now place your ad four days before the magazine mailing date. Science is mailed on the cover date.

Film (right-reading, emulsion face down) or full cameraready art and insertion order must reach: SciENCE, Attention: Daniel Moran, 1333 H Street, N.W., Washington, DC 20005 by NOON Mondays (except for legal holidays when material must reach SciENCE by NOON Fridays). Because space is limited, the four-day close page will be reserved on a firstcome, first-served basis, at a 15% premium. 1/4,1/2 or full page only.

Now you don't have to wait to find the researchers you need immediately, nor must you advertise in a Sunday paper that pans a lot of sand but not much gold. Scientific employers know that Science ads fill the job better. Now they fill it faster too.

You can call it "INSTANT RECRUITMENT."

For further information, telephone Daniel Moran, Advertising Traffic Manager at Science: 202-326-6541, or write to: Science, 1333 H Street, N.W., Washington, DC 20005

CURRENT DISTRIBUTION 160,000



Pew Latin American Fellows Program

A PROGRAM OF THE PEW CHARITABLE TRUSTS

The Pew Charitable Trusts, one of the United States' largest private foundations, is sponsoring a program to provide support for young scientists from Latin America for post-doctoral training in the biomedical sciences in the U.S. Ten Fellows will be selected for awards in 1993 and will be supported for up to three years. An award of \$40,000 will be provided for use by the Fellow for living expenses during the training period (2 years) and will be administered by the sponsoring U.S. institution. Upon notification of the Fellow's return to his or her country of origin, an additional \$35,000 award will be provided to the Fellow for the sole purpose of purchasing equipment and supplies to establish a laboratory at his or her home institution.

Applicants must have held the Ph.D. and/or M.D. degrees for no more than five years as of July 1, 1993. Preference is given to Latin American individuals who have not had significant previous training in the U.S. and who require support to receive post-doctoral training. The Program will accept candidates from five regions: Argentina, Brazil, Chile, Mexico, and Columbia/Uruguay/Ecuador/Venezuela. To obtain further information and an application, contact the appropriate Nominating Committee Chairman at the given address for your region. The deadline for applications is October 1, 1992.

ARGENTINA:

Professor Israel Algranari Instituto de Investigaciones Bioquimicas Fundacion Campomar, Antonio Machado 151 Av. Patricias Argentinas 435 1405 Buenos Aires, Argentina TEL: 1-88-4018 FAX: 1-865-2246

BRAZIL:

Professor Carlos Morel Director of Research Head, Department of Molecular Biology Av. Brasil, 4365 - Manguinhos Rio de Janeiro, RJ 21045, Brazil TEL: 21-290-7549 FAX: 21-590-3495

CHILE:

Professor Mario Luxoro Facultad de Ciencias, Universidad de Chile Casilla 653 (correo Central) Santiago, Chile TEL: 2-271-2865 FAX: 2-271-2983

MEXICO:

Professor Hugo Arechiga Department of Physiology Centro de Investigacion Del IPN, AP 14-470 Mexico City 14DF, Mexico TEL: 5-754-0200 (ext, 210) FAX: 5-754-8707

COLUMBIA/URUGUAY

ECUADOR/VENEZUELA: Torsten Weisel, M.D. Chairman, National Advisory Committee c/o The Pew Latin American Fellows Program 1388 Sutter Street, Suite 805 San Francisco, California 94109 U.S.A. TEL: 415-476-8181 FAX: 415-476-4113



Syntex has earned its reputation in the pharmaceutical industry for significant and innovative research with a continuing commitment to R&D. Consider these exciting research opportunities located at our Palo Alto, California headquarters.

Research Scientists

Clinical: Pharmacology/Pharmacokinetics

Your expertise in pharmacokinetics/biopharmaceutics is needed to design protocols, prepare reports, and carry out kinetic analysis of pharmacokinetic and bioavailability studies in normal human volunteers and patients. You will also prepare protocols for and carry out population kinetic analysis and PK/PD analysis of appropriately designed studies. Excellent verbal and written skills are necessary for final report preparation and summarization for NDA and International drug registrations.

Two positions are available in this area and require a PhD in Pharmacokinetics, Pharmaceutical Chemistry, or Pharmacology. One is an entry-level position and the other requires at least 3-5 years' related industry experience. A good working knowledge of NONLIN and PK/PD software programs is required; expertise in NONMEM is desirable.

•Pharmaceutical Analysis

You will conduct experiments requiring proficiency in pharmaceutical chemistry applied to the analysis of pharmaceutical dosage forms. The successful candidate must be able to work on project teams and interact effectively with other team members. You may also be required to assume additional leadership responsibilities.

