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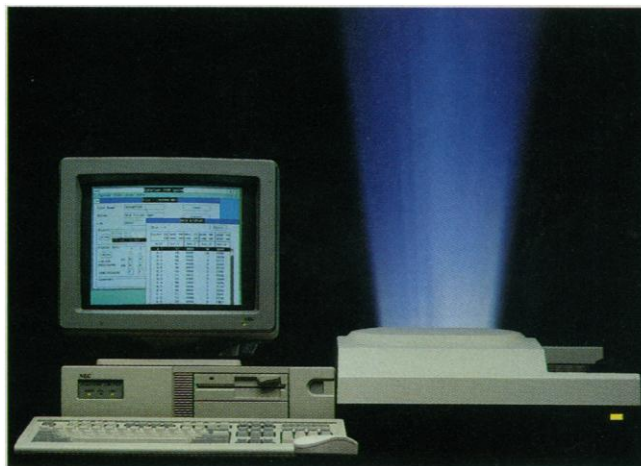
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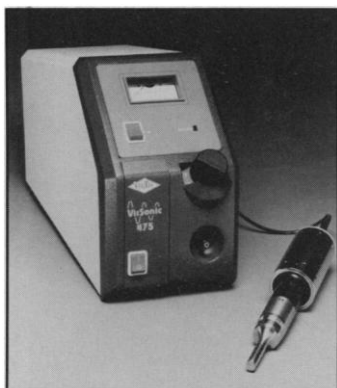
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PRODUCTS & MATERIALS

edited by ERIC SEABORG

Cell Disrupter

The Virsonic 475 Cell Disrupter harnesses 475 watts of high intensity power for a variety of processing applications, including cell disruption, emulsification, degassing of liquids, acceleration of enzymatic and chemical reactions, and dispersion of solids in liquid. Power output is adjustable and displayed on a panel-mounted indicator. Supplied



with a half-inch-diameter titanium disrupter horn with replaceable tip designed for sonicating volumes of 10 to 250 ml, the Virsonic 475 can be adapted with accessories to volumes ranging from 0.2 to 1000 ml. VirTis. Circle 87.

Monoclonal Antibodies

Anti-ICAM-2 and Anti-ELAM-1 are new mouse monoclonal antibodies (MAbs) to human intercellular adhesion molecule-2 and human endothelial leukocyte adhesion molecule-1, respectively. Provided as purified immunoglobulins from ascites, these antibodies can be used for flow cytometry or to stain acetone-fixed cryostat sections or cell smears. BioSource International. Circle 88.

MAbs to CD antigens conjugated to biotin include antibodies to CD2, CD3, CD4, CD5, CD8, and CD25. The first in a range of such MAbs planned by the manufacturer, they are designed for use in flow cytometry. Serotec. Circle 89.

The mouse MAb clone 780-3 reacts specifically with human p105 proliferation-associated nuclear antigen. It is suitable for immunohistochemical staining of frozen tissue sections or formalin-fixed, paraffin-embedded tissue sections after enzyme digestion. BioGenex Laboratories. Circle 90.

Growth Media Capsules

BIO 101 has formulated many of the conventional bacterial and yeast growth media into an assortment of mixtures packaged in capsules and bulk powders. Media can be prepared by simply adding capsules or powder to water and autoclaving. In cases where pH adjustments are normally made after dissolving powders in water, biological buffers have been pre-added so pH adjustments are not necessary. Custom formulations are available. BIO 101. Circle 91.

Statistical Software

FASTAT 2.0 for DOS is a software package for statistical analysis, data management, and graphics on IBM-compatible computers running DOS 3.0 or higher. It is designed to meet the statistics needs of researchers who do not have broad statistical expertise. Data can be entered through a simple data editor, and can also be imported and exported in several standard formats, including ASCII, Lotus, Symphony, dBase, and DIF. It requires a hard disk with 640K random access memory. SYSTAT. Circle 92.

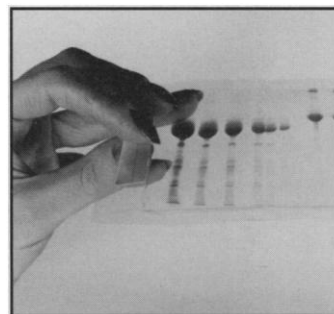
cDNA Synthesis Kit

The Timesaver cDNA Synthesis Kit enables researchers to prepare cDNA libraries from mRNA in a single working day. The kit can

produce representative libraries containing full-length cDNAs using a primer of choice quickly. The kit includes both oligo (dT)12-18 and random hexamers [pd(N)6] for priming cDNA synthesis and Eco RI/Not I cohesive-end adapters to facilitate cloning. Innovations include a specially developed rapid ligation procedure and the use of SizeSep 400 Spun Columns for intermediate purifications. Pharmacia P-L Biochemicals. Circle 93.

Gel Drying System

BioGelWrap gel drying system is an easy way to dry and store all types of polyacrylamide and aga-



rose gels. The unique pore configuration allows the water in a gel to be readily evaporated directly through the BioGelWrap membrane. There is no need for a vacuum hot plate gel drier. The membrane bonds to both the gel surface and itself, so the dried gel is sealed between two layers of tough, transparent, and stable membrane without wrinkling or cracking. The clear dried gel is flexible for safe storage and can be photographed, examined by densitometry, or shown on an overhead projector. BioDesign Inc. of New York. Circle 94.

80-Channel Respirometer

A new O₂/CO₂ Respirometer features 80 channels and real-time graphical representation of measurements. It is intended for bacteriological and environmental applications where oxygen uptake and carbon dioxide production of a large number of bacterial cultures need to be monitored in periodic intervals. Additional areas of application include environmental studies (bioremediation), the food industry (testing oxidation of lipids and fat), tissue cultures, and measuring the respiration of seeds, insects, and soil. The respirometer features sensitivity to oxygen consumption of 0.2 µl/hour. Test chamber size can range from 50 ml to 20 liters. Columbus Instruments. Circle 95.

Literature

DATAPLATE 350 Series Digital, Programmable Dry Block Heaters is a four-page brochure on these microprocessor-controlled instruments. PMC Industries. Circle 96.

PCR: A Practical Approach offers a starting point for those new to polymerase chain reaction technology and a reference for experienced researchers in all areas of biology. Promega. Circle 97.

ATCC Preservation Methods: Freezing and Freeze-Drying is a laboratory manual that describes American Type Culture Collection's preservation techniques for microorganisms and other biological materials. American Type Culture Collection. Circle 98.

Sigma Immunochemicals 1992 Catalog lists more than 1300 antibodies, growth factors, enzyme substrate and buffer tablets, and related products. The more than 100 new products include an expanded line of CD marker monoclonal antibodies and their fluorochrome conjugates. Sigma Immunochemicals. Circle 99.

Choosing a High Performance Timer/Counter is a four-page guide. Fluke. 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.

Scientists reluctant to incorporate nonradioactive labeling and detection into their research techniques have historically accused nonradioactive products of lacking sufficient levels of sensitivity. However, recent technological advancements — chemiluminescent detection, to be exact — have allowed select products to meet or exceed the sensitivity levels achievable with ^{32}P labeling and detection.

Southern blotting: single-copy gene detection in 30 minutes

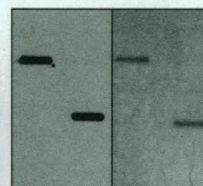
The accepted wait for accurate single-copy gene detection using ^{32}P labeled probes has always been one to three days. Now identical results can be achieved in 30 minutes with the Genius System and its chemiluminescent substrate.

In addition, the probes are stable, allowing researchers to reuse them

employed to prepare radioactive probes, and multiple filters can be processed simultaneously.

Dot blots: guaranteed results in under one hour

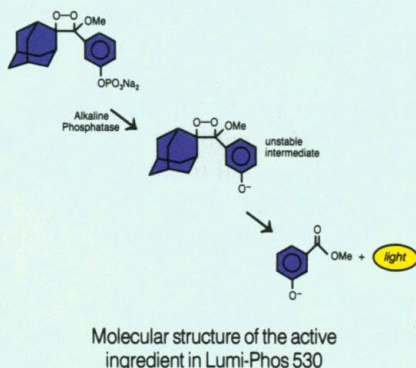
With exposure times reduced from overnight to 30-60 minutes, critical answers are relayed quickly, helping research progress as soon as possible.



Comparison of slot blot hybridizations using Genius-labeled oligonucleotide probe (left panel, 60 minute film exposure) and ^{32}P -labeled probe (right panel, overnight film exposure)

New information identifies ideal techniques for nonradioactive labeling and detection.

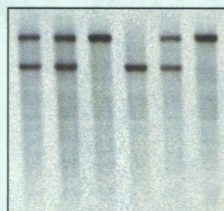
Those products, part of the GeniusTM System with Lumi-PhosTM 530 from Boehringer Mannheim, guarantee detection of 0.1 pg of target nucleic acid in less than one hour. In addition, they allow detection of single-copy genes in human DNA in less than 30 minutes when used in Southern blotting techniques.



The Genius products rely on the very same procedures already used for radioactive labeling, yet provide results not just hours earlier, but days earlier.

Results can be recorded on X-ray film and, because the chemiluminescence lasts more than 48 hours, multiple exposures are possible. Those films can be easily scanned and quantified by densitometry.

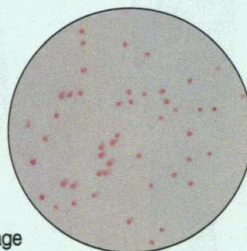
multiple times without relabeling. Furthermore, Southern blots developed with the Genius System can be repeatedly stripped and reprobbed using the same procedures as the older radioactive method.



Human genomic Southern blot (RFLP) showing chemiluminescent detection of single-copy genes following a 2.5 minute X-ray film exposure

Library screening: positive colonies visible in one hour

Using probes labeled with the Genius System, researchers are detecting positive colonies and plaques within one hour versus the overnight exposures required with radioactive techniques.



Colorimetric detection of recombinant lambda gt 10 phage

Because the Genius System can use DNA, RNA or oligonucleotide probes, many research needs can be met with a single system. Probe labeling utilizes the same techniques currently

Performance is guaranteed as the Genius System products are function tested in dot blot (also referred to as slot blot) assays.

The unique digoxigenin-labeled probes are stable for at least one year and can be reused multiple times, offering savings in terms of the time and money normally spent relabeling decayed radioactive probes. By using the same probe, experimental variables are reduced and reproducibility between experiments is provided.

0.1 pg DNA Guaranteed

Technique-specific information and bibliography available upon request

To receive additional information about the Genius System products, their applications and specifications, or to receive a bibliography of publication references, call Boehringer Mannheim at **800-428-5433**.

If you would like to speak directly with a specialist about your individual research needs, call **800-262-4911**.



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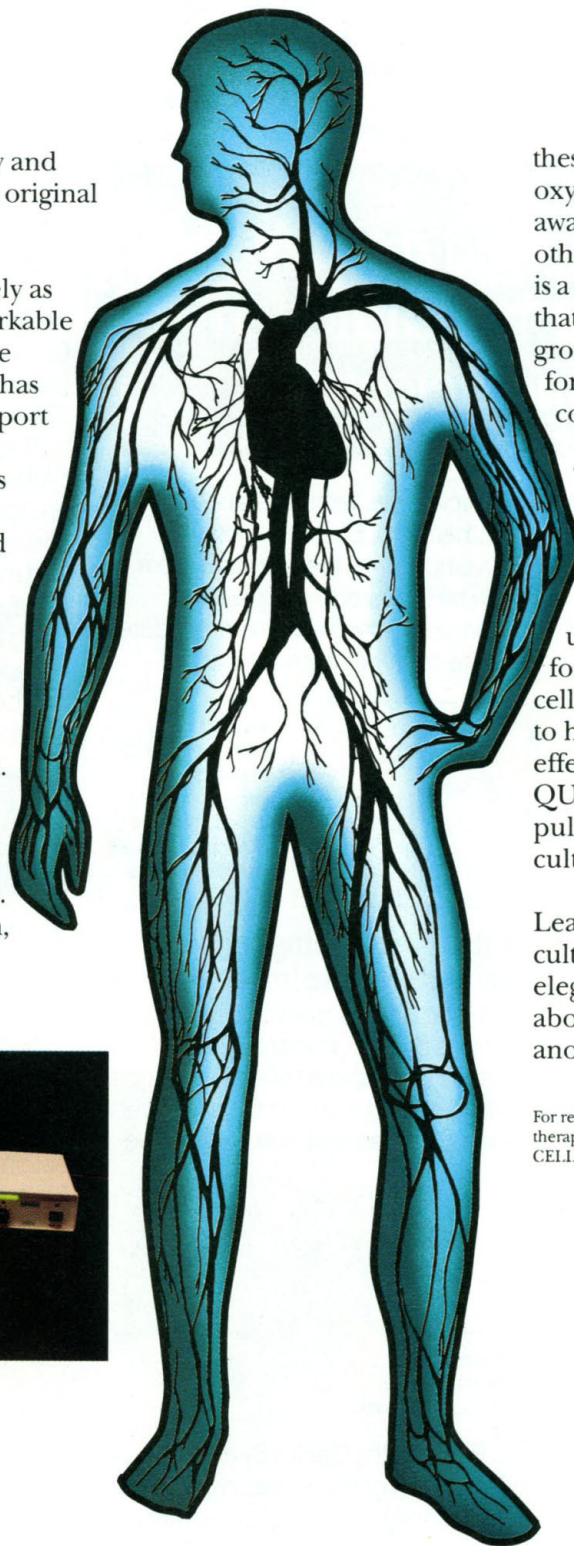
The CELLMAX QUAD can simultaneously operate up to four independent cultures at different flow rates. It can accommodate various ready-to-use Cellco cartridges optimized for growth of a broad spectrum of cell types ranging from bone marrow to hybridomas. A compact, cost-effective system, the CELLMAX QUAD requires far less space, manipulation and materials than other culture technologies.

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POSITIONS OPEN

ANIMAL PHYSIOLOGIST. Hofstra University Department of Biology invites applications for a tenure-track **ASSISTANT PROFESSORSHIP**, beginning September 1992. Ph.D. required with postdoctoral training, and teaching experience preferred. Applicant is expected to develop an active research program at the organismal or cellular level and be able to teach both physiology and zoology. Submit curriculum vitae, names, addresses and telephone numbers of three professional references and reprints of representative publications to: **Dr. Carleton Phillips, Biology Department, Hofstra University, Hempstead, NY 11550**, by 25 April 1992. *Affirmative Action/Equal Opportunity Employer.*

ASSISTANT PROFESSOR. The College of Forest Resources, University of Washington, invites applicants for a full-time, 12-month, tenure-track position in forest soils. Applicants must have a Ph.D. by the time of appointment, a background in soil science, and a strong interest in soil/plant relationships and/or soil development in forest ecosystems. Responsibilities include teaching an undergraduate course in basic soils, graduate courses, and development of a research program. The College of Forest Resources has a strong forest soils program with a long history of teaching and research. The position is available 1 July 1992 or at a mutually acceptable date thereafter. Closing date for applications is 15 May 1992. Address applications (including résumé, transcripts, and three letters of reference) to: **Dr. Robert L. Edmonds, Chairperson, Forest Soils Search Committee, College of Forest Resources, University of Washington, Seattle, WA 98195**. Telephone: 206-685-0953; FAX: 206-685-3091. *The University of Washington is an Equal Opportunity/Affirmative Action Employer. Qualified women and minorities are urged to apply.*

Department of Medicine, Georgetown University, seeks Board-certified allergist and internist for immunobiology of inflammation group to study molecular biology of neurogenic inflammation in respiratory disease. Experience with molecular biology techniques, human and animal models of mucosal inflammation is required. This entry-level **ASSISTANT PROFESSOR** position carries expectations of academic scholarship, skill in teaching and patient care, and commitment to investigation. Transferable research support is an asset. Send curriculum vitae and names of three references to: **Dr. John M. Eisenberg, M.D., Chairman, Department of Medicine, Georgetown University, School of Medicine, 3800 Reservoir Road N.W., Washington, DC 20007**. *Georgetown University is an Equal Opportunity/Affirmative Action Employer.*

SENIOR STAFF (ASSISTANT PROFESSOR EQUIVALENT) OR POSTDOCTORAL FELLOWSHIP (depending on qualifications) available immediately to study regulatory mechanisms and functions of small molecular weight GTP binding proteins (RAS superfamily). Particular emphasis on the roles for these proteins in protein secretion in mammals and yeast. Experience in nucleotide binding or protein secretion fields preferred. Send curriculum vitae and names of three references to: **Richard A. Kahn, Ph.D., Laboratory of Biological Chemistry, National Cancer Institute, NIH, Building 37, Room 5D-02, 9000 Rockville Pike, Bethesda, MD 20892**. *An Equal Opportunity/Affirmative Action Employer.*

ASSISTANT PROFESSOR OF SILVICULTURE. Nine-month, tenure-track. Must have Ph.D. with expertise in silviculture, ability to communicate with field professionals and one degree in forestry. Background in protection, ecology and quantitative analysis/modeling preferred. Duties: Advise students and teach undergraduate and graduate courses; seek funding and conduct research in area of expertise; and participate in continuing education and service activities. Available 1 October 1992. Salary commensurate and supplemented with summer salary the first 5 years. Application with résumé, statement of goals/interests, and transcripts must be received by 1 July 1992. Three letters of reference also needed. Direct applications and contacts to: **Dr. Carl A. Mohn, Department of Forest Resources, University of Minnesota, 115 Green Hall, St. Paul, MN 55108**. Telephone: 612-624-7281. FAX: 612-625-5212. *The University of Minnesota is an Equal Opportunity Educator and Employer.*

POSITIONS OPEN

BROWN UNIVERSITY NEUROSCIENCE ASSISTANT PROFESSOR

Tenure-track faculty position for individual with expertise in molecular or cellular neuroscience. The successful candidate will join a large faculty with research interests in systems and cellular neuroscience. Candidates must have a Ph.D. or M.D. and postdoctoral experience. Candidates must show evidence of their ability to establish an independent, externally funded research program and must demonstrate the potential for excellence in teaching. Responsibilities include participation in undergraduate and graduate courses in neuroscience and undergraduate advising.

