## Cambridge

### **Forging Ahead into the Future** of Science

### **Industrial Ecology** and Global Change R. Socolow, C. Andrews, F. Berkhout, and V. Thomas,

**Editors** 

Discusses how humankind can more fully industrialize its societies without overwhelming the Earth's natural systems. Addresses such important issues as recycling, solar energy, chemicals in agriculture, industrial innovation, and international cooperation. 1995 530 pp.

Hardback \$49 95 47197-4

## GenEthics Technological Intervention in Human Reproduction as a Philosophical Problem Kurt Bayert:

GenEthics Technological Intervention in Human Reproduction as a Philosophical Problem Kurt Bayertz An analysis of the ethical controversies surrounding techno-

logical intervention in

human reproduction.

#### 41693-0 Hardback \$64.95 1995 362 pp.

### The Uncertain Reasoner's Companion

A Mathematical Perspective J.B. Paris

Presents the key results on the subject, concentrating on giving clear mathematical formulations, analyses, justifications, and consequences of the main theories about uncertain reasoning.

**Cambridge Tracts in Theoretical** Computer Science 39 1995 222 pp. Hardback 46089-1 \$39.95

### An Introduction to Cosmochemistry

### Charles R. Cowley

Describes the composition and evolution of material objects in the universe from the perspectives of chemical as well as nuclear processes. 1995 500 pp.

. Hardback \$79.95 41538-1 45920-6 Paperback \$29.95

### Vertebrate Paleontological Techniques Volume 1

### Patrick Leiggi and Peter J. May. Editors

Describes modern paleontological preparatory techniques and skills that have usually only been passed down by example and demonstration, and that until now, have rarely been standardized or put down in print.

1995 365 pp.

Hardback 44357-1 \$69.95

### The Correspondence of Charles Darwin

Volume 9: 1861

**Charles Darwin** Frederick Burkhardt, Duncan Porter, Janet Browne, and Marsha Richmond, Editors

Reveals the variety of responses to Darwin's species theory in the second year following the publication of The Origin of Species. The letters also yield important new information about contemporary research. 1994 642 pp.

45156-6 Hardback \$59.95

### First-time paperbacks...

### Mammoths, Mastodonts, and Elephants

Biology, Behavior, and the Fossil Record

### Gary Haynes

"...well written, with illustrations and tables provided to support important conclusions. The bibliography alone is an excellent resource...offer[s] a reasonable scenario for mammoth extinction that is consistent with the wealth of new information provided concerning modern elephant behavior and mortality." - Paul Koch, Science 1991 424 pp. 45691-6 . Paperback \$32.95

### **Understanding Ageing**

### Robin Hollidav

41788-0

47802-2

Presents a completely novel approach to understanding aging by explaining why aging exists in animals and by reviewing our current understanding of it at the biological level.

Developmental and Cell Biology Series 30 1995 224 pp.

Hardback Paperback

### **Erosion and** Sedimentation Pierre Y. Julien

Provides a thorough analysis of erosion, transport and sedimentation of soil and solid particles by surface waters. Includes an explanation of the fundamental concepts pertaining to the hydrodynamic forces exerted on solid particles. 1995 290 pp. 44237-0 Hardback \$54.95

### **Scanning Probe** Microscopy and Spectroscopy

Methods and Applications **Roland Wiesendanger** 

Provides a clear and comprehensive introduction to the theoretical background of scanning tunneling microscopy, the design and instrumentation of practical STM and associated systems, including topographic imaging and local tunneling. 1994 660 pp. 41810-0 Hardback \$100.00 42847-5 Paperback \$39.95

### Tools, Language and **Cognition in Human Evolution** Kathleen R. Gibson

and Tim Ingold, Editors

"...a handsome, mind-stretching volume that expands human understanding among practitioners, and may serve as a useful supplementary text in colleges and universities."

– Philip R. Harris, Behavioral Science 1993 496 pp.

48541-X Paperback \$29.95

### Weather Cycles

Real or Imaginary?

William James Burroughs

"...a book whose clarity and breadth of vision set it apart." – Scientific American 1992 222 pp. 47869-3

Paperback \$19.95



40 West 20th Street, New York, NY 10011-4211 Call toll-free 800-872-7423 MasterCard/VISA accepted. Prices subject to change.

\$64.95

\$24.95

## PRODUCTS & MATERIALS



### Atomic Force Conversion Lens

The DualScope is a new lens that attaches to the nosepiece of any optical microscope to transform it into an atomic force microscope powerful enough to map the molecular shape of any solid surface. The lens measures only  $1\frac{3}{4}$  inches long and weighs 8 ounces. It screws into a standard optical microscope's nosepiece and is connected to a central electronics and software unit, which turns the microscope into a system capable of noncontact examination of any size specimen within a resolution of <15 nm and of producing three-dimensional images. The unit can also be used in other modes, such as a standard optical or confocal scanning microscope. Technical Instrument. Circle 139.

### **DNA Decontaminant**

.....

DNA Away surface decontaminant can ensure that workstations, countertops, and apparatus are free from DNA contamination. The reagent is designed to eliminate all DNA from glassware and plasticware without having a residual effect on subsequent DNA samples. It is more effective than autoclaving, according to the manufacturer, and is particularly useful for cleaning surfaces and apparatus that cannot be autoclaved. There is no need to wait for autoclaving or sterilizing. The user simply applies DNA Away to the surface or labware then rinses it clean. Molecular Bio-Products. Circle 140.

### Analysis and Visualization Software

O-MATRIX 2.0 for Windows is an interactive analysis and visualization package with a complete set of interactive graphics capabilities and advanced debugging tools. Its functions include curvefitting, sorting, matrix factorization, normal distributions, matrix exponentiation, spectral analysis, numerical integration, and statistics. Graphics capabilities include vector plots, histograms, bar plots, mesh plots, error bars, stair plots, scatter plots, contour plots, surface plots, graph rotation, and more. It requires an IBM-compatible computer with 386 or greater processor, Windows 3.1, 3 megabytes hard disk space, and 4 megabytes of conventional or extended memory. Harmonic Software. Circle 141.

### Hybridization Services

Genome Systems offers services including gene mapping, gene ordering, physical distance mapping, chromosomal walking assessment, fluorescent in situ hybridization map making, chromosomal deletion analysis, and gene amplification analysis. The written report includes a description of the methods used, photographic documentation, number of cells analyzed, description of results, and final conclusion. Genome Systems. Circle 142.

### **Recombinant Aequorin**

Acquorin, a bioluminescent molecule originally isolated from jellyfish and other marine organisms that emits a blue light upon binding calcium, is now available in recombinant form, genetically engineered from *Escherichia coli*. Unlike preparations isolated from jellyfish, the recombinant form is not toxic to cells and does not contain unidentified contaminants. It is useful as a  $Ca^{2+}$ indicator in living cells and as a calibration standard. **Molecular Probes. Circle 143.** 

### а.

### Nontoxic Gel Plate Treatment

Gel Slick is a safe alternative to silane treatment. Gel Slick prevents sequencing gels from sticking to the treated surface when the glass electrophoresis plates are separated. Other uses include coating microfuge tubes and other surfaces that are commonly silanized. Typical silanizing agents, which often contain chlorodimethylsilane or dichlorodimethylsilane, are toxic, flammable, and require handling in a fume hood. Unlike these reagents, Gel Slick can be applied safely at the bench. One application lasts for several electrophoresis runs. J.T. Baker. Circle 144.

### Portable UV Darkroom

100

The CC-10P Chromato-vue Cabinet is a portable darkroom designed for field use with the



manufacturer's six-watt, portable, rechargeable ultraviolet (UV) lamps. A lightweight curtain al-

SCIENCE • VOL. 267 • 3 MARCH 1995

lows easy access to the cabinet but blocks out external lighting for fluorescence viewing in darkness. An easily removable bottom panel allows the user to position the cabinet over samples. The cabinet features a special contrast control filter in the viewport that absorbs UV energy before it reaches the viewer's eyes. UVP. Circle 145.

### Literature

Metal Free Products for HPLC outlines a wide range of packed columns for high-performance liquid chromatography (HPLC) available in polyetheretherketone and glass-lined assemblies. **Phenomenex. Circle 146.** 

Using Dyes and Filters in the FluorImager System is a technical note with information for researchers who wish to use fluorescence to visualize and quantitate DNA and protein in gels, blots, thin layer chromatography, and microplates. Molecular Dynamics. Circle 147.

Instruments for Chromatography includes 80 pages of instruments and applications for low-pressure liquid chromatography (LC), high-pressure LC, micobore highpressure LC, supercritical fluid chromatography, and capillary electrophoresis. **Isco. Circle 148.** 

Signal Transduction Technical Brochure focuses on a new line of colorimetric protein kinase assay kits, including kits for protein kinase C, protein kinase A, and protein tyrosine kinase. Pierce Chemical. Circle 149.

ATCC Guide to Packaging and Shipping of Biological Materials describes the regulations of various U.S. government agencies and the International Air Transportation Association. Permit requirements are listed for interstate shipments, exporting, and importing of biological materials. American Type Culture Collection. Circle 150.

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.

## Science

### PERSONNEL PLACEMENT

### LINE CLASSIFIED ADVERTISEMENTS

**Deadlines:** Ads are due by Thursday, 10 a.m., 2 weeks prior to the issue date. *Science* is published each Friday, except the last Friday of the year. Call for holiday deadlines. Ads must be submitted in writing.

### How to Submit a Classified Ad:

Prepare double-spaced typewritten copy. Do not include any abbreviations. *Science* will edit and typeset ads according to *Science* guidelines. Include billing information, and desired publication date. Available categories: Positions Open, Meetings, Announcements, Courses and Training, Search Firms. *Science* cannot provide proofs of typeset line ads.

### Mail, FAX or Email materials to:

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

Internet Email: science\_classifieds@aaas.org

Rates: Ads are \$43 per line; \$430 minimum. One line equals 52 characters and spaces; centered headings equal 32 characters and spaces. A 3% cash discount is granted to all prepaid ads.

Estimates: Science will provide a cost estimate for line ads. This is an approximate cost only. Allow for variation between estimated lines and actual typeset lines and resulting final cost. Purchase orders must allow for some degree of flexibility and/or adjustment.

Ads from Outside the U.S.: A discount of \$30 will be offered to advertisers making payment in U.S. dollars by checks drawn on U.S. banks. Contact Gordon Clark at +44 223 302 067 (telephone) or +44 223 302 068 (FAX).

**Credit Cards:** *Science* accepts American Express, MasterCard and VISA. Discount does not apply to credit cards.

**Cancellations:** Deadline for cancellation is 10 a.m., Tuesday, 10 days prior to issue date.

### **DISPLAY PERSONNEL ADVERTISEMENTS**

For rates and info. for fractional display ads call:

Deborah Cummings Recruitment Advertising Telephone: 202-326-6541 FAX: 202-682-0816

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

Gordon Clark European Recruitment Advertising Telephone: +44 223 302 067 FAX: +44 223 302 068

**CONDITIONS:** The AAAS encourages employers to actively recruit and employ underrepresented minority groups. *Science* reserves the right, at its discretion, to edit or decline to publish advertisements submitted to it.





FACULTY POSITION BIOCHEMIST OR CELLULAR/MOLECULAR BIOLOGIST

**POSITIONS OPEN** 

The Musculoskeletal Research Center of the Department of Orthopaedic Surgery at the University of Pittsburgh School of Medicine and Children's Hospital of Pittsburgh are seeking a qualified individual to conduct research and build a research program directed at determining cellular function in immature and developing musculoskeletal tissues. This is a tenure-track, full-time **FACULTY POSITION** at a level commensurate with the candidate's qualifications and experience. The successful applicant will be expected to merit secondary appointments in the Department of Microbiology/Biochemistry or Molecular Genetics and Biochemistry. Applicants must have a Ph.D. in biochemistry, cell bi-

Applicants must have a Ph.D. in biochemistry, cell biology, or related field with a strong background in tissue culture and be able to work well in collaborative research. Preference will be given to candidates interested in the metabolic and cell growth alterations resulting from limb lengthening procedures and the mechanical stimulation of soft tissues. The individual occupying this position will be expected to secure grant funds and participate in classroom teaching.

Interested candidates should send their curriculum vitae, summary of research background, and three letters of recommendation to: Savio L-Y. Woo, Ph.D., Ferguson Professor and Vice Chair for Research, Department of Orthopaedic Surgery, University of Pittsburgh, Suite 1010 Liliane Kaufmann Building, 3471 Fifth Avenue, Pittsburgh, PA 15213.

The University of Pittsburgh School of Medicine and Children's Hospital of Pittsburgh are Equal Opportunity/Affirmative Action Employers. Women and minorities are encouraged to apply.

### EXPERIMENTAL MOLECULAR EVOLUTION

The National Science Foundation Center for Microbial Ecology at Michigan State University seeks senior scientists to conduct research aimed at understanding genetic and phenotypic changes that cause substantial improvements in competitiveness, which we have observed in experimental populations of bacteria (see *PNAS*, **91**: 6808-6814 and *PNAS*, **91**:9037-9041). Analyses of such a complex trait äs competitiveness will require diverse approaches and perspectives. We seek individuals with a Ph.D. and advanced training and strong backgrounds in molecular microbial genetics, evolutionary population genetics, or (preferably) both.

It is anticipated that the appointment will be made for two years, with a rank of Temporary ASSISTANT RE-SEARCH PROFESSOR or Research Associate to be determined based on experience and qualifications. Salary is negotiable. The positions will remain open until suitable candidates are found. Screening of candidates will begin in April 1995. To apply, send a letter describing your training and

To apply, send a letter describing your training and research interests, a curriculum vitae and arrange for three letters of reference to be sent to: Dr. Larry J. Forney and Dr. Richard E. Lenski, Center for Microbial Ecology, 540 Plant and Soil Sciences Building, Michigan State University, East Lansing, MI 48824-1325.

Michigan State University is an Affirmative Action/Equal Opportunity Institution.

### CELLULAR BIOLOGY AND ANATOMY ASSISTANT/ASSOCIATE PROFESSOR

This is a full-time, tenure-track FACULTY POSI-TION available 1 July 1995. Applicants should have a Ph.D. and/or M.D. degree, at least two years of postdoctoral experience, and a record of excellent research accomplishments. We are seeking an individual with research experience in mucosal immunology to augment our current departmental program on cell biology and immunology of the gastrointestinal tract. The successful candidate will be expected to establish and maintain active, externally funded research and to participate in teaching medical and graduate students. An attractive package including research facilities and start-up funds will be available. Send curriculum vitae, and description of current and future research directions to: Dr. Leonard L. Seelig, Department of Cellular Biology and Anatomy, LSU Medical Center, *P.O. Box 33932*, Shreveport, LA 71130. Louisiana State University Medical Center is an Affirmative Action Employer.