This position requires a PhD in Pharmaceutical, Analytical or Physical Organic Chemistry with 2-5 years' post doctoral or industrial experience in the following areas: analytical method development, reaction mechanisms, experimental design, HPLC, UV-Visible spectroscopy and gel electrophoresis. Experience with protein chemistry and characterization is desired but not required. You must have demonstrated excellent written and verbal skills and exhibit a favorable record of scientific publication.

Syntex offers a diverse and challenging environment, attractive salary, and benefits package including relocation assistance. We also offer day care, on-site health club and beautiful, campus-like facilities. For consideration, please send your resume to: Syntex, Staffing Department Job #TCS673, 3401 Hillview Avenue, Palo Alto, CA 94303. Syntex is an equal opportunity employer committed to the values of a diversified workforce.



POSITIONS OPEN

RESEARCH ASSISTANT needed by a southwestern Ohio university to perform research on treatment and prevention of allergies by oral administration of drugs. Formulates the chemical basis of the encapsulated allergenic proteins administered to small animals using Protein quantitative assay and Western blotting and determines whether the encapsulated allergens retain their native structure and immunogenicity after oral administration. Evaluates the immune response to the target allergens before and after administration using the following techniques: ELISA, T-cell proliferation assay and PCA. In connection with the testing procedures, bleeds animals with a Pasteur pipette to obtain serum samples, calculates antibody titre based on computerized data sheet, dissects antibody titre based on computerized data sheet, dissects antibody titre based on computerized to expose to antigens in a sterile condition, performs SDS-PAGE testing, uses the electrotransblotting technique and probes target proteins with appropriate enzyme labeled antibodies. Manages laboratory including organizing and maintaining supplies. Education must include Master's degree in biology with specialization in the area of molecular biology. Education must also have included the following graduate courses: immunology, immunogenetics and biochemistry. Experience must include 1 year of experience in the related occupation of Graduate Assistant or Biochemist using ELISA, Cell culture techniques, Protein quantitative assay and Western blotting. Experience may be gained before, during or after education. Monday to Friday 8:00 a.m. to 5:00 p.m., 40 hours per week, \$21,000 per year. *Must have proof of legal authority to work permanently in United States*. Send résumé in duplicate (NO CALLS) to: L. Ellison, JO# 1230843, Ohio Bureau of Employment Services, P.O. Box 1618, Columbus, OH

PEPTIDE PHARMACOLOGIST

RESEARCH ASSOCIATE POSITION available to participate in the characterization of natural peptides regulating pituitary hormone secretion. Position requires Ph.D. or extensive published experience with isolation, purification, biological and pharmacological characterization of peptides. Candidate should have good verbal and written communication skills and strong familiarity with the fields of neuroendocrinology and signal transduction mechanisms. Published experience with modern chromatography techniques, receptor-binding assays radioimmunoassay, ELISA, and cell culture systems is a necessity. Experience in devising and performing *in vivo* pharmacological experiments using rats and mice is also desired. Please forward curriculum vitae and names of three references to: Dr. Marc E. Freeman, Department of Biological Sciences, Florida State University, Tallahassee, FL 32306. Telephone: (904) 644-3896.

The Molecular Allergy and Immunology Section, National Institute of Allergy and Infectious Diseases (NI-AID), invites applications for a tenure-track **RE-SEARCH SCIENTIST** position starting in 1993. Requirements include a Ph.D. in pharmacology, cell biology or molecular biology, a 5-year minimum of postdoctoral experience and expertise in immunology and molecular biology. Successful candidates are expected to establish an outstanding independent research program investigating the molecular basis of allergic reaction. Candidates with a strong research background in immunology and pharmacology, and with experience in gene regulation and in the biochemistry of cell activation, are preferred. Additionally, applicants should be familiar with techniques of tissue culture, DNA recombination, protein chemistry, HPLC, bioassays of cytokines and must have demonstrated involvement in quality research published in peer-review journals. Starting salary will be commensurate with qualifications and experience. Applicants should send their curriculum vitae, selected reprints, a statement of research accomplishments and names of three referees to: Dr. John Gallin, c/o Dr. Jean-Pierre Kinet, NIH-NIAID, 12441 Park-Iawn Drive, Rockville, MD 20852. Women and minorities are encouraged to apply. NIH is an Equal Opportunity Employer. U.S. citizenship required.

YOUR PERSONNEL PLACEMENT AD in our line classified columns can be boxed for higher visibility. Call SCIENCE at 202-326-6555 for details.