Screening of applications will begin on 15 April 1992 and continue until a successful candidate has been identified or the search closed. Applicants should submit curriculum vitae, a set of representative reprints, a concise description of research interests and goals and should arrange for three letters of reference to be sent to: **John Donoghue, Neuroscience Search Committee, Box 1953, Brown University, Providence, RI 02912**. *We encourage applications from women and minority candidates. Brown University is an Equal Opportunity Affirmative Action Employer.*

SENIOR STAFF (ASSISTANT PROFESSOR EQUIVALENT) OR POSTDOCTORAL FELLOWSHIP (depending on qualifications) available immediately to study HIV transcriptional regulation and retroviral assembly mechanisms. Studies will focus on the cloning and characterization of cellular transcriptional factors and mechanisms of viral protein subcellular targeting and intracellular interactions. Experience in molecular biology and protein purification preferred. Send curriculum vitae and names of three references to: **Dr. R. L. Felsted, Laboratory of Biological Chemistry, Building 37, Room 5D-02, NIH, 9000 Rockville Pike, Bethesda, MD 20892**. *An Equal Opportunity/Affirmative Action Employer.*

ASSISTANT PROFESSOR—RESEARCH TRACK. The Department of Animal Biology, University of Pennsylvania, seeks a neuroscientist to study the neuroendocrine mechanisms of body fluid homeostasis. The candidate must have a Ph.D. in neuroscience or related area, 3 years of postdoctoral training, and extensive experience with brain steroid receptor analysis. Please submit curriculum vitae, statement of research interests, and three letters of recommendation to: **Dr. Steven J. Fluharty, Animal Biology—254 E. VET/6046, University of Pennsylvania, Philadelphia, PA 19104-6046**. *An Affirmative Action/Equal Opportunity Employer.*

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The Department of Molecular and Cell Biology invites applications for the following tenure-track position, with appointment beginning approximately 1 July 1993. Candidates should have demonstrated excellence, originality, and productivity in research and should have a strong interest in undergraduate and graduate teaching.

ASSISTANT PROFESSOR: research emphasizing the development of vertebrates, especially higher vertebrates, as approached through molecular, genetic, or embryological methods.

Application should include a cover letter, curriculum vitae, a bibliography, a statement of research objectives and teaching interests, three letters of recommendation, and reprints of three representative publications. The closing date for acceptance of applications is 1 October 1992. This is an announcement of a previously advertised position with a new, later closing date and an extended time for beginning the appointment. Applications should be sent to: **Genetics/Development Search Committee, Department of Molecular and Cell Biology, Room 597 Life Sciences Addition, University of California, Berkeley, CA 94720**. *The University of California is an Affirmative Action/Equal Opportunity Employer. We especially invite women and underrepresented minorities to apply.*

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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 projects; Field assignments in 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.

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**Cancer Prevention Fellowship Program
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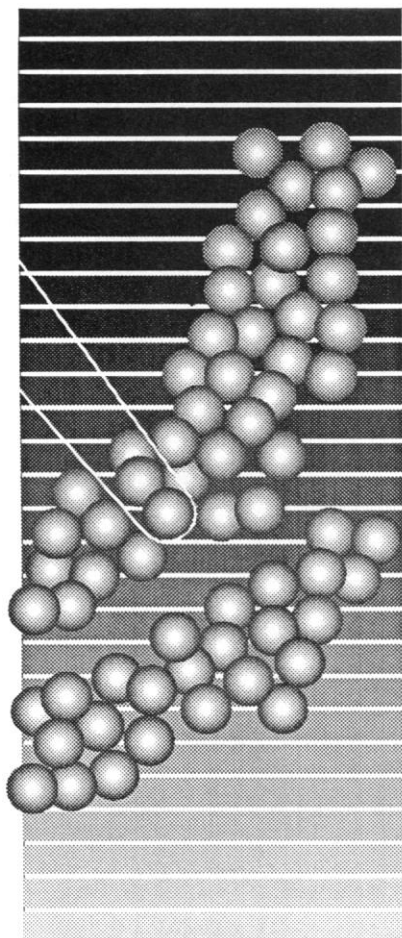
***Deadline for Receipt of Applications:
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Further Inquiries: Mrs. Barbara Redding, (301) 496-8640

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UNIVERSITY OF FLORIDA COLLEGE OF MEDICINE DEPARTMENT OF PHARMACOLOGY AND THERAPEUTICS

A tenure-track ASSISTANT PROFESSOR position is open for applicants having a Ph.D. and/or M.D. degree with at least 2 years of postgraduate experience. The successful candidate will be expected to develop an independent research program, teach professional and graduate students and contribute to other academic activities. Position offers a competitive salary and laboratory start-up package. The department is interested in strengthening research in neuropharmacology with molecular and structural biology approaches although all candidates with strong scientific credentials are encouraged to apply. Application deadline is 31 May 1992. Applications including names of three references should be sent to: **Dr. Fulton T. Crews, Chairman of the Search Committee, University of Florida, Department of Pharmacology, P.O. Box 100267, Gainesville, FL 32610.** *The University of Florida is an Equal Opportunity Employer and specifically invites and encourages applications from women and minorities.*

BAYLOR COLLEGE OF MEDICINE, HOUSTON, TEXAS

Department of Anesthesiology is inviting applications and nominations for faculty positions at ASSISTANT PROFESSOR AND ASSOCIATE PROFESSOR levels. These positions offer excellent opportunities to develop an academic career in a department with excellent clinical and research resources and facilities. We are interested in qualified candidates in general anesthesia and in basic science research in molecular pharmacology of ion channels or cerebrovascular physiology or pharmacology. Qualified candidates should send curriculum vitae to: **William F. Childers, M.D., Chairman, Department of Anesthesiology, Baylor College of Medicine, 6550 Fannin, Suite 1003, Houston, TX 77030.** *Baylor College of Medicine is an Affirmative Action/Equal Opportunity Employer.*

ASSISTANT/ASSOCIATE PROFESSOR OF PHARMACOLOGY

Mercer University School of Medicine wishes to fill a tenure-track position in pharmacology immediately. Applicants must possess a Ph.D. and/or M.D. with postdoctoral training. Preference will be given to candidates with experience in cardiovascular and/or autonomic pharmacology. However, candidates with experience in other areas of pharmacology are also encouraged to apply. The successful candidate will be expected to develop a research program. Submit curriculum vitae, statement of objectives, and addresses and names of three references to: **Dr. Robert J. Moon, Chairman, Division of Basic Medical Sciences, Mercer University School of Medicine, Macon, GA 31207.** *An Equal Opportunity/Affirmative Action Employer.*

RESEARCH ASSISTANT/ASSOCIATE PROFESSOR IN ENDOCRINOLOGY. Ph.D. with several years of postdoctoral experience in molecular biology to coordinate and supervise a new interdepartmental research program in diabetes and obesity. The candidate must have outstanding leadership capabilities, become involved in the training of fellows and technicians, conduct collaborative research and initiate his/her independent research. We offer a competitive salary and benefits package.

Please send curriculum vitae, summary of present research interest and two letters of reference to: **Dr. Jose F. Caro, Chairman, Department of Medicine, Jefferson Medical College, 1025 Walnut Street, Philadelphia, PA 19107.**

An Equal Opportunity/Affirmative Action Employer.

ASSOCIATE/FULL PROFESSOR OF PHARMACOLOGY. Established scientist to lead section on molecular biology of CNS drug actions is sought for a tenure-track position. Send nominations/applications including curriculum vitae, a statement of research goals and extramural support to: **Dr. Harbans Lal, Chairman, Department of Pharmacology, Texas College of Osteopathic Medicine, 3500 Camp Bowie Boulevard, Fort Worth, TX 76107.** *Affirmative Action/Equal Opportunity Employer and Educator.*

POSITIONS OPEN

TENURE-TRACK FACULTY POSITIONS (ASSISTANT PROFESSOR, ASSOCIATE PROFESSOR AND PROFESSOR) UNIVERSITY OF MINNESOTA MEDICAL SCHOOL

Applications are invited for positions of assistant professor (tenure track) in the Department of Pharmacology, Medical School. Successful candidates are expected to establish an outstanding independent research program, in addition to teaching, in the area of molecular pharmacology. Requirements include a Ph.D. in biochemistry, cell biology, molecular biology, pharmacology or related field, or an M.D., and 2 years of postdoctoral research experience. Candidates with a strong research background and experience using recombinant DNA technology for studying pharmacological problems and/or molecular biological problems are preferred. Applicants must have demonstrated involvement in quality research published in peer-reviewed journals.

Appointment as associate professor (tenured) or full professor (tenured) may be considered for applicants with professional distinction in published research and who have demonstrated effectiveness in teaching and advising and evidence of consistently attracting extramural funding for research. Appointment at these ranks must meet minimum qualifications established by the University of Minnesota. The above described areas of research and qualifications are also preferred for these candidates.

Applicants should indicate level of position they are applying for and send curriculum vitae, significant reprints, a statement of research plans, and three names for reference purposes to: **Dr. J. W. Miller, Professor and Chairperson of Search Committee, Department of Pharmacology, 3-249 Millard Hall, University of Minnesota, 435 Delaware Street, S.E., Minneapolis, MN 55455.** Deadline for receipt of applications is 15 May 1992.

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

ASSISTANT/ASSOCIATE PROFESSOR PHARMACOLOGY

Applications are invited for a tenure-track position in the Department of Pharmacology at the State University of New York Health Science Center at Syracuse available in the fall 1992. Candidates are expected to participate in medical and graduate student teaching and to develop an independent research program. Applicants should have an M.D. or Ph.D. degree and a minimum of 2 years of postdoctoral experience. Individuals using molecular biological approaches to examine the function of receptors, ion channel or transport proteins, the mechanisms of cellular signal transduction, or eukaryotic gene regulation will be given special consideration. Applicants should send curriculum vitae, three letters of reference, a description of past experience and present and future research interests to: **Search Committee, Department of Pharmacology, State University of New York, Health Science Center, 766 Irving Avenue, Syracuse, NY 13210.** *An Equal Opportunity/Affirmative Action Employer.*

TENURE-TRACK FACULTY POSITIONS IN PHARMACOLOGY VANDERBILT UNIVERSITY

Applicants for ASSISTANT PROFESSOR should have demonstrated exceptional potential to develop strong independent research programs; senior candidates with ongoing programs of excellence will be considered for ASSOCIATE OR FULL PROFESSOR, as appropriate. Preference will be given to investigators who integrate a variety of experimental approaches to address fundamental questions in cell regulation, particularly in neural systems. University-wide recognized research strengths in signal transduction, cellular and molecular neuroscience, regulation of gene expression and cell growth, molecular development and a strong graduate student training program make Vanderbilt an excellent research environment. Applicants should send curriculum vitae, three letters of reference and a description of research interests to: **Dr. Lee E. Limbird, Ph.D., Professor and Chair, Department of Pharmacology, Vanderbilt University, Nashville, TN 37232.** FAX: 615-343-1084. *Vanderbilt is an Equal Opportunity Employer.*

POSITIONS OPEN

ENDOCRINOLOGY. ASSISTANT/ASSOCIATE CLINICAL PROFESSOR (Department of Medicine) position available at the University of California, San Diego (UCSD). Candidates must have clinical training and experience in endocrinology/metabolism; significant experience in clinical endocrinology and diabetes; experience in clinical investigation preferred. Candidate will devote majority of time to clinical and teaching responsibilities including supervision of the clinical endocrinology fellowship training program, and will participate in inpatient/outpatient endocrinology and diabetes service. Participate in Diabetes Control and Complications Trial. Board-certified or -eligible in internal medicine and/or endocrinology. California medical license or eligible to apply. Salary related to rank and step of appointment and based on established UCSD salary scales. Reply by 30 April 1992 to: **Jerrold M. Olefsky, M.D., VA Medical Center, Medical Research Service (9111G), 3350 La Jolla Village Drive, San Diego, CA 92162.** *Affirmative Action/Equal Opportunity Employer.*

UNIVERSITY OF CALIFORNIA, DAVIS SCHOOL OF MEDICINE DEPARTMENT OF PATHOLOGY

Full-time faculty position as an ASSISTANT/ASSOCIATE PROFESSOR with specialty training as a molecular geneticist or molecular biologist. Must be certified by the American Board of Medical Genetics (or eligible) and if an M.D., licensed (or eligible) to practice medicine in California. A background in teaching and research is required. Responsibilities will include participation in the development of a clinical investigative service (molecular genetics), carrying a research program and teaching of medical students and residents.

The University of California, Davis is an Equal Opportunity/Affirmative Action Employer with a strong institutional commitment to the achievement of diversity among its faculty and staff. We are particularly interested in receiving applications from persons of underrepresented groups including women, ethnic minorities, disabled veterans, Vietnam-era veterans and handicapped persons.

Please send a letter of interest describing background and experience, curriculum vitae, and the names of five references to:

**James R. Carlson, Ph.D.
Chair, Search Committee
Director of Reference Laboratories
University of California, Davis Medical Center
Department of Pathology
2315 Stockton Boulevard
Sacramento, CA 95817**

This position will be open until filled but no later than 31 August 1992.

SUPERVISOR OF THE CELL CULTURE LABORATORIES. The Coriell Institute for Medical Research invites applications for Supervisor of the Cell Culture Laboratories. Candidates must have human cell culture training and experience in media preparation, cryo preservation, quality control at the highest level and must possess excellent supervisory abilities.

Coriell is an independent, nonprofit organization founded in 1953. It houses the largest human cell repositories in the world. Coriell offers an excellent work environment, laboratory facilities, and a generous benefits package. Salary is negotiable.

Candidates should submit curriculum vitae, a statement of interest and accomplishments, and a list of at least three references to: **David P. Beck, Ph.D., President, Coriell Institute for Medical Research, 401 Haddon Avenue, Camden, NJ 08103.** *Equal Opportunity Employer/Affirmative Action.*

TENURE-TRACK POSITION

Work Environment Department is seeking to fill a tenure-track position. Preferred candidates will be committed to interdisciplinary research and teaching in two or more of the following groups: industrial hygiene, occupational ergonomics, occupational epidemiology, or work environment policy. Salary and rank will be commensurate with background and experience.

Résumés and names and addresses of three references should be sent to: **Chair, Search Committee, Department of Work Environment, University of Massachusetts Lowell, Lowell, MA 01854.** Offer of a position is contingent upon funding. *The University of Massachusetts Lowell is an Equal Opportunity/Affirmative Action, Title IX, 504 Employer.*

POSTDOCTORAL SCIENTIST

A n t i - I n f e c t i v e s

SmithKline Beecham, a worldwide leader in pharmaceuticals research, has a postdoctoral position immediately available in their Anti-Infectives HIV research group. The research program involves the study of HIV Pathogenesis and specifically deals with molecular approaches (i.e. site-directed mutagenesis) to identify and characterize novel targets in HIV.

Qualified candidates will have a Ph.D. in Virology, Biochemistry, Immunology or Pathology. Preference will be given to individuals with demonstrated expertise in virology, molecular biology, and/or biochemistry.

Our state-of-the-art research facility is located in suburban Philadelphia, near Valley Forge, PA. SmithKline Beecham Pharmaceuticals provides a stimulating and challenging work environment, based on creativity, commitment and teamwork. We offer an attractive compensation/benefits/relocation package. For confidential consideration, please submit your C.V. and the names of three references to: Marilyn Leggieri, #L0113, SmithKline Beecham Pharmaceuticals, P.O. Box 1539, King of Prussia, PA 19406-0939. We are an Equal Opportunity Employer, M/F/H/V.

SB
SmithKline Beecham
 Pharmaceuticals

National Institutes of Health RESEARCH SCIENTIST/ POSTDOCTORAL FELLOW (CELL AND MOLECULAR BIOLOGIST)

The Bone Research Branch, National Institute of Dental Research seeks an outstanding candidate with graduate education and/or clinical experience in Cell Biology, Biochemistry or Molecular Biology for a senior postdoctoral fellowship position. Applicants should have at least 4 years postdoctoral training and research experience in connective tissue research, primarily in chondrogenesis and osteogenesis. Additionally, the applicant should be familiar with: tissue culture techniques including biological assays for metabolism and structure of matrix macromolecules such as proteoglycans and collagen; DNA recombination techniques including construction of cDNA libraries and cDNA probes for matrix macromolecules and osteogenic/chondrogenic growth factors; protein chemistry techniques including peptide mapping and sequencing. A substantial record of publications of original work in these areas is required. Starting salary will be commensurate with qualifications and experience. Interested candidates should submit a curriculum vitae, several reprints, summary of research interests and names of three references *no later than May 15, 1992*. Material should be sent to:

Faye M. Harbrant, Personnel Management Specialist, National Institute of Dental Research, Building 31, Room 2C23, 9000 Rockville Pike, Bethesda, Maryland 20892.

NIH is an Equal Opportunity Employer

PHARMACOKINETICIST

The Research Triangle Institute (RTI) has an opening for an individual with demonstrated training and experience in pharmacokinetic modeling of xenobiotics. Applicants should have a thorough understanding of computer modeling programs such as ADAPT II, NONMEM, NLIN and PCNONLIN; and experience in their use as well as in statistical analysis of experimental data. Training in PBPK is also essential. Applicants should also have capabilities and experience in at least one of the following: development and use of HPLC, GC and/or CE for trace analysis; conduct of xenobiotic metabolism studies; organic synthesis; pharmaceuticals.

This successful candidate will join an experienced team in planning, conducting and analyzing data from pharmacokinetic studies of pharmaceutical and environmental chemicals. She/he will also have opportunities to develop additional research programs.

Qualified candidates possessing a Ph.D. in an appropriate discipline should forward their resumes, copies of their academic transcripts and names of two references to the address below.

RTI is a well established not-for-profit research organization with a staff of approximately 1,500. We are located in the Raleigh/Durham/Chapel Hill area of North Carolina, which is a center of pharmaceutical, environmental and other scientific research.

Research Triangle Institute
 Office of Human Resource (BOC-G)
 P.O. Box 12194
 Research Triangle Park, NC 27709



An Equal Opportunity/Affirmative Action Employer

Director of Organic Chemistry

Emisphere Technologies, Inc., a publicly held company, is developing its breakthrough, patented oral drug delivery technology and is currently conducting a search for a director of organic chemistry. Candidates must have a minimum of eight years industrial experience with a Ph.D. or M.S. degree. Experience should include production scale up (from bench to final product) of a pharmaceutical product and all facets of the FDA approval process.

Emisphere is looking for candidates who possess extensive experience in synthetic organic chemistry, excellent leadership qualities and proven abilities to achieve results. Knowledge of thermal condensation reactions, peptide synthesis, and/or polymer chemistry is desirable. A competitive compensation package is being offered, including an excellent opportunity to participate in the success of the Company through an employee stock option plan.

