

tions of visual cortex in cats are outlined. These descriptions are useful, but they are not closely tied to the main theme. Except for a brief description of the response properties of neurons in area 17 of macaque monkeys, such research on mammals other than cats is largely ignored. Comparative statements about other mammals are few and sometimes seem naïve or motivated by a need to justify research on cats. Yet what the book does well it does quite well, and there is no comparable review of visual cortical processing and coding in the three main visual areas of cats.

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Molecular Neurobiology

Molecular Neurobiology. Cold Spring Harbor Laboratory, Cold Spring Harbor, N.Y., 1983. xxii, 921 pp., illus. Cloth (in two volumes), \$125; paper, \$68. Cold Spring Harbor Symposium on Quantitative Biology, vol. 48. From a symposium, Cold Spring Harbor, N.Y., June 1983.

This large volume combines the market appeal of molecular biology and that of neurobiology, the two fields of biology that, along with immunology, have grown the most rapidly during the past two or three decades. As Kandel in his thoughtful epilogue points out, one should not suppose that the publication of the book marks the sudden discovery of neurobiology by molecular biologists, for many turned their attention to the brain more than 20 years ago. It is only in the last few years, however, that rapid progress has begun to be made.

With respect to detailed molecular analysis of a membrane protein of critical importance to the function of the nervous system, studies of the acetylcholine receptor protein must rank as the supreme example so far. The receptor, which controls the fast opening of membrane channels for sodium and other cations in cells receptive to acetylcholine, has been purified to homogeneity, and understanding of the complex molecular architecture is well advanced. This has been achieved both by the classical techniques of biochemistry, the isolation and characterization of the receptor protein, and by the modern techniques of molecular genetics, by which means the entire primary sequences of all four different subunits of the receptor protein can be deduced from the DNA sequences of the cloned receptor genes.

At the same time, electrophysiological techniques have advanced to the point at which recording of the opening and closing of a single receptor-controlled membrane channel has become a practical possibility. The studies of the acetylcholine receptor thus combine the most powerful new tools of electrophysiology with those of molecular biology in a most impressive manner, to give considerable new insight into the working of the system.

Also well advanced, along similar lines, are studies of the voltage-sensitive sodium channels present in all nerve cell membranes, which are responsible for the ability of these cells to propagate electrical signals.

Modern nucleic acid technology allows a new range of possibilities in analyzing the macromolecules synthesized in brain. By the use of screening techniques it is possible to focus attention on those mRNA species that are present only in brain and to try to obtain more information about the nature of the gene products that they represent. This is a formidable undertaking, for the number of different brain-specific mRNA species in mammals is high (estimates range from tens of thousands to hundreds of thousands). By focusing on narrower categories (such as brain-specific phosphoproteins), however, progress may be made quite rapidly.

Another approach is to study mRNA species specific for particular key enzymes in neurotransmitter metabolism, such as those coding for tyrosine and dopamine hydroxylases in catecholamine synthesis. Analysis of mRNA species or DNA sequencing of gene families may well be the most powerful tools for identifying novel brain peptides. It is already known that some three dozen small peptides exist in neurons and are probably released as a novel class of chemical messengers in brain. More neuropeptides are being discovered as the approaches of molecular genetics reveal the multiple gene families that specify most brain peptides and the molecular heterogeneity in each peptide family. Thus, the two morphine-like peptides [Met]enkephalin and [Leu]enkephalin are now known to be members of a family of opioid peptides numbering more than one dozen members and specified by three different genes.

Among the most intriguing problems facing neurobiology is to understand the complex mechanisms that regulate the development of the nervous system and the formation of appropriate connections between its individual cellular components. Here the study of nerve growth

factors will be of crucial importance, as will the understanding of the neuronal cell-surface markers and adhesion molecules that determine recognition and cell adhesion during development.

The present volume reviews all of this and much more in more than 80 short papers. Overall it is an exciting book. It portrays a field of great scientific promise and intellectual vigor, with just an occasional note of arrogance. The volume is strongly recommended to all who wish to become acquainted with or to be brought up to date in this field.

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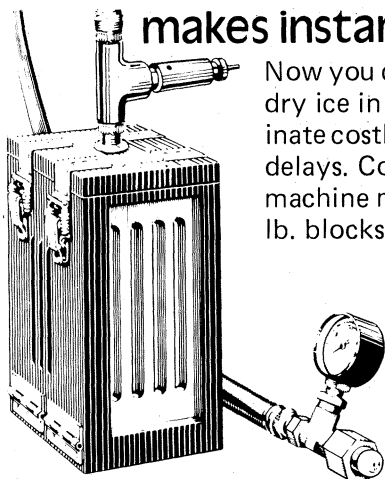
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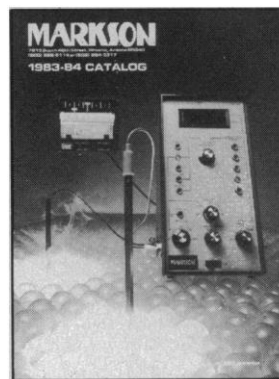