POSITIONS OPEN

RESEARCH ASSOCIATE, PHARMACOG-NOSY/BOTANY. Collect plants for biomedical screening, coordinate collection operations in tropical regions. Ph.D. in botany, tropical collecting experience required. Taxonomic determination, documentation and curation skills vital. Foreign language, biomedical collecting experience desired. Application deadline August 1, starting date early fall. One-year position with option to extend to three years. Send curriculum vitae and three reference letters to: D.D. Soejarto, PCRPS, m/c 877, 833 South Wood Street, Chicago, IL 60612. The University of Illinois is an Affirmative Action/Equal Opportunity Employer.

PRINCIPAL SCIENTIST, INSTRUMENT DE-VELOPMENT: Beckman Instruments, a leading manufacturer of state-of-the-art, precision medical instruments, seeks a research scientist to help develop new instrumentation based on centrifugation. In this highly visible position, you will perform exploratory research to validate new opportunities for the use of centrifugal fields in separating or manipulating macromolecules and cells. To fill this senior-level position, you must have a Ph.D. and 3 to 5 years of experience in molecular or cell biological techniques, possess good interpersonal skills, and be able to establish external collaborations in addition to performing in-house research. We offer immediate challenge and a highly visible role within one of our premier business units. Moreover, you'll be rewarded with a competitive compensation and benefits package, and have the freedom to grow a career at one of the country's leading biomedical instrument companies. Qualified scientists interested in this type of role should forward a current curriculum vitae, in confidence, to: Human Resources Department, Beckman Instruments, Position: Sr. Scientist, 1050 Page Mill Road, Palo Alto, CA 94304. Equal Opportunity Employer.

RESEARCH SCIENTIST, DIVISION OF EN-DOCRINOLOGY. Rhode Island Hospital seeks a research scientist with a Ph.D. in neurosciences or neuroendocrinology with training in molecular biology and/ or cell biology and a minimum of 2 years of postdoctoral research experience. Candidates must qualify for appointment at Brown University as an Assistant Professor of Medicine (Research) and have demonstrable research ability. The successful candidate will be expected to develop an independent research program focused on neural peptide biology as well as collaborate closely with other faculty currently conducting related research in the area. Interested candidates should send their curriculum vitae and the names of three references by Friday, 7 August 1992 to: Ivor M.D. Jackson, M.D., Director, Division of Endocrinology, Brown University School of Medicine and Search Committee Chair, Division of Endocrinology, Rhode Island Hospital, 593 Eddy Street, Providence, RI 02903. Screening of applicants will begin on that date and continue until the search is successful or terminated. Rhode Island Hospital is an Equal Opportunity/Affirmative Action Employer and actively solito is applications fom minority and protected groups.

ANNOUNCEMENTS

GRADUATE STUDIES IN BIOTECHNOLOGY THE UNIVERSITY OF CHICAGO

The NIH (National Institutes of Health)-funded graduate training program in Biotechnology at the University of Chicago, in collaboration with Abbott Laboratories, is accepting applications for the 1992–1993 academic year. The program plan has flexibility to accommodate candidates with different backgrounds and interests. Students can pursue a Ph.D. degree in any of five degree-granting units, including the Department of Biochemistry and Molecular Biology, the Department of Molecular Genetics and Cell Biology, the Department of Chemistry, the Committee on Genetics, the Committee on Virology and the Committee on Immunology. Interested students should apply directly to a participating department or committee. Further information may be obtained from:

Lucia B. Rothman-Denes Director, Biotechnology Training Program Department of Molecular Genetics and Cell Biology The University of Chicago 920 East 58th Street Chicago, IL 60637

POSITIONS OPEN

SENIOR RESEARCH SPECIALIST. Position immediately available for research in the Section of Digestive and Liver Diseases. M.S. in biological sciences required, preferably with a minimum of one year of experience, or Ph.D. in biological sciences desired. Experience with molecular biology and biochemical techniques required. Project involves cloning of the mammalian intestinal membrane transporters and transporter expression and regulation. Résumé with three references to: P. Randle, Department of Medicine (M/C 787), University of Illinois at Chicago, 840 South Wood Street, Chicago, IL 60612. Affirmative Action/Equal Opportunity Employer.

SENIOR RESEARCH SCIENTIST: Coordinate activities of multidisciplinary team of scientists and engineers in connection with research and development of artificial heart devices; study and prepare appropriate data with respect to the interaction of the left ventricle of the heart with certain heart-assist devices after implantation in animals and humans.

tation in animals and numans. Ph.D. degree in Biomedical Engineering. Ph.D.-level course work must include at least one (1) course in Medical Physiology. Graduate-level research must include Electrical Resistance Volumetry in the Circulation of Blood in the Heart, and the Effect of Anesthetics on the Strength of Red Blood Cells.