Please send your resume with salary history and requirements to:



EMISPHERE
 TECHNOLOGIES, INC.

Ms. Sally Love
 Emisphere Technologies, Inc.
 15 Skyline Drive
 Hawthorne, New York 10532
 Fax (914) 347-2498



EARTH OBSERVING SYSTEM (EOS) SENIOR PROJECT SCIENTIST

The NASA/Goddard Space Flight Center, located in Greenbelt, MD is seeking candidates for the position of EOS Senior Project Scientist. The incumbent will provide the primary and day-to-day interface between the Earth Science community and the EOS Project in defining and representing scientific requirements and providing related scientific insight and guidance to the EOS Project. The incumbent will work with the EOS Program Scientist and other Earth Science Program personnel at NASA Headquarters to ensure that scientific and related programmatic requirements are appropriately implemented by the EOS project. Along with the Program Scientist, the incumbent will co-chair the EOS Investigators Working Group (IWG) and related panels and subpanels. The incumbent will guide and lead the efforts of EOS Project Scientists associated with the various EOS payloads and the EOS Data and Information Systems (EOSDIS).

An applicant should be an internationally recognized research scientist in an Earth science discipline or interdisciplinary Earth science, with substantial experience in developing and implementing research programs. There should be documented skill or knowledge in numerical modeling and data analysis using remotely sensed data from spaceborne, earth oriented observing systems and related data processing, archiving, and distribution systems. The salary associated with the position (\$64,233-\$104,000) will depend upon the selected applicant's background, qualifications, and experience.

In applying, the following is required: a resume including a list of scientific and technical publications and an Application for Federal Employment (SF-171). This material should be sent by May 8, 1992, to: **NASA/Goddard Space Flight Center, Code 115G, Greenbelt, MD 20771**. Inquiries should be directed to **Ms. Dianne Hagerty at (301) 286-8319**. Equal Opportunity Employer. U.S. Citizenship is required.

University & Community College System of Nevada Director of Experimental Program for the Stimulation of Competitive Research, (EPSCoR)

POSITION:

**Director of EPSCoR,
Primarily Administrative Contract;
Opportunity for Some Teaching/Research**

SALARY RANGE:

Competitive

JOB DESCRIPTION: A National search is being conducted for an active Senior Researcher with interest in both the administration and stimulation of competitive research for the University and Community College System of Nevada (UCCSN). The Director of EPSCoR reports directly to the Chancellor of UCCSN and serves as Executive Director for the EPSCoR statewide Committee and the Executive Committee (a subcommittee of the statewide committee). The Director chairs the EPSCoR Planning and Coordinating Committee; serves as an ex officio member of UCCSN Research Affairs Council and works closely with the EPSCoR Committee Chair on a daily basis. The Director deals with state government officials and legislators; coordinates all proposals for EPSCoR projects to all federal agencies which are submitted to the Chancellor and advises the Chancellor on the proper priority of EPSCoR projects.

QUALIFICATIONS: Ph.D. in a Scientific or Engineering Field; significant record of accomplishment in research, research stimulation, research administration; competitive funding support awarded in an appropriate department, in a major academic institution; experience and desire to act as a mentor; extensive experience and success in writing federal grants and proposals in science, math or engineering; proven excellence in interpersonal skills and communicating, both written and orally, with senior level officials in a variety of governmental and private industry settings. Qualifications are such that the successful candidate would ordinarily be eligible for appointment as a full professor in an academic department. Experience in working in a multidiscipline, multi-institutional environment in any interinstitutional setting is desirable.

ORGANIZATION: The University and Community College System of Nevada is composed of two universities, four community colleges, the Desert Research Institute and the System Administration Office. This position will consult with all contacts from all entities regarding any EPSCoR matter.

APPLICATIONS: Applicants are to submit a letter of interest, with emphasis on the above qualifications, a resume, and the name, address and telephone number of at least three professional references to:

**The EPSCoR Search Committee
UCCSN, Chancellors Office
2601 Enterprise Road
Reno, Nevada 89512**

For additional information, or a copy of a more detailed job description, call Judy Sambrano at 702-784-4905. Review of applications will begin April 30, 1992 and continue until the position is filled.

UCCSN is an Equal Opportunity, Affirmative Action, employer and employs only U.S. citizens and aliens lawfully authorized to work in the U.S.

POSITIONS OPEN

UNIVERSITY OF WÜRZBURG THE BAVARIAN JULIUS-MAXIMILIANS-UNIVERSITY INVITES APPLICATIONS FOR A PROFESSORSHIP (C4) IN BOTANY

(Chair botany II: ecophysiology and geobotany, succeeding O. L. Lange). The position will be available from 1 October 1992. Applicants should be experienced in research and teaching within the fields of ecophysiology and/or geobotany. They should be able and willing to cooperate with research groups within the Sonderforschungsbereich 251 "Ecology, physiology and biochemistry of plant and animal performance under stress" and with the two other chairs (botany I and pharmaceutical biology) of the Julius-von-Sachs-Institute. The successful applicant will also be appointed head of the botanical garden. Applications including curriculum vitae, publication list, records of teaching activities and an outline of the envisaged research program should be sent no later than 31 May 1992 to the **Dean of the Faculty of Biology, Professor U. Scheer, Biozentrum, Am Hubland, D-8700 Würzburg, Germany**.

CHAIRPERSON DEPARTMENT OF CHEMISTRY DUQUESNE UNIVERSITY

The Department of Chemistry at Duquesne University invites applications and nominations for the position of chairperson. Duquesne University is a private Catholic institution located in Pittsburgh, Pennsylvania, with a total enrollment of 8000 students. The department, which consists of 13 full-time faculty and approximately 30 graduate students, offers the B.S., M.S., and Ph.D. degrees in chemistry and biochemistry. We are seeking an individual with nationally recognized research accomplishments and a commitment to undergraduate and graduate education. The successful candidate will demonstrate the ability to provide leadership and vision in a growing department's research and educational programs. The area of expertise, rank, and salary are open.

Applications should consist of a cover letter, curriculum vitae, and names and addresses of four references. Review of applications will begin 1 May 1992. Direct inquiries and applications to: **Search Committee, c/o Dr. J. W. Hausser, Interim Chair, Department of Chemistry, Duquesne University, Pittsburgh, PA 15282**.

Equal Opportunity/Affirmative Action Employer.

CHIEF ENDANGERED RESOURCES BRANCH

Administers branch and directs technical studies to assess status and needs of rare, threatened and endangered resources including animals, plants and communities. Coordinates department actions to address endangered resource issues on statewide basis. Develops policy and regulations and participates in educational efforts. **Vacancy announcement #21, item 1. Salary not to exceed \$51,408.**

CHIEF AQUATIC STUDIES BRANCH

Administers branch and directs technical studies assessing instream flows for rivers, freshwater inflows to estuaries, evaluates water rights permits and actions to avoid or mitigate adverse impacts. Coordinates with other branches, divisions, and other state and federal agencies. Develops policy and participates in educational efforts. **Vacancy announcement #21, item 2. Salary not to exceed \$51,408.**

Contact by 15 May 1992: **Larry D. McKinney, Ph.D., Director, Resource Protection Division, Texas Parks and Wildlife Department, 4200 Smith School Road, Austin, TX 78744; telephone: 512-389-4636.**

MICROBIOLOGY/DEVELOPMENTAL BIOLOGY. One-year replacement position for 1992-93 at two-thirds time. Teaching responsibilities include two courses with accompanying laboratories each semester: microbiology and general biology, fall semester; and developmental biology and general biology, spring semester. Ph.D. or A.B.D. Send letter, curriculum vitae, and names of three references to: **Dr. Richard Pfau, Dean, Emory & Henry College, Emory, VA 24327. Inquiries to: Dr. Richard Sherwin, Chair, Biology; telephone: 703-944-4121.**

POSITIONS OPEN

DEVELOPMENTAL BIOLOGIST. FACULTY POSITION available in the Department of Anatomy for a developmental biologist with research program in molecular aspects of development, e.g., gene expression, cell and tissue interactions, role of regulatory molecules in development. Must have postdoctoral experience and ability to develop independent, productive research program. Teaching responsibilities include participation in teaching anatomical sciences in the medical-dental curriculum; participation in the graduate program in developmental biology. Prior teaching or training in anatomy desirable but not required. Applicants should submit curriculum vitae, list of publications, projected research plans, and names of three references by 15 May 1992 to: **Dr. S. J. Cooperstein, Professor and Head, Department of Anatomy, The University of Connecticut Health Center, Farmington, CT 06030. An Equal Opportunity Employer.**

BEHAVIORAL PHARMACOLOGIST/ NEUROSCIENTIST

University of Chicago, Department of Psychiatry, seeks faculty with interests in drug abuse research and/or behavioral neuroscience. Must have strong record of original research demonstrated by publication and grant support. This appointment will be made in conjunction with the Department of Pharmacological and Physiological Sciences, which has active research and training programs in neuropharmacology and psychopharmacology. Applicants must have Ph.D. or M.D. with relevant experience. Send curriculum vitae and letter outlining research interests and plans to: **Harriet de Wit, Ph.D., Search Committee Chair, Department of Psychiatry, The University of Chicago, 5841 South Maryland Avenue, Chicago, IL 60637. Equal Opportunity Employer/Affirmative Action.**

INSTRUCTOR IN PHARMACOLOGY. Responsible for teaching graduate students on both an individual and group basis in the area of the interaction of G proteins, receptors, and phospholipases and their roles in cell proliferation and oncogenesis. The incumbent will also be responsible for the design, execution, and evaluation of *in vitro* biochemical and molecular genetic experiments in this area. Required: Ph.D. in biochemistry or molecular biology and at least 3 years of postdoctoral experience in the biochemistry and molecular biology of G proteins and associated receptors and effectors, documented by publication. Training or knowledge of relevant G protein physiology, pharmacology or endocrinology documented by graduate or medical training. Send application, curriculum vitae and two letters of reference to: **Ms. Cheryl Lacy, Department of Pharmacology, University of Texas (UT) Southwestern Medical Center, 5323 Harry Hines Boulevard, Dallas, TX 75235-9041. UT Southwestern is an Equal Opportunity Institution.**

POSTDOCTORAL POSITIONS

The Interferon System. Oncogenes.

Applicants are invited to join studies aimed at:

(1) characterizing and elucidating the functions of genes activated by interferons, and

(2) identifying mediators of *ras* oncogene action.

Various approaches including genetic, biochemical and organismal are applied. Please send résumé and three references to: **Dr. Peter Lengyel, Department of Molecular Biophysics and Biochemistry, 436 Kline Biology Tower, Yale University, 260 Whitney Avenue, New Haven, CT 06511.**

POSTDOCTORAL POSITION for 2 years available to study the action of insulin and exercise on skeletal muscle glucose transport. Eligible candidates must hold M.D. or Ph.D. degree and not have more than 3 years of postdoctoral research experience. Salary will depend on qualifications and experience. Support includes travel to scientific meetings. *U.S. citizenship not required.* Candidate will be chosen by 1 June 1992; starting date is negotiable. Send curriculum vitae and names of three references to: **Dr. Edward Horton, Department of Medicine, Given C-350, University of Vermont College of Medicine, Burlington, VT 05405. FAX: 802-656-8031; telephone: 802-656-2530. The University of Vermont is an Equal Opportunity/Affirmative Action Employer. Women and people from diverse racial, ethnic, and cultural backgrounds are encouraged to apply.**

An Equal Opportunity/Affirmative Action Employer.

The Wellcome Trust

Eighth Wellcome Summer School Gene Targeting and Homologous Recombination

July 9th - 18th 1992

*Division of Biochemistry, United Medical and Dental Schools
of Guy's and St Thomas's Hospitals, Guy's Campus, London.*

An intensive laboratory based course to introduce participants to some of the procedures underpinning gene targeting and homologous recombination.

Programme

1. Design of targeting constructs.
2. Transfection of human somatic cells and mouse embryo stem cells.
3. Screening and selection procedures for isolation of homologous recombinants.
4. Growth and analysis of candidate homologous recombinants.
5. Techniques for transgenic reconstitution.

Informal tutorials and evening lectures (by invited speakers) will supplement the laboratory sessions.

Course Directors: MARTIN EVANS, JOHN HEATH and ANDREW PORTER.

Confirmed speakers include: ANTON BERNIS, ROLF KEMLER, GAIL MARTIN, MIROSLAV RADMAN, SHUNICHI TAKEDA and STEPHEN WEST.

Participants: Applicants should be postdoctoral (or close to) scientists engaged in relevant research. Applicants with cell culture and/or molecular biology experience will be particularly welcome. The course is subsidised by the Wellcome Trust for scientists based in academic institutions anywhere in the world, but there is a charge of £350 towards board and lodging.

Applications: There are no formal application forms, but applicants should send a copy of their full cv together with a 300 word outline of their research plans to Dr Pelin Faik, Course Co-ordinator, Division of Biochemistry, UMDS, Guy's Campus, London Bridge, London SE1 9RT, England. Telephone: 071-403 6998. Fax: 071-407 5281.

Closing date for applications is April 30th.

SR. RESEARCH INVESTIGATOR/PH.D. ONCOPHARMACOLOGY

Join Sterling Winthrop and be part of a team dedicated to the enhancement of scientific discovery. Sterling Winthrop Pharmaceuticals Research Division is the worldwide pharmaceutical research and development organization of Sterling Winthrop Inc. We currently seek a highly motivated doctoral-level scientist to establish a laboratory of *in vitro* and *in vivo* tumor biology in our Great Valley, Pennsylvania facility.

Your major responsibilities will be to supervise a team of scientists, establishing transplantable tumor models, evaluating novel and licensed antitumor agents versus those tumor models and establishing *in vitro* systems for the evaluation of cytostatic and cytotoxic agents.

The ideal candidate will have a Ph.D. in biology plus a minimum of 2 years related experience beyond post doctoral training. Experience with *in vivo* tumor models in murine systems and in the evaluation of antitumor agent efficacy is required. Experience in non-murine models and *in vitro* antitumor evaluation systems is preferred.

At Sterling Winthrop, you'll enjoy a highly competitive salary and benefits package. For confidential consideration, forward your resume and salary requirements to:



**STERLING
WINTHROP**

**Pharmaceuticals
Research Division**

A Division of Sterling Winthrop Inc.
A Subsidiary of Eastman Kodak Co.

**Human Resources
GV-20-92
Sterling Winthrop PRD
9 Great Valley Parkway
Malvern, PA 19355**

Equal Opportunity Employer. M F D V



Postdoctoral Fellowship In Immunology.

Position available immediately. Immunologist to work on structure and properties of polyreactive antibodies. Experience desirable in protein chemistry, synthetic peptides, processing and presentation of antigens and production of monoclonal antibodies. Opportunity for postdoctoral fellow to have technical and/or postdoctoral support. Salary commensurate with experience (range \$33,504 to \$60,070 per year). Send Curriculum Vitae and names of references to Dr. Lois Salzman, Deputy Director, Intramural Research Program.



National Institute Of Dental Research

National Institutes of Health, 9000 Rockville Pike, Building 30, Room 131, Bethesda, MD 20892

Equal Opportunity Employer



University of Zürich, Physics Department Professor in Condensed Matter Physics

The Physics Departments is seeking a candidate for a faculty position as full professor in experimental condensed matter physics. The position will be available in fall 1993.

Applications are invited from physicists with an outstanding international research reputation. The successful candidate is expected to start a new research program in an active and innovative field in condensed matter physics. Topics like "laser physics", "surface physics" or "complex systems" are particularly welcome. Interactions with the existing activities of the NMR, ESR and μ SR groups are possible.

The candidate is encouraged to continue the collaboration of the Physics Department with the IBM Research Center in Rüschlikon, the Paul-Scherrer-Institute (PSI) and various institutes of the University of Zürich and the Institute of Technology (ETH) in Zürich.

Beside research, the applicant is expected to share with his colleagues the duties of teaching and guiding courses in experimental physics at all levels.

Please send your application including curriculum vitae, list of publications, proposed research activities and three references to the following address to arrive before **15 June 1992**: Dekan der Philosophischen Fakultät II, Universität Zürich, Winterthurerstr. 190, CH-8057 Zürich, Switzerland.

RESEARCH OPPORTUNITIES IN BIOTECHNOLOGY

The Department of Biotechnology Research is seeking applicants for our ongoing program of crop improvement. Pioneer offers competitive salaries, excellent facilities and a highly cooperative research environment. Successful candidates will be expected to interact extensively with ongoing programs in transformation, gene expression, gene isolation or RFLP programs.

PROJECT LEADER, DISEASE RESISTANCE/PATHOLOGY (JOB #1355) - There is an immediate opening for a plant pathologist to develop whole plant bioassays for determining efficacy of disease resistance genes in transgenic crop plants. The person filling this position will be expected to interact extensively with a multidisciplinary disease resistance group as well as other research departments in the Plant Breeding Division. **EDUCATION/EXPERIENCE:** PhD or equivalent experience in plant pathology, cell biology or related field plus 1-2 years relevant post-doctoral or laboratory experience. Experience in fungal disease screening, host-plant pathogen interactions, experimental design and analysis, knowledge of cell and molecular biology is required.

Applications received by APRIL 24, 1992 will be assured of consideration. However, applications will be considered until the position is filled.

Pioneer Hi-Bred International, Inc. is an Equal Opportunity/Affirmative Action employer. Please send resume and indicate in your correspondence the JOB #, the names, addresses and telephone numbers of three references to:



PIONEER HI-BRED INTERNATIONAL, INC.
Plant Breeding Division
Department of Biotechnology Research
Attn: Amy LaMotte JOB #1355
P.O. Box 1004
Johnston, IA 50131-1004

Senior Virologist

The Infectious Diseases Section of the PARKE-DAVIS Pharmaceutical Research Division seeks an experienced Ph.D. Virologist to lead an expanding virology program.

The successful candidate will have at least five years of post-doctoral experience and direct familiarity with two or more virus systems. A demonstrated ability for in vivo and in vitro evaluation of investigational antiviral agent efficacy is required, as is the ability to lead a research group and to interact with the substantial molecular and biochemical antiviral research underway at PARKE-DAVIS. Additional competence in molecular biology and/or biochemistry of virus is highly desirable.