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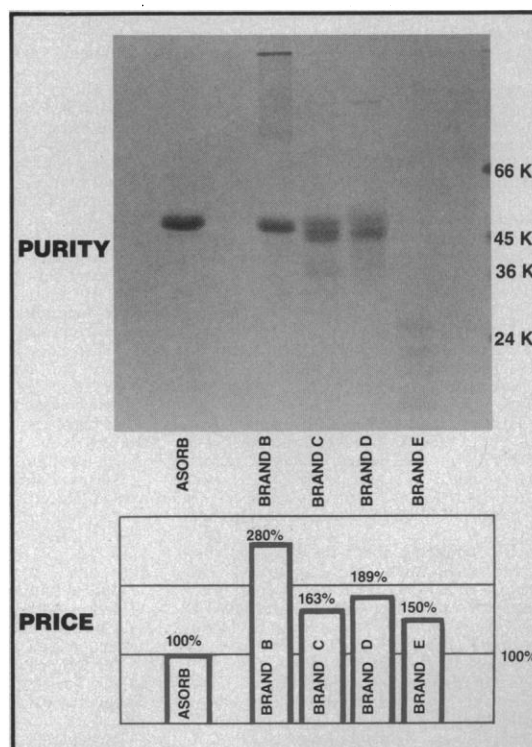
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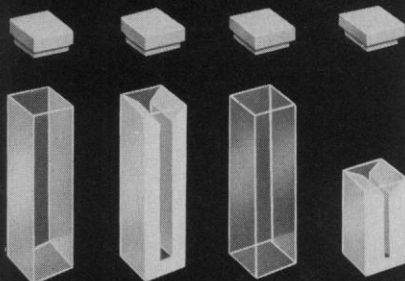
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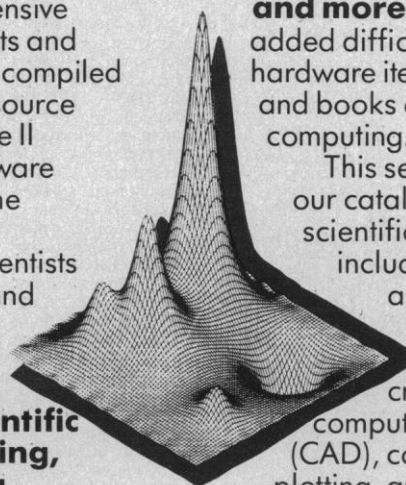
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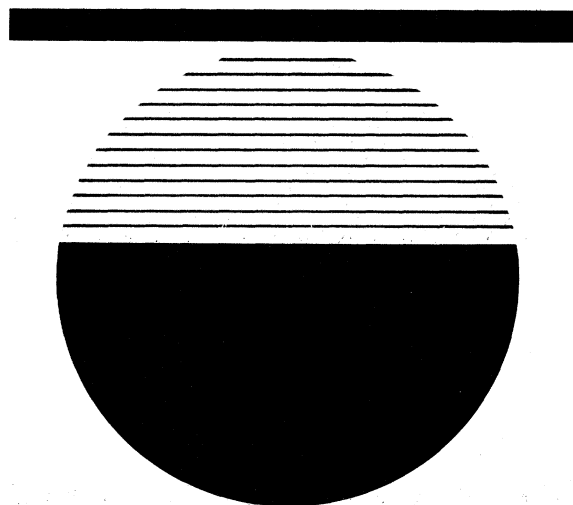
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SCIENCE publishes each Friday, except the last Friday of the year. Advertising is accepted only in writing; no abbreviations. Any deadline in ad must be at least 2 weeks after date of issue in which ad appears. Also, personnel advertising is accepted only with the understanding that the advertiser does not discriminate among applicants on the basis of race, sex, religion, age, color, national origin, handicap, or sexual preference.

LINE CLASSIFIED ADVERTISING DEADLINES:
19 October issue (mailed 12 October): **28 September**
26 October issue (mailed 19 October): **5 October**
2 November issue (mailed 26 October): **12 October**
9 November issue (mailed 2 November): **19 October**

POSITIONS WANTED: 40¢ per word, plus \$4 for use of box number, per week. \$10 minimum, per week. Prepayment required. This rate is available only to individuals seeking jobs.

LINE DISPLAY (POSITIONS OPEN, COURSES, FELLOWSHIPS, MARKETPLACE, and so forth): \$10.40 per millimeter; \$260 minimum, per week (minimum charge covers 25 millimeters on a single column; 25 millimeters equals 10 lines of 50 spaces per line). No charge for use of box number. No agency commission for ads less than 103 millimeters (4 inches). No cash discount. Prepayment required for all foreign ads. Purchase orders and billing address required for all other advertising.