### **POSITIONS OPEN**

### ASSISTANT PROFESSOR BIOCHEMISTRY

The Department of Biochemistry at the University of Minnesota Medical School is seeking outstanding candidates for appointment to its faculty. The Graduate Program in Biochemistry, Molecular Biology and Biophysics has established strengths in molecular biology, cell signaling and biomolecular structure. We are seeking candidates who will complement one or more of those areas. We are particularly interested in attracting candidates whose research has physiological or medical significance. The appointment is at the ASSISTANT PROFESSOR level (tenure-track position). Applicants should hold a Ph.D. or equivalent degree in biochemistry or a closely related discipline, have completed at least one year of postdoctoral training at the time of application and should have an outstanding record of research productivity. Send your curriculum vitae, a statement of research

Send your curriculum vitae, a statement of research plans, recent reprints, and arrange to have three letters of recommendation sent to the address given below. The application must be postmarked by March 31, 1995.

Faculty Search Committee Department of Biochemistry 4-225 Millard Hall 435 Delaware Street SE University of Minnesota Minneapolis, MN 55455

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

### CALIFORNIA INSTITUTE OF TECHNOLOGY Assistant Professor of Geochemistry

Applications are being accepted for a tenure-track faculty position in Geochemistry in the Division of Geological and Planetary Sciences at the ASSISTANT PRO-FESSOR level. Initial appointment is for four years. It is possible that a candidate with exceptional qualifications may be considered for a position at a higher level. Completion of the Ph.D. is required. Candidates of extraordinary ability and potential for innovation and leadership in teaching and research in any area of geochemistry are encouraged to apply. We are especially interested in individuals whose research naturally links approaches involving existing or new techniques with existing programs in the Division. Strong interactions with research programs covering the full spectrum of the earth and planetary sciences are encouraged. Areas of interest include, but are not limited to, the following: radiogenic and stable isotope geochemistry, low-temperature and trace-element geochemistry, and atmospheric, aqueous, and environmental geochemistry.

Chembury, and athrosphere, aqueous, and erritorintental geochemistry. A curriculum vitae including a list of publications, a brief description of proposed research activities, and names of three references should be sent to: Professor E. M. Stolper, Chairman, Division of Geological and Planetary Sciences, 170-25, California Institute of Technology, Pasadena, CA 91125. The California Institute of Technology is an Equal Opportunity/Affirmative Action Employer. Women, minorities, veterans, and disabled persons are encouraged to apply.

### MICROBIOLOGIST

The Department of Biological Sciences, Old Dominion University, invites applications for an anticipated position as ASSISTANT PROFESSOR in microbiology to begin August 1995. Preference will be given to individuals whose research involves microbial pathogenesis/infectious disease processes, preferably studied at the molecular level. However, excellent candidates in other specialty areas are encouraged to apply. The successful candidate will be responsible for teaching undergraduate bacteriology and graduate courses in their specialty area. Establishment of a productive research program, supervision of graduate students and participation in the Biomedical Sciences doctoral program is expected. A Ph.D. is required, and postdoctoral experience is preferred. Screening of applications will begin on April 10, 1995, and will continue until a successful candidate is identified. Applicants should send a curriculum vitae, statements of research and teaching interests, selected reprints, and should arrange to have at least three letters of recommendation sent to: Chair, Microbiology Search Commition University, Norfolk, VA 23529-0266. Old Dominion University is an Affirmative Action/Equal Opportunity Employer and requires compliance with the Immigration Reform and Control Act of 1986.

### **POSITIONS OPEN**

The Artificial Organ, Biomaterial and Cellular Technology (ABC) Group in the Department of Molecular Pharmacology and Biotechnology announces a tenuretrack faculty position at the ASSISTANT PROFESSOR level, available July 1, 1995. We seek applicants with demonstrated research ability in the area of biomedical engineering which addresses tissue engineering, biomaterials, bioartificial organs, cell therapy, transplantation biology, or neuroengineering, and with teaching interests at the undergraduate, graduate and medical school level. Candidates must have a doctoral degree (preferably M.D.-Ph.D. or D.V.M.-Ph.D.), potential for excellence in teaching, ability to develop an independently funded research program, and capacity to interact productively with the faculty in the ABC graduate program. Teaching responsibilities might include medical applications of biotechnology, biomolecular materials, organ replacement, tissue engineering and experimental surgery. Opportunities exist for interaction with research faculty in the Departments of Pathology, Surgery, Orthopaedic Surgery and Neurosurgery, as well as with the staff of local biotechnology companies.

Applicants should submit a résumé including research and teaching experience and future research plans as well as representative reprints of publications. They should also have three letters of reference sent to: **Professor E. Hawrot (Chair of the Search Committee), Box G-B4, Brown University Medical School, Providence, RI 02912.** Applications must be received by May 1, 1995, to receive full consideration.

Brown University was founded in 1764 as a private liberal arts college. It is a coeducational institution with an enrollment of 5,300 undergraduate, 1,200 graduate and 280 medical students. It is a nondiscriminatory Affirmative Action Employer and welcomes applications from all qualified individuals, in particular women and members of minority groups.

### FACULTY POSITION VERTEBRATE ZOOLOGIST

St. Edward's University seeks applicants for tenuretrack, ASSISTANT PROFESSOR position beginning August 1995. Ph.D. in biology or closely related field strongly preferred, strong commitment to undergraduate education and the supervision of undergraduate research, broad background in animal physiology and vertebrate zoology required. Ability to teach molecular biology, developmental biology preferred. Grant writing experience desirable. Application review begins March 20, 1995, and continues until position is filled or closed. Send application letter; curriculum vitae; name, address and telephone number of three references to: Faculty Search Committee, Box 1055, St. Edward's University, 3001 South Congress Avenue, Austin, TX 78704-6489. St. Edward's University embraces excellence through diversity and especially encourages applications from members of underrepresented groups.

ASSISTANT PROFESSOR. Department of Biology, University of South Florida (USF). Nine-month, tenuretrack position in Environmental Plant Biology for fall 1995. Contingent upon funding. Duties include: teaching undergraduates in such areas as ecology, evolution, physiology; supervising M.S. and Ph.D. students; graduate courses in specialty area. We seek a broadly based person with interest in terrestrial or wetlands ecosystem processes. Applicants with a Ph.D. and training in ecology, evolutionary biology, plant physiology, biochemistry, or molecular biology are sought. Needed by March 31, 1995: curriculum vitae, statement of teaching and research interests, reprints, three letters of recommendation. Send to: Search Committee, Department of Biology, University of South Florida, 4202 East Fowler Avenue, Tampa, FL 33620-5150. USF is an Equal Opportunity/Affirmative Action/Equal Access Institution. For disability accommodation, please contact the Search Committee Chair five days in advance. Telephone: 813-974-3250.

### BIOMEDICAL ENGINEERING FACULTY POSITION

Rice University invites applications for a tenure-track appointment as ASSISTANT PROFESSOR in the field of biomaterials—with research interests in cellular and tissue engineering. Areas of particular interest include cell specific biomaterials and materials fabrication at the micron to nanometer scale. Send curriculum vitae, statement of teaching and research interests, and three letters of recommendation to: Dr. Larry V. McIntire, Chair, Institute of Biosciences and Bioengineering, Rice University, Houston, TX 77251-1892. Rice University is an Equal Opportunity/Affirmative Action Employer; women and minority candidates are encouraged to apply.

### **POSITIONS OPEN**

#### ASSISTANT PROFESSOR DEPARTMENT OF PATHOLOGY UNIVERSITY OF WASHINGTON

Applications are invited for a tenure-track faculty position at the **ASSISTANT PROFESSOR** level in the Department of Pathology. Candidates should have an M.D. or an M.D./Ph.D. degree with training in pathology and will be expected to conduct research on the regulation of liver growth and hepatic stem cells. Selection will be based on scientific excellence and the potential to establish an independent research program using transgenic mouse models and molecular and cellular approaches to study hepatocyte replication and hepatocarcinogenesis. Opportunities for limited practice of pathology are available for qualified candidates. The successful candidate will participate in the teaching of medical and graduate students. Please send curriculum vitae, a statement of research plans and three letters of recommendation by April 1, 1995, to: Nelson Fausto, M.D., Professor and Chairman, Department of Pathology, SM-30, University of Washington, Seattle, WA 98195. The University of Washington is an Affirmative Action/Equal Opportunity Employer.

#### PURDUE UNIVERSITY FACULTY TEACHING/RESEARCH POSITION NUTRITION, FITNESS, AND HEALTH

ASSISTANT/ASSOCIATE/PROFESSOR, tenmonth, tenure-track position in Foods and Nutrition beginning August 1, 1995. Position is 50% research and 50% teaching with rank and salary commensurate with qualifications and experience. Earned Ph.D. or equivalent degree in nutrition or related areas i.e., health, exercise physiology, biochemistry, biology, etc. One degree MUST be in nutrition. Experience and research must be in nutrition as it relates to health/fitness. Review of applications begins April 3, 1995, and will continue until position is filled. Send curriculum vitae, transcripts, letter of application describing how qualifications fit the position, and names of three people from whom letters of recommendation have been solicited for receipt by Olivia B. Wood, Chair, NFH Search Committee, Department of Foods and Nutrition, 1264 Stone Hall, Purdue University, West Lafayette, IN 47907-1264. Telephone: 317-494-8238. An Equal Opportunity/Affirmative Action Employer.

Biochemist–Search Extended–The College of St. Francis has extended its search for a biochemist. The College invites applications at the ASSISTANT PROFESSOR level for a biochemist committed to undergraduate science education in the context of a Catholic, liberal arts institution. The successful candidate will teach General Chemistry I and II, biochemistry, and science general education courses. The candidate will also have the opportunity for biochemistry curriculum/program development. Ph.D. required; teaching experience preferred. Pedagogical innovation, development of a research program which involves undergraduates, and the integration of chemistry course work with existing major programs in biology, environmental science, and allied health is essential. Salary and benefits are competitive. Send letter of application, curriculum vitae, transcripts, sample syllabi, and three letters of recommendation to: Ms. Sharon Senffner, Science Search Secretary, College of St. Francis, 500 Wilcox Street, Joliet, IL 60435. Review of applications will begin immediately and will continue until the position is filled. The College of St. Francis is an Equal Opportunity Employer and encourages the applications of qualified women and minorities.

### FACULTY POSITION IN NEUROSCIENCE Children's Hospital and Harvard Medical School

The Division of Neuroscience at Children's Hospital is inviting applications from M.D. or Ph.D. scientists for the position of ASSISTANT PROFESSOR. The possibility exists for a joint appointment in the Department of Neurobiology at Harvard Medical School. Applicants should have an outstanding research background in any area of developmental, cellular or molecular neurobiology. Send a curriculum vitae, current and future research plans, relevant reprints, and three letters of reference to: Michael E. Greenberg, Ph.D., Director—Division of Neuroscience, Children's Hospital, 300 Longwood Avenue, Boston, MA 02115. Harvard Medical School is an Equal Opportunity/Affirmative Action Employer. Women and minority candidates are encouraged to apply.

### **POSITIONS OPEN**

### ICHTHYOLOGIST

The Department of Biological Sciences, Old Dominion University, invites applications for an anticipated position as ASSISTANT PROFESSOR in ichthyology to begin August 1995. Preference will be given to individuals whose research involves marine fishes; research areas of special interest to the department include conservation genetics, systematics, and physiological ecology. The suc-cessful candidate will be expected to teach courses in ichthyology, evolution, and possibly marine biology and marine ecology. Establishment of a productive research program, supervision of graduate students and participation in the Ecological Sciences doctoral program is expected. A Ph.D. is required, and postdoctoral experience is preferred. Screening of applications will begin on April 10, 1995, and will continue until a successful candidate is identified. Applicants should send a curriculum vitae, statements of research and teaching interests, selected reprints, and should arrange to have at least three letters committee, Department of Biological Sciences, Old Dominion University, Norfolk, VA 23529-0266. Old Dominion University is an Affirmative Action/Equal Opportunity Employer and requires compliance with the Immigration Reform and Control Act of 1986.

Microbial physiological ecologist, tenure-track AS-SISTANT PROFESSORSHIP, available 1 July 1995. Ph.D. in Microbiology or related field, postdoctoral and research experience in microbial physiological ecology or related area required. We seek an individual with basic research interests in applied and environmental microbiology. Knowledge of metabolic diversity and/or molec-ular tools preferred. The initial one-and-a-half to two years is a research position in the NSF-sponsored Center for Biofilm Engineering and the individual must contribute expertise to interdisciplinary research on environmental, industrial or medical aspects of biofilm processes. Sub-sequently, the individual will participate in undergraduate and graduate instruction in general, applied and environ-mental microbiology, coordinate the department's environmental microbiology program, and maintain a vigorous independent research program. Send application specifically addressing qualifications for these duties, curriculum vitae, and names, addresses and telephone/FAX Email numbers for three referees to: Dr. David M. Ward, Department of Microbiology, Montana State University, Bozeman, MT 59717. Telephone: 406-994-3401. Screening begins on 1 April 1995, and continues until a suitable candidate is hired. ADA/Equal Opportunity/Affirmative Action/Veterans Preference.

### ASSISTANT OR ASSOCIATE PROFESSOR

The Departments of Biochemistry and Cancer Biology of the Bowman Gray School of Medicine, Wake Forest University, are recruiting an individual with expertise in signaling and cell cycle regulation. The successful candidate will be a member of the gene therapy group of the Comprehensive Cancer Center of Wake Forest University. The position is **TENURE-TRACK** and offers an outstanding opportunity to become a part of a major developing research program at the Medical Center. Send applications to:

Dr. Moseley Waite, Chairman Department of Biochemistry Bowman Gray School of Medicine Medical Center Boulevard Winston-Salem, NC 27157-1016

An Affirmative Action/Equal Opportunity Employer.

### OCEANOGRAPHER

We seek a Ph.D. oceanographer for a nine-month, tenure-track position at the ASSISTANT PROFESSOR level to begin August 1996. The position involves research, teaching at the graduate and undergraduate levels, and service. We seek a person who would be able to offer coursework relevant to both chemical and biological curricula and whose research interests complement those of faculty in both areas. Please send a letter describing your research and teaching interests together with a curriculum vitae, and the names, addresses, and telephone numbers of three references to: Search Committee, Department of Oceanography, Florida State University, Tallahassee, FL 32306-3048. Application review will begin in May 1995 and continue until a suitable candidate is found. Florida State University is an Equal Opportunity/Affirmative Action Employer.