The successful candidate will develop antiviral testing strategies which complement existing discovery efforts and will have an exceptional opportunity to influence future virology research direction at PARKE-DAVIS.

Interested persons should forward their resume in confidence to **Box JDM-92109, PARKE-DAVIS, Human Resources, 2800 Plymouth Road, Ann Arbor, MI 48105.** "Smoke-Free Work Environment"

"Equal Opportunity in Action"



PARKE-DAVIS

A DIVISION OF **WARNER LAMBERT**

SOCIETY OF CHINESE BIOSCIENTISTS IN AMERICA

FOURTH INTERNATIONAL SYMPOSIUM & WORKSHOP ON BIOSCIENCES



June 14 - 19, 1992, (SINGAPORE)

at

INSTITUTE OF MOLECULAR AND CELL BIOLOGY
NATIONAL UNIVERSITY OF SINGAPORE



Symposia and Workshops include: Gene Structure, Expression & Regulation; Cell Structure Functions & Interactions; Genome & Molecular Genetics; Pharmacology & Drug Design; Tumor Progression & Suppression; Human Virology & AIDS; Recent Advances in Gene Transfer & Biotechnology; Cardiovascular & Clinical Research & Artificial Cells; Hepatitis, Hepatitis Viruses & Hepatoma; Structural Biology; Molecular Enzymology & Metabolic Diseases; Immunology; Plant Molecular & Cellular Biology; Approaches to Vaccines; DNA Viruses & Cancer; Kinases, Phosphatases & Signal Transduction; Toxicology: Mechanism; Detoxification & Risk; New Drug Discovery & Chinese Herbal Medicine; RNA Viruses & Retrovirology; Environmental & Resource Biotechnology; Oncogenesis & Growth Signals; Transcription & RNA Splicing; Neuroscience & Developmental Biology; Molecular Parasitology.

Partial List of Invited Speakers: Sydney Brenner (Cambridge/Scripps/IMCB), James C. Wang (Harvard), Y.H. Tan (IMCB), Y.W. Kan (UCSF), Lan Bo Chen (Harvard), Ray Wu (Cornell), Charles Cantor (Berkeley), Yung-Chi Cheng (Yale), Ru-Chih Huang (Johns Hopkins), Nam-Hai Chua (Rockefeller/IMCB), Wen-Hwa Lee (Texas), Flossie Wong-Staal (UCSD), Louis Lim (IMCB), Cheng-Wen Wu (Taipei), Savio L.C. Woo (Baylor), Tsai-Ping Li (Shanghai), Shu Chien (UCSD), W.K. Joklik (Duke), Jeffrey T.F. Wong (Hong Kong), W. Chia (IMCB), Jerry Wang (Calgary), Michael Lai (USC), Hsing-Jien Kung (Cleveland), Wanjing Hong (IMCB), Peter Vogt (USC), C.C. Wang (Taipei), Yunde Hou (Beijing), Chien Ho (Pittsburg), Chi Huey Wong (Scripps), C.C. Liew (Toronto), C.J. Pallen (IMCB), C. Samuel (UCSB), Michel Klein (Connaught Lab), T.M.S. Chang (McGill), Carl Wu (NIH).

Conference Inquiries: Joseph K.-K. Li, Molecular Biology Program, Department of Biology, UMC-5500, Utah State University, Logan, Utah 84322-5500, USA 801-750-1914 (Off); 801-750-1575 (FAX)

DIRECTOR, DIVISION OF HIV/AIDS NATIONAL CENTER FOR INFECTIOUS DISEASES CENTERS FOR DISEASE CONTROL

CDC invites applications for the position of Director, Division of Human Immunodeficiency Virus (HIV/AIDS), National Center for Infectious Diseases, Atlanta, Georgia.

This Senior Executive Service position is in the career civil service with an annual salary range of \$90,000-\$112,100. Physicians may also be eligible for a comparability allowance of up to \$20,000 per year. Exceptional recruiting difficulty may result in payment of a recruitment/relocation bonus or a dual compensation waiver.

The Director, Division of HIV/AIDS has responsibility for planning and coordinating a national program for the prevention and control of HIV/AIDS. He/she serves as a principal resource for the Public Health Service for public health aspects of infections caused by the Human Immunodeficiency Virus.

Qualifications preferred include a doctoral degree (M.D., Ph.D., or equivalent), broad knowledge of public health programs related to the prevention and control of HIV/AIDS, and proven ability to provide administrative and scientific leadership for a research program employing over 250 professional, technical, and administrative personnel.

Further information about the position may be obtained from **Mitchell L. Cohen, M.D., Search Committee Chair, Mailstop C09, Centers for Disease Control, 1600 Clifton Road, Atlanta, GA 30333**. Interested candidates may send their curriculum vitae and names of three professional references by May 22, 1992 to **Nancy Peterson, Personnel Management Office, Centers for Disease Control, 1600 Clifton Road, Atlanta, GA 30333**. Tel. (404) 639-1521.

CDC is an Equal Opportunity Employer and provides a smoke-free work environment. This is a drug testing designated position.

Assistant Extension Natural Resources Specialist and Assistant Plant Ecologist

The Department of Botany and Plant Sciences, University of California, Riverside, announces a position available July 1, 1992. The position is an 11-month, academic career-track, Assistant Extension Specialist (70%) and Assistant Plant Ecologist (30%) appointment in the Agricultural Experiment Station. Basic and applied research will emphasize the development of improved management methods for maintaining, augmenting, and restoring biodiversity. The appointee is expected to provide leadership, coordination, and subject matter knowledge through statewide research and education activities for the benefit of interested individuals, groups, and agencies and for the general benefit of California's environment. A Ph.D. degree is required, with demonstrated expertise in plant biodiversity, preferably with emphasis on urbanization and plant community fragmentation. Knowledge and experience with one or more of the following is desirable: biology of rare, threatened, or endangered plant species; preparation of EIR or similar biological reviews; biodiversity management or mitigation methodology. The position requires strong basic knowledge of plant community ecology and a knowledge of or willingness to learn the California flora. Must have demonstrated successful performance of original research and computer skills necessary for statistical data analysis and database management. Should have well developed organizational skills and knowledge of Cooperative Extension methodologies. Skills in oral, written, and visual communication are essential for working with diverse clientele groups. Send letter of application, curriculum vitae, statement of research interest, transcripts, and arrange to have at least three confidential letters of reference sent to:

**Dr. Robert T. Leonard, Chairman,
Department of Botany and Plant Sciences,
University of California,
Riverside, CA 92521-0124
(Telephone 714-787-4413; FAX 714-787-4437).**

The application deadline is May 22, 1992. The University of California is an Affirmative Action/Equal Opportunity Employer. Minorities and women are encouraged to apply.

POSITIONS OPEN

POSTDOCTORAL POSITIONS OPEN: 1 June 1992 to study immunological mechanisms and autoimmune disease. Primary interests are:

(1) Identifying and understanding the role of endogenous retroviruses in human immune disease through an in-depth analysis of the roles of these endogenous retroviruses in disease by determining their *in vivo* presence and expression.

(2) Understanding associated changes in immunoglobulin gene structure and expression in autoimmune disease by identifying critical DNA and protein characteristics associated with autoantibodies and how these sequences underlie disease processes.

Experience in molecular biology and/or protein biochemistry required. Please respond with curriculum vitae and three letters of reference to: **George N. Abraham, M.D., Box 695, University of Rochester Medical Center, Rochester, NY 14642.**

POSTDOCTORAL POSITION

Available to study the molecular interaction between a protein and its RNA substrate. Projects involve site-directed mutagenesis to probe the structure-function relationship of the protein-RNA interaction. Candidates should have a strong background in molecular biology. Send curriculum vitae, one-page description of research summary, and three letters of reference to: **Dr. Ya-Ming Hou, Thomas Jefferson University, Department of Biochemistry and Molecular Biology, Blueleaf Life Sciences Building, 233 South 10th Street, Philadelphia, PA 19107. We are an Equal Opportunity Employer committed to a smoke-free environment.**

POSTDOCTORAL POSITIONS IN IMMUNOLOGY available immediately in the laboratories of Elizabeth Mellins, M.D., or Yvonne Paterson, Ph.D. Research will involve various aspects of antigen processing and presentation in the class I and II restricted pathways in humans and mice. Candidates should possess a Ph.D. in molecular biology, immunology or biochemistry. Send curriculum vitae and names of three references to either **Dr. Paterson or Dr. Mellins, 209 Johnson Pavilion, School of Medicine, University of Pennsylvania, Philadelphia, PA 19104-6076. Equal Opportunity Employer.**

POSTDOCTORAL POSITIONS. Two positions are available fall 1992 for research on the methanogenic archaeobacteria pertaining to: (1) gene expression in regulated catabolic pathways, and (2) enzymology of metalloproteins. Contact: **James Ferry, Department of Anaerobic Microbiology, Virginia Polytechnic Institute and State University, Blacksburg, VA 24061-0305. Telephone: 703-231-7121. Virginia Tech is an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.**

POSTDOCTORAL POSITIONS are available to study the relation between membrane composition, and regulation of ion channel function and excitation-contraction coupling in single vascular smooth muscle cells using patch clamp and ratiometric fluorophore techniques. All applicants with strong academic backgrounds will be considered but experience preferred. Please submit curriculum vitae, career objectives and references to: **Dr. Robert H. Cox, Bockus Research Institute, The Graduate Hospital, One Graduate Plaza, Philadelphia, PA 19146. The Graduate Hospital is an Affirmative Action/Equal Opportunity Employer.**

POSTDOCTORAL POSITION IN SIV TRANSMISSION AND PATHOGENESIS. Available immediately for M.D.'s, Ph.D.'s, and D.V.M.'s with strong background in molecular virology, immunology, or genetics to study mechanisms of (1) viral determinants of pathogenesis, (2) sexual transmission, (3) fetal and neonatal pathogenesis in the SIV/rhesus macaque model. Experience in recombinant DNA technology, mucosal/cellular immunology or baculovirus protein expression desirable. Salary: \$31,000 per year depending on experience. Send curriculum vitae, summary of past work, and names and addresses of three references to: **Dr. Marta Marthas, California Regional Primate Research Center, University of California, Davis, CA 95616-8542. Equal Opportunity Employer.**

POSITIONS OPEN

POSTDOCTORAL POSITION, University of Michigan, available immediately to study the activation and development of T lymphocyte subsets in aging. A strong background in cellular and/or molecular immunology is desired. Send curriculum vitae, a brief statement of research interests, and names and telephone numbers of three references to: **Richard Miller, M.D., Ph.D., Institute of Gerontology, 300 North Ingalls, Ann Arbor, MI 48109-2007. The University of Michigan is a nondiscriminatory/Affirmative Action Employer.**

POSTDOCTORAL POSITION IN AUDITORY NEUROBIOLOGY to study aspects of voltage-dependent motility of isolated outer hair cells. Experience with whole cell and patch voltage clamp required. Available immediately. Salary \$25,000 plus benefits. Send curriculum vitae and names of three references by 1 May 1992 to: **J. Santos-Sacchi, Ph.D., Yale Medical School, Department of Surgery (Otolaryngology), BML 244, 333 Cedar Street, New Haven, CT 06510. Yale is an Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL POSITION available immediately to participate in studies of DNA excision repair mechanisms in specific chromatin domains in human cells. Applicants should have completed Ph.D. studies in molecular biology/molecular genetics/biochemistry or a related area and be familiar with modern methods for studying the genetics or biochemical characteristics of DNA. Send curriculum vitae and names of three references by 23 April 1992 to: **Dr. George J. Kantor, Department of Biological Sciences, Wright State University, Dayton, OH 45435 (telephone: 513-873-2053). Affirmative Action/Equal Opportunity Employer.**

TWO POSTDOCTORAL POSITIONS are available at the Dyson Vision Research Institute to study the functional organization of vertebrate retina at the cellular and molecular levels. Research areas include (1) electrophysiology of, and synapse formation among, identified retinal cells from amphibians and primates, (2) retinal regeneration in urodele amphibians, and (3) diversity and distribution of glutamate receptors in mice. Experience in electrophysiology, molecular biology, or histology techniques is preferred. The Dyson Institute, a newly built, interdisciplinary research facility, is part of the Department of Ophthalmology at Cornell University Medical Center (CUMC) and currently houses four groups studying diverse aspects of retinal function. The proximity of Memorial Sloan-Kettering Cancer Center and Rockefeller University and a Scientific Advisory Committee consisting of prominent scientists from the three institutions form a rich scientific environment. Send curriculum vitae, summary of relevant research experience or representative publications and the names of three references by 31 May 1992 to: **Drs. Peter MacLeish and Robert Duvoisin, Margaret M. Dyson Vision Research Institute, CUMC, 1300 York Avenue, New York, NY 10021.**

POSTDOCTORAL POSITION THOMAS JEFFERSON UNIVERSITY

The Alcohol Research Center at Jefferson Medical College invites applications for a postdoctoral position available immediately to work on the structure, function and modulation of potassium channels. Several cDNA clones encoding potassium channels from fruit fly and mouse brain are presently available in this laboratory. Using the techniques of molecular biology and electrophysiology (patch-clamp) we express and study these ion channels in *Xenopus* oocytes and mouse fibroblasts. Some specific areas of interest include: (1) identification of phosphorylation sites that affect channel function using site-directed mutagenesis, (2) the interactions of cloned potassium channels with anesthetics and alcohols, and (3) the molecular mechanism of potassium channel subunit association. Individuals with previous experience in biochemistry, molecular biology and/or electrophysiology (voltage-clamp) are especially encouraged to apply. This training grant requires that candidates be citizen or non-citizen nationals of the United States or have been lawfully admitted for permanent residence. Send curriculum vitae and names of three references to: **Dr. Manuel L. Covarrubias, Department of Pathology and Cell Biology, Jefferson Medical College, Thomas Jefferson University, 1020 Locust Street, JAH 260, Philadelphia, PA 19107. We are an Equal Opportunity Employer committed to a smoke-free environment.**

POSITIONS OPEN

FULL-TIME POSTDOCTORAL POSITION. Available immediately to work on problems in T cell-antigen receptor gene regulation during development and molecular mechanisms of cell death. Experience in molecular biology is preferred but not required. Candidates should have an M.D. or Ph.D. degree in the field of molecular biology, immunology or related area. Send curriculum vitae and telephone numbers of three references to: **Dr. Astar Winoto, c/o Linda Jarvis, 299 LSA, Department of Molecular and Cell Biology, University of California Berkeley, Berkeley, CA 94720 by 5 June 1992. The University of California is an Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL POSITION

Available immediately to candidates with experience in biochemistry of signal transduction to study pathways involved in neurite growth. Experience with calcium imaging or molecular biology preferred. Fellowship salary is \$27,000 to \$30,000 and includes health insurance. Send curriculum vitae, summary of research experience and names of references to: **Dr. Robert Messing, University of California at San Francisco, San Francisco General Hospital, Building 1, Room 1011, San Francisco, CA 94110. An Equal Opportunity Employer.**

POSTDOCTORAL POSITION at Savannah River Laboratory, Aiken, South Carolina, to work on analytical spectroscopy of waste and environmental restoration samples. Research is directed toward applying the latest analytical technology to Department of Energy waste management efforts. Must have Ph.D. in chemistry or physics with detailed knowledge of emission spectroscopy and C and FORTRAN programming. For application material: **Postgraduate Research Program/SRL, Science/Engineering Education Division, Oak Ridge Associated Universities, P.O. Box 117, Oak Ridge, TN 37831-0117; telephone: 615-576-3456.**

POSTDOCTORAL POSITIONS. Four postdoctoral positions are available immediately to work on aspects of applied plant biochemistry/molecular biology. Projects include characterization of acylglucosides and acylsucroses in plant populations being analyzed by RFLPs for inheritance of components of the acylsugar biosynthetic pathway; isolation of glucose acyltransferases responsible for the terminal steps of triacylglycerol biosynthesis (*Plant Physiol.* 93, 1554-1551); analysis of polyphenol oxidase (PPO) expression; and alteration of PPO expression in transgenic plants. Ph.D. with experience in relevant areas of natural products chemistry, biochemistry, or molecular biology is required. Interested individuals should send curriculum vitae, names and telephone numbers of three references to: **Dr. John C. Steffens, Department of Plant Breeding, Cornell University, Ithaca, NY 14853. Telephone: 607-255-2043; FAX: 607-255-6683.**

POSTDOCTORAL POSITION UNIVERSITY OF CALIFORNIA SAN FRANCISCO

Positions are available immediately for biochemists or cell biologists with molecular biology experience. Projects involve (1) cloning of the mammalian nucleoside transporter and studying the regulation of nucleoside transport by phosphorylation and (2) regulation of cAMP signal transduction by "cross-talk." Salary is \$27,000 to \$30,000. Send curriculum vitae, summary of research experience, and names of three references to:

**Drs. Adrienne Gordon or Ivan Diamond
Department of Neurology
Gallo Center
Building 1, Room 101
1001 Potrero Avenue
San Francisco, CA 94110**

The University of California is an Equal Opportunity Employer.

POSTDOCTORAL POSITION to study muscle development/function using combination of molecular biology and image processing techniques. Some experience in molecular biology required. Applicant must be a citizen or permanent resident of the United States. Position available immediately. Please contact: **Drs. Joseph W. Sanger/H. Lee Sweeney, University of Pennsylvania School of Medicine, 36th Street and Hamilton Walk, Philadelphia, PA 19104-6058. The University is an Equal Opportunity Employer.**



AGRICULTURAL AND FOOD RESEARCH COUNCIL

AFRC POSTDOCTORAL FELLOWSHIPS

The Agricultural and Food Research Council will be appointing up to six postdoctoral fellows in 1992.

The fellowships are to enable a small number of outstanding research workers to devote a significant period to full time research. They are tenable in any of the areas of research funded by AFRC—agriculture, food, biological sciences and related areas in the physical sciences and engineering—and at any appropriate UK higher education institution or research institute prepared to receive the fellow. Applicants are responsible for making their own arrangements with the intended host institution. The fellowships will normally be for 5 years, with the possibility of renewal.

Applicants should be postdoctoral scientists. There are no age limits, but the Council wishes

a proportion of the fellows to be research workers already having significant postdoctoral experience. Applications will be considered from UK nationals including those returning from a temporary absence abroad and scientists ordinarily resident in the UK. The value of the fellowships is based on the UFC scales for non-clinical academic staff. In addition, the fellow will receive a support grant of up to £100k over the five year period to help provide technical support, equipment and consumable costs etc. Fellows are eligible to apply for AFRC research grants.