Send copy for all **Positions Wanted** ads and **Line Display** ads less than 1/6 page in size (125 millimeters) to:

SCIENCE, Room 107
1515 Massachusetts Avenue, NW
Washington, D.C. 20005
Telephone: 202-467-4456

Send copy for **Fractional Display** ads, 1/6 page and larger, and all **Marketplace** ads to:

Scherago Associates, Inc.
1515 Broadway
New York, N.Y. 10036
Telephone: 212-730-1050

Blind ad replies should be addressed as follows:

Box (give number)
SCIENCE
1515 Massachusetts Avenue, NW
Washington, D.C. 20005

POSITIONS WANTED

Biochemist/Molecular Biologist. Ph.D. 1978. Experienced with protein synthesis and characterization, mRNA isolation, cloning, hybridization, and related techniques. Seeking industrial or academic position, research or teaching. Box 215, SCIENCE. 9/28; 10/5

Marine Biologist. Ph.D., over 15 years of experience in fisheries oceanography, sea survey sampling, laboratory rearing and hatching, aquatic and marine bioassays for toxicity evaluation. Publications. Seeking biologist position in fisheries oceanography research, mariculture, or environmental protection. Box 230, SCIENCE. X

Marine Invertebrate Zoologist/Systematist/Benthic Ecologist. Ph.D. 1972. Numerous journal publications; administrative, organizational, editorial, communicatory, and supervisory skills; extensive research, field, teaching, and consulting experience. Seeks teaching and/or research position in academia, museum, private laboratory, or government. Reply: Box 226, SCIENCE. 9/28; 10/5, 12

Molecular Biologist. Ph.D., 1983. Desires exciting industrial position. Trained in analysis of chromatin structure. One year of postdoctoral experience in mechanisms of chemical carcinogenesis. Working knowledge of immunological screening of cDNA expression libraries. Box 229, SCIENCE. X

Pharmacologist. Ph.D. 1971. Former university and now industrial researcher with extensive background in calmodulin, microtubules, and chemotherapeutic agents. Also some experience in endocrine, neuropharmacology, trace metals, enzyme kinetics, and RIA. NIH postdoctorate. Excellent publications and proven high performance thinking ability. Seeks position with university, research institute, or industry. No geographic preference. Box 228, SCIENCE. 9/28; 10/5, 12, 19, 26

POSITIONS OPEN

ANIMAL BIOTECHNOLOGY

Applications are invited for two tenure-track positions at assistant or associate professor levels. Both positions involve research and teaching and advising at the undergraduate and graduate levels. Candidates must be interested in the application of biotechnology to the improvement of domestic animals and the establishment of a research program in this area. Demonstrated ability to do high-quality research and publish results essential. Postdoctoral experience desirable. Salary commensurate with experience and education.

REPRODUCTIVE AND DEVELOPMENTAL BIOLOGY—Qualifications: Ph.D. with specialization in genetic manipulation of gametes or embryos. Demonstrated ability to pursue areas of research such as recombinant DNA, gene expression, mammalian gene cloning, splicing, and transfer. Courses to be taught include genetic engineering of gametes and embryos, developmental animal biology, and procedures in biotechnology.

IMMUNOBIOLOGY—Qualifications: Ph.D. in immunobiology with background and demonstrated interest in genetics preferred. Courses to be taught include animal immunobiology and immunogenetics and/or other courses in area of expertise. Applicants should submit, by 31 October 1984, letter of application, statement of research interests, detailed curriculum vitae, and the names of four references to: **Dr. James B. Marcum, Chairman, Department of Veterinary and Animal Sciences, 313 Paige Laboratory, University of Massachusetts, Amherst, Mass. 01003. The University of Massachusetts is an Affirmative Action/Equal Opportunity Employer.**

ASSISTANT/ASSOCIATE PROFESSORS—The Department of Biochemistry at the University of Mississippi Medical Center invites applications for two tenure-track positions. The department is well equipped and has strong research and graduate programs in developmental biology, protein synthesis, eukaryotic gene structure and organization, chromatin structure, biochemistry of the cytoskeleton, nucleic acid biophysics, enzymology, and protein chemistry. We seek innovative individuals to establish and/or maintain vigorous, independent, high-quality research programs. Special consideration will be given to those areas that complement current research programs here. Interested candidates should send curriculum vitae and three references by 15 November 1984 to: **Dr. J. D. Dignam, Department of Biochemistry, University of Mississippi Medical Center, Jackson, Miss. 39216. Equal Opportunity Employer, M/F/H/V.**

ASSISTANT PROFESSOR ELECTROPHYSIOLOGY

Research faculty position available at the University of Arizona College of Medicine. Major responsibilities will be development of a research program in myocardial electrophysiology. Candidate will work closely with clinical electrophysiologists, will have joint appointment in the Department of Medicine and Physiology. Ph.D. degree and postdoctoral training are prerequisite. Send summary of research plans, curriculum vitae, and names of three references to: **Dr. Frank I. Marcus, Cardiology Section, University of Arizona Health Sciences Center, Tucson, Ariz. 85724, by 1 November 1984. The University of Arizona is an Equal Opportunity/Affirmative Action Employer.**

DEPARTMENT OF BIOLOGICAL SCIENCES STATE UNIVERSITY OF NEW YORK AT BINGHAMTON

The State University of New York at Binghamton announces two tenure-track positions at the **assistant professor** level: **BIOCHEMISTRY** (all specializations considered; **Dr. Fredrick J. Kull, search chair**) and **ECOLOGICAL GENETICS** (**Dr. John E. Titus, search chair**). Applicants should solicit three or more letters of recommendation to be sent, and send curriculum vitae (including home and business telephone numbers, a summary of current and/or anticipated research, reprints, and a statement of teaching interests to the appropriate search chair. **Department of Biological Sciences, State University of New York at Binghamton, Binghamton, N.Y. 13901. Deadline is 16 November 1984.**

An Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

NORTHWESTERN UNIVERSITY DEPARTMENT OF GEOLOGICAL SCIENCES

Applications are invited for a tenure-track position at the **ASSISTANT PROFESSOR** level from persons who will complement one of the existing departmental research programs in structural geology, tectonics, petrology, or sedimentary geology. Applicants must hold the Ph.D. degree by the time of appointment and demonstrate excellence in or strong potential for independent research in one of these fields. In addition to having a strong research orientation the position will involve teaching at the undergraduate and graduate levels and the supervision of graduate student research. Current departmental facilities include VAX 11/750 computer, fully automated JEOL 733 microprobe/SEM, and high pressure and geochemical laboratories.