# Postdoctoral Opportunities In The Biomedical Sciences.

Listed below are some of the outstanding research training opportunities that are currently available at the National Institutes of Health.

### **Molecular Genetics** Chuxia Deng, PhD

The functions of FGF receptors and tumor suppressor genes are being studied. Projects include analysis of mouse mutants generated by gene targeting, creation of animal models of human genetic diseases and development of technology for conditional knockouts. Applicants should have a strong background in molecular biology, embryology or oncology and must have less than five years of postdoctoral experience. Laboratory of Biochemistry and Metabolism (OE-70), NIDDK, Building 10, Room 9N119, 10 CENTER DR MSC 1812, BETHESDA MD 20892-1812.

### Cytomegalovirus in Restenosis and Atherogenesis Stephen E. Epstein, MD

The potential roles of HCMV in restenosis following angioplasty and in atherosclerosis are being explored. Molecular mechanisms relating to latency and reactivation are current areas of interest. Applicants must have a strong background in molecular biology, virology and/or immunology and have less than five years of postdoctoral experience. Cardiology Branch (OE-70), NHLBI, Building 10, Room 7B15, 10 CENTER DR MSC 1650, BETHESDA MD 20892-1650. (Science 1994; 265:391-394)

### Viral Molecular Biology Roland A. Owens, PhD

The role of Rep proteins in the replication and gene regulation of adeno-associated virus (AAV) is being studied utilizing functional analysis of wild-type and mutant proteins. Collaborative projects focus on the role of Rep proteins in targeted integration of AAV DNA and the inhibition of cancer cell division. Applicants must have less than five years of postdoctoral experience. Laboratory of Molecular and Cellular Biology (OE-70), NIDDK, Building 8, Room 309, 8 CENTER DR MSC 0840, BETHESDA MD 20892-0840.

### Mechanisms of DNA Replication William Copeland, PhD

The regulation and mechanisms of human DNA polymerases involved in the replication of nuclear and mitochondrial DNA is being investigated. Attention is focused on the mutation rate of the mitochondrial and nuclear genome by understanding the enzymology of the mitochondrial and nuclear DNA polymerases. Future studies include the regulation of these essential enzymes in the cell. Applicants must have less than five years postdoctoral experience. Laboratory of Molecular Genetics (OE-70), NIEHS, P.O. Box 12233, Mail Drop E3-01, Research Triangle Park, NC 27709.

### **Prokaryotic Molecular Genetics** Michael Yarmolinsky, PhD

Two positions are available to study plasmid maintenance mechanisms in relation to the E. coli cell cycle. A strong research background in molecular genetics or nucleic acid-protein interactions is desirable.

Applicants must have less than five years of postdoctoral experience. Laboratory of Biochemistry (OE-70), NCI, Building 37, Room 4D15, 37 CONVENT DR MSC 4255, BETHESDA MD 20892-4255.

### Germline Sex Determination in Drosophila Brian Oliver, PhD

The first developmental choice faced by germ cells in the majority of higher eukaryotes is oogenesis versus spermatogenesis. Applicants are invited for two postdoctoral fellowships investigating this process at a biochemical, molecular genetic or evolutionary level. Previous training in biochemistry, molecular biology or genetics is highly desirable. Applicants must have less than five years of postdoctoral experience. Laboratory of Cellular and Developmental Biology (OE-70), NIDDK, Building 6, Room B1-28, 6 CENTER DR MSC 2715, BETHESDA MD 20892-2715.

### **Cytokine Signal Transduction** John J. O'Shea, MD

Understanding the structure and function of JAK's as it relates to cellular activation by IL-2 and IL-12 is being investigated. Positions are available for applicants with less than five years of postdoctoral experience (excluding clinical), who desire laboratory or combined clinical/ laboratory training. Arthritis and Rheumatism Branch (OE-70), NIAMS, Building 10, Room 9N262, 10 CENTER DR MSC 1820, BETHESDA MD 20892-1820.

### Additional Postdoctoral Fellowship Opportunities

For an on-line listing of additional postdoctoral openings, you may access the NIH EDNET Bulletin Board POSTDOC conference via Internet (wylbur.cu.nih.gov) or modem (1,301-402-2221 or 1,800-358-2221) with parameters set at "7,Even,1". When connected to NIH, type in ",vt100" for terminal emulation, "F5E" for initials, and "AJL1" for account number.

The Postdoctoral Research Fellowship Opportunities catalog, which describes intramural laboratories at the NIH, is also available by request. An electronic version of the catalog may be accessed via the Internet using either the Gopher Information System (gopher.nih.gov) or the World Wide Web (http://www.nih.gov/). When connected, select Research Opportunities at the NIH Office of Education. If you would like to request a catalog or have further questions, please contact the NIH Office of Education, Building 10, Room 1C129, 10 CENTER DR MSC 1158, BETHESDA MD 20892-1158, 301-402-1603, Fax 301-402-0483.

### To Apply

If you hold a doctoral degree (e.g., PhD, MD/PhD, MD, DO, DDS, DMD or DVM) accompanied by previous laboratory research experience, and would like to be considered for one of these positions, please send a cover letter, curriculum vitae, bibliography, and statement of research interests to the address listed with each position. In addition, please arrange to have letters of recommendation sent from three scientists who can provide an evaluation of your qualifications.



## National Institutes Of Health

### Office Of Education

The NIH is an Equal Opportunity Employer

### **POSITIONS OPEN**

Arizona State University West: the Department of Life Sciences invites applications for two full-time tenure-track positions at the ASSOCIATE or ASSISTANT PRO-FESSOR level for persons who will engage in innovative teaching and establish externally funded research pro-grams in Ecosystem Ecology or Physiology. The Ecosys-tem Ecologist will integrate basic and applied studies on ecosystem processes in an interdisciplinary program. Individuals with the potential to direct undergraduate and graduate research on southwestern ecosystems are preferred. Teaching includes a course in ecosystem ecology plus advanced courses. The Physiologist must have re-search interests in ecological or evolutionary physiology; record of directing undergraduate and graduate students in broad areas of physiology is preferred. Teaching in-cludes courses in basic and comparative physiology and an advanced course. This position is contingent on final budgetary approval. Requirements for both positions: A Ph.D. in an appropriate field and evidence of scholarly activity appropriate to the level of appointment. Submit cover letter, curriculum vitae, brief statements of teaching and research goals, four to five selected reprints, and three letters of recommendation (include names, addresses, and telephone numbers of referees with your application) to: Ecosystem Search Committee or Physiology Search Committee, Department of Life Sciences (2352), Ar-izona State University West, P.O. Box 37100, Phoe-nix, AZ 85069-7100. Review of applications will begin on April 3, 1995, and on the 1st and 15th of succeeding months until the positions have been filled. Position(s) starting date: August 16, 1995. Arizona State University West is an Equal Opportunity/Affirmative Action Employer.

### ASSISTANT PROFESSOR PHARMACOLOGY

The Department of Physiology/Pharmacology at the University of Osteopathic Medicine and Health Sciences is seeking candidates for a tenure-track ASSISTANT **PROFESSOR** position. A Ph.D. degree is required with primary responsibility for teaching medical pharmacology in several university programs. The candidate will have the opportunity to conduct independent research or participate in departmental research programs. Salary is negotiable, depending upon individual qualifications. Letter of interest, curriculum vitae and names of three references should be sent to: Mearl Kilmore, Ph.D., Professor and Chairman of Search Committee, Department of Physiology/Pharmacology, 3100 Grand Avenue, Des Moines, IA 50312. The University is an Equal Opportunity Employer.

### ENVIRONMENTAL SCIENTIST-DIRECTOR

Claremont McKenna College, a member of The Claremont Colleges, seeks to hire at the advanced level a **DI**-**RECTOR** of the Roberts Environmental Center, an institute for research and undergraduate education in environmental problems. Responsibilities will include research (preferably applied biological research pertinent to Southern California), administration, and undergraduate teaching in environmental science. Prior experience in each of these areas is essential. Salary commensurate with experience. Claremont McKenna College is a small, selective liberal arts college that emphasizes economics and policy studies. Send a résumé and arrange to have three to five letters of recommendation forwarded to: Anthony Fucaloro, Dean of the Faculty, Claremont McKenna College, 500 East 9th Street, Claremont, CA 91711-6400 by March 31, 1995. Review of applications will begin immediately and continue until the position is filled.

Claremont McKenna College is an Affirmative Action/Equal Opportunity Employer. Women and minority candidates are encouraged to apply.

**PROGRAM DIRECTOR.** The Center for Human Growth and Development at The University of Michigan is seeking an experienced, senior-level investigator to lead a program of interdisciplinary, collaborative research on brain/behavior relationships in the developing child. Position is half-time in faculty research track, with joint appointment as tenured faculty member in an appropriate academic department, depending on candidate's background. Complete curriculum vitae, funding support history, letters from three recommenders to: Betsy Lozoff, Director, CHGD, 300 North Ingalls, Ann Arbor, MI 48109-0406 by May 1, 1995. The University of Michigan is an Equal Opportunity/Affirmative Action Employer.

### **POSITIONS OPEN**

### FACULTY POSITION FACULTY OF HEALTH SCIENCES Ben-Gurion University of the Negev

The Faculty of Health Sciences is recruiting a basic LABORATORY SCIENTIST to help form a multidisciplinary team engaged in research in the fields of Nutrition and International Health. Candidates should be researchers who utilize modern approaches in basic research areas such as: biochemistry, biophysics, molecular biology, microbiology, immunology, and developmental biology. Ph.D. and/or M.D. degrees with at least two years of experience are required. Excellence in research, teaching and ability to develop independent and interactive research is essential. Curriculum vitae, statement of research plans and three letters of reference should reach: Dr. Drora Fraser, Director, S. Daniel Abraham International Center for Health and Nutrition, Faculty of Health Sciences, Ben-Gurion University of the Negev, P.O. Box 653, Beer Sheva, 84105, Israel, by April 15, 1995. FAX: 972-7-277342.

### ALCOHOL RESEARCH PH.D.

ASSOCIATE or SENIOR ASSISTANT PROFES-SOR level position requires previous experience in neurophysiological research, especially applications of evoked potential techniques to alcohol and substance abuse studies. Evidence of previous extramural funding is also highly desirable. This individual will serve as Co-Director of the Neurophysiology Research Laboratory with Allan Tasman, M.D., Chair of the Department of Psychiatry, and will have major responsibility for design and implementation of studies applying evoked potential/brain mapping techniques to studies of alcohol and substance abuse. Send curriculum vitae and names of three references to: Allan Tasman, M.D., Chairman, Department of Psychiatry and Behavioral Sciences, University of Louisville, Louisville, KY 40292. Telephone: 502-852-1126. An Affirmative Action/Equal Opportunity Employer.

### FACULTY POSITIONS BIOLOGY AND ENVIRONMENTAL SCIENCE

The Department of Biological Sciences is seeking to fill two FACULTY POSITIONS to support its teaching program and its research efforts with the Texas Regional Institute for Environmental Studies (TRIES). TRIES is a research consortium, headquartered on campus, directed toward a broad range of environmental problems. Ph.D. and university feaching experience are required. (1) Lecturer, temporary renewable position, Plant Ecology/Taxonomy. Duties include half-time TRIES research in vegetational analysis and satellite imagery/aerial photography interpretation, and half-time teaching introductory Biology and Environmental Science courses. (2) Lecturer, temporary nine-month position, renewable, to teach introductory Biology and Environmental Science courses. Candidates should send curriculum vitae, statements of research interest and teaching philosophy, and have complete transcripts and three letters of recommendation sent by March 22, 1995, to: Dr. Andrew Dewees, Chair, Department of Biological Sciences, Sam Houston State University, Huntsville, TX 77341-2116. An Equal Opportunity/Affirmative Action Employer.

**POSTDOCTORAL POSITION** available immediately to study immunoregulation and molecular mechanisms of immunity to the nematode parasite Onchocerca voluulus in rodent models. Experience in molecular biology and immunological techniques essential. The candidate should have a Ph.D. degree in immunology or parasitology, and research experience at the postdoctoral level is desirable. Send curriculum vitae, including summary of research experiences to: David Abraham, Ph.D., Thomas Jefferson University, 233 South 10th Street, Philadelphia, PA 19107. Thomas Jefferson University is an Equal Opportunity Employer.

**POSTDOCTORAL POSITION** available to study the function of homeobox genes in hematopoiesis and leukemogenesis, using molecular and cellular approaches including cloning, DNA and protein expression analysis, progenitor colony assays, antisense approaches, transgenic mice. Background in molecular biology and/or hematology is required. Send curriculum vitae and names of three references to: Ken Takeshita, M.D., Hematology Division, New York University Medical Center, 550 First Avenue, New York, NY 10016 USA. FAX: 1-212-263-8444.

### **POSITIONS OPEN**

The Center for Environmental Studies invites applications for a new FACULTY POSITION beginning July 1995. Fixed term renewable contract based on funding, current funding is for two years. Candidates must have a Ph.D. or equivalent degree, broad experience in waste management fields and a strong commitment to teaching undergraduate and graduate students. This position requires the development and teaching of courses in various aspects of waste management and the coordination of a cooperative program among colleges and universities in northern Minnesota. This position will be situated primarily at Vermilion Community College in Ely, Minnesota. Preference will be given to candidates with extensive experience in academia or industry. Faculty rank and salary are negotiable. Applicants should send résumé; a statement of professional experience and goals; and names, addresses, and telephone numbers of five references to: Dr. Ken Lundberg, Interim Dean, College of Social and Natural Sciences, Hagg Sauer Hall, Bemidji State University, 1500 Birchmont Drive NE, Bemidji, MN 56601-2699. Review of applications will begin April 3, 1995, and continue until filled. An Equal Opportunity Educator and Employer.

### DIRECTOR DNA DIAGNOSTIC LABORATORIES

Available immediately. Board-certified/eligible (American Board of Medical Genetics) Ph.D. in Clinical Molecular Genetics to direct DNA Diagnostic Laboratory and pursue research goals. Curriculum vitae to: Aubrey Milunsky, M.D., D.Sc., Director, Center for Human Genetics, Boston University School of Medicine, 80 East Concord Street, Boston, MA 02118.

### POSTDOCTORAL POSITION Tumor Gene Therapy

The Cancer Institute of New Jersey, University of Medicine and Dentistry of New Jersey (UMDNJ), has an immediate opening for a **POSTDOCTORAL FEL-LOW** to investigate tumor gene therapy. Ph.D. in Molecular Biology, Tumor Virology is required. Experience in gene regulation, virology and tumor biology preferred. Applicants should be highly motivated and able to employ both molecular and genetic techniques and conduct independent research.