Application forms and further details of the fellowships can be obtained from the AFRC Higher Education Branch, Polaris House, North Star Avenue, Swindon, SN2 1UH (Tel 0793 413218). **Applications must be submitted by 31 May 1992.**

Research Associate Inflammation

The Immunopathology Department of PARKE-DAVIS Pharmaceutical Research Division, Warner-Lambert Company, seeks a senior-level scientist to establish and integrate development of molecular biology techniques into ongoing inflammation programs directed at modulation of adhesions.

Candidates should have an M.D. or Ph.D. degree with at least five years of independent research, including a strong background in the molecular biology of endothelial cells, neutrophils or extracellular matrix.

Special interests include signal transduction, oxygen radicals, receptor modulation and gene expression, peptide and inflammatory mediators, and growth factors relating to arthritic, gastrointestinal and inflammatory disorders. The ability to initiate collaborations as well as establish independent research is essential.

Interested persons should submit their resume in confidence to **Box JDM-908, PARKE-DAVIS, Human Resources, 2800 Plymouth Road, Ann Arbor, MI 48105.** "Smoke-Free Work Environment"

"Equal Opportunity in Action"



PARKE-DAVIS

A DIVISION OF

WARNER LAMBERT

DIRECTOR, UCR/UCLA PROGRAM IN BIOMEDICAL SCIENCES DIVISION OF BIOMEDICAL SCIENCES UNIVERSITY OF CALIFORNIA, RIVERSIDE

Responsible for leadership of the research and educational activities of the Division of Biomedical Sciences in UCR. Duties include leadership of and active participation in the research activities of the Divisional faculty at UCR and the Ph.D. program in Biomedical Sciences; supervision of an accelerated 7-year educational program leading to the B.S. degree from UCR and the M.D. degree from the UCLA School of Medicine; serving as Chairperson of the Division of Biomedical Sciences (15 ladder-rank faculty positions in basic Medical Sciences disciplines at UCR and seven adjunct positions at the associated Harbor/UCLA Medical Center teaching facility); and maintaining liaison among UCR, UCLA, Harbor/UCLA Medical Center, the UC Office of the President, and other applicable state and national agencies. Requires: (a) Doctorate degree (Ph.D., M.D. or equivalent); (b) A strong and active research program in biomedical sciences; (c) Familiarity with medical school basic sciences instruction; (d) Evidence of success in managing strong academic programs; (e) Qualification for appointment as a Full Professor in the University of California system. Duties begin in 1993.

Please send nominations or letter of application, resume and names of at least three references by June 15, 1992, to: **BMSP Program Director Search Committee, Division of Biomedical Sciences, University of California, Riverside, CA 92521.**

The University of California is an Equal Opportunity/Affirmative Action Employer. Female and minority candidates are encouraged to voluntarily identify themselves.

The Wellcome Trust

Ninth Wellcome Summer School

DNA Related Methods in Human Genetics YAC Cloning in Genome Analysis

July 31st - August 8th 1992

*Division of Biochemistry, United Medical and Dental Schools
of Guy's and St Thomas's Hospitals, Guy's Campus, London.*

An intensive laboratory based course to introduce participants to modern methods of DNA analysis using yeast artificial chromosomes.

Programme

1. Methods for YAC library screening.
 2. The analysis of individual clones by hybridisation and polymerase chain reaction.
 3. Methods for overlapping YAC clones.
 4. Subcloning of YACs and integration with prokaryotic cloning systems.
 5. Retrofitting and fragmentation of YACs.
 6. Application of YACs to specific problems in human genetics.
- Informal tutorials and evening lectures (by invited speakers) will supplement the laboratory sessions.

Course Directors: DAVID BENTLEY, ANTONY MONACO and IOANNIS RAGOUSIS.

Confirmed speakers include: WILLIAM BROWN, TOM CASKEY, ERIC GREEN, NICK HASTIE, DAVID HOUSMAN and RODNEY ROTHSTEIN.

Participants: Applicants should be postdoctoral (or close to) scientists engaged in relevant research and all applicants will be expected to have a basic competence in recombinant DNA techniques. The course is subsidised by the Wellcome Trust for scientists based in academic institutions anywhere in the world, but there is a charge of £350 towards board and lodging.

Applications: There are no formal application forms, but applicants should send a copy of their full cv together with a 300 word outline of their research plans to Dr Pelin Faik, Course Co-ordinator, Division of Biochemistry, UMDS, Guy's Campus, London Bridge, London SE1 9RT, England. Telephone: 071-403 6998. Fax: 071-407 5281.

Closing date for applications is April 30th.

Research Microbiologist, Bioremediation

The Agouron Institute has an opening in its Microbiology Group for an established investigator who intends to maintain an independent research program in the area of bioremediation. The Microbiology Group at Agouron emphasizes environmental microbiology, particularly work with anaerobic halophiles and thermophiles from marine and subsurface environments. The basic mechanisms involved in maintenance, distribution and function of these organisms are being studied using a broad range of approaches including molecular biology, genetics, physiology, biochemistry and ecology. An investigator with interest in more applied aspects, i.e. bioremediation, is sought to broaden the spectrum of activities of the Group.

The Agouron Institute is a non-profit, research organization with several autonomous research groups in eukaryotic and prokaryotic biology.

Please send a Curriculum Vitae and a letter describing research interests to: **Mike Silverman, Melvin Simon, or Willis A. Wood, The Agouron Institute, 505 Coast Blvd. South, La Jolla, CA 92037.** An equal opportunity employer.

Scientist

The PARKE-DAVIS Pharmaceutical Research Division of Warner-Lambert Company has an immediate opening for a Scientist in the Pharmacokinetics/Drug Metabolism Department at the Research Facility in Ann Arbor, Michigan.

The successful candidate will design and conduct in vivo and in vitro drug metabolism studies, perform metabolite isolation and identification, evaluate data and write reports (publishing is strongly encouraged). Special emphasis will be on application and development of in vitro biotransformation methodologies including isolated enzyme, subcellular fractions, whole cell and perfused organs. A strong background in drug metabolism concepts and principles along with expertise in bioanalytical methods, medicinal chemistry, metabolite isolation and identification, and radiotracer work is preferred. Expertise in molecular biological methodologies would be beneficial as well as a basic understanding of pharmacokinetics.

Position requirements include a PhD Degree in the Pharmaceutical Sciences or closely related field with a strong background in chemistry and in vitro drug metabolism methodologies. Some post-graduate experience is preferred, along with good verbal and written communication skills.

Interested and qualified candidates should send their resume and references in confidence to **Box JDM-92041, PARKE-DAVIS, Human Resources, 2800 Plymouth Road, Ann Arbor, MI 48105.** "Smoke-Free Work Environment"

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PARKE-DAVIS

A DIVISION OF **WARNER
LAMBERT**

EIGHTH INTERNATIONAL SYMPOSIUM ON CELLULAR ENDOCRINOLOGY

"Growth Factors: Signal Transduction Mechanisms and Role in Development"

Held in Honor of
DR. STANLEY COHEN,
Nobel Laureate
and **DR. RITA LEVI-MONTALCINI,**
Nobel Laureate
August 31-September 3, 1992

Signal Transduction
M. Barbacid, G. Carpenter, P. Comoglio, R. Davis, G. N. Gill, H.-J. Kung, T. Maciag, H. Moses, C. J. Sherr, M.D., Waterfield, B. Westermark

Development
M. Asashima, M. Chao, T. M. Dexter, E. V. Fuchs, B. Hogan, E. Johnson, U. Otten, L. F. Parada, A. H. Reddi, G. Serrero, P. W. Sternberg, C. D. Stiles, N. A. Wright

Session topics will focus on the latest development in signal transduction and the role of growth factors in differentiation and development.

CONTACT: Organizing Committee
W. Alton Jones
Cell Science Center, Inc.
10 Old Barn Road,
Lake Placid, N.Y. 12946
Tel. (518) 523-1252
FAX (518) 523-1849

MOLECULAR BIOLOGIST/BIOCHEMIST

The Department of Obstetrics and Gynecology and the Sealy Center for Molecular Science at the University of Texas Medical Branch, Galveston invite applications for a joint appointment to a tenure-track position at the **ASSISTANT, ASSOCIATE, OR FULL PROFESSOR** level. The appointee will be expected to build a strong research program in the area of molecular studies of gene expression, as related to uterine contraction and/or physiology. Candidates with demonstrated expertise in uterine contractility and/or smooth muscle biochemistry are especially encouraged to apply. Candidates must have the Ph.D. and/or M.D. degree, with appropriate postdoctoral training and publication record. Salary and start-up funds are highly competitive. The Department and the Center offer a stimulating scientific environment and are deeply committed to high-quality research and teaching. Send complete curriculum vitae, including publications list, brief statement of future research plans, and names and addresses of three references, to:

Dr. Robert Garfield, Search Committee Chairman, Department of Obstetrics and Gynecology, Room 2.143 Medical Research Building, Rt. J-62, University of Texas Medical Branch, Galveston, TX 77555.

EO/AA Employer, M/F/H/V. UTMB hires only individuals authorized to work in U.S.

POST-DOCTORAL POSITION TRUDEAU INSTITUTE, INC.

A Postdoctoral Position in immunology is available to study the immune response to *Cryptococcus neoformans*. Candidates with a background in cellular or molecular immunology who are interested in using their training to analyze *in vivo* models of opportunistic infections should apply. A competitive salary and fringe benefits are offered and on-campus housing will be made available. Future staff appointment is possible, depending on performance.

The Trudeau Institute is a not-for-profit pure research institute that specializes in studying the immunology of host defense mechanisms. Current staff interests include cancer and transplantation immunology, immunity against infectious diseases, cytokine function, and immunoregulation. The institute is located on the shore of Saranac Lake, 8 miles from Lake Placid, New York.

Send curriculum vitae and the names of three references to:

**Dr. Joseph O. Hill
Trudeau Institute, Inc.
P.O. Box 59
Saranac Lake, NY 12983**

Make Significant Contributions To A New Generation Of Therapeutics

At the Medical Research Division of American Cyanamid Company, we're making important strides in developing a new generation of therapeutics based on molecular biology and cell-specific mechanisms. From the creation of materials that allow for longer periods of chemotherapy at lower doses to the discovery of new anti-viral agents, our scientists are making significant contributions in drug discovery and development. We invite you to consider these opportunities:

Senior Development Analytical Chemist

Working within the Biotechnology Development Department, you will primarily be involved with the analytical support of monoclonal antibody drug conjugate development. This includes the development and operation of various methods of analysis related to drugs, antibodies and their conjugates, including immunological, chromatographic, electrophoretic and chemical methods of analysis; radiolabeling and radiochemical analysis as well as laboratory culture and isolation and purification of antibodies, antigens and related proteins. The successful candidate should possess a Ph.D. with 5 years of experience in analytical/bioanalytical chemistry and immunology. (Dept. MK1)

Senior Development Biochemist

This position, also within the Biotechnology Development Department, will be in support of antibody drug conjugate development including process and formulation development, optimization and scale-up for the production of these conjugates for clinical trials and the preparation of the clinical trial supplies. You will also be involved in the development and operation of analytical/bioanalytical methods in support of the conjugate development as well as various aspects of radiolabeling and antibody purification and characterization. The successful candidate should possess a Ph.D. with 2-5 years of experience in biochemistry and immunology. (Dept. MK2)

Postdoctoral Scientist

As part of the Lipid Regulation Group of the Cardiovascular Research Department, you will work on the molecular regulation of metabolism. This will include cloning, expressing and characterizing novel receptors involved in the control of weight and blood glucose. A strong background in the techniques of molecular biology is essential. Knowledge of mammalian cell culture and/or receptor binding desirable. (Dept. JD)

We are located at Lederle Laboratories in Rockland County on a 580-acre campus-like setting only 25 miles

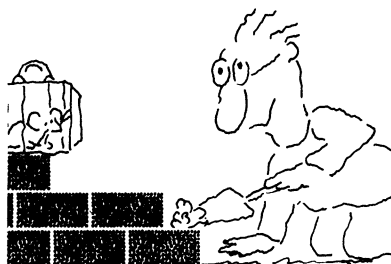


north of New York City. Salaries are competitive and include comprehensive benefits.

For consideration, send resume/c.v. with the names and telephone numbers of 3 references, indicating the Dept. code for the position of your choice, to: Professional Employment Representative, Medical Research Division, Lederle Laboratories, Pearl River, NY 10965. An Equal Opportunity Employer M/F.

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Washington, DC 20005

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SCIENCE

POSITIONS OPEN

POSTDOCTORAL POSITION MOLECULAR TOXICOLOGY HARVARD

Two positions available immediately to study genetic responses to environmental stress [*Nature* 337, 285 (1989)] in mammalian cells and in *Saccharomyces cerevisiae*. Molecular biology and microbiology and/or tissue culture experience required. Position interfaces with biotechnology company and offers an attractive salary.

Send curriculum vitae and three letters of recommendation to: **Dr. Robert H. Schiestl**, Department of Molecular and Cellular Toxicology, Harvard School of Public Health, 665 Huntington Avenue, Boston, MA 02115.

POSTDOCTORAL TRAINEES IN METABOLIC REGULATION IN EUKARYOTES AT PURDUE UNIVERSITY

Two postdoctoral training fellowships in metabolic regulation in eukaryotes are available at Purdue University. These NIH supported fellowships are for basic scientists and clinicians to conduct research in basic and clinical aspects of metabolic regulation. The trainees will have excellent opportunities to interact with training faculties and other trainees in various areas of their research interests. Current research activities include: regulatory factors for the genes in fat and muscle cell development, structure and function of genes for amino transferases and alcohol metabolism, membrane structure and function, mechanism of growth factor action, and signal transduction processes in the action of tumor necrosis factor.

Candidates must be U.S. citizens or permanent residents of the United States. Interested applicants should submit their curriculum vitae, three letters of recommendation, and a letter stating their research interests to: **Ki-Han Kim**, Department of Biochemistry, Purdue University, West Lafayette, IN 47907-1153. Telephone: 317-494-1666. *Purdue University is an Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL POSITION

Available immediately to study the toxicity of selected radioprotectors (misoprostol, Iloprost, DMPL and WR 153169) in rats, mice, rabbits, freshwater and saltwater fish. Ph.D. in histological techniques desirable. Salary: \$22,000.

Send curriculum vitae and three references to: **Chairman, Department of Basic Pharmaceutical Science, College of Pharmacy, Xavier University of Louisiana, 7325 Palmetto Street, New Orleans, LA 70125.**

POSTDOCTORAL POSITION available for an insect biochemist/physiologist to study the mode of action of a hormone involved in stimulating sex pheromone production in moths using ELISA, RIA, bioassays. Experience with peptides desired. Excellent facilities and research environment. Submit curriculum vitae and names of three references to: **Dr. Wendell Roelofs**, Department of Entomology, Cornell University, New York State Agricultural Experiment Station, Geneva, NY 14456. *An Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL POSITIONS. One or two years, beginning 1 September 1992. A position to produce H-2 transgenic mice. Research also involves control of transgenes expression and function. Another position to work in the cloning, characterization and expression of genes coding for protective antigens of a tapeworm parasite. Candidates should have Ph.D. degree and adequate experience. Competitive salaries. Send curriculum vitae and three references to: **Dr. Juan P. Laclette**, Department of Immunology, Instituto de Investigaciones Biomédicas, UNAM, A.P. 70228, C.P. 04510, México, D.F. Mexico.

POSTDOCTORAL POSITION

Applications are invited from holders of M.D./Ph.D. or Ph.D. degrees for a postdoctoral position starting 1 June 1992. The project involves the study of the role of subunit-9 of mitochondrial ATP synthase in Batten disease. Background in molecular biology or biochemistry is necessary. Funding is available for a minimum of 3 years. Please contact: **Dr. Rose-Mary Boustany**, Box 3533, Duke University Medical Center, Durham, NC 27710. FAX: 919-684-8598. *Equal Opportunity Employer.*

POSITIONS OPEN

POSTDOCTORAL POSITION available immediately to study regulation of neuronal gene expression in models of CNS injury. Salary \$27,000 to \$30,000 including health insurance. Send curriculum vitae, summary of research experience, and names of references to:

Dr. Michael Miles
University of California at San Francisco
San Francisco General Hospital
Building 1, Room 101
San Francisco, CA 94110

The University of California is an Equal Opportunity Employer.

FOUR POSTDOCTORAL FELLOWSHIPS in the Molecular Virology and Plant Transformation Section are available at the Noble Foundation. Applicants should have a Ph.D. in molecular biology, virology, plant physiology, or related fields. Position A will involve the study of long distance transport of viruses in plants, and/or expression of antibodies against viruses in plants; apply to **Dr. Richard Nelson**. Position B will study the molecular evolution of peanut stunt cucumovirus; apply to **Dr. Marilyn Roossinck**. Position C will continue current research on potyvirus replication; apply to **Dr. Brandt Cassidy**. Position D will continue research on transformation of a regionally important forage grass, to allow future genetic manipulations; apply to **Dr. Chandra Franklin**. Minimum starting salary will be \$22,000 per year, with funding available for 3 years, for each position. Positions will begin on either 1 June 1992 (A and B), or 1 August 1992 (C and D). Applicants should send curriculum vitae and the names of three references to the appropriate individuals at: **The Samuel Roberts Noble Foundation, Plant Biology Division, P.O. Box 2180, Ardmore, OK 73402.**

POSTDOCTORAL FELLOWSHIP. Department of Biochemistry and Genetics Unit of the University of Rochester. Fellowship available to clone human chaperons and study their effects in yeast. Qualified person with Ph.D. and appropriate background required. Send curriculum vitae and the names of three references to: **Dr. Fred Sherman**, Chairman of Biochemistry, University of Rochester School of Medicine, Box 607, 601 Elmwood Avenue, Rochester, NY 14642. *The University of Rochester is an Equal Opportunity Employer.*

POSTDOCTORAL FELLOW. Position is available to study the role of phospholipase in arachidonic acid release and prostaglandin synthesis in smooth muscle. Ph.D. in biochemistry and experience in enzyme purification and characterization are desirable. Send curriculum vitae to: **Dr. A. A. Abdel-Latif**, Department of Biochemistry and Molecular Biology, Medical College of Georgia, Augusta, GA 30912-2100. *The Medical College of Georgia is an Equal Opportunity/Affirmative Action Employer.*

THREE INSTITUTIONAL, TWO NIH PREDOCTORAL AND SIX NIH POSTDOCTORAL FELLOWSHIPS in cardiovascular and neurophysiology beginning 1 July 1992 at the University of California, Davis. Preceptors (16) will direct individualized training programs to develop knowledge and technical skills required to become independent investigators. Candidates must have M.D. or Ph.D. degrees; M.D.'s must have completed all clinical training. Submit curriculum vitae to: **John Longhurst, M.D., Ph.D., Cardiovascular Medicine, 7B172, University of California, Davis, CA 95616.** Review of applications will be ongoing. *The University of California is an Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL ASSOCIATE—Full-time position available in the laboratory of Doctor Anil Kumar Jaiswal in the Department of Pharmacology. Individual will participate in research involving the role of NAD(P)H: Quinone Oxidoreductases (DT diaphorases) in metabolic detoxification or activation of antitumor drugs and carcinogens and drug resistance. It will involve expression of proteins from cloned cDNAs into mammalian cells and analysis of transfected cells to form DNA adducts and cause mutations. Ph.D. required; previous research experience in DNA adduct and mutation analysis techniques preferred. Send résumé to: **AJ, c/o Personnel Department, Fox Chase Cancer Center, 7701 Burholme Avenue, Philadelphia, PA 19111.** *Equal Opportunity Employer.*

Position Announcement The W. Alton Jones Foundation

Senior Fellow, Energy Policy

The W. Alton Jones Foundation seeks candidates to fill a position as Senior Fellow at the Foundation working on energy policy, with particular attention to solar hydrogen and especially its role in automotive transport. Working with other organizations, agencies and corporations, the Senior Fellow will carry out policy research and advocacy to promote the development of solar hydrogen based transportation systems. A specific focus will be the feasibility of solar hydrogen demonstration vehicles addressing national clean air legislation requirements and Southern California automotive regulations. The fellow will also advise programmatic staff at the foundation about grant-making opportunities in energy policy, especially those directed toward renewables and energy efficiency.