Letters of application should be accompanied by a résumé that includes a description of research interests and accomplishments and teaching experience, a list of publications, and the names of at least three references. Send to: **S. O. Schlanger, Chairman, Department of Geological Sciences, Northwestern University, Evanston, Illinois 60201. Closing date for applications is 1 November 1984. We expect to fill the position for fall 1985.**

Northwestern University is an Equal Opportunity/Affirmative Action Employer.

ASSISTANT PROFESSOR—BIOCHEMISTRY. The Department of Chemistry at Boston University is seeking applicants for a tenure-track position to begin by 1 September 1985. Responsibilities include teaching of biochemistry courses and development of a vigorous research program, preferably in the area of membrane chemistry, immunochemistry, recombinant DNA technology, or plant biochemistry. Outstanding applicants in any field will be considered, however. Résumé, research plan, and three letters of recommendation should be sent to: **Dr. Dan Dill, Chair, Department of Chemistry, Boston University, Boston, Mass. 02215. An Equal Opportunity/Affirmative Action Employer.**

ASSISTANT/ASSOCIATE PROFESSOR for a tenure-track position. Responsibilities relate to machine design and automatic controls in agronomic and horticultural systems. Ph.D. in agricultural or mechanical engineering with background in agricultural systems. Send curriculum vitae, transcripts, publications, and the names of four references to: **Dr. Brahm P. Verma, Professor and Head, Agricultural Engineering Department, University of Georgia Experiment Station, Experiment (Griffin), Ga. 30212. Closing date is 5 October 1984 or until a suitable applicant is identified.**

The University of Georgia is an Equal Opportunity/Affirmative Action Institution.

ASSOCIATE/ASSISTANT PROFESSOR OF MICROBIOLOGY. This position with tenure/on tenure track is available immediately. Candidates should have an M.D., Ph.D., D.D.S., or an equivalent degree. Preference will be given to applicants with an established research program in molecular immunology; however, candidates with research expertise in related fields also will be considered, especially if they employ recombinant DNA methodology. Teaching experience in medical microbiology is very desirable. Interested persons should send curriculum vitae and brief description of research as well as the names and telephone numbers of three individuals from whom recommendations may be obtained to: **Dr. C. John Abeyounis, Department of Microbiology, School of Medicine, State University of New York at Buffalo, 203 Sherman Hall, Buffalo, N.Y. 14214. Deadline for receipt of applications is 30 November 1984. The university is an Equal Opportunity/Affirmative Action Employer. No person in whatever relations with the university will be subject to discrimination on the basis of age, color, national origin, race, religion, sex, or handicap.**

The Departments of Anesthesiology and Biochemistry, University of Alabama in Birmingham, are interested in recruitment of a tenured or tenure-track **BIOCHEMIST** at the Ph.D. level. Candidates should have experience in metabolism in oxygen deprived mammalian organs/tissues. A strong research background with an interest in developing an independent research program is essential. Curriculum vitae and three letters of recommendation should be submitted to: **Simon Gelman, M.D., Ph.D., Vice Chairman for Research, Department of Anesthesiology, University of Alabama in Birmingham, University Station, Birmingham, Ala. 35294.**

An Equal Opportunity/Affirmative Action Employer

CENTER FOR MOLECULAR MEDICINE AND IMMUNOLOGY

Several senior and junior level research positions are available at the CENTER FOR MOLECULAR MEDICINE AND IMMUNOLOGY, affiliated with the University of Medicine and Dentistry of New Jersey at Newark, and consisting of the following INSTITUTES:

INSTITUTE FOR MOLECULAR GENETICS

Directorship open, as well as senior and junior scientist positions. Experienced and grant-successful individuals with interest in oncogenes and related problems desired.

INSTITUTE FOR IMMUNOBIOLOGY

Directorship open, as well as senior and junior scientist positions. Experienced and grant-successful individuals with interest in tumor immunity and biology desired.

INSTITUTE FOR MOLECULAR IMMUNOLOGY

Senior and junior scientist positions open. Experienced and grant-successful individuals with interest in tumor antigen immunochemistry, tumor imaging, and tumor therapy research desired.

POSTDOCTORAL POSITIONS available within the Molecular Immunology Institute for individuals with experience in one or more of the following areas: immunochemistry, glycoprotein chemistry, radiochemistry, and protein-labeling techniques.

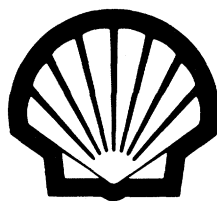
INSTITUTE FOR NUCLEAR MEDICINE

Senior and junior scientist positions available for individuals with experience in radiochemistry and protein chemistry.