Please submit curriculum vitae to: T. S. Ravikumar, M.D., Professor of Surgery and Molecular Genetics, UMDNJ-Robert Wood Johnson Medical School, Associate Director and Chief of Surgical Oncology, The Cancer Institute of New Jersey, 303 George Street, Suite 501, New Brunswick, NJ 08901. UMDNJ is an Affirmative Action/Equal Opportunity Employer, Minority/Female/Disabled/Veterans, and member of the University Health System of New Jersey.

**POSTDOCTORAL POSITIONS** at the University of Utah Health Sciences Center are available to recent Ph.D.'s or M.D./Ph.D.'s with experience in single cell electrophysiology. NIH-funded projects in Departments of Cardiology and Physiology, including laboratories of **Drs. Michael Sanguinetti, Kenneth Spitzer, John Bridge**, and **William Barry**, are investigating K<sup>+</sup> channel function, Na<sup>+</sup>/Ca<sup>2+</sup> exchange, and Na<sup>+</sup> pump and SR function in isolated myocytes from human and animal ventricular myocardium. Previous experience of applicants with cardiac myocytes and fluorescence microscopy desirable but not required. Send curriculum vitae and names, addresses and telephone numbers of three references to: **Dr. William H. Barry, Cardiology Division, University of Utah Medical Center, 50 North Medical Drive, Salt Lake City, UT 84132.** *The University of Utah is an Affirmative Action/Equal Opportunity Employer and encourages applications from women and minorities, and persons with disabilities.* 

### POSTDOCTORAL POSITION

A POSTDOCTORAL POSITION is available July 1, 1995, for the study of germinal center events and the regulation of B cell memory. Experience in molecular biology and/or cellular immunology is advisable. The laboratory is located in the Clinical Sciences Building of Washington University School of Medicine. Send a curriculum vitae, names and addresses of three references, and a short letter describing research experience to: Dr. Julian Ambrus, Division of Rheumatology, Washington University School of Medicine, 600 South Euclid, Campus Box 8045, St. Louis, MO 63110.

The University is an Equal Opportunity/Affirmative Action Employer.



## **Postdoctoral Fellows**

## Explore the possibilities and experience the rewards of a growing Postdoctoral Program.

Pharmaceutical research: Science that enhances the quality of life. A call to go beyond established frontiers and seek innovative solutions. A career path marked by limitless possibilities — and exceptional rewards.

There's no better place to pursue pharmaceutical research than with Ciba, recognized worldwide for innovative drug therapies that fulfill unmet medical needs. Right now, we are in the process of expanding our Summit, NJ postdoctoral program, and we seek candidates to participate in the following areas:

### CARDIOVASCULAR-ATHEROSCLEROSIS RESEARCH

**MOLECULAR BIOLOGIST/BIOCHEMIST-Signal Transduction:** You will perform independent research to define the molecular regulation of vascular smooth muscle cell proliferation; experience in the molecular biology and biochemistry of signal transduction pathways is required. Please refer to Position JN-391 on resume.

**IN VIVO PHARMACOLOGIST:** The selected candidate will perform independent research to profile vascular lesion formation after injury, and explore the therapeutic regulation of vascular smooth muscle cell proliferation *in vivo*. Experience in sterile veterinary surgery and a strong research background in cardiovascular pharmacology or physiology are requisite. Please refer to Department JN-392 on resume.

### ARTHRITIS RESEARCH BIOCHEMIST/CELL BIOLOGIST: You will

investigate the role of anti-angiogenic proteins in arthritis. Qualifications include a PhD in Biochemistry/Cell Biology and experience in protein chemistry and tissue culture. An interest in pursuing research in the area of arthritis is important. Please refer to Department JN-VG on resume.

### **BIOCHEMIST/MOLECULAR BIOLOGIST:**

You will carry out independent research to study gene expression in chondrocytes with an emphasis on identifying those genes that are differentially expressed. A PhD in Biochemistry and/or Molecular Biology and a strong background in mammalian molecular biology are required. Please refer to Department JN-SHH on resume.

### BIOPHYSICAL CHEMISTRY

**MOLECULAR BIOLOGIST/ BIOCHEMIST:** As a member of our New Lead Discovery Group, you will evaluate novel, non-radioactive technologies that have potential to enhance high throughput screening assays. Research will involve expression of a newly discovered transcription factor from its cDNA, which will then be purified and labeled with a fluorescent tag for energy transfer experiments. A PhD in Biochemistry, Molecular Biology, Biophysics (or a related field) with molecular biology experience is essential; a background with fluorescence techniques is desirable. Please refer to Department JN-393 on resume.

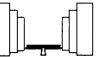
**COMPUTATIONAL CHEMIST:** Responsibilities require the ability to develop computational methods for estimating binding affinities of enzyme inhibitors when the 3dimensional structure of the enzyme/inhibitor complex is known or can be computed. Additional requirements include a PhD in Computational Chemistry, with a background in molecular mechanics/dynamics and programming experience with "C" or FORTRAN. Please refer to Department JN-384 on resume.

**COMPUTATIONAL CHEMIST:** The selected candidate will be an integral member of a team that is involved with computational methods for predicting potency and with the development of GROWMOL, a computer program which generates structures *de novo*. A PhD in Physical Chemistry, Computational Chemistry or a related field, a thorough knowledge of structural organic chemistry and programming experience (preferably FORTRAN) are essential; a background in mathematics is important. Please refer to Department JN-394 on resume.

We offer competitive compensation in an environment where creativity is valued and professionalism is highly respected. For confidential consideration, please send your resume and salary requirements, indicating the department code for your position of interest, to: **Staffing Center, Ciba Pharmaceuticals Division, 556 Morris Avenue, Summit, New Jersey 07901.** We are an equal opportunity employer M/F/D/V.

### Preparing for the future





### Noble Foundation/Salk Institute Joint Program in Plant Biology

As part of this program, two post-doctoral fellowships are available July 1, 1995, for research on the following topics:

## (1) Mechanism-based manipulation of floral induction. Principal Investigators: Detlef Weigel (Salk) and Maria Harrison (Noble)

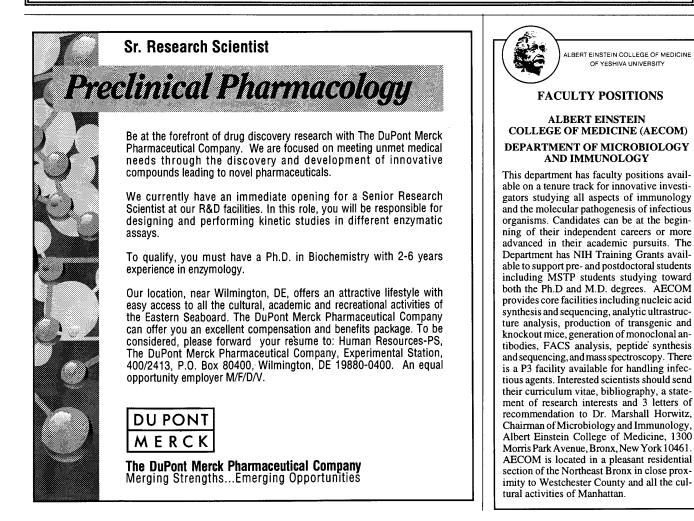
To develop a transgenic system for inducing flower development, starting with the cloned *LEAFY* gene of Arabidopsis (Weigel *et al.*, **Cell**, *69*, 843-859; Weigel and Meyerowitz, **Science** 261, 1723-1726). The goal of this project is to apply such knowledge to manipulate flowering in the legume *Medicago truncatula*, in order to transform this species into a genetically tractable system for the study of mycorrhizal/*Rhizobium* interactions (Harrison and Dixon, **Plant J.** 6, 9-20).

### (2) Genetic and biochemical analysis of chloroplast development. Principal Investigators: Joanne Chory (Salk) and Dusty Post-Beittenmiller (Noble)

To begin a systematic biochemical analysis of a large array of existing Arabidopsis mutants (Li, *et al.* Genes & Development 8, 339-349; Susek *et al.* Cell, 74, 787-799) that are defective in chloroplast development or metabolism. The mutants will be analyzed with respect to light-regulated gene expression, plastid structure, photoperiodic defects, and lipid and fatty acid metabolism (Post-Beittenmiller *et al.* J. of Biol.Chem., 266, 1858-1865). In addition, new genetic screens for mutants defective in the control of lipid and fatty acid biosynthesis will be sought.

For both fellowships, the first eighteen months will be spent in the Plant Biology Laboratory at the Salk Institute, La Jolla, CA followed by eighteen months in the Plant Biology Division at the Noble Foundation, Ardmore, OK.

Applications including *curriculum vitae* and three letters of recommendation should be sent to: Cindy Doane, Administrative Assistant, Plant Biology Laboratory, The Salk Institute, 10010 N. Torrey Pines Road, La Jolla, CA 92037. The Samuel Roberts Noble Foundation and Salk Institute are Equal Opportunity Employers.



## **ACCEPT THE NAVY CHALLENGE**

Become a member of an elite research and development community under the Chief of Naval Research involved in basic and applied scientific research and advanced technological development for tomorrow's Navy.

Listed below are career opportunities\* for Senior Managers of a variety of broad research programs in theoretical research and experimental fields:

### • Director, Electronics Division, Office of Naval Research (ID#95-04)

Manages and directs extensive activities in fostering, administering, and executing an integrated program of basic research, exploratory development, and advanced technology development in the field of electronics and related areas. Duty station: Office of Naval Research, Arlington, VA. Contact: Ms. Jill Blackwell, (703) 696-4653.

• Director, Mechanics and Energy Conversion S&T Division, Office of Naval Research (ID#95-05) Manages and directs an integrated program of basic research, exploratory development, and advanced technology development in the fields of fluid dynamics (aero- and hydromechanics), fluid structure interaction, energetic materials, propulsion processes, and weapons technology. Duty station: Office of Naval Research, Arlington, VA. Contact: Ms. Roberta Perry, (703) 696-4587.

• Director, Ship Structures and Systems S&T Division, Office of Naval Research (ID#95-06) Manages and directs a program of basic research, exploratory development, and advanced technology development in the fields of solid mechanics, electromechanics, fracture mechanics, structural dynamics, structural acoustics, electric power, ship structures, ship and marine acoustic and non-acoustic signature technology, propulsion technology and system integration. Duty station: Office of Naval Research, Arlington, VA. Contact: Ms. Roberta Perry, (703) 696-4587.

## • Director, Ocean, Atmosphere, and Space (OAS) Modeling and Prediction Division, Office of Naval Research (ID#95-07)

Manages and directs extensive activities in fostering, administering, and executing an integrated program of basic research, exploratory development, and advanced technology development in the wide range of interdisciplinary fields included in the Division such as environmental optics; physical oceanography; biological/chemical oceanography; ocean modeling and prediction; atmospheric modeling and prediction; high latitude dynamics; tactical environmental support; and marine geology, geophysics and meteorology. Duty station: Office of Naval Research, Arlington, VA. Contact: Ms. Angelica Ashby, (703) 696-4649.

### • Superintendent, Remote Sensing Division, Naval Research Laboratory (ID#95-01)

Plans and directs a program of research, development, and evaluation leading to the creating, adoption and application of improved and new concepts, principles, methods, and techniques in the fields of remote sensing, sensor technology, atmospheric sciences, oceanography, astronomy, and terrestrial sciences. Duty station: Naval Research Laboratory, Washington, DC. Contact: Ms. Kathy Weaver, (202) 767-3030.

- Superintendent, Spacecraft Engineering Department, Naval Research Laboratory (ID#95-02) Responsible for the conception, planning and formulation of research, design and development in the areas of satellite and orbital transfer vehicle systems. Duty station: Naval Research Laboratory, Washington, DC. Contact: Ms. Patricia Reed (202) 767-3030.
- Superintendent, Marine Meteorology Division, Naval Research Laboratory (ID#95-03)

Manages, directs and administers a broad spectrum of multi-disciplinary scientific, engineering, and technical programs in numerical weather forecasting; atmospheric physics, processes and phenomena; ocean atmospheric coupling; satellite meteorology; data base management and visual information systems; and automation techniques for atmospheric analysis forecasting. Duty station: Naval Research Laboratory, Monterey, CA. Contact: Ms. Mary Branick, (202) 767-3030.

Apply to: HRO-DC Attn: (ID# )S Naval Research Laboratory 4555 Overlook Avenue SW Washington DC 20375-5320

Applicants should be recognized as national/international authorities in their specialty and should have planned and executed difficult programs of national significance or specialized programs that show outstanding attainments in their field of research or consultation. Salaries range from \$92,900 to \$115,700 (plus locality pay) per year. Resumes, SF-171s (Application for Federal Employment) or OF-612s (Optional Application for Federal Employment) must be received by 31 March 1995.

\*Each position will be filled subject to position allocation availability.

Navy is an Equal Opportunity Employer (Women and Minorities are encouraged to apply)

THE



the U.S. Revenues come from five products -- including Intron (R)A alpha interferon and hepatitis B vaccines and diagnostics -- sold throughout the world by licensees or affiliates. Current research is directed toward the discovery and development of proprietary products to treat inflammation, cardiovascular disease, AIDS and certain cancers.

### **Director - Biological Sciences**

We currently seek a proven leader with strong managerial and motivational skills to assume overall responsibility for directing a group of forty talented individuals in the general areas of growth regulation, viruses, gene therapy and vascular biology. The successful candidate will hold a PhD in Molecular Biology or Protein Chemistry and have a minimum of 10 years' experience in project/line management. Effective communications skills are essential as is a strong record of scientific achievement. Industry experience highly desirable.

Biogen offers what few companies in our industry can - Professional Challenge, Stability, Profitability, and Growth. In addition, our compensation and benefits package is one of the best in the industry, and is designed to attract and retain the finest talent available. If you are one of the best, you have an opportunity to join us now. Please forward your resume, to: Biogen, Inc., Professional Staffing - Dept. JT, 14 Cambridge Center, Cambridge, MA 02142, FAX: (617) 679-3595. Biogen is an Equal Opportunity Employer.