One (1) year of experience in the position, or one (1) year, 6 months of experience as post-Ph.D. Research Associate. Experience in felated occupation must include the following: in-vivo studies of ventricular interaction during heart-assist; design of rapid ventricular uploading experiments, including microprocessor controller; computer modeling of ventricular interaction; assist in clinical management of patients on ventricular assist devices; participation in explant analysis of artificial heart devices.

cal management of patients on ventricular assist in curices; participation in explant analysis of artificial heart devices; Forty hours per week; 9:00 a.m. to 5:00 p.m.; salary: \$60,000.00 per year. Must show proof of legal authority to work permanently in United States if offer of employment is received.

Send this ad and your résumé to: Job No. LQ 6619, P.O. Box 9560, Sacramento, CA 95823-0570, no later than 18 July 1992.

COMPUTER MARKETPLACE

STATISTICAL SOFTWARE Accurate, easy to learn. For MS-DOS. Includes t-tests, ANOVA, chi-square tests, DOE, survival analysis, sample size and power analysis, curve fitting, graphics, more. Spreadsheet-style interface. Transfer graphics to other programs. Thousands of users. Base system: \$125. Complete: \$395. Ask for Dr. Hintze (PhD statistician) at (801) 546-0445. FAX: (801) 546-3907. NCSS, 329 North 1000 East, Kaysville, UT. 84037.

Circle No. 11 on Readers' Service Card

MARKETPLACE



Circle No. 6 on Readers' Service Card

Custom DNA Purified and Delivered in 48 hours. \$7.50 per base • Purified Guaranteed minimum 100 µg DNA Research Genetics 1-800-533-4363

Circle No. 5 on Readers' Service Card



Introducing a new kind of scientific conference...

Science Innovation '92 New Techniques and Instruments

in Biomedical Research

21-25 July 1992 ♦ San Francisco

Sponsored by the American Association for the Advancement of Science and *Science* Magazine

There's never been a meeting like it.

At Science Innovation '92 you can...

- Acquire an overview of new technologies each morning in plenary sessions by great pioneers of science.
- Get practical solutions to your research problems each afternoon in intimate, informal advanced technology workshops (see list below).
- ♦ Introduce your own techniques to colleagues at the evening poster sessions.
- Experience new technologies up close daily at the exhibition and in evening industry workshops.
- Preview emerging technologies at a unique, last-day session spotlighting the next frontiers of science.

Advanced Technology Workshops		
 Basic & Clinical Immunology Techniques Biomedical Imaging DNA Amplification DNA Forensics DNA Sequencing Technology Electrical Measure of Mammalian Cells Field Flow Fractionation Fluorescent In-situ Hybridization (FISH) 	 ♦ Gene Expression ♦ Gene Mapping ♦ Gene Therapy ♦ Gene Transfer ♦ High-Performance Electrophoresis ♦ High-Speed Liquid Chromatography ♦ Information Analysis ♦ Innovations in Crop Production 	 Mass Spectrometry Microscopy Nonisotopic Detection Oncogenes & Suppressor Techniques Optical Trapping (Laser Tweezers) Preparative & Analytical Electrophoresis Protein Structure-Based Drug Design Tissue Preparation for Microscopy

For complete details regarding the scientific program, registration, abstract submission, or exhibits, call 202-326-6461 or fax your request to 202-289-4021.

Circle No. 13 on Readers' Service Card



New Micro-Isolator LP[™] Height 6 1/4"

Standard Micro-Isolator™ Height 8 5/8"

Gain 50% or more space and keep a cleaner environment with the new Low Profile Micro-Isolator™ and new Formed Lid.

NEW LOW PROFILE MICRO-ISOLATOR TOP: The lower height of our new ~ Micro-Isolator filter top maintains the same internal environmental conditions as the standard top.

> NEW FORMED LID: The key to the tighter seal of the new Micro-Isolator LP is the stainless steel, formed lid with a smooth flat rim.

Standard Cage: The standard Micro-Isolator cage remains the same.

Introducing the Micro-Isolator LP™

Many of our customers asked for a Micro-Isolator[™] system that was more space efficient and effectively contained bedding material. Lab Products, Inc. came back with the Micro-Isolator LP[™], a new standard in housing for mice, designed to maximize your rack capacity and keep your shelves clean.

For example, 126 new Micro-Isolator LP cages can now be stacked onto a shelf rack where, typically, only 84 cages would fit. This means fewer racks, and fewer racks mean more space available for other functions—a valuable savings on lab real estate. (Where you formerly used 3 rooms, you can now use 2.)

You can realize cost efficiencies, as well, on cleaning and sterilization. Your Lab Products salesperson will be happy to detail how you can benefit from these new improvements.





Circle No. 9 on Readers' Service Card

800/526-0469 201/843-4600 FAX: 201/843-6040