Salary commensurate with experience and credentials. Eligibility for adjunct faculty appointment. Send resume and names of references to:

Personnel Director
CENTER FOR MOLECULAR MEDICINE AND IMMUNOLOGY
University of Medicine and Dentistry of New Jersey
100 Bergen Street
Newark, N.J. 07103

Equal Opportunity Employer



POSITION IN TOXICOLOGY RESEARCH

The following position is available in Toxicology Research at Shell Development Company.

Veterinary Pathologist

Requirements for this position are DVM, PhD in veterinary pathology, and ACVP board certification. The position also requires excellent skills in written and verbal communication. Although gross pathology and histopathology examinations in support of traditional toxicologic studies are associated with this position, emphasis is placed on pathobiology in evaluating and interpreting

toxicologic disease situations. In this integrated program pathologists are engaged in all phases of intramural and extramural research.

The position, located in Houston at Shell's Westhollow Research Center, offers competitive salary and excellent benefits.

Applicants should be U.S. citizens or have permanent resident visa. Interested applicants should send a résumé, in confidence to: Research Recruitment, Shell Development Company, P.O. Box 1380, Houston, Texas 77001.

Shell Development Company

An Equal Opportunity Employer M/F

CHAIRPERSON

DEPARTMENT OF PEDIATRICS

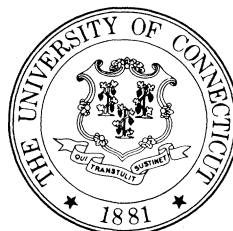
UNIVERSITY OF ARIZONA COLLEGE OF MEDICINE

The University of Arizona College of Medicine is seeking a qualified candidate for the position of Chairperson, Department of Pediatrics. Qualified individuals interested in the position should send a Curriculum Vitae as well as the names of three references to: **Andrew M. Goldner, Ph.D., Associate Dean, Student Affairs Office, Search for Chairperson, Pediatrics, University of Arizona College of Medicine, 1501 N. Campbell Avenue, Tucson, Arizona 85724.**

DEADLINE FOR APPLICATION IS
OCTOBER 30, 1984

Equal Employment Opportunity/
Affirmative Action Employer

The University of Connecticut is expanding its program in Marine Sciences and seeks qualified candidates for the following positions. All positions require a Ph.D.



DIRECTOR
Marine Sciences Institute

DIRECTOR
National Undersea Research Program

DIRECTOR
Connecticut Sea Grant Program

Apply by November 11, 1984 to: Alexandra Van Gelder,

UNIVERSITY OF CONNECTICUT

Research Foundation
Box U-133, Storrs, Ct. 06268.
(203) 486-3337

(Search 4G119, 4G125, 4G128) AA/EOE

The International Livestock Centre for Africa (ILCA), Addis Ababa, Ethiopia, and The International Laboratory for Research on Animal Diseases (ILRAD), Nairobi, Kenya, are conducting collaborative research on the productivity of trypanotolerant livestock under different levels of tsetse/trypanosomiasis risk in various locations in West Africa. The programme is being extended to include studies on the productivity, at village level, of N'Dama cattle in the Gambia and Senegal. The study will be based at the International Trypanotolerance Centre (ITC) in the Gambia.

ILCA wishes to recruit for this project:

AN ANIMAL PRODUCTION SCIENTIST

The person appointed will be a member of the collaborative research team and will be involved with the coordination of the field data collection in the animal production, animal health, and tsetse challenge components of the programme. Applicants must be animal science graduates with at least 5 years of experience in cattle productivity research, including preferably experience in a tropical environment. Applicants should also have a postgraduate qualification or proven research ability in the handling, analysis, and interpretation of quantitative animal production data. Experience in the organisation and operation of a large-scale livestock development project is also desirable.

This is an international staff position and the salary will be paid in U.S. dollars. The contract length will be 3 years. Initial salary level will be determined by qualifications and experience. Moving and education allowances are paid and there are medical and retirement benefits. Application should include current curriculum vitae and the names and addresses of three referees. Applications citing the reference number should be sent by 31 October 1984 to:

The Head of Administration
International Livestock Centre for Africa
P.O. Box 5689
Addis Ababa
Ethiopia

Research Positions In Marine Geology And Geophysics

Woods Hole Oceanographic Institution invites applications from researchers active in the fields of marine geology and geophysics to fill available positions on the scientific staff of the Department of Geology and Geophysics. We seek applicants at a broad range of experience levels, from immediately post-doctoral to those with 10 or more years of research experience. Salary levels negotiable, depending primarily on background and experience.

The Institution offers excellent facilities to carry out the full spectrum of practical and theoretical marine earth science research. A strong interest by candidates in conducting programs of marine G&G data acquisition and analysis is preferred; a capability to conceive, fund and carry out independent research programs is required. In addition to Geology and Geophysics, the Institution consists of 4 well-established research departments specializing in the fields of Biology, Chemistry, Physical Oceanography and Ocean Engineering. Collaborative research with members of the staff of these departments is strongly encouraged. Opportunities also exist for participation in the joint Massachusetts Institute of Technology-Woods Hole Oceanographic Institution graduate level education program.