## PITES BURGH SUPERCOMPUTING CENTER

June 4-9, 1995

Nucleic Acid and Protein Sequence Analysis<sup>1</sup> •Database Searches and Pairwise Alignments •Multiple Sequence Alignments and Pattern Identification •Visualization of Macromolecules and Sequence Alignments

Application Deadline: April 17, 1995

**WORKSHOPS** 

1995

### June 25-28, 1995

Structure Determination From NMR<sup>2</sup> •Solving NMR solution Structures of Biological Macromolecules Application Deadline: April 28, 1995

### August 16-19, 1995

Molecular Mechanics and Dynamics of Biopolymers<sup>2</sup> •Development of Force Fields •Structure: Thermodynamics, Refinement & Analysis

Application Deadline: June 22, 1995

<sup>1</sup>Funded by a grant from the NCHGR, NIH. Financial assistance for travel & lodging for researchers affiliate viti U.S. academic institutions is available. <sup>1</sup>Funded by a grant from NCRR, NIH. Travel, meak and hotel accommodations for researchers affiliated with U.S. academic institutions are supported by this grant. Direct Inquiries to: Nancy Blankenstein, Pittsburgh Supercomputing Center 4400 Fifth Avenue. Suite 230C

Pittsburgh, PA 15213

Initiative

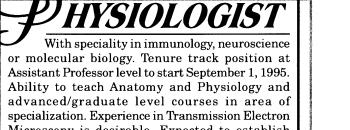
**Biomedical Supercomputing** 

biomed@psc.edu or 412-268-4960 WWW information http://pscinfo.psc.edu/biomed/workshops95.html

## Temple University School of Medicine

### Postdoctoral Position Microbiology/Immunology

The Post-Doctoral Training Program of the Department of Microbiology and Immunology of Temple University School of Medicine has positions open immediately. Research efforts being conducted in the Department emphasize molecular biology and include the molecular immunology of T cells. macrophages, and cytokines; lymphocyte signal transduction mechanisms; cellular and viral oncogenes and their role in growth and transformation; molecular biology of DNA and RNA viruses including HIV; molecular genetics of sporulation in Bacillus; and molecular and biochemical analysis of bacterial cell wall synthesis. Successful candidates will be encouraged to work in a collaborative research group composed of several faculty, students, and post-doctoral fellows. Experience in molecular and /or cellular biology required. Applicants must be United States citizens or permanent residents. Please send curriculum vitae and at least 3 letters of reference to Dr. Chris D. Professor and Chairman, Platsoucas, Department of Microbiology and Immunology, Temple University School of Medicine, 3400 N. Broad St., Philadelphia, PA 19140. FAX 215-707-7788. An equal opportunity/affirmative action employer and applications from women and minorities are encouraged.



advanced/graduate level courses in area of specialization. Experience in Transmission Electron Microscopy is desirable. Expected to establish active research program involving students. Ph.D. required. Post doctoral teaching and research experience preferred. Please include a statement of application. Salary is competitive upon background and experience. As an accredited state college of New Jersey offering 50 undergraduate and graduate programs, the college is committed to educational excellence, cultural diversity and community outreach. Review of applications will begin 30 days after publication of this advertisement.

William Paterson College is an Equal Opportunity/Affirmative Action Employer.

Apply to: Dr. Miryam Z. Wahrman, Chairperson, Department of Biology (Draw S)



WILLIAM PATERSON COLLEGE 300 Pompton Road Wayne, New Jersey 07470

### National Institute of Neurological Disorders and Stroke National Institutes of Health

Public Health Service / Department of Health and Human Services

### Position: Deputy Director, NINDS Location: Bethesda, Maryland

The National Institute of Neurological Disorders and Stroke (NINDS) invites nominations and applications for the position of Deputy Director, NINDS. The Deputy Director, NINDS serves as a full Deputy to the Institute Director in the coordination and management of all activities related to the mission and functions of the NINDS, in the execution of the policies of the Director, and in the allocation of resources to carry out these policies. The Deputy Director will assist the Director in oversight and direction of intramural Extramural Research Programs, and in representing the Institute in its relations with the Congress, the scientific community and lay communities.

This is a Civil Service Position in the Senior Executive Service with a salary range of \$96,830 to \$116,529 per year. Physicians may be eligible for a Physician's Comparability Allowance up to \$20,000 per year. A one-year probationary period must be served by the individual selected if not currently in the Senior Executive Service.

For more information on the position, contact Dr. Mark Hallett at (301) 496-1561 or Dr. Jonas Ellenberg at (301) 496-4106. For information regarding qualifications requirements, contact Ms. Christine Steyer at (301) 496-6334. Applicants should submit a curriculum vitae and bibliography to: **Ms. Christine Steyer, National Institutes of Health, NINDS Personnel Office, Building 31, Room 8A23, 31 Center Dr., MSC 2540, Bethesda, Maryland 20892-2540.** In addition, you may fax your application to Ms. Steyer at (301) 402-2818.

Applications must be submitted by April 3, 1995.

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

NIH is an Equal Opportunity Employer

### ASSISTANT OR ASSOCIATE PROFESSOR Cellular and Molecular Pathology

Mount Sinai School of Medicine and the Graduate School of Biological Sciences of the City University of New York invite applications for a

## Mount Sinai

position at the Assistant or Associate Professor level, to begin in September, 1995. Preferred research areas include control of DNA replication, cell cycle control mechanisms, tumor suppressor genes, signal transduction mechanisms, environmental mutagenesis, DNA repair and interaction of cell cycle and developmental controls.

The position is open to investigators with a degree of Ph.D. or M.D. and at least two years of post-

doctoral experience. Please submit a C.V. including a 1-page description of a projected research program together with names and addresses of three references. The successful applicant must demonstrate clear evidence of research excellence and will be expected to develop a strong, extramurally-funded research program. All faculty in the Department of Pathology participate in the teaching of both medical and graduate students.

Mount Sinai School of Medicine is located in Manhattan, adjacent to Central Park, near extensive cultural attractions and with convenient access to several excellent public and private schools. Applications should be sent to: Edward M. Johnson, Ph.D., Chair, Molecular Pathology Search Committee, Department of Pathology, Box 1194, Mount Sinai School of Medicine, One Gustave L. Levy Place, New York, NY 10029-6574. An Equal Opportunity Employer.

The Mount Sinai Medical Center of New York

### CELL MEMBRANE ION CHANNEL ELECTROPHYSIOLOGIST BS/MS

The Upjohn Company, is seeking a laboratory research associate for evaluation of drug effects on membrane ion channels and for elucidation of underlying mechanisms of drug-ion channel interactions. Depending on the project, the candidate may work on native ion channels in cardiac cells or smooth muscle cells, or cloned ion channels transfected in cultured mammalian cells or oocytes.

A minimum of a Bachelor's degree in a biological or closely related science with 2 years experience or a Master's degree is required. The candidate must be highly skilled in patch clamp work, both whole cell and single channel recording and be highly proficient in computer based data acquisition and analysis. Good written and oral communication skills are required.

In addition to an excellent salary and benefits package Upjohn Laboratories offers a stimulating, multidisciplinary research environment at modern facilities in Kalamazoo, a southwestern Michigan community located midway between Chicago and Detroit. Our region offers and outstanding mix of cultural and recreational pursuits and an attractive cost of living.

For confidential consideration, please send your resume to: The Upjohn Company, Corporate Recruiting, Position #252, 7000 Portage

Road, Kalamazoo, MI 49001. We are an equal opportunity employer with a commitment to workplace diversity.



THE UNIVERSITY OF BRITISH COLUMBIA



In association with



### CENTRE FOR MOLECULAR MEDICINE AND THERAPEUTICS, VANCOUVER 8 Faculty Positions

We invite applications for 8 positions at the Professor, Associate Professor and Assistant Professor levels from exceptional basic and clinical scientists. Successful candidates will have a record of research accomplishment or have demonstrated the potential to contribute to advanced research programs in the fields of neuroscience, cardiovascular research, or molecular medicine. The anticipated start date for the first of these positions is **July 1, 1995**.

The Centre for Molecular Medicine and Therapeutics will be a new dynamic multi-disciplinary environment for conducting innovative research, and is a result of partnerships between university, hospital, government and industry. The Centre is associated with the British Columbia Research Institute for Child and Family Health and the Merck Frosst Centre for Therapeutic Research, Montreal. It will be located in a new research facility adjacent to B.C.'s Children's Hospital and B.C.'s Women's Hospital and Health Centre sites in Vancouver.

The Centre's goal is to employ new approaches in molecular and cell biology and genetics to obtain fundamental advances in knowledge which will lead to novel therapeutic strategies. Areas of research emphasis will include, but are not limited to:

- human molecular genetics
- biochemistry and cell biology
- transgenic models and molecular physiology
- genetic therapies

### HEAD, OFFICE OF PUBLIC OUTREACH

The Space Telescope Science Institute, which conducts the science program of the Hubble Space Telescope, is seeking a Head for its Office of Public Outreach, with overall responsibility for the Institute's public outreach program. This program includes both education and public information activities. Our goals are to communicate the new knowledge found by HST, encourage the use of astronomy results in the classroom, and promote scientific and technical literacy in the public at large.

The Office of Public Outreach consists of an education group, a news and information group, and an outreach products and services group, including graphics, photography, image processing, video animation and basic video production capabilities. We very actively support NASA in its HST outreach activities, with news releases, TV programs, and publications, and we are initiating numerous public and classroom education activities. The Institute has an active astronomy research staff, a software and engineering staff, the HST science operations facilities and the HST data archive.

The Head of the Office of Public Outreach must be able to provide leadership and vision to the Space Telescope Science Institute's growing astronomy public outreach program. Candidates must have the ability to identify and pursue new opportunities and partnerships. They must have good management skills, being expected to oversee a broad program with a staff that is exprected to number about 15-20 this year, including astronomers, education specialists, and media relations and technical support staff. They should have experience in science communication to the public and/or formal science ducation. The ideal candidate would possess an advanced degree, with a background in astronomy or another science. A current research program in astronomy or another science. A current research program in astronomy or another science in a papointment could be made on the tenure track or at a tenured level, if appropriate.

STScI is committed to equal opportunity: Women and minorities are strongly urged to apply. Candidates should send a resume and the names of three references to the following address: Human Resources Manager, Space Telescope Science Institute, 3700 San Martin Dr., Baltimore, MD 21218. Applications received by April 1,1995 will receive full consideration. EOE/M/F/D/V.



### POSTDOCTORAL FELLOWSHIPS AVAILABLE

The Center for Insect Science, through a training grant from the National Institutes of Health, is offering three to four postdoctoral fellowships on the interface between molecular biology and the biochemistry, physiology, neurobiology, genetics, and ecology of insects. Appointments are for two years, depending on availability of funds and satisfactory performance. In addition to a stipend, fellows receive funds to support their research. Fellows will also be encouraged to develop their own ideas in an atmosphere that is supportive, but that demands independent thinking and collaboration with colleagues. Applicants must have a Ph.D. degree, and according to the terms and conditions of the grant, must be U.S. citizens or permanent residents. Candidates with previous NRSA support should note the statutory limitation of three years total aggregate support. Application deadline: April 15, 1995 or until positions are filled.

To apply, please send an introductory cover letter with a statement of research interests, curriculum vitae, and names of three references to:

> Dr. Edmund A. Arbas, Chair Search Committee Center for Insect Science Life Sciences South, Room 225 University of Arizona Tucson, AZ 85721

Applications from women and members of minority groups are particularly encouraged. The University of Arizona is an Affirmative Action/Equal Employment Opportunity/ADA Employer.

Investigators will conduct competitive research programs and will achieve effective collaborations with university-based, clinical-based and industrial research colleagues. While the Centre's programs are core-funded by a grant from Merck Frosst Canada, investigators will have the opportunity to attract substantial independent research funding. Successful applicants will be both members of the Centre and a Department in the Faculty of Medicine, University of British Columbia. Salary will be commensurate with experience and audifications.

Applications should be received by **May 31, 1995** and should include a curriculum vitae, three references, a summary of research accomplishments, and information on future research directions.

The Centre for Molecular Medicine and Therapeutics and University of British Columbia encourage all qualified applicants to apply. This includes women, aboriginal people, visible minorities and persons with disabilities, and in accordance with Canadian Immigration requirements, is particularly directed at Canadian Citizens and permanent residents of Canada. International applications are welcome. <u>Send applications in confidence to</u>:

Dr. Michael Hayden Director Centre for Molecular Medicine and Therapeutics c/o Faculty of Medicine, University of British Columbia IRC Rm. 317 - 2194 Health Sciences Mall Vancouver, B.C. Canada V6T 1Z3

### Physical Oceanographer Oceanography Division Naval Research Laboratory

The Oceanography Division invites applications for the position of Head, Meso-and Finescale Ocean Physics Section, in the Ocean Sciences Branch. The Branch conducts a broad program of basic and applied oceanographic research that includes: coupled hydrodynamical, atmospheric, biodynamical and optical models, ocean optics, small scale turbulence and mixing, surface waves, ocean dynamics, and microbiologically influenced corrosion. The Meso-and Finescale Ocean Physics Section conducts experimental and theroretical analyses of mesoscale, finescale and microscale processes. Research work is supported by a suite of modern in situ measurement systems, workstation networks and access to high-performance computing facilities. The current Section emphasis includes: upper ocean turbulent mixing, methods for optimizing sampling of hydrody namic and thermohaline variability on continental shelves; littoral zone bubble distributions; deep west-ern boundary current structure in the Northern Pacific. The Head of this Section leads in the formulation and conduct of research projects with a preferred emphasis on littoral and continental shelf dynamical processes. SALARY: \$59,920 to \$77,983 (GM-1360-14, Supervisory Oceanographer), dependent on quali-fications. QUALIFICATIONS: Ph.D., or equivalent, in physical oceanography with a documented record of research accomplishments and research team leadership. Ability to obtain a security clearance and pass a *fitness for sea duty* medical examination are required. Applicants should submit a detailed resume or an optional Application for Federal Employment (OF-612) to: Naval Research Laboratory, Human Re-sources Office (Code 1870), ATTN: Mrs. P. Buehler, Stennis Space Center, MS 39529. Resumes/Application forms must be postmarked no later than April 1995. For additional information, contact Mrs. Pam Buehler at (601) 688-5731.

AN EQUAL OPPORTUNITY EMPLOYER U.S. CITIZENSHIP REQUIRED.

## COMPUTER/ANALYTICAL SCIENTIST

Bristol-Myers Squibb Company is seeking a Computer/ Analytical Scientist for its Syracuse facility.

## Bristol-Myers Squibb

Responsibilities include performing quantitative analytical testing on development and in-process samples of proteins and small molecules; and developing and/or implementing computer systems for sample tracking, result reporting, and QC analysis. Some development and validation of analytical methods may be required, as well as writing of Standard Operating Procedures and Validation Documents. Compliance with GMP performance and documentation guidelines is required.

To qualify, you must have a B.S. in Chemistry, Biochemistry or related field and 2-4 years experience, or an M.S. in related field with 0-2 years experience. Knowledge of quantitative analysis of biomolecules (HPLC, immunoassay, capillary electrophoresis) and experience with computer controlled analytical laboratory instrumentation and computerized data acquisition/analysis are essential. Experience with robotic systems or laboratory information management is highly desirable.