The W. Alton Jones Foundation, located in Charlottesville, Virginia, about 100 miles southwest of Washington, D. C., makes grants to charitable organizations working in two areas: protecting the global environment and preventing nuclear warfare. The foundation's grant budget will total \$13 million in 1992. A significant fraction of the environmental program focuses on identifying and implementing sustainable sources of energy world-wide.

The successful candidate will have an advanced degree in physics or a related field. A strong professional background in environmental policy, a knowledge of domestic and global environmental issues, and excellent communication and networking skills are important.

Salary will depend upon qualifications and experience and may range up to \$60,000 *per annum*. Generous benefits are included. The foundation is an equal opportunity employer. Letters of inquiry along with a resumé should be sent to the Foundation, to the attention of the Director, 232 East High Street, Charlottesville, Virginia 22902.

PHARMACOLOGIST

Wyeth-Ayerst Laboratories, a major division of Fortune 100 American Home Products Corporation, has a challenging opportunity for a Pharmacologist in our modern pharmaceutical research facility in Princeton, New Jersey.

This position will be responsible for assisting our Central Nervous System Pharmacology Group with work related to the antipsychotic program and the neurodegeneration program as well as supporting the characterization of clinical development candidates. We seek an individual with a BS/MS degree in psychology, neuroscience, psychobiology, or psychopharmacology with 2-5 years relevant experience. Candidates should be experienced with behavioral testing procedures (drug discrimination, acoustic startle response), stereotaxic surgery, histology procedures and drug preparation.

We offer excellent compensation, benefits and career advancement. Our research laboratory is just minutes away from Princeton University and convenient to many other cultural, educational and leisure activities. Please forward resume with salary requirements to: **WYETH-AYERST RESEARCH, Personnel, CN 8000, Position #464, Princeton, NJ 08543-8000.** Equal Opportunity Employer, M/F/D/V.



Leading The Way for a Healthier World

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MAGNETIC RESONANCE IMAGING AND SPECTROSCOPY AT HIGH MAGNETIC FIELDS *IN VIVO* June 10-11, 1992

Masur Auditorium
National Institutes of Health
Bethesda, Maryland
Chaired By: Dr. Robert Balaban

This is the eighteenth in a series of symposia that are conducted by NHLBI to capitalize on and transfer the progress achieved in basic science disciplines to clinical research programs. Leading researchers and experts in the field will present their views on the state of the science, the problems facing current understanding, and anticipated future developments in this area.

Presentations will focus on the use of high magnetic fields to generate improved structural images and biochemical analyses of human tissues *in vivo*. Presentations by noted experts will be followed by open discussion.

Topics will include: *in vivo* imaging of head, chest, and heart; *in vivo* imaging of blood flow and tissue oxygenation; *in vivo* metabolic and biochemical analyses using ^{31}P , ^{13}C and ^1H spectroscopy; *in vivo* studies of cardiac function; improvements and limitations of temporal and spatial resolution of *in vivo* images; high speed *in vivo* imaging; safety considerations in high field MRS/MRI; and magnets, coils, and receivers used in high field MRS/MRI.

For further information and registration materials, please contact:
Ms. Judy Corbett, Prospect Associates, 1801 Rockville Pike,
Suite 500, Rockville, Maryland 20852, (301)468-MEET

Sponsored by:
The National Heart, Lung, and Blood Institute



Chair of Botany (ref. 91/92-85)

Applications are invited for the Chair of Botany which will fall vacant on July 1, 1993 following the retirement of Professor D. A. Griffiths. Applicants should have strong academic qualifications and an outstanding record of research and publications. The successful candidate is expected to provide academic leadership in teaching and research and may be appointed as Head of Department.

The University would prefer to make a permanent appointment, but consideration may be given to applications for appointment for a fixed-term or on secondment for a period of preferably not less than three academic years. The University reserves the right not to fill the Chair or to fill the Chair by invitation or to make an appointment at a lower level.

Annual salary (superannuable) will be within the professorial range, of which the minimum is HK\$685,620 and the average is HK\$848,040 (approx. US\$1-HK\$7.80 as at March 4, 1992). Starting salary will depend on qualifications and experience. At current rates, salaries tax will not exceed 15% of gross income. Housing at a charge of 7.5% of salary, children's education allowances, leave and medical benefits are provided.

Further particulars and application forms may be obtained from **Appointments (40426), Association of Commonwealth Universities, 36 Gordon Square, London WC1H 0PF, UK; or from the Appointments Unit, Registry, The University of Hong Kong, Hong Kong (Fax (852) 5592058; E-mail: APPTUNIT@HKUVM1.HKU.HK).**

Closes: 15 May 1992.

POSITIONS OPEN

POSTDOCTORAL FELLOW RESEARCH ASSOCIATE

Research associate position available immediately to study immunoglobulin gene expression. Send curriculum vitae, relevant publications and name, address and telephone numbers of three references to: **Dr. Katherine L. Knight, Department of Microbiology and Immunology, Loyola University Medical Center, 2160 South First Avenue, Maywood, IL 60153.**

Loyola University Chicago is an Equal Opportunity/Affirmative Action Employer.

U.S. DEPARTMENT OF AGRICULTURE (USDA) AGRICULTURAL RESEARCH SERVICE (ARS) POSTDOCTORAL FELLOW (RESEARCH CHEMIST)

USDA, Human Nutrition Research Center, Carbohydrate Nutrition Laboratory, Beltsville, Maryland, is seeking a recent Ph.D. to study carbohydrate metabolism in relation to lipid synthesis during various stages. Knowledge of mathematical modeling of isotope dilution is desired. Salary is commensurate with experience (\$32,423 to \$38,681). Appointment is for 2 years. Submit application form SF-171 and curriculum vitae to: **Judith Hall-frisch, Research Leader, USDA, ARS, BHNRC, Carbohydrate Nutrition Laboratory, Building 307, Room 323, BARC-East, Beltsville, MD 20705** or telephone: 301-504-8396. Applications in response to this ad should be marked 2E014. *Minority and women are encouraged to apply. ARS is an Equal Opportunity Employer.*

POSTDOCTORAL RESEARCH ASSOCIATE in neuroanatomy sought to study circuits that regulate the locus coeruleus in rats and monkeys. Recent Ph.D. with expertise in tract-tracing, immunohistochemistry and brainstem anatomy most desirable. Position supported by an NIH grant for at least 2 years. Competitive salary and excellent fringe benefits. Respond with curriculum vitae and names of three references to: **Gary Aston-Jones, Ph.D., Department of Mental Health Sciences, Hahnemann University, Mail Stop 403, Broad and Vine, Philadelphia, PA 19102-1192.**

POSTDOCTORAL RESEARCH ASSOCIATE. Position available 1 July 1992 to investigate various polymers for use as potential arterial substitutes. Studies will involve modification of novel materials with bioactive factors to evaluate the effect upon cellular attachment, spreading, and function in vitro and in vivo. Candidates must have a Ph.D. in biologic sciences or biomedical engineering. Documented experience in cell/tissue culture techniques is a prerequisite. The successful candidate will be expected to meet the qualifications for appointment at the Research Instructor level in the Brown University Department of Surgery. Send curriculum vitae and three letters of reference to: **Robert B. Patterson, M.D., Department of Surgery, The Miriam Hospital, 164 Summit Avenue, Providence, RI 02906.**

POSTDOCTORAL RESEARCH ASSOCIATE position available beginning on or after May 1992, to construct a detailed chromosome map around the cyst nematode resistance (Rhg4) locus in soybean. Ph.D. required. Training in molecular biology and plant pathology is preferred. Salary GS-11 (\$32,423 to \$35,666). Send curriculum vitae and three references to: **Dr. Benjamin J. Matthews, USDA, ARS, Plant Molecular Biology Laboratory, Building 006, Room 118, 10300 Baltimore Avenue, Beltsville, MD 20705-2350.** Only U.S. citizens need apply. *ARS is an Equal Opportunity Employer.*

POSTDOCTORAL RESEARCH ASSOCIATE position (12-month, full-time) examining the properties and regulation of flavin-containing monooxygenase (FMO) in rabbit and primates. Specific areas of research include protein purification, immunoprecipitation, drug metabolism in vitro and in vivo and isolation of FMO cDNAs. Applications due 1 June 1992 start 15 June 1992 or later. Send letter of application and curriculum vitae, and have three letters of reference sent to: **Dr. David E. Williams, Department of Food Science and Technology, Wiegand Hall, Oregon State University (OSU), Corvallis, OR 97331-6602.** OSU is an Affirmative Action/Equal Opportunity Employer and has a policy of being responsive to the needs of dual-career couples.

POSITIONS OPEN

UNIVERSITY OF ILLINOIS AT CHICAGO COLLEGE OF KINESIOLOGY

POSTDOCTORAL RESEARCH ASSOCIATE position. Two positions are available in a laboratory that is focusing on the mechanisms of hormonal regulation of muscle growth. Research emphasis is on interventions that modify the atrophy process, the regulation of gene transcription and expression, and the use of transgenic animals. Initial review of candidates will begin immediately. Earned doctorate required. Send curriculum vitae, publications, and three letters of recommendation to:

Dr. Robert C. Hickson
College of Kinesiology
University of Illinois at Chicago
901 West Roosevelt Road
Chicago, IL 60608

MOLECULAR TOOL, INC.

POSTDOCTORAL RESEARCH SCIENTIST. Molecular Tool is a biotechnology company located in Baltimore, Maryland, committed to the development and commercialization of highly integrated, DNA-based systems for the analysis of complex genomes and genetic loci. Together with a key industry partner, Molecular Tool has embarked on a significant research and product development program. The company is seeking a dynamic and highly motivated scientist to join a growing multidisciplinary team and complement its expertise in chemistry, instrumentation, biochemistry, and genetics. The successful candidate shall have recently completed a Ph.D. with a research background in the area of DNA or RNA enzymology and biochemistry, and a strong interest in genetic analysis. Situated on a campus of the Johns Hopkins University School of Medicine, Molecular Tool, Inc., provides a stimulating scientific environment which encourages individual initiative and creative thinking. Competitive salaries, an incentive program, and medical insurance benefits are also offered. Interested candidates should send a résumé together with the names of three professional references to: **Ms. Loretta Burrows, Molecular Tool, Inc., 5210 Eastern Avenue, Alpha Center, Hopkins Bayview Research Campus, Baltimore, MD 21224.**

POSTDOCTORAL RESEARCH TRAINEE

The University of Tennessee, Memphis, Department of Physiology and Biophysics, has postdoctoral research trainee positions in two areas: the role of gonadal steroid hormones in the central neural control of vasopressin release and in the cardiovascular actions of vasopressin and in hypertension. Background in cardiovascular or neurophysiological techniques in vivo or in vitro is desirable. Possibility of non-tenure-track faculty position, depending on experience. Competitive salary, commensurate with experience. Candidates should have a Ph.D. or M.D. degree. Applicants send curriculum vitae, copies of three representative publications and the names of three references to: **Dr. Leonard Share, Professor, Department of Physiology and Biophysics, 894 Union Avenue, Memphis, TN 38163.** An Equal Opportunity/Title IX/Section 504/Affirmative Action Employer. *Minorities and women are encouraged to apply.*

RESEARCH ASSOCIATE. To conduct research in the area of retinoids, hormone secretion and diabetes. This involves Northern, nuclease protection assays and transfection studies. Will supervise technicians, write research reports and grant proposals. Salary: \$30,000 per year. Requires Ph.D. and experience in molecular biology. Send curriculum vitae with names and telephone numbers of references and three letters of recommendation to: **Dr. Bruce S. Chertow, Marshall University School of Medicine, Department of Medicine, Huntington, WV 25701.** Equal Opportunity Employer.

RESEARCH ASSOCIATE: Developmental neurobiology of mammalian visual system, 1 September 1992 to 30 June 1993; reappointment subject to NIH funding. Manage laboratory, perform research, train students. Ph.D. (or equivalent) and relevant research experience required. Send curriculum vitae and name/address of three references by 3 May 1992 to: **R. C. Van Sluyters, School of Optometry, University of California, Berkeley, CA 94720.** The University of California is an Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

RESEARCH ASSOCIATE OR STAFF APPOINTMENT to investigate the molecular and cell biology as well as pathogenesis of viral and immune-mediated neurological injury, particularly in association with HIV and related viral infection. Experience in molecular biology of cellular receptors and/or proteases and cytokines is an advantage. Applicants should have demonstrated relevant research productivity and experience. Candidates for staff also should demonstrate success in competitive research funding. Forward curriculum vitae to: **Dr. Thomas Edgington, The Scripps Research Institute, 10666 North Torrey Pines Road, La Jolla, CA 92037.** An Equal Opportunity Employer we encourage minority application.



ASSISTANT RESEARCH SCIENTIST

The Department of Cell and Tumor Biology of the City of Hope National Medical Center is seeking a Ph.D. with an interest in tumor biology for a tenure-track position at the level of assistant research scientist. The successful candidate will be expected to develop an independent research program with preference given to candidates using approaches based in molecular genetics. Areas of particular interest include studies of gene rearrangement and chromosome integrity, control of the chromosome cycle, and mechanisms of cell proliferation and growth control. The City of Hope, as an NCI Cancer Center, has excellent facilities for DNA, peptide and RNA synthesis, protein and DNA sequencing, mass spectrometry, molecular modeling and molecular cloning. The center also offers the opportunity for interaction with medical oncologists and provides access to an extensive solid tumor bank and cancer registry. The successful candidate will also have the opportunity to participate in an NIH-funded research training program for Surgical Oncology Fellows. Send curriculum vitae and a brief summary of research objectives to: **Steven S. Smith, Department of Cell and Tumor Biology, City of Hope National Medical Center, 1500 East Duarte Road, Duarte, CA 91010.** Affirmative Action/Equal Opportunity Employer.

RESEARCHER. Research within laboratory of the division of basic research of the Department of Pediatrics related to molecular and immunohistochemical characterization of aspects of the developmental biology of the visual system and brain. As appropriate monoclonal antibody, recombinant DNA, and primary culture techniques will be used to examine detailed expression of nervous system cellular components. Requires M.S. or B.S. in biology. If M.S. degree 3 years of experience, if B.S. degree 5 years of experience. The experience requirement must include 2 years of research in neurite outgrowth from retina explant, also 3 years of research in cell membrane and extracellular matrix. Forty hours per week, 8:00 a.m. to 5:00 p.m.; \$25,000 per year. Send résumés in duplicate (no calls) to: **J. Davies, JO# 1230825, Ohio Bureau of Employment Services, P.O. Box 1618, Columbus, OH 43216.** Must have proof of legal authority to work permanently in the United States.

ASSISTANT LANDSCAPE HORTICULTURE SPECIALIST IN COOPERATIVE EXTENSION (75%) AND THE AGRICULTURAL EXPERIMENT STATION (25%). The appointee is expected to carry out a program of extension and applied research in landscape horticulture. Ph.D. or equivalent in plant physiology, ecology, horticulture, or related field is required. Experience in extension and/or postdoctoral research experience are desirable. Submit curriculum vitae and names and addresses of three references to: **Richard Y. Evans, Search Committee Chair, Department of Environmental Horticulture, University of California, Davis, CA 95616-8587; telephone: 916-752-6617 or 916-752-0130.** Closing date: 15 May 1992. Position available: 1 July 1992.

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

Research Assistant Professor of Internal Medicine

Nora Eccles Harrison Cardiovascular Research and Training Institute (CVRTI), University of Utah seeks a qualified candidate for the position of Research Assistant Professor in cardiac electrophysiology. The position requires proven ability to:

a) conduct independent research in mathematical aspects of cardiac electrophysiology, b) implement computer models of forward and inverse solutions in electrocardiography, including those based on finite element and boundary element methods, c) design and develop interactive scientific visualization software (programming skills in C, Fortran and Postscript required), d) manage computer systems in a scientific environment.

Candidates should have a Ph.D. degree in a related field and at least one year of post-doctoral experience. Candidates must possess previous experience in design and use of multichannel data collection equipment for use in experimental and clinical cardiac electrophysiology and must be able to teach seminars in the area of cardiac electrophysiology and biophysics.

The expected duties include: independent research in areas of experimental and theoretical cardiac electrophysiology, collaboration with members of the CVRTI on projects of common interest, teaching seminars and research presentations, both at the CVRTI and in other university departments, supervision of graduate students, and coordinating the management and operation of the UNIX computer systems in the CVRTI.