Applicants should send resumes and names of 3 professional references to: **Personnel Manager, Box 54 P, WOODS HOLE OCEANOGRAPHIC INSTITUTION, Woods Hole, MA 02543**

An equal opportunity employer M/F/H

POSITIONS OPEN

Applications are invited for an ASSISTANT PROFESSOR position in genetics, beginning in September 1985. Candidates should have a Ph.D. degree (received since 1980), postdoctoral experience, and demonstrated accomplishments in research. Applicants in several sub-specialties will be favorably considered. These include mammalian molecular genetics, prokaryotic genetics, neurogenetics, viral genetics, and plant genetics. Interested candidates should submit curriculum vitae, a description of research plans, and the names of three referees to:

Chairman, Search Committee
Department of Genetics, SK-50
University of Washington
Seattle, Washington 98195

The University of Washington is an Equal Opportunity Employer.

BIOCHEMISTRY FACULTY POSITION

Applicants at the assistant, associate, or full professor level in all areas of biochemistry will be considered. Candidates should have postdoctoral experience and will be expected to develop an independent research program. Senior candidates should have an externally funded research program. The department has recently occupied space in a new medical sciences building. Access to dual laser fluorescence activated cell sorter, gas phase protein sequencer, automated DNA and peptide synthesizer, and SLM-8000 spectrofluorometer. Send curriculum vitae, a description of research plans/interest, and the names of three references to: **Chairman, Search Committee, Department of Medical Biochemistry and Medical Genetics, College of Medicine, Texas A&M University, College Station, Texas 77843-1112. Equal Opportunity through Affirmative Action.**

Princeton University—**BIOLOGICAL CHEMISTRY.** The Department of Chemistry invites applications for a tenure-track position in biological chemistry beginning September 1985. Applicants with any field of specialization may apply, and we especially encourage candidates with interests in x-ray crystallography or NMR spectroscopy. Applicants should send curriculum vitae and a statement of future research plans, and have three letters of recommendation sent to: **Professor Herschel Rabitz, Chairman of Recruiting Committee, Department of Chemistry, Princeton University, Princeton, N.J. 08544. Princeton is an Equal Opportunity/Affirmative Action Employer.**

BIOLOGICAL OCEANOGRAPHER. Ph.D. minimum requirement. Experienced in environmental research and marine ecology and able to work independently. Demonstrated analytical and writing skills prerequisite. Diverse experience preferred. Salary commensurate with experience. Send résumé and pertinent material to: **Nancy Roberts, Oceanic Institute, Makapuu Point, Waimanalo, Hawaii 96795.**

COMPARATIVE INVERTEBRATE BIOLOGIST. Tenure-track assistant professor; higher rank will be considered in exceptional circumstances. Applicant should provide evidence that he/she can develop a strong, independent research program and has a broad, general knowledge of marine invertebrates. Send curriculum vitae, a one-page outline of future research plans and have four letters of recommendation sent by 1 December 1984 to: **Invertebrate Biology Search Committee, Department of Biology, Coker Hall 010A, University of North Carolina, Chapel Hill, N.C. 27514. An Equal Opportunity/Affirmative Action Employer.**

COMPARATIVE PHYSIOLOGIST OR FUNCTIONAL MORPHOLOGIST

UNIVERSITY OF CALIFORNIA, IRVINE

The Department of Developmental and Cell Biology is recruiting for a position in comparative physiology at the assistant or beginning associate professor level. Functional morphologists whose research areas are related to physiological problems and approaches are also encouraged to apply. The candidate is expected to establish a productive research program, to participate in an ongoing program of graduate student training in comparative physiology, and to assume undergraduate teaching responsibilities in physiology. The candidate must have a Ph.D. degree and postdoctoral experience is desired. Applicants should submit curriculum vitae and copies of publications and should request that three or four letters of recommendation be sent to: **Chair, Comparative Physiology Search Committee, Department of Development and Cell Biology, University of California, Irvine, Calif. 92717.** Applications should be completed by 15 November 1984. *The University of California is an Affirmative Action/Equal Opportunity Employer.*

POSITIONS OPEN

DEPARTMENT CHAIRMAN—The Woods Hole Oceanographic Institution invites applicants for position of chairman, Department of Oceanography. This position requires an appointment as senior scientist with tenure in the field. The candidate should have a record of distinguished publication in the field and the ability to raise support for research. A chairman's search usually occupies approximately half the year. The remainder is devoted to teaching and administrative matters. The chief executive task of the department will be to maintain and enhance the quality of the department. The details of the appointment and salary are negotiable. Send curriculum vitae and list of publications to: **Personnel Manager, Woods Hole Oceanographic Institution, Box 54P, Woods Hole, Mass. 02543. Equal Opportunity Employer, M/F/H/V.**

DEPUTY DIRECTOR: Applications are invited for the deputy director's position in the Environmental Monitoring and Support Laboratory, Environmental Protection Agency in Cincinnati, Ohio. This is a permanent full-time Federal Service position with a salary range of \$42,550-\$50,495, depending upon experience.

The successful candidate will be expected to assist the director in managing a laboratory responsible for methods standardization and quality assurance techniques; (ii) provide authoritative scientific advice to peer groups; and (iii) serve as a spokesperson on matters related to environmental monitoring.