We offer an excellent salary, comprehensive benefits and a working environment conducive to professional growth. For consideration, forward your resume with salary requirements to: Manager of Human Resources, BRISTOL-MYERS SQUIBB, Position #SY-950023, P.O. Box 4755, Syracuse, NY 13221-4755.

Equal Opportunity Employer, M/F/D/V

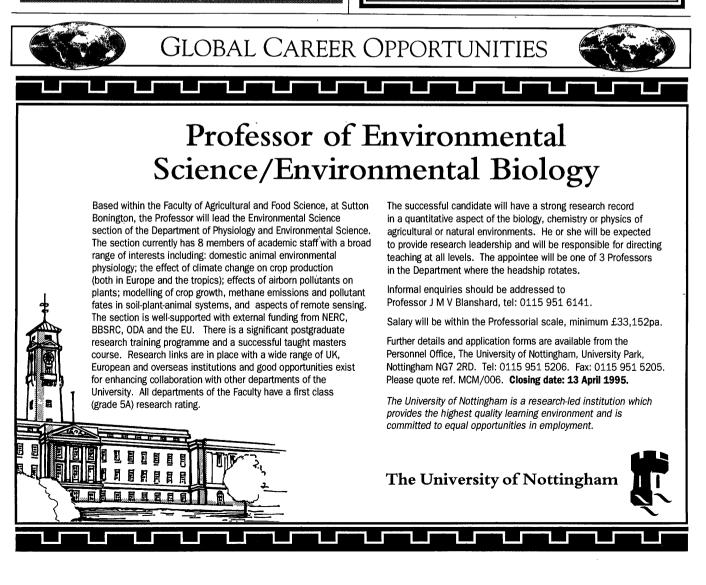
### INDEPENDENT, TENURE TRACK STAFF POSITION AT NIH

The Laboratory of Biochemistry, National Cancer Institute, National Institutes of Health seeks to appoint a junior scientist to initiate an independent, tenure track program of basic research. Applications are invited from candidates with demonstrated potential for creative research in the biological sciences. The Laboratory of Biochemistry is composed of 14 research groups that study diverse problems in bacteria, yeast, fly, and animal cells, employing techniques of classical and molecular genetics, protein chemistry, biochemistry, and cell biology.

To apply, please send a curriculum vitae, bibliography, brief statement of research interests, and three letters of recommendation to:

> Dr. Carl Wu, Chair, Search Committee Laboratory of Biochemistry NIH/National Cancer Institute Bldg. 37, Room 4E28 9000 Rockville Pike Bethesda, MD 20892-4255

NIH/NCI is an Equal Opportunity Employer



### NATIONAL UNIVERSITY OF SINGAPORE DEPARTMENT OF PHYSIOLOGY



Applications are invited for **faculty appointments** in the **Department of Physiology.** 

Candidates should have an MD or PhD degree or equivalent and have had at least two years of postdoctoral research experience in one of the following areas:

- (a) aspects of cellular and molecular physiology related to the regulation of cell growth and differentiation
- (b) mechanism of action of hormones and hormone antagonists
- (c) cancer cell biology

The appointee will be expected to develop an independent research programme in his/her own area of interest. Ability to teach human physiology at undergraduate and postgraduate levels is a requirement.

Gross annual emoluments range as follows:

Lecturer Senior Lecturer Associate Professor \$\$59,010 - 71,400 \$\$65,200 - 122,820 \$\$108,820 - 151,480

### (US\$1.00 = S\$1.44 approximately)

The commencing salary will depend on the candidate's qualifications, experience and the level of appointment offered. In addition, a 13th month Annual Allowance (of one month's salary) and an Annual Variable Component (of normally 2 months' salary) are payable at year end, under the flexible wage system, to staff on normal contracts.

In addition, appointees who possess an approved basic medical degree and a recognised higher academic/professional qualification may opt to retain consultation fees under the Consultation/OutsideWork Scheme, or to receive a Fixed Allowance, the annual rates for which are as follows:

Lecturer	S\$6,000/9,000
Senior Lecturer	S\$15,000
Associate Professor	S\$21,000

Leave and medical benefits will be provided. Depending on the type of contract offered, other benefits may include: provident fund benefits or an end-of-contract gratuity, a settling-in allowance, subsidised housing or a housing allowance, education allowance for up to three children subject to a maximum of S\$16,425 per annum per child, passage assistance and baggage allowance for the transportation of personal effects to Singapore.

All academic staff will be given a networked personal computer with access to a Cray supercomputer, UNIX hosts, departmental laser printers, a wide spectrum of software, on-line library catalogue, CD-ROM databases, Teleview, INtv and Internet.

Application forms and further information on terms and conditions of service may be obtained from:

The Director Personnel Department National University of Singapore 10 Kent Ridge Crescent Singapore 0511

The Director North America Office National University of Singapore 55 East 59th Street New York, N.Y. 10022, U.S.A. Tel: (212) 751-0331

Enquiries may also be sent through **BITNET** to: **PERLIMMJ@NUS3090**, or through **Telefax:** (65) 7783948

### MOLECULAR BIOLOGIST

Agouron Pharmaceuticals, Inc., a cutting-edge leader in the field of protein structure-based drug design, has an immediate opportunity for a Ph.D. level scientist to join its multidisciplinary team of researchers in the Molecular Biology/Biochemistry group. Agouron invites applications from talented scientists with experience in cloning and protein expression.

Successful candidates will be expected to interact closely with Agouron's crystallography department, especially to optimize vector constructs for crystallization. Prior experience with protein kinases is required. Prior experience with insect and/or mammalian cell expression is a plus.

We offer state-of-the-art facilities and competitive salaries and benefits. Please send a curriculum vitae and references to:

Human Resources, Code JC EOE. Principals only.





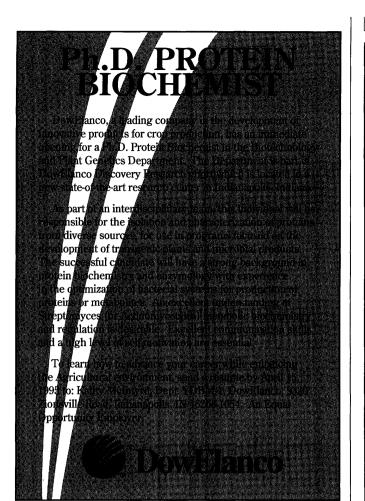
The Lubrizol Corporation, a global Fortune 500 innovation leader in specialty chemicals, has outstanding opportunities for experienced toxicologists.

Responsibilities involve scheduling testing, auditing and reviewing studies, summarizing data and classifying chemical hazards.

You will need a background that includes mammalian toxicology training; BS, MS or Ph.D. level with up to 10 years' experience. Good communications and interpersonal skills are required. Computer proficiency is desirable. Positions will report to the Manager of Toxicology in our Product Safety and Compliance Department.

We offer an attractive salary, benefits and relocation package, plus tremendous potential for professional growth. Please send resume/ salary history in confidence to The Lubrizol Corporation, Attn: Elizabeth Martin, 29400 Lakeland Blvd., Wickliffe, OH 44092.





### The Faculty of Science invites applications for a Chair in Plant Systematics

We are seeking a scientist in the field of molecular plant systematics (preferably macrosystematics). Zurich offers extensive plant collections in the Botanic Garden and Herbarium. The position includes teaching at undergraduate and graduate levels. The new professor will be responsible for establishing a research group. Collaboration with existing research groups in systematic botany and other fields of biology is expected, as is participation in the directorship of the institute. The successful candidate is expected to acquire proficiency in German within two years.

Applications, with curriculum vitae, record of teaching and research activities, and a list of publications should be sent by 15 April 1995 to

> Dekan der Philosophischen Fakultät II Prof. Dr. H. Fischer Universität Zürich-Irchel Winterthurerstrasse 190 CH-8057 Zürich Switerzerland

For further informations:

Prof. Dr. Peter K. Endress Institut für Systematishce Botanik Universität Zürich Zollikerstrasse 107 CH-8008 Zürich Switzerland +1 385 44 20/11 Phone +1 385 44 04 Fax email pendress@systbot. unizh.ch

UX ET VERITA

YALE UNIVERSITY SCHOOL OF MEDICINE

The Department of Epidemiology and Public Health invites applications for an ASSOCIATE or FULLPRO-FESSOR position. We seek a nationally or internationally recognized virologist (Ph.D. and/or M.D.) with demon-strated ability in establishing an externally funded research program. Candidates are sought with expertise in mo-lecular virology and epidemiology of emerging viruses; experience in molecular evolution is desirable. The investigator's interests should fit with existing programs in evolution, pathogenesis and epidemiology of arbovi-ruses and arenaviruses; participation in teaching medical and graduate students is expected.

Application reviews will begin April 1, 1995, and con-tinue until the position is filled. Candidates should submit unic unit in position is interaction of research interests, three reprints and the names of three professional refer-ences to: Dr. Robert W. Ryder, Department of Epidemiology and Public Health, Yale University School of Medicine, P.O. Box 208034, 60 College Street, New Haven, CT 06520-8034.

The Department of Epidemiology and Public Health invites applications for an ASSISTANT PROFESSOR position. We seek a virologist (Ph.D.) with potential to establish an externally funded research program. Candidates are sought with expertise in molecular virology and epidemiology of emerging viruses, especially hantaviruses; experience in molecular evolution is desir-able. The investigator's interests should fit with existing programs in evolution, pathogenesis and epidemiology of arboviruses and arenaviruses; participation in teach ing medical and graduate students is expected. Applications will be reviewed April 1- May 1, 1995.

Applications will be reviewed April 1- May 1, 1995. Candidates should submit curriculum vitae, a brief state-ment of research interests, three reprints and the names of three professional references to: Dr. Rebeca Rico-Hesse, Department of Epidemiology and Public Health, Yale University School of Medicine, P.O. Box 208034, 60 College Street, New Haven, CT 06520-8034. Yale University is an Affirmative Action/Equal Opportunity Employer. The Department of Evidemiology and Public

Employer. The Department of Epidemiology and Public Health encourages applications from women and minority group members.

GLOBAL CAREER OPPORTUNITIES

INSTITUTE OF GEOGRAPHY UNIVERSITY OF COPENHAGEN Øster Volgade 10 DK-1350 Kebenhavn K Øster Volgade 10

### **PROFESSORSHIP UNIVERSITY OF COPENHAGEN**

A Professorship in Geomorphology at the Institute of Geography, University of Copenhagen, Denmark, is available as of 1 December 1995.

The Institute of Geography seeks to develop and strengthen research that aims at an increased understanding of earth surface processes and landscape evolution including effects of landscape human interference.

In accordance with the Institute's development plan, which is available on request, applicants should have achieved scientific recognition within one or more of the following research areas: geomorphology (morpho-dynamics), transport of sediment and dissolved solids and landscape development in fluvial, eolian, littoral, estuarine or glacial environments.

Applicants should be able to document original and scientific production on an international level within one or more of the above mentioned fields. Furthermore, applicants should possess the ability to lead and inspire a group of researchers and be able to cooperate, not only with geomorphologists, but also with other groups within geography.

The successful candidate will be required to undertake both undergraduate and postgraduate teaching within physical geography. It is expected that the candidate is active and enterprising concerning the development of teaching methods and quality, not only within his/her own field of research, but also within other fields of physical geography. The language of instruction for undergraduate courses is Danish, but English will be accepted for the first two years of the appointment.

The application must include a *curriculum vitae* and a complete list of publications and three copies of those publications which are most relevant for this position (max 10 titles). Information about teaching experience must also be enclosed.

The Evaluation Committee may ask for supplementary material, which the applicant then must provide in the requested number of copies.

The professorship is a tenured position under the Ministry of Education. The annual salary is approximately 410,000 DKK after contributions to the pension scheme.

Information on research plans, facilities and staff of the institute may be obtained from the Head of the Institute of Geography

The application marked: 211-51/95-5208 and written in English, must formally be made to the Rector of the University of Copenhagen and mailed to the Faculty of Science, Blegdamsvej 3, DK-2200 Copenhagen N, Denmark

Attention should be paid to the fact that the entire report of the selection committee will be sent to all applicants, and that mutual confidence as regards fellow applicants is required.

Applications, in order to be considered, must have been received by the Faculty of Science no later than May 15, 1995.

Three copies of the application, and in addition three copies of a brief outline of proposed research, should be mailed to the Head of the Institute Geography, Øster Voldgade 10, DK-1350 Copenhagen K.





### AUSTRALIAN NUCLEAR SCIENCE & TECHNOLOGY ORGANISATION

ANSTO wishes to appoint an Executive Director to give leadership to and manage Australia's national nuclear science organisation at Lucas Heights Research Laboratories in Sydney, Australia

The Executive Director will provide the vision for ANSTO and will plan and manage the overall direction for research, operations, financial and human resource management and communications

ANSTO has important relationships with international safety and regulatory agencies. It is a frequent source of information and advice to government on nuclear matters. As the manager of several national facilities ANSTO provides resources to and often collaborates with universities and other science organisations.

The Executive Director is a member of the Board of Directors and is accountable to the Board for ANSTO's performance.

A well established record of achievement in executive management is required. Extensive experience in nuclear science management, research and technology will be highly regarded. The Executive Director will also be responsible and accountable for the safe operation of all nuclear plant and other complex facilities.

The ability to develop appropriate strategies within budgetary contexts to balance national interests and short/long term perspectives is necessary. A high level of interpersonal skills and an ability to communicate at all levels will be evident. An understanding of the use of nuclear science in industry and the structure of Australian industry would be desirable.

ANSTO operates under a continual change management process, and highly developed skills to achieve culture change are essential. Demonstrated skills and experience in negotiation/conflict resolution and an ability to be adaptable and flexible in approach are required. The Executive Director undertakes a lead role in negotiating and liaising at all levels of executive government.

The remuneration for the position is set by the Remuneration Tribunal. The salary is A\$120,000 pa and a performance-based payment of up to A\$20,000 may be payable depending upon the achievement of agreed performance criteria. Other benefits include a fully maintained car and contributory superannuation.

Enquiries in the first instance may be made to: Mr Rodney Watson, Director Personnel and Services, ANSTO, on telephone 61 2 717 3815, fax 61 2 543 7908.

Written applications are to be made to: Mr R. Ward-Ambler, Chairman, ANSTO, Private Mail Bag 1, Menai, NSW 2234, Australia, by 24 March, 1995.

> ANSTO is an equal opportunity\_employer. Smoking is prohibited in the workplace.

## Executive Director



### **UNIVERSITY OF MANCHESTER** SCHOOL OF OLOGICAL **Two Lectureships** SCIENCES

Following our recent success in recruiting to a number of new lectureships, the School of Biological Sciences now seeks to appoint outstanding individuals to two further posts, created to support our continuing programme of development.