The position will be open until May 3, 1992 or until a suitable candidate is identified. Send resume and references to **Dr. Robert Lux, University of Utah, CVRTI, Bldg 500, Salt Lake City, Utah 84112**. Salary negotiable on the basis of qualifications and previous experience (minimum of \$38,000 per 12-month). *The University of Utah is an Equal Opportunity and Affirmative Action Employer.*

THE ACADEMY OF NATURAL SCIENCES DIRECTOR BENEDICT ESTUARINE RESEARCH LABORATORY

The Academy is seeking candidates for Director of its estuarine research lab on the Chesapeake Bay (the Benedict Estuarine Research Laboratory, Benedict, MD). The Academy is internationally known for its pioneering research on aquatic ecosystems. The Chesapeake lab is part of the Academy's Division of Environmental Research which consists of a network of three labs and a total staff of 100. Research in the Division focuses on the stream-river-estuary continuum, and specifically on watershed and land margin processes which link basic and applied research programs. The laboratory currently maintains research strengths in the areas of biogeochemistry, nutrient chemistry, plankton ecology, and population biology and ecology.

The Academy is currently involved in a capital campaign to relocate the laboratory to a new, state-of-the-art facility on the Chesapeake.

The successful candidate must have a broad programmatic focus and a distinguished research career in some aspect of estuarine science. The position offers a unique opportunity to communicate with a broad spectrum of the public, from policy-makers, to corporate executives, to interested citizens, to prospective donors. The director will maintain continuity of an existing, well-integrated research program, as well as explore new avenues for both team and individual programs.

Please send curriculum vitae, a letter stating background and interests in environmental research, policy and public education, and the names and telephone numbers of four relevant references to:

**Dr. Louis E. Sage, VP
Academy of Natural Sciences
1900 Benjamin Franklin Parkway
Philadelphia, Pa. 19103-1195**

An equal opportunity employer.

POSTDOCTORAL

OPPORTUNITIES

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Lilly Research Laboratories, a division of Eli Lilly & Co., is one of the most distinguished research facilities in the pharmaceutical field.

A postdoctoral fellowship here offers several impressive advantages. Working with highly respected Lilly scientists on state-of-the-art equipment, you'll gain in-depth research training and experience while becoming acquainted with the pharmaceutical industry. In addition, you'll have the opportunity to share your knowledge as our postdocs are encouraged to publish, attend at least one major conference a year, and interact with other Lilly scientists and postdocs through our formal speaker series and less formal meetings.

All positions are for one year, renewable for a second year upon mutual agreement. Lilly provides competitive pay and a comprehensive benefits package which includes a generous relocation allowance. Candidates with no more than one previous post doctoral experience are encouraged to send a CV to: Albert L. Peyton, PhD, Senior Personnel Recruitment Representative, Dept. S0403, Eli Lilly and Company, Lilly Corporate Center, Indianapolis, IN 46285. Equal Opportunity Employer.

BIOTECH UPDATE

Genetically engineered crop protection brings a new dimension to agriculture.

At the Agricultural Research Division of American Cyanamid, we've developed a significant in-house biotechnology capability. Our work has fostered major advances in the development of imidazolinone-resistant corn and in the near future we expect to introduce the first world crop with herbicide resistance. At our 640-acre campus-like setting, you'll discover state of the art research laboratories and an interdisciplinary work environment where innovative thinking is nurtured. Right now we have an immediate opportunity for:

Cell Biologist

The BS/MS level scientist we seek for our Cell Biology and Genetics Group will conduct research in the area of plant transformation. This position will involve using cell biology, biochemistry, and plant transformation techniques in the development of novel transformation technologies and their application to agronomically important monocots. Training in plant tissue culture and experience in plant transformation are required. Experience in monocot cell culture is desirable.

In addition to our unique interdisciplinary environment and history of new product innovations, American Cyanamid Company offers a competitive salary and excellent benefits, including a 401K Savings Plan. We invite you to forward your resume and salary history to: Employment Office, Dept. WS2, American Cyanamid Company, Agricultural Research Division, P.O. Box 400, Princeton, NJ 08543-0400. An Equal Opportunity Employer M/F/H/V.



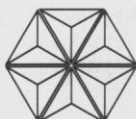
VETERINARY ASSISTANT Microinjector: Transgenic Core Facility

Bristol-Myers Squibb, a worldwide leader in the development and marketing of sophisticated pharmaceutical, medical care, consumer and nutritional products, has an exceptional opportunity for assistant or associate level scientists at the Pharmaceutical Research Institute in Wallingford, CT.

This position in the Veterinary Sciences Department Transgenic Core facility is available to applicants with a BS/BA in Biology and 2-4 years of experience in embryo microinjection and related techniques. Successful candidates will perform all aspects of production, Macintosh-based computer tracking, and coordination of animal model handling and husbandry. Cryopreservation or ES cell culture experience will be an asset.

The Transgenic Core Facility is a central transgenic animal model production service for all Bristol-Myers Squibb Pharmaceutical Research Institute locations. This position will be part of a growing team in a service-oriented core facility with extensive clinical veterinary support.

Bristol-Myers Squibb offers the advantages of sustained career growth, highly competitive salaries and extensive benefits. Please send resume with salary requirements to: **Bristol-Myers Squibb Pharmaceutical Research Institute, Dept. ATZ-92-0150, P.O. Box 1500, Wallingford, CT 06492-7660.** Equal Opportunity Employer, M/F/D/V.



Bristol-Myers Squibb Company

TRUDEAU INSTITUTE, INC. BASIC RESEARCH SCIENTISTS

Infectious Diseases Immunologist

A vacancy exists at the assistant professor level for an immunologist interested in employing modern immunological techniques to analyze immunity to infections with microbial pathogens. The successful applicant will be supplied the resources to develop his/her independent research program within the overall infectious disease program of the Trudeau Institute. Persons interested in developing models of immunity to intracellular pathogens are encouraged to apply.

The Trudeau Institute is a not-for-profit, basic research institute. Salaries and benefits are competitive, and working conditions are conducive to a productive research career.

Applications consisting of a curriculum vitae, the names and addresses of three references, and a brief description of research interests, should be addressed to:

Dr. Robert J. North, Director
Trudeau Institute, Inc.
P.O. Box 59
Saranac Lake, NY 12983

Life Sciences Research Laboratory

Baxter Diagnostics Inc., Life Sciences Research Laboratory (LSRL) is proud to announce the opening of our state-of-the-art facility in San Diego, CA. The LSRL is dedicated to conducting basic and applied research and its scientists are involved in multidisciplinary studies focused on the diagnosis of infectious and genetic diseases. The staff is currently seeking outstanding and highly motivated applicants who can make significant contributions to research programs in molecular virology and nucleic acid chemistry.

Staff Scientist

Bio-Organic Chemistry

A staff scientist level position in the area of Bio-organic Chemistry. The successful candidate should possess:

- Ph.D. with two years or more of postgraduate experience in synthetic organic chemistry, protein biochemistry and enzymology.

Assistant/Associate Research Scientist

DNA Diagnostics

- B.S. degree with 1-2 years experience in molecular biology and/or bio-organic chemistry.
- Knowledge of gene amplification methods, nucleic acid chemistry and enzymology is desirable.
- Duties will involve development and applications of nucleic acid amplification methods.

Reagent Preparation/DNA Diagnostics

- B.S./M.S. in Chemistry/Biochemistry.
- Experience in organic synthesis, chromatographic and spectrographic techniques.
- Will be involved in reagent preparation and responsible for developing chemical approaches for DNA diagnostics.

Retrovirology

- B.S./M.S. degree and 3-5 years research experience in virology and mammalian cell culture.
- Preference given to those with experience in propagation of the HIV-1 virus and in Molecular Biology techniques.
- Will participate in studies on the regulation of HIV-1 growth and resistance to antiviral drugs.

Interested applicants should send a C.V. and the names of three individuals to sponsor letters of reference to: **Director, Life Sciences Research Laboratory, Baxter Diagnostics Inc., P.O. Box 910492, San Diego, CA 92121-0492.** We are an equal opportunity employer.

Baxter

BIOCHEMIST/ MOLECULAR BIOLOGIST

Merck Research Laboratories is seeking a research scientist with MS or equivalent experience to join the Department of Fermentation Microbiology. The successful applicant will be responsible for the purification and cloning of enzymes from microorganisms which synthesize and transform natural products and the isolation of these products.

Merck Research Laboratories is located in Rahway, New Jersey approximately 25 miles from New York City. Our salaries, benefits and growth potential are excellent. Interested applicants should submit a curriculum vitae, including 3 references, to: **Christine L. Cantone, Associate Manager, Merck Research Laboratories, R80 A-3, AD 112, P.O. Box 2000, Rahway, New Jersey 07065-0900.** EEO/AA/VH/Employee.



MERCK
Research Laboratories

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Genetics Institute is a recognized leader in the discovery and characterization of novel human regulatory proteins and their development into biopharmaceuticals. The following positions provide opportunities for outstanding individuals to achieve in this pioneering organization.

Genetics Institute offers competitive salaries and benefits, including comprehensive health care, dental and life insurance, three weeks' paid vacation, 401(k), stock purchase plan, tuition assistance, and an on-site exercise facility.

Genetics Institute is dedicated to building strength through diversity. We are an Affirmative Action Employer.

GENETICS INSTITUTE



MOLECULAR BIOLOGIST/STAFF SCIENTIST

Responsibilities include the investigation of enzymes, ligands and receptors for leukocyte adhesion and extravasation. Successful candidate will possess a Ph.D. with postdoctoral experience in academia or industry reflecting thorough technical expertise and a proven record in molecular biology. Problem-solving skills and experience supervising research activities are essential. Background involving cell biology and biochemistry is highly desirable. (5194)

For this Cambridge-based position, please send curriculum vitae and letter of interest specifying department code, to: Human Resources Department, Genetics Institute, Inc., 87 CambridgePark Drive, Cambridge, MA 02140.

POSTDOCTORAL FELLOW – Biological Mass Spectrometry

As part of our Postdoctoral Fellowship Program, we seek a talented, highly motivated individual with an appropriate, in-depth background to contribute to biomolecular mass spectrometry within the Structural Protein Chemistry group. Laboratory facilities encompass a four-sector tandem mass spectrometer, MALD-TOF mass spectrometry, protein microsequencing and carbohydrate characterization technologies. Qualifications include experience in mass spectrometric analysis of biomolecules, and demonstrated interest in developing and implementing instrumental and chemical-based strategies for the structural analysis of recombinant glycoproteins. (1143)

STAFF SCIENTISTS – Glycoprotein/Carbohydrate Structure

We seek two highly motivated individuals with a strong interest in pursuing studies involving glycoprotein structure and structure/function. Responsibilities include the isolation and structural characterization of glycoconjugates, and the assessment of the impact of glycosylation on the pharmacological, biological and biophysical properties of recombinant proteins. Both positions call for expertise with the isolation, structural and functional characterization of carbohydrates and glycoproteins including experience with NMR spectroscopy. A Ph.D., excellent communication skills and a desire to work in a collaborative environment are essential. Background involving mass spectrometric glycoprotein structural analysis (FAB-MS/MS, GC/MS, MALD-TOF MS, etc.) would be a definite plus. In addition, one position requires up to 2 years' postdoctoral experience; the other requires 5+ years' postdoctoral or industrial experience, along with a record of scientific leadership and accomplishment. (1141)

STAFF SCIENTIST – Formulation Development

Develop liquid and lyophilized formulations for protein pharmaceuticals, as well as devise analytical methods for the characterization and stability monitoring of the formulated pharmaceuticals. Responsibilities include preparing reports for IND and NDA filings. Ph.D. in Biochemistry or Analytical/Pharmaceutical Chemistry, and 2–5 years' relevant experience are required, along with good communication and interpersonal skills. Expertise in chromatography, electrophoresis, spectroscopy, and thermal analysis is preferred. (1140)

For these Andover-based positions, please forward curriculum vitae and letter of interest specifying department code, to: Human Resources Department, Genetics Institute, Inc., One Burt Road, Andover, MA 01810.

RESEARCH SCIENTISTS: Medicinal Chemistry

Gilead Sciences, an innovative and rapidly growing biotechnology company, is a leader in the development of a broad new class of nucleotide-based pharmaceuticals for the treatment of viral diseases, cancer, and cardiovascular diseases. We offer a vigorous research environment for exceptional individuals committed to the development of significant new human therapeutics.

We are looking for Scientists with a Ph.D. in organic or medicinal chemistry and two years postdoctoral training with 0 to 5 years of relevant experience and demonstrated ability in the design, synthesis, and improvement of novel biologically-active agents. Successful candidates will join a multi-disciplinary team of scientists pursuing the development of anticancer, antiviral, and cardiovascular therapeutic agents.

Gilead Sciences is located in the San Francisco Bay Area and offers a stimulating scientific environment with excellent salary, benefits, and stock options. Please send CV and *reference this ad and position to*: Human Resources Administrator, Gilead Sciences, Inc., 346 Lakeside Drive, Foster City, CA 94404.

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ZYNAXIS
CELL SCIENCE, INC.

Zynaxis Cell Science, Inc., is seeking scientists to participate in: research and development of therapeutic products which utilize lipophilic "Zyn-linkers" for localization and retention of therapeutic agents useful in cardiovascular disease, arthritis and cancer; development of cellular diagnostic immunoassay kits.

Organic Chemist (Development) - Optimize methods for preparation and purification of "Zyn-linkers." This will include scale-up of synthetic procedures to multigram levels and the development of analytical methods/specifications for contract and/or GMP production. Requires a Ph.D. in Organic Chemistry and 3-5 years experience in industrial synthetic chemistry (preferably lipid chemistry).

Immunopharmacologist - Characterize in vivo efficacy of "Zyn-linked" radio- and chemotherapeutic agents as part of arthritis program. Establish rabbit antigen-induced arthritis model and testing of new compounds in the model. Requires a Ph.D., 2-4 years experience with animal arthritis models. Veterinary pathology skills and experience with radiolabeled compounds preferred.

Preformulation/Metabolism Scientist - Develop/characterize vehicles for delivery of "Zyn-linked" radio- and chemotherapeutic conjugates by catheter or injection. Develop HPLC systems for use in stability, metabolism, and kinetic studies of conjugates in serum and blood. Requires Ph.D./MS and 2 - 5 years experience in preformulation or drug metabolism. Strong HPLC background necessary.

Protein Conjugation/Immobilization Chemist - Provide protein chemistry support for the generation and scale-up of reagents used in the development of in vitro diagnostic immunoassays. Ph.D. or BS/MS with 5+ years experience including a background in the immobilization of antibodies to solid surfaces is required.

Process Development and Production Specialist - Responsible for process development/production of immunoassay kits and in vitro diagnostics. Requires Ph.D. or MS/BS with 5+ years industrial experience including a background in GMP production of immunoassay kits.

Please forward your resume, indicating position of interest, to: Dept. GK, ZYNAXIS CELL SCIENCE, INC., 371 Phoenixville Pike, Malvern, PA 19355. An equal opportunity employer.

POSITIONS OPEN

RESEARCH ASSOCIATE. One postdoctoral position is available immediately to work in the field of insulin and growth factor signaling with special emphasis on the mechanisms of generation of inositolglycans and the role of G proteins on insulin signal transduction. Salary negotiable. Please send curriculum vitae and letters of references to: **Guillermo Romero, Ph.D., Department of Pharmacology, University of Pittsburgh, School of Medicine, W1345 Biomedical Science Tower, Pittsburgh, PA 15261. Equal Opportunity/Affirmative Action Employer.**

ASSISTANT SPECIALIST. Full-time position is available in Molecular and Cell Biology, Division of Biochemistry and Molecular Biology. Duties are to conduct research on the mechanism of papilloma virus transcription, including development of in vitro transcription; study of relationships between the viral replication and transcription apparatus; and characterization of host factors interacting with the viral proteins. Qualifications required include Ph.D. in molecular biology with detailed knowledge of papilloma viruses and research in the above areas. Salary range is: \$30,540 to \$34,968, depending on qualifications. Approximate starting date: 15 May 1992. Application deadline: 2 May 1992 or 30 days from publication date. Qualified candidates should send a letter of application and résumé to: **Dr. Michael Botchan, University of California (UC), Division of Biochemistry and Molecular Biology, 401 Barker Hall, Berkeley, CA 94720. UC Berkeley is an Equal Opportunity, Affirmative Action Employer.**

BIOCHEMIST/NEUROBIOLOGIST. The Department of Pathology and Laboratory Medicine at the University of Pennsylvania School of Medicine seeks a tenure-track senior level Ph.D. biochemist/neurobiologist with a funded, independent research program focused on cellular and molecular studies of aging and neurodegenerative diseases. The candidate should have contemporary research skills in cell culture, hybridoma technology, protein and peptide chemistry as well as an international reputation in his/her respective field of research. He/she should possess organizational and leadership abilities in order to develop new multidisciplinary research programs based on in vitro and in vivo models of diseases of the aging nervous system that complement an existing research program on aging and neuron death in humans. The candidate will join the Division of Anatomic Pathology and he/she will be expected to contribute to the teaching mission of the department as well as to the clinical activities of the Molecular Diagnosis Laboratory in the Division of Anatomic Pathology. Interested individuals should send curriculum vitae and the addresses of three references to: **Giuseppe G. Pietra, M.D., Director, Division of Anatomic Pathology, University of Pennsylvania, Hospital of the University of Pennsylvania, 3400 Spruce Street, 6 Founders Pavilion, Philadelphia, PA 19104. The University of Pennsylvania is an Affirmative Action/Equal Opportunity Employer.**

ENVIRONMENTAL SCIENTISTS. The Smithsonian Institution has two civil service career openings to join an interdisciplinary basic research team conducting long-term studies in the Chesapeake Bay region. One position is for an **ENVIRONMENTAL PHOTOBIOLOGIST (announcement #92-3024Q)**. The second position is for a **CHEMICAL ECOLOGIST (announcement #92-3023Q)**. Salary for either position is \$38,860. Applicants must be U.S. citizens. For full details please telephone: 202-287-3102, press 9. Ask for the appropriate vacancy announcement above, and a full application package. Applications must be received by 15 May 1992. *Equal Opportunity Employer/Affirmative Action.*

FERMENTATION MICROBIOLOGISTS AND BIOCHEMIST. BioEnergy is a new company committed to the bioconversion of biomass to ethanol. These studies include chemical and enzymatic pretreatment, fermentation, and analysis of substrates and fermentation products. Bachelor or master of science in microbiology, biochemistry or related areas and experience in fermentation is required. Additional experience in pretreatment of biomass and analysis of carbohydrates and fermentation products would be preferable. Please send résumé to: **Quadrex Corporation, P.O. Box 4100, Gainesville, FL 32613, attention: Personnel Office.**

Equal Opportunity Employer, M/F/H/V.