The candidate should: (i) possess an advanced degree, preferably an earned doctorate, in science or engineering; (ii) have demonstrated research through publications in peer-reviewed journals; (iii) have a minimum of three years of experience managing a high-level technical group, prefer research and development organization.

Further information, including detailed qualification requirements, may be obtained from: **J. Schuermann, Personnel Management Division, Environmental Protection Agency, 26 West Street, Cincinnati, Ohio 45268. Telephone: 513/7804.** Applications (SF-171, Personal Qualifications Statement), accompanied by current curriculum vitae and bibliography, must be submitted to J. Schuermann prior to 15 October 1984. *An Equal Opportunity Employer.*

A tenure-track **FACULTY POSITION** is available for individuals with research interests developing molecular explanations of membrane associated phenomena. Send curriculum vitae and names of three references by 31 October 1984 to: **Dr. Vanaman, Department of Biochemistry, University of Kentucky College of Medicine, Lexington, KY 40536. An Equal Opportunity Employer.**

FACULTY POSITION, Cornell University, to conduct research (80 percent) and teaching (20 percent) program concerned with use of recombinant DNA techniques for application in food fermentations, particularly dairy starter cultures.

Ph.D. in microbiology, food microbiology, fermentation biotechnology with training in molecular genetics and experience in recombinant DNA complete résumé, transcripts, a statement of research interests, and have three reference letters sent by 30 October 1984 to:

Dr. R. A. Ledford
Department of Food Science
101 Stocking Hall
Cornell University
Ithaca, N.Y. 14853

Cornell is committed to an Affirmative Action program to seek applications from women and members of minority groups.

WILDLIFE TOXICOLOGIST

The U.S. Environmental Protection Agency (EPA) Environmental Research Laboratory at Corvallis, Oregon, invites applicants for a 2- to 4-year appointment as toxicologist in wildlife toxicology programs. Duties include research and research supervision with some administrative responsibilities. Applicants must be U.S. citizens and possess a Ph.D. or equivalent in toxicology or related field. Experience in animal physiology or wildlife toxicology is required. Salary range is \$36,327 to \$55,807, depending on qualifications. Applications (SF-171, Personal Qualifications Statement, available at most EPA offices) should be sent to: **Sharon Johnson, Personnel Office, P.O. Box 18417, Las Vegas, NV 89114, no later than 12 October 1984. The Environmental Protection Agency is an Equal Opportunity Employer.**

Chimerix Corporation is a new biotechnology company engaged in the development of a variety of innovative concepts and products aimed at the rapid diagnosis of cancer and infectious diseases employing both recombinant-DNA and immunological techniques. The Company's modern research facilities, currently under construction, will be ready for operations early in 1985. The Company is now seeking to fill several key positions:

DIRECTOR OF RESEARCH—This challenging and exciting opportunity requires an entrepreneurial individual possessing an M.D. or Ph.D. degree, with a broad scientific background, well-established scientific credentials, and a demonstrated ability to initiate research. This individual will participate in shaping the Company's long-range plans and will be responsible for: implementing the Company's research program; recruiting scientific talent; assembling a dynamic and creative multidisciplinary research staff; and for day-to-day research operations. The ideal candidate should have experience in an industrial environment and be well versed in business matters including financial reporting, budgeting, and marketing/sales activities.

SENIOR SCIENTISTS—Three positions available for individuals possessing a Ph.D. degree; 5–10 years of postdoctoral experience with a strong record of creativity and practical achievement, and ability to work in goal oriented team environment.

- **Molecular biologist** with strong background in recombinant DNA research and expertise in detection of DNA hybridization reactions.
- **Immunologist/biochemist** with demonstrated ability to develop immunoassay systems, preferably in an industrial setting.
- **Biochemist/biophysicist** with strong background in fluorescence and other spectroscopic techniques.

The company's research facilities will be located in an attractive suburban community in the greater Hartford area conveniently located midway between New York and Boston and providing excellent cultural, educational, and recreational pursuits. Chimerix offers an exceptional opportunity for advancement and professional achievement, competitive salaries, and excellent benefits. If interested please send resume including three references, and salary history and requirements to:



Chimerix Corporation
95 Niles Street
Hartford, Connecticut 06105
Att: Recruiting

CSIRO **AUSTRALIA**

RESEARCH FELLOW

A\$25,342 to A\$31,270

DIVISION OF PLANT INDUSTRY
CANBERRA ACT

CSIRO conducts scientific and technological research in laboratories located throughout Australia and employs about 7500 staff, of whom some 2900 are professional scientists. The organization's research activities are grouped into five Institutes: Animal and Food Sciences, Biological Resources, Energy and Earth Resources, Industrial Technology, and Physical Sciences. The CSIRO Division of Plant Industry is a member of the Institute of Biological Resources.

FIELD: Biotechnology for crop breeding.

GENERAL: The CSIRO Division of Plant Industry conducts research on problems fundamental to plant biology and agricultural production. Prominent among this research are programs in plant molecular biology. In collaboration with the Australian Centre for International Agricultural Research, the division has initiated a project to utilise somaclonal variation to transfer disease and stress tolerance traits from wild species into wheat. Objectives focus on the needs of developing countries.