Lectureship In Ecology Ref. 43/95 Applications are invited from researchers with a research record in any aspect of ecology. All areas will be given full consideration but we would especially welcome applications from those in the field of plant environmental biology. The successful candidate will be expected to establish a vigorous research programme, and to contribute to courses organised in both the Undergraduate and Postgraduate Schools. Contact: Professor M.J. Emes, tel: 0161 275 3899, fax: 0161 275 3954. E-Mail MEmes@fs2.scg.man.ac.uk

### Lectureship In Wound Healing Ref. 44/95

Applications are invited for this endowed post, from individuals researching in any area of tissue repair or related sciences e.g. extracellular matrix biology, growth factors, molecular biology, immunology, developmental biology, biochemistry etc. The successful applicant will be expected to establish a vigorous research group and to interact with a large number of researchers in the School, investigating various aspects of scar prevention, fetal healing and human chronic wound pathogenesis. Facilities are excellent and a generous start up package (involving interaction with a major health care company) is available for an appropriate applicant. The post is for five years in the first instance, renewable according to progress. Teaching duties are light. Contact: Professor Mark W.J. Ferguson, tel: 0161 275 6775 or 0161 275 5569, fax: 0161 275 5945 or 0161 275 5586. E-Mail SLong@fs2.scg.man.ac.uk

FOR ALL POSTS: The full range of the Lecturer Scale is £14,756 - £25,735 pa. Appointment will be made to a point on this scale appropriate to qualifications and experience. Initial enquiries concerning these posts should be made to the contact persons listed, who will be happy to discuss the opportunities in more detail and to arrange for informal visits, etc. Closing date for receipt of applications is March 13th 1995.

As an Equal Opportunities Employer, the University welcomes applications from suitably qualified people from all sections of the community regardless of race, religion, gender or disability. Promoting quality teaching and research.

## UNIVERSITY OF **)**XFORD

### **Cookson Professorship** of Materials

The electors intend to proceed to an to the Cookson election Professorship of Materials with effect from 1 October 1995. The stipend of the professorship is at present £35,859 per annum.

non-stipendiary professorial fellowship at St Catherine's College is attached to the professorship.

Applications (ten copies, or one only from overseas candidates), naming three referees should be received not later than 27 March 1995 by the Registrar, University Offices, Wellington Square, Oxford OX1 2JD, England, from whom further particulars may be obtained. (Confidential fax: 01865 280300.)

The University is an Equal Opportunity Employer.

The University exists to promote excellence in education and research

### GLOBAL CAREER OPPORTUNITIES



### **PROFESSOR AND** IRECTOR



### **Cooperative Research Centre for Tropical Rainforest Ecology and Management** Cairns

Canno The Centre was established in 1993 as part of the Commonwealth Cooperative Research Centres Program, and brings together in a cooperative venture, James Cook University of North Queensland, the University of Queensland and Griffith University, CSIRO Tropical Forest Research Centre and the Wet Tropics Management Authority. The inaugural Director of the Centre, Professor Jiro Kikkawa will retire in 1995 retire in 1995.

The appointee will be responsible for the efficient and effective In an agement of the Centre. In particular the Director will be expected to foster excellence and provide creative leadership with the aim of integrating and guiding the evolution of the Centre's multidisciplinary research programs which are conducted by a variety of groups and individuals. The appointee is expected to be actively involved in one or more CRC research programs, and to seek additional resources for the Centre when the opportunity arises.

Applicants must have appropriate qualifications and experience including an established international research reputation supported including an established international research reputation supported by a strong record of publication in refereed journals. Experience in research administration and good communication skills are also required. Experience in the development of policies and strategies for multidisciplinary research and its applications in conjunction with industry, community and other groups is desirable.

A commitment to biological conservation and the ecologically sustainable use of natural resources will be expected. Experience in tropical rainforest ecosystems will be an advantage.

tropical rannorest ecosystems will be an advantage. The Director will be located at the CRC-TREM headquarters on the Cairns campus of James Cook University. **Tenure:** Appointment as Professor will be on a tenured basis and the position of Director will be offered for an initial term of five years.

Base Salary: Professor Academic Level E A\$80,176 a year.

Further information may be obtained from the Recruitment Officer, Human Resources Division, James Cook University of North Queensland, Townsville Q 4811, Australia. Phone 61 77 81 4880; Fax 61 77 81 5644. Applications close on 31 March 1995. Quote J195035.

Equal Opportunity in Employment is University Policy The University has a "Smoke-Free Working Environment" Policy

JAMES COOK UNIVERSITY 8653158 NORTH QUEENSLAND



### INTERNATIONAL CENTRE FOR RESEARCH IN AGROFORESTRY

GERMPLASM SPECIALIST MULTIPURPOSE TREE GERMPLASM RESOURCE UNIT

The International Centre for Research in Agroforestry (ICRAF) is an international research organization supported by the Consultative Group on Interna-tional Agricultural Research (CGIAR). Its ultimate purpose is to help mitigate tropical deforestation, land depletion and rural poverty through the better use of trees and shrubs in crop and livestock production systems in humid, sub-humid and semi-arid tropics.

ICRAF is seeking to fill an internationally-recruited senior position of Germ plasm Specialist for Multipurpose Tree Germplasm Resource Unit (MPT-GRU). He/She will develop annual programme of work and budget for the following activities: exploration, germplasm collection, documentation, establishment of seed multiplication sites and living gene banks, supervision of the development of the MPT information database activities and seed distribution activities. The incumbent should also develop effective collaborative networks with NARS National Gene Banks especially in exploration and collection of germplasm with appropriate training and prepare appropriate protocols for all collection expedi-tions. He/She will liaise with other international groups; promote the orderly development of the MPT-GRU laboratories and offices in the new research building scheduled for completion in 1996 and participate in ICRAF training activities for NARS collaborative counterparts and supervise MPT GRU staff.

The successful candidate must have a PhD degree or equivalent in some aspect of forest genetic resources with at least 5 years of international research experi-ence. The candidate should have excellent command of English while knowledge of French or Spanish would also be highly desirable. He/She should have field experience in several tropical countries with a flair for strategic thinking in addressing worldwide strategic issues in forest genetic resources also with successful management experience. Ability to work in a cross-cultural and multidisciplinary environment is essential.

An internationally competitive salary and benefits package will be provided. ICRAF offers a collegial and gender-sensitive working environment. Initial appointment is for two years, renewable upon satisfactory performance.

Applicants are invited to send a detailed curriculum vitae, salary details and the names and addresses of three referees (including telephone and fax numbers an E-Mail address if available). All correspondence should be addressed to the Head of Human Resources, International Centre for Research in Agroforestry, P.O. Box 30677, Nairobi, Kenya Tel: (254-2) 521450; E-Mail: R. Lécuyer@CGNET.COM, Fax: (254-2) 521001.

Woman are particularly encouraged to apply.

Applications will be considered until 30th April, 1995 or until a suitable candidate is found.

ICRAF IS AN EQUAL OPPORTUNITY EMPLOYER



### **BIOMEDICAL SCIENCE**

### ASSOCIATE PROFESSOR, SENIOR LECTURER, LECTURER, ASSOCIATE LECTURER Continuing/Convertible (Limited Term) 5 years/Fixed Term (up to 4 Years) Appointments

Three vacancies exist and may be filled at one or more of the above levels. An outstanding applicant with the demonstrated capacity for research leadership may be considered for a Professorial level appointment.

This newly reorganised department within the Faculty of Health and Behavioural Sciences has a mandate to create a strong, research-oriented department dedicated to producing quality graduates in the health and biomedical sciences. A new building to house the Faculty is under construction and will include excellent research and postgraduate facilities. Undergraduate courses include Biomedical Science, Human Movement Science and a new 4-year program in Exercise Science. The department services the Anatomy and Physiology disciplines for the University.

Department research focuses on the roles of diet, exercise and genetic factors in the health and disease. Particular research strengths are in energy balance, diabetes, exercise and environmental physiology, central and autonomic nervous system, stress physiology, biomechanics, ageing and anatomy. Our research approaches range from intracellular metabolism in cell culture to human clinical studies.

One of the successful applicants will be expected to contribute to the undergraduate and postgraduate teaching program in the area of exercise science/rehabilitation and should have qualifications in such areas as exercise physiology, pharmacology, clinical biomechanics or rehabilitation medicine. Excellent opportunities exist within the University and the Illawarra Area Health Service for interdisciplinary research and clinically qualified applicants are encouraged to apply.

A full-time or two fractional (up to 50%) positions are available at the Associate Lecturer level. These would suit good Honours or Masters graduates or particularly MEDICAL GRADUATES who would like to obtain teaching experience while doing research towards a PhD. In addition scholarships for PhD study are available for Medical Graduates who are considering a Research or Academic career. These can be taken up full-time or part-time in combination with a fractional appointment at Associate Lecturer level.

Further information from Professor L Storlien (042) 21 3881, Fax (042) 21 4096 or email I.storlien@uow.edu.au Reference Client Group A95-037. Closing date 10 March 1995. Annual salary \$61,322 - \$67,558 Associate Professor (Level D), \$50,928 - \$58,724 Senior Lecturer (Level C), \$41,574 - \$49,370 Lecturer (Level B), \$29,539 - \$39,495 Associate Lecturer (Level A). Position classification standards are available for each level. Please nominate the level you are applying for and if you are interested in a fractional appointment.

Position specific enquires from the contact person, information on conditions of employment from the Personnel Officer, Client Group A on (042) 21 3276. Applications should quote the reference, contain details of qualifications, employment history, names and address of three referees (including fax or e-mail address). Academic appointments should also include research interests and publications. Address to Personnel Officer (Client Group A). Please mark envelope 'Confidential Appointment' Mail address: University of Wollongong, Northfields Avenue, Wollongong NSW 2522. Electronic address s.branch@uow.edu.au Secure fax (042) 21 3700.

Equality of employment opportunity and a smoke free work environment are University policies.

₹

GLOBAL CAREER OPPORTUNITIES





### **GRANTS FOR INTERNATIONAL JOINT RESEARCH** IN THE AREAS OF MATERIALS, ENERGY AND GLOBAL ENVIRONMENT

The New Energy and Industrial Technology Development Organization (NEDO), a Japanese governmental implementing agency supervised by the Ministry of International Trade and Industry (MITI) of Japan, has been carrying out an International Joint Research Program since 1988. This program aims to contribute to the enhancement of the international level of industrial technology as well as to the advancement of international exchange by supporting international joint research teams which conduct superior research. In addition to supporting international joint research teams which conduct original and innovative basic research in the materials area, international joint research teams which conduct research in the energy area and the global environmental area will be provided with grants in FY 1995. The program in the global environment area will be conducted jointly with the Research Institute of Innovative Technology for the Earth (RITE).

### Research grants will be provided to "International Joint Research Teams" which fulfill the following main requirements:

- 1. Each team, in principle, must be composed of four or more researchers;
- 2. Each team must consist of researchers of two or more different nationalities;
- The research organizations where the team members' major activities take place must be located in two or more countries.

Each team must appoint a research coordinator and an accounting coordinator. The accounting coordinator must be responsible for accounting matters and function as the liaison between the team and NEDO. The accounting coordinator's organization and research site must be located in Japan, and he/she must be able to communicate with NEDO in Japanese about all accounting matters. The research coordinator can also hold the post of accounting coordinator.

FY 1995's program is shown below.

Research Area	Field of Research	Amount of Each Grant	Number of Themes to be Adopted	Recipients of Applications
Materials	<ol> <li>Basic research concerning the investigation and elucidation of materials</li> <li>Basic research concerning the practical use of materials</li> </ol>	about 30,000,000 yen in FY 1995	5 themes	NEDO (Note a.)
Energy	<b>Practical research</b> on electric power generation technologies using oil-alternative energy, on load leveling technologies and on global environment conservation related to such technologies.	about 30,000,000 yen in FY 1995	4 themes	
Global Environment	(Basic research) on conservation and improve- ment of the global environment.	about 24,000,000 yen in FY 1995	2 themes	RITE
	(Practical research) concerning the production, generation and use of oil-alternative energy (ex- cluding electric power generation technologies) which contributes to the conservation and im- provement of the global environment.	about 30,000,000 yen in FY 1995	1 theme	(Note b.)

(Recipients of applications)

Note a. Materials and Energy area

International Joint Research Division,

Industrial Technology Department

- New Energy and Industrial Technology Development Organization (NEDO) Address : PO Box 1151, 29F, Sunshine 60 Bldg.
- - 3-1-1 Higashi-Ikebukuro, Toshima-ku,
    - Tokyo, 170 Japan
- Phone No. : 81-3-3987-9357

Telefax No.: 81-3-3981-1536

- Note b. Global environment area
  - Research Proposals Reception Section,
  - Research Planning Department
  - Research Institute of Innovative Technology for the Earth (RITE)
    - Address : 9-2 Kizugawadai Kizu-cho Soraku-gun,
    - Kyoto, 619-02 Japan
    - Phone No. : 81-774-75-2302
    - Telefax No.: 81-774-75-2314

Please be informed that the amount of each grant and the number of themes to be adopted may be changed, and that this grant program is subject to government budget approval. A research team may submit an application a maximum of two times for a grant on the same subject.

The application period is from January 26, 1995 to April 26, 1995.

No applications will be accepted later than April 26th.

ATTENTION: If there are some discrepancies in a submitted application, for example, it does not follow the Application Guidebook or the research contents are different from the proposed research area, it will be considered invalid.

### **POSITIONS OPEN**

### POSTDOCTORAL POSITION INTEGRIN SIGNALING

A POSTDOCTORAL RESEARCH POSITION is available for a highly motivated individual to contribute to a multidisciplinary team focused in the area of integrin structure and function. The successful candidate will work closely with accomplished molecular biologists, cell biologists, protein biochemists, immunologists and pharmacologists in an environment designed to foster individual growth and creativity. The candidate should have demonstrated expertise in molecular biology, cell biology or protein biochemistry. Experience in integrin signaling is desirable. Send curriculum vitae, statement of research interests, and names of three references to: Mary Jeannette, The DuPont Merck Pharmaceutical Company, Postdoctoral Program, Position No. 95-TR, P.O. Box 80353, Wilmington, DE 19880-0353. An Equal Opportunity Employer.

**POSTDOCTORAL RESEARCH ASSOCIATE** position is available immediately to apply molecular techniques to investigate adaptation and divergence among strains of Aspergillus flavus. Techniques to differentiate strains will be developed and applied to a subset of an existing, rigorous sampling of A. flavus communities in order to answer fundamental questions about community development. Position is temporary, requires a related Ph.D. earned within the last four years, and will be filled at the GS-11 level (\$35,578 per annum). Send curriculum vitae to: Peter J. Cotty, USDA, ARS, Southern Regional Research Center, P.O. Box 19687, New Orleans, LA 70179. Telephone: 504-286-4391. The USDA is an Equal Employment Opportunity/Affirmative Action Employer.