POSITIONS OPEN

The Biotechnology Patent Examining Group of the Patent and Trademark Office is currently recruiting scientists for positions as **PATENT EXAMINERS**. Individuals with advanced degrees and/or equivalent experience in the fields of immunology, molecular biology, gene therapy, plant genetics and plant breeding, biochemistry, protein engineering and microbiology are urged to send a résumé or SF-171 to the following address:

**Patent and Trademark Office
c/o David Lacey
15345 Stillfield Court
Centerville, VA 22020**

For further information, call **David L. Lacey at 703-308-4314**. *U.S. citizenship is required for employment.*

SYSTEMS RESEARCH PROGRAMMER

THE UNIVERSITY OF MICHIGAN MEDICAL CENTER

The Department of Information Technology and Networking seeks an individual to design and implement a relational database (Sybase) for the Human Genome Center. Assist in development of concepts for the improvement of total hardware/software and communication systems and design specific software to extend the systems. Advise researchers, faculty and staff concerning detailed problems arising from use of the systems. Present short courses to the user community on the capabilities and use of the operating and software systems.

Master's degree in computer science or related field. Progressively responsible experience in designing and implementing computer operating systems is necessary. Reasonable knowledge of gene mapping. Experience with relational databases, preferably Sables. Unix and X Windows experience is required.

Salary range: \$35,000 to \$45,000. Excellent benefit package.

Applicants should send two copies of their résumés to:

**The University of Michigan
Medical Center
Employment Office
300 NIB Room 8A07 Box 0422 (92-0756MJ)
Ann Arbor, MI 48109-0422**

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U.S. DEPARTMENT OF AGRICULTURE (USDA) AGRICULTURAL RESEARCH SERVICE (ARS) RESEARCH CHEMIST

USDA, Human Nutrition Research Center, Carbohydrate Nutrition Laboratory, Beltsville, Maryland, is seeking a highly qualified scientist to direct, design and conduct an independent research program that is related to carbohydrate and trace element metabolism. Ph.D. in nutrition, biochemistry or related field desired. Salary is commensurate with experience (\$54,607). Submit application form SF-171 and curriculum vitae to: **Rose Cunningham, ARS Personnel, 6303 Ivy Lane, Greenbelt, MD 20770 or telephone: 301-344-3950**. Applications in response to this ad should be marked **2B015**. *Minority and women are encouraged to apply. ARS is an Equal Opportunity Employer.*

RESEARCH SCIENTISTS YEAST GENETICS/MOLECULAR BIOLOGY PLANT CELL BIOLOGY CHROMOSOME STRUCTURE

Positions for three individuals interested in introducing large DNA fragments into plant cells (begin summer or fall 1992). Approaches include particle bombardment and *Agrobacterium*-mediated transfer of large cloned DNAs, in vivo engineering of YACs, and development of plant artificial chromosomes. Opportunity for multidisciplinary collaboration with faculty laboratories carrying out map-based cloning, cell culture, transformation, and genome analysis (including S. Tanksley, R. Wu, E. Earle, M. Hanson, J. Sanford, S. Winans). Previous postdoctoral experience preferred. Send curriculum vitae and names of three references to: **Search Committee, Plant Science Center, Cornell Biotechnology Building, Ithaca, NY 14853. Cornell is an Equal Opportunity/Affirmative Action Employer.**

POSITIONS OPEN

SCIENTIST POSITION AVAILABLE

We have an immediate opening for an energetic research scientist in Selectide's Department of Pharmacology. The scientist hired for this position will play a major role in drug discovery efforts using newly developed technology for discovery of peptides of pharmaceutical interest for treatment of human diseases [Lam *et al.*, *Nature* 82 Nov. 7, (1991)]. Applicants will be of particular interest who have a Ph.D. degree and completed a postdoctoral fellowship and have technical skills in the fields of pharmacology, biochemistry, biophysics and molecular biology. The company offers excellent career potential for a creative scientist interested in participating in the development of a dynamic new biopharmaceutical company. Selectide's headquarters and research laboratories are located in Oro Valley, just north of Tucson. Selectide has formal relations and close ties with The University of Arizona (UA) with opportunity for ongoing collaborations with participating UA investigators. Applicants should submit a cover letter including the names of two professional references and a copy of their curriculum vitae and biosketch by 17 April 1992 to:

Stephen Felder, Ph.D.

**Director, Department of Pharmacology
The Selectide Corporation
10900 North Stallard Place, Suite 122
Oro Valley, AZ 85737
Phone: 602-575-8040
FAX: 602-575-8283**

TECHNICAL STAFF MEMBER POSITIONS.

The Life Sciences Division of the Los Alamos National Laboratory is inviting applications for two technical staff member positions in the Genomics and Structural Biology Group. The appointments will be for 3 years with possibility of continuation of the positions. Applicants will be expected to collaborate with a highly interactive team of investigators in the Human Genome Program. Applicants will also be expected to conduct an independent research program that will utilize information obtained from genome mapping efforts. Emphasis will be placed on studies attempting to link human genome physical maps with functional organization of genes or gene clusters and on investigations of mechanisms regulating differential expression of specific genes related to human genetic disorders or disease predisposition. We are seeking applicants who will publish original research papers in peer-reviewed journals, present results of research at major scientific meetings, provide oral and written progress reports as required, contribute to human genome project funding proposals, and obtain financial support for their independent research programs. Applicants should have broad experience in molecular biology, genetics, and recombinant DNA research. They should have demonstrated ability, by both research accomplishments and publication record, to conduct both collaborative and independent research in genome organization and gene expression. Successful applicants should have demonstrated abilities in at least three of the following areas: gene mapping techniques using both phenotypic and molecular genetics approaches; in situ hybridization and somatic cell hybrid panel approaches to regional localization of DNA sequences on specific chromosomes; design and use of eukaryotic or prokaryotic expression vectors, particularly somatic cell hybrids, radiation hybrids, and yeast artificial chromosomes; directed mutagenesis of eukaryotic genes; genetic analysis employing transgenic mice; development of strategies to identify expressed regions of the human genome with an emphasis on disease genes of interest to the DOE and radiation-sensitive areas of the genome; and analysis of long-range genomic organization of eukaryotic genes or gene clusters. Experience in technical management of research program and supervision of personnel desirable. Applicants should have a Ph.D. in molecular biology, genetics, biochemistry, or related life sciences discipline, or equivalent combination of education and experience. Postdoctoral experience past the Ph.D. degree highly desirable.

To formally apply for this position, interested candidates should forward a résumé to: **Cathy Majerus (MS P280), Personnel Services Division 20138-R, Los Alamos National Laboratory, Los Alamos, NM 87545. Affirmative Action/Equal Opportunity Employer. Must be able to obtain a Department of Energy "Q" Security Clearance, which normally requires U.S. citizenship.**

PROTEIN CHEMIST

Merck Research Laboratories is currently offering an excellent career opportunity for a Protein Chemist to join the Department of Cellular and Molecular Biology. The selected individual will do research on the purification and characterization of recombinant proteins from microbial and animal cell cultures, as well as natural sources. Functions also include scaling-up processes for preparing proteins for clinical studies under cGMP.

Requirements include a Ph.D. in chemistry or biochemistry and at least two years relevant experience in protein isolation and analytical biochemistry with knowledge of protein structural analysis by chemical and spectroscopic means. Experience in large-scale bioseparations by HPLC and open column methods is desirable. Excellent writing and oral communication skills, a sound publication record and the ability to work in a team situation are necessary.

Excellent salary and benefits accompany this position. Our West Point laboratories are located 25 miles northwest of Philadelphia. Please send resume with salary requirements to **Merck Research Laboratories, Manager, Ad B-9, West Point, PA 19486.** EEO/AA/VH Employer.



Post Doctoral Research at The Wistar Institute

The Wistar Institute, an independent research organization located on the campus of the University of Pennsylvania, is currently seeking Post doctoral applicants interested in cancer-oriented research. Wistar has maintained a reputation for pioneering work and ground-breaking accomplishments since its founding nearly 100 years ago.

Fellows can anticipate a stimulating and challenging experience in the tradition of strong interdisciplinary collaboration within an environment utilizing state-of-the-art biotechnology. Wistar's general areas of research interest include: Molecular Oncology, Molecular Virology, Cell & Developmental Biology, Tumor Biology & Immunology, Cell & Molecular Immunology and Structural Biology.

Interested applicants are requested to send a Curriculum Vitae and the names of three references to: **Coordinator of Research Training, THE WISTAR INSTITUTE, 36th & Spruce Streets, Philadelphia, PA 19104.**

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RESEARCH SCIENTISTS

Gilead Sciences, an innovative and rapidly growing biotechnology company, is a leader in the development of a broad new class of nucleotide-based pharmaceuticals for the treatment of viral diseases, cancer, and cardiovascular diseases. We offer a vigorous research environment for exceptional individuals committed to the development of significant new human therapeutics.

We are looking in the following areas:

APTAMERS

Gilead Sciences has developed a drug discovery technology which allows the identification of nucleotide-based affinity agents selected against important disease-causing targets. [See *Nature*, (1992), 355: 564-566].

Molecular Biologists Ph.D. with at least 2 years postdoctoral training and a strong background in either nucleic acid or protein chemistry. The positions entail either working on the development of aptamers directed against therapeutically important targets, or the application of novel chemistries to aptamer development.

SMALL MOLECULES

A number of life-threatening viruses are the targets of Gilead's nucleotide-based small molecule program.

Virologist Ph.D. and/or M.D. with at least 2 years of postdoctoral experience in virology including cell culture and animal models of viral infections. We are particularly interested in individuals to work with both our virology and pharmaceutical development groups to establish cell culture and animal based systems for the discovery and testing of antiviral agents.

Biochemist/Enzymologist Ph.D. and at least 2 years of postdoctoral experience in nucleic acid enzymology (e.g. polymerases, endonucleases, transcription factors) to study structural and functional relationships of a number of viral enzymes. This position will require close interaction with our chemistry division in the design and testing of potential antiviral agents.

Molecular Virologist Ph.D. and/or M. D. with at least 2 years of postdoctoral experience working on molecular approaches to viral pathogenesis. We are particularly interested in individuals who are experienced in working with herpesviruses, hepadnaviruses, or HIV.

Gilead Sciences is located in the San Francisco Bay Area and offers a stimulating scientific environment with excellent salary, benefits, and stock options. *Please send CV and reference this ad and position to:*

Human Resources Administrator
Gilead Sciences, Inc.
346 Lakeside Drive
Foster City, CA 94404

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POSITIONS OPEN

ECOLOGIST, FISHERY BIOLOGIST (RESEARCH) OR OPERATIONS RESEARCH ANALYST. The U.S. National Marine Fisheries Service announces a permanent interdisciplinary position with a group focusing on the conservation of Pacific salmon populations. Candidate should have a Ph.D., or comparable experience, with a background demonstrating the ability to design and execute research projects pertaining to demographic, genetic, and environmental factors affecting the abundance of natural populations; population viability analysis; and the biological implications of alternative management strategies. The incumbent will employ specialized knowledge from a variety of relevant disciplines to develop original mathematical models and methodologies when appropriate. The successful candidate will have a strong quantitative background and experience analyzing the dynamics of natural populations; experience with fish populations is desirable but not essential. Salary: GS-12, \$38,861 to \$50,516 annually. Application (SF-171), and curriculum vitae must be received by close of business on 5 May 1992 at: **WASC, Personnel Division, 7600 Sand Point Way N.E., Seattle, WA 98115-0070, Attention: P. Macias, 206-526-6048.** Enter announcement number W/SNC92-146PM on item #1 of SF-171. *Equal Opportunity Employer.*

SENIOR INORGANIC CHEMIST: The Department of Chemistry of the University of California, Santa Barbara (UCSB), is initiating a search for a senior inorganic chemist as a replacement for Ralph G. Pearson, who has recently become Professor Emeritus. The timing of this appointment is planned to correspond to the scheduled 1993 completion of a 61,430 ASF addition to the Chemistry Building. Only those individuals with an outstanding record in research and teaching will be considered. The specific sub-field is open and applications will be accepted until this position is filled. Persons interested in applying or obtaining further information are urged to write to: **Chair, Inorganic Search Committee, Department of Chemistry, University of California, Santa Barbara, CA 93106-9510.** *Equal Opportunity/Affirmative Action Employer.*

MEETINGS

12 to 16 July 1992, Washington, D.C., **FOURTH INTERNATIONAL SYMPOSIUM ON NEURAL TRANSPLANTATION.** Information: The George Washington University Medical Center, Office of CME, 2300 K Street, N.W., Washington, DC 20037. Telephone: 202-994-4285. FAX: 202-994-1791.

COURSES AND TRAINING

CAREER CHANGE OPPORTUNITY

This unique program offers the candidate with an earned doctorate in the sciences the opportunity to obtain the Doctor of Optometry (O.D.) degree in two calendar years. Employment opportunities exist in private practice, industry, education and research. Contact: **Dr. D. Chauncey, Program Director, Accelerated Program, The New England College of Optometry, Room S, 424 Beacon Street, Boston, MA 02115.**

SOMATIC CELL AND MOLECULAR GENETICS WORKSHOP, 12 to 26 July 1992. Intensive, 2-week, "hands-on" introduction to the methodology and concepts of current tissue culture and molecular biology procedures. Also provides basic techniques needed for initiating genome mapping studies. This course is designed for established scientists who need to exploit these techniques for their continuing research programs. Registration fee: \$200. Partial per diem provided. Enrollment limited to 16 students. Applications accepted until 30 April 1992. Applicants should submit a letter describing how the workshop will assist their current research, along with curriculum vitae which lists publications (no abstracts) for the past 5 years only, to: **Peggy J. Woodson, Somatic Cell and Molecular Genetics Workshop, Eleanor Roosevelt Institute, 1899 Gaylord Street, Denver, CO 80206, telephone: 303-333-4515.** The Eleanor Roosevelt Institute is an *Equal Opportunity/Affirmative Action Institution* and invites and encourages applications from women and minorities. Open to U.S. citizens and permanent residents only.

ANNOUNCEMENTS

POSTDOCTORAL FELLOWSHIPS IN IMMUNOLOGY 1993 TO 1996

The Irvington Institute for Medical Research will award up to ten postdoctoral fellowships in immunology for three consecutive years of work in a laboratory or hospital in the United States. A laboratory may qualify for only one fellow per year.

This year only, one of the ten awards will be offered to support a project focusing on juvenile diabetes. The other fellowships will be awarded for basic immunologic research.

M.D.'s, Ph.D.'s, and M.D./Ph.D.'s are encouraged to apply. Candidates with not more than 3 years of laboratory experience will receive priority.

The institute will pay a stipend of \$22,000, \$24,000, and \$26,000 for years one, two, and three, with an additional \$2000 each year paid directly to the host institution to help cover the costs of health insurance, travel and supplies.

The deadline for filing applications is 17 August 1992. The Institute will notify applicants in November 1992 whether they have been selected to receive a fellowship to begin 1 July 1993.

Applications may be obtained by writing to the Fellowship Coordinator, The Irvington Institute for Medical Research, 120 East 56 Street, #340, New York, NY 10022. FAX: 212-758-8968.

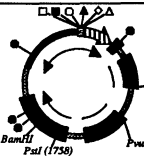
TRANSGENIC MOUSE PRODUCTION

The National Transgenic Development Facility operated by DNX, Inc., and funded by the National Institute of Child Health and Human Development (NICHD) is now accepting applications for submission of DNA constructs for the production of transgenic mice. The application deadline for the July to December 1992 microinjection session is 1 June 1992. The cost of these transgenic services is subsidized by the NICHD. For information and application materials contact: **DNX, Inc., 303B College Road East, Princeton, NJ 08540. Telephone: 609-520-0300. FAX: 609-520-9864.**

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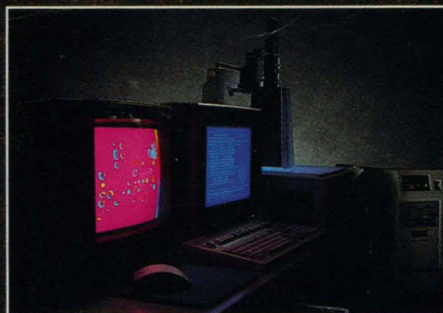
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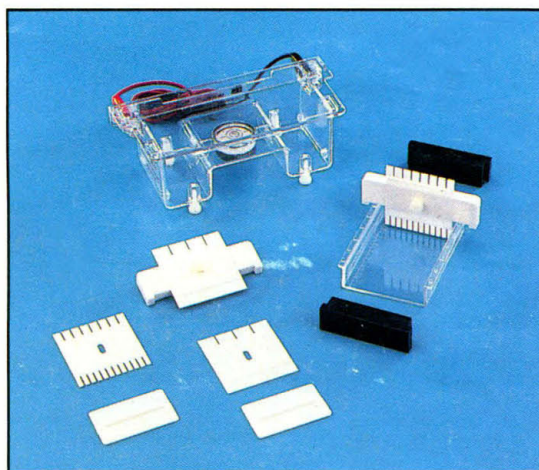
LYNX USER LOG

TIME IN	TIME OUT	NAME	APPLICATION
9:00	9:30	DAVID SERRAT	SEQUENCE READ
9:45	9:50	Mary Dunne	PCR Autorad
10:15	10:18	Werner Stahl	Northern Blot
10:30	10:35	DAVID SERRAT	ETHIDIUM BROMIDE
10:45	12:00	Joyce Thomas	2D Gel Matching
1:20	2:00	Shigeru Kozu	LIBRARY Screen
2:25	2:55	Annette Adles	1 colored 96 well blots
3:40	3:50	Nina Perez	Western
4:20	4:26	DWIGHT HOWES	SOUTHERN BLOT
		Paula Solieri	Protein Gel
			Chemical Blot

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- 10cm x 6.5cm gel tray
- 12-well, 8-well, 4-well and 1-well combs
- UV-fluorescent rule on gel tray
- molded rubber gel casting dams
- built-in level and leveling feet
- safety interlock lid
- leak-free molded construction
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- molded rubber gel casting dams
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- built-in level and leveling feet
- safety interlock lid
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