**POSTDOCTORAL POSITION** to study the molecular basis of morphogenesis and/or tissue engineering. We are interested in the regulation of integrin gene expression by homeobox genes (*J. Biol. Chem.*, 267:23502). Candidates will receive experience in molecular biology and have opportunity to interact with clinical group involved in tissue engineering. Please send curriculum vitae, statement of interests and names of three references to: Robert J. Klebe, Department of Cellular and Structural Biology, The University of Texas Health Science Center, San Antonio, TX 78284-7762. The University of Texas Health Science Center at San Antonio is an Equal Employment Opportunity/Affirmative Action Employer.

POSTDOCTORAL POSITION available to candidates with experience in molecular biology or mouse developmental biology. Studies include the analysis of the actions of vitamin A and retinoic acid during embryonic development and in normal vs. tumorigenic epithelial cells. Send curriculum vitae, names of three references, and a statement of research interests to: Dr. Lorraine J. Gudas, Department of Pharmacology, Cornell University Medical College, 1300 York Avenue, New York, NY 10021. An Equal Opportanity Employer/Affirmative Action/Minority/Fenale/Veterans.

### POSTDOCTORAL POSITION

Immediate opening to explore the role of endothelial receptors in angiogenesis. Proficiency required in molecular biology/protein biochemistry or zebrafish developmental biology. Send curriculum vitae, and the names and addresses of three references to: Dr. Kevin G. Peters, Duke University Medical Center, Box 3623, Durham, NC 27710. Telephone: 919-684-2119; FAX: 919-684-8591; Email: kpg@hodgkin.mc.duke.edu.

POSTDOCTORAL POSITION in the pharmacology of tumor imaging agents to conduct multidisciplinary research in the development of new radiopharmaceuticals for PET and SPECT imaging. Position requires a Ph.D. in pharmacology or biology; a background in cancer research is preferable. Please send curriculum vitae to: Dr. Hank F. Kung, Departments of Radiology and Pharmacology, University of Pennsylvania, Room 305, 3700 Market Street, Philadelphia, PA 19104. Email: kungh@sunmac.spect.upenn.edu.

### POSTDOCTORAL POSITION

Project: Studies of the role of the band 3-related adhesin of malaria-infected erythrocytes in endothelial binding. Applicants should have a doctorate with previous experience in membrane protein isolation and characterization. Send curriculum vitae and three references to: **Professor Irwin Sherman, Department of Biology, University of California, Riverside, Riverside, CA 92521.** An Equal Opportunity Employer.

### **POSITIONS OPEN**

### POSTDOCTORAL POSITIONS

Two **POSTDOCTORAL POSITIONS** are available immediately to study the structure-function relationships and regulation of type 1 and type 2A Ser/Thr protein phosphatases. Particular emphasis is placed in studying the role of these enzymes in transmission of growth factor signals which lead to metabolic responses, control of gene expression and cell cycle regulation. Experience in enzymology/cell biology/molecular biology or yeast genetics is required.

Please send curriculum vitae and have three letters of reference forwarded to: Anna DePaoli-Roach, Ph.D., Department of Biochemistry and Molecular Biology, Indiana University School of Medicine, 635 Barnhill Drive, Indianapolis, IN 46202. FAX: 317-274-4686; Telephone: 317-274-1585; Email: depaoliroach@iucc.iupui.edu. Indiana University is an Equal Opportunity/Afirmative Action Employer.

POSTDOCTORAL RESEARCH ASSOCIATE— Applications are invited for an immediate postdoctoral position in Virology to study molecular mechanisms of lymphocyte transformation by Epstein-Barr virus. Candidates must have a Ph.D. or M.D. with laboratory expertise in molecular cloning and protein analysis. Experience in cellular immunology would be helpful. Studies will examine novel genes induced by EBV infection and the roles of these genes in B cell growth regulation and transformation. Submit curriculum vitae and names of three references to: Mark Birkenbach, M.D., Kovler Viral Oncology Laboratories, The University of Chicago, 910 East 58th Street, Chicago, IL 60637. FAX: 312-702-3791. An Affirmative Action/Equal Opportunity Employer.

**POSTDOCTORAL/RESEARCH** ASSOCIATE **POSITION(S)**. Research involves enzyme mechanism and enzyme structure-function studies and requires experience in protein purification and characterization and recombinant DNA techniques. Send curriculum vitae, statement of research interests and experience, and the names and telephone numbers of three references to: Dr. C. A. Caperelli, Division of Pharmacology and Medicinal Chemistry, College of Pharmacy, University of Cincinnati Medical Center, 3223 Eden Avenue, Cincinnati, OH 45267-0004.

POSTDOCTORAL FELLOWSHIPS for training in Immunology and Virology at the University of Massachusetts Medical Center. Cellular Immunology: Robert Humphreys, M.D., Ph.D.; Lawrence Jung, M.D.; Carol Miller, Ph.D.; Peter E. Newburger, M.D.; Gyongyi Szabo, M.D., Ph.D.; Robert T. Woodland, Ph.D. Molecular Immunology: Janet Stavnezer, Ph.D. Viral Immunology: Neil R. Blacklow, M.D.; Francis A. Ennis, M.D.; John E. Herrmann, Ph.D.; John L. Sullivan, M.D.; Raymond M. Welsh, Ph.D. Molecular Virology: Trudy G. Morrison, Ph.D.; Carel Mulder, D. Phil.; Ronald M. Iorio, Ph.D.; Harriet L. Robinson, Ph.D. Experimental Diabetes: Dale Greiner, Ph.D.; Arthur A. Like, M.D.; Aldo A. Rossini, M.D.; Bruce A. Woda, M.D. Candidates interested in joining this active, multidisciplinary, NIH-supported training program should send a curriculum vitae, the names of three references, and a letter stating their research interests and the laboratories in which they would be interested in undertaking training to: Dr. Janet Stavnezer, Department of MGM, University of Massachusetts Medical Center, 55 Lake Avenue North, Worcester, MA 01655. The University of Massachusetts Medial Center is an Afitmative Action Employer.

### POSTDOCTORAL FELLOW

Available immediately in human tumor genetics. Study involves molecular genetics to assess metastatic breast and/or gastrointestinal carcinomas genotypes for diagnosis. Excellent clinical resources and facilities. Must be well experienced in molecular genetics of human tumors. Send curriculum vitae and references to:

National Genetics Institute 5839 Green Valley Circle, No. 104 Culver City, CA 90230

POSTDOCTORAL TRAINEES, Neuroscience. Research with Drs. Eric Simon (opioid receptors), Eric Stone (catecholamines and stress) or Ken Carr (opioids and motivated behavior). Start April 1 to September 1, 1995. Contact: Dr. Carr, Millhauser Lab, NYU Medical Center, 550 First Avenue, New York, NY 10016. U.S. citizenship or permanent residency required. An Affirmative Action/Equal Opportunity Employer.

### **POSITIONS OPEN**

#### BIRTH DEFECTS MOLECULAR MECHANISMS Postdoctoral Fellow/Research Associate

Position available to investigate molecular and cellular mechanisms of birth defects. Studies include analysis of cellular signal transduction mechanisms. Particular emphasis directed toward clarification of interactions among growth factors, protein kinases and transcription factors in regulating gene expression and cell differentiation during normal and abnormal mammalian embryonic development. Strong background in biochemistry, cell and/or developmental biology required; expertise in molecular methodologies recommended. Inquiries may be sent to: Dr. Robert M. Greene, Molecular Determinants of Birth Defects Training Program, Department of Pathology, Anatomy and Cell Biology, Room 511 J.A.H., Thomas Jefferson University, 1020 Locust Street, Philadelphia, PA 19107. We are an Equal Opportunity Employer.

### POSTDOCTORAL FELLOW

Position(s) available immediately in the laboratory of **Dr. Harold A. Singer**, at the Sigfried and Janet Weis Center for Research to identify calcium/calmodulin dependent protein kinase II isozymes and evaluate structure/function in smooth muscle. Applicants should have training in molecular biology or biochemistry. Experience in one or more of the following areas is desirable: control of gene expression and/or cell growth, protein kinase enzymology, smooth muscle contractile protein regulation. Send curriculum vitae, a statement of research interests, and names with telephone numbers of three references to: **Geisinger Human Resources (HS)**, **100 North Academy America Protein**, *Employer/Minority/Female/Disabled/Veterans*.

**POSTDOCTORAL FELLOWSHIP** at Harvard Medical School. Applications are invited for the position of research associate to conduct work on an NIH-funded study of the role of macrophage receptors involved in the binding and metabolism of endotoxin and oxidized lipids. Qualified applicants will possess a Ph.D. degree and relevant experience in molecular and/or cell biology. The term of the fellowship is three years, with the possibility of extension. Applicants should send a curriculum vitae and the name of their current preceptor as well as that of at least one other person familiar with their research to: Mason Freeman, Department of Medicine, Massachusetts General Hospital, Boston, MA 02114.

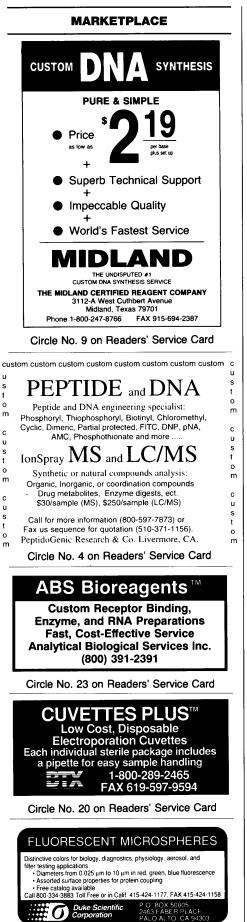
**RESEARCH ASSOCIATE** position available immediately in the Department of Biological Chemistry, Johns Hopkins School of Medicine to study a new type of calcium channel important in *Drosophila* vision and the human brain. Project will entail using a variety of approaches, especially molecular and genetic, to identify new members of the gene family and perform structure/function analyses on the *Drosophila* and human isoforms. Interested candidates with a Ph.D. and a strong background in molecular biology should send curriculum vitae and three letters of recommendation to: Dr. Craig Montell, Department of Biological Chemistry, Johns Hopkins School of Medicine, 725 North Wolfe Street, Baltimore, MD 21205. Telephone: 410-955-1199; FAX: 410-614-9573; Email: craig.montell@qmail.bs.jhu. edu. The Johns Hopkins University is an Equal Opportunity/ Affirmative Action Employer.

### MARKETPLACE

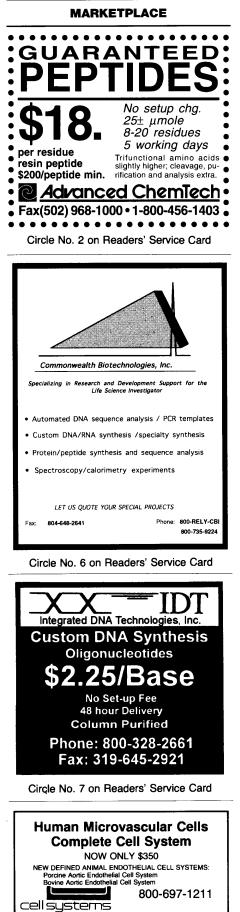
Po	lyconal Antisera
	IGHEST QUALITY AT THE LOWEST PRICE — <i>PLUS</i> — PECIAL INTRODUCTORY DISCOUNTS
	CALL FOR A FREE CATALOG <b>800-454-6790</b> FAX (619) <del>454</del> -7851
	La Jolla Diagnostics A division of PATHFINDER HOLDING CORPORATION 800 Silverado La Jolla CA., 92037

Circle No. 36 on Readers' Service Card

Marketplace ads continue on page 1390



Circle No. 25 on Readers' Service Card



Circle No. 35 on Readers' Service Card



Circle No. 10 on Readers' Service Card



Circle No. 13 on Readers' Service Card

## NOW THAT OPERON'S DNA is just <u>\$1.20</u> per base, YOUR savings are SURE TO multiply.



Here's something you can bank on. A 50 nmole scale synthesis of Operon's custom DNA for just \$1.20 per base, with a \$10.00 set-up fee.

This new, affordable price not only means you'll be able to conduct more experiments, it means your savings will grow with each project. And with our reputation for high-quality DNA, you'll get the results you need every time.

Of course, we still offer our 0.2  $\mu$ mole scale for \$2.00 per base with a \$15.00 set-up fee and our 1.0  $\mu$ mole scale for \$2.80 per base with a \$20.00 set-up fee.

Thanks to Operon's knowledgeable and experienced staff, you can always count on us for unmatched customer service, too. Because when it comes to meeting your needs, we really know how to hop to it.

For more information, or to place an order, call us toll-free at **1-800-688-2248**.



© 1995 Operon Technologies, Inc. 1000 Atlantic Ave., Alameda, CA 94501, USA. Phone: (800) 688-2248 or (510) 865-8644. Fax: (510) 865-5255. E-mail: dna@operon.com. NIHBPA 263.00033233.

## **SequaMark**<sup>™</sup>

The DNA size marker designed for the specific needs of sequencing and microsatellite sizing.

SequaMark<sup>™</sup> is used in standard sequencing reactions using ddT as the exclusive terminator. The products of the resulting reaction will produce a ladder with bands appearing every 10 bases beginning twenty bases from the special sequencing primer provided and extending to 500 bases. Distinctive banding patterns are provided for orientation at 100, 200, 300, 400, and 500 bases along the ladder. The end of the SequaMark<sup>™</sup> ladder is evident by the clear lack of bands above 500 for 31 bases. This marker aids in orientations of bands appearing in neighboring lanes on gels and serves as a reference point for proper scoring of sequencing and microsatellite PCR reactions as well as providing an indication of the resolving power of each gel run.

Kits are available for either isotopic or non-isotopic sequencing methods and include primers, template and protocols. The amount of SequaMark<sup>™</sup> provided is sufficient for 400 lanes.

Catalog #	Description	Price
701001	SequaMark <sup>™</sup> for isotopic methods	\$180.00
701002	SequaMark <sup>™</sup> for biotin-based detection systems	\$180.00
701003	SequaMark <sup>™</sup> for digoxygenin-based detection systems	\$180.00
701004	SequaMark <sup>™</sup> for fluorescence-based detection systems	\$180.00

™ SequaMark is a trademark of Research Genetics, Inc.

**Research Genetics**, Inc. 2130 Memorial Parkway SW Huntsville, AL 35801

U.S or Canada 800-533-4363 U.K. 0-800-89-1393 FAX 205-536-9016

Circle No. 16 on Readers' Service Card

500

400