DUTIES: The appointee will undertake research in tissue culture and plant regeneration from alien addition lines derived from intergeneric wheat hybrids; development of rapid screening procedures for disease and stress tolerant somaclones; and genetic analysis of potentially useful somaclones. The appointee will be expected to interact with researchers to develop molecular probes to detect chromatin in alien species.

QUALIFICATIONS: Applicants should have a Ph.D. or equivalent qualifications in plant genetics. Experience in tissue culture, plant disease, or stress response would be an advantage.

TENURE: The position is for a term of 3 years with Australian government superannuation benefits available.

APPLICATIONS: Stating full relevant particulars, including details of qualifications and experience, the names of at least two professional referees, and quoting reference Number M 8370, should be directed to:

The Chief
CSIRO Division of Plant Industry
G.P.O. Box 1600
Canberra, ACT 2601
Australia

By 26 October 1984.

CSIRO is an Equal Opportunity Employer

STATE OF KUWAIT **KUWAIT UNIVERSITY** **COLLEGE OF SCIENCE**

The College of Science of Kuwait University invites applications for the posts of Professors, Assistant Professors and Lecturers for the academic year 1985/1986 tenable September 1st, 1985 in the following areas:

Department of Mathematics

Computer Science, Statistics, Operations Research, Applied Mathematics, Numerical Analysis, Differential Equations.

Department of Physics

Molecular, Electronics, Solid State.

Department of Biochemistry

(Full Professor for a contract of one or two years)
 Biochemical Genetics or Enzymology.

Department of Botany and Microbiology

Plant Pathology, Sea Weeds (Algae).

Department of Zoology

Marine Biology

Department of Geology

Metamorphic Petrologist, Mineralogist-Crystallographer.

Note: All applicants must be in possession of the Ph.D. in their discipline at the time of application. The language of instruction is *English*.

Applications and conditions of service may be obtained from:

Kuwait University Office
3500 International Dr., N.W.
Washington, D.C. 20008

Applications, together with non-returnable copies of academic qualifications and sample publications, should be sent by registered post *directly* to:

Department of Administrative Affairs
Kuwait University
P.O. Box 5969
KUWAIT

All applications must be received by December 31st 1984.

POSITIONS OPEN

DIRECTOR OF INDUSTRIALLY SPONSORED RESEARCH DARTMOUTH COLLEGE

Nominations and applications are invited for the position of Director of Industrially Sponsored Research at Dartmouth College. The director identifies industrial sources of research support, assists members of the faculty in obtaining research contracts from industry, and assists Dartmouth personnel in obtaining patents or copyrights, and in marketing inventions, software, and so forth. The director reports to the provost.

Candidates should have at least a masters degree in science or engineering (a doctoral degree is preferred) and at least 5 years of experience in industry and/or university research. Candidate should be knowledgeable about research proposals, contract negotiations, the role of venture capital, research and development limited partnership agreements, investment tax credits, and must be willing to travel extensively. Nominations and applications should be received prior to 1 November 1984 by: **The Search Committee for the Director of Industrially Sponsored Research, Office of the Provost, Parkhurst 102, Dartmouth College, Hanover N.H. 03755. An Equal Opportunity/Affirmative Action Employer, M/F.**

FACULTY POSITIONS, DEPARTMENT OF PATHOLOGY

Two faculty positions are available with primary responsibility for research in some aspect of thrombosis, hemostasis, angiogenesis, or atherosclerosis. The candidates must be capable of developing independent research programs utilizing advanced biological technology such as molecular or cell biology. The Ph.D. and/or M.D. degree and at least 3 years of postdoctoral experience are required. Rank and salary will depend upon qualifications. Applicants should send curriculum vitae, an outline of research objectives, and names of three references by 10 October 1984 to: **Dr. John B. Graham, Department of Pathology, Brinkhous-Bullitt Building 228H, University of North Carolina, Chapel Hill, North Carolina 27514. An Equal Opportunity/Affirmative Action Employer. Applications by women and minorities are encouraged.**

POSITIONS OPEN

FACULTY APPOINTMENTS IN CNS DRUG DEVELOPMENT

The Departments of Psychiatry and Clinical Neurosciences, together with the Neurosciences Research Group of the Faculty of Medicine, The University of Calgary, are establishing a program, both at basic science and at clinical level, for the development and evaluation of drugs for psychiatry and neurology.

Program funding will be on a competitive basis from the Alberta Heritage Foundation for Medical Research. Appointments will be made at the appropriate academic rank in the Faculty of Medicine.

Applications are invited from medical scientists with training in the areas of: Neuropsychopharmacology, neurochemistry, behaviourist (animal drug research), clinical investigator-psychiatry, and clinical investigator-neurology.

All qualified individuals are encouraged to apply but preference will be given to Canadian citizens and permanent residents.

Deadline for receipt of application is 31 December 1984. Interested candidates should send curriculum vitae, a brief description of field of interest, and the names of three referees to:

**Dr. S. K. Littmann
Professor and Head
Department of Psychiatry
Foothills Hospital
1403-29th Street NW
Calgary, Alberta, Canada T2N 2T9**

The Department of Chemistry of the University of Chicago invites applications from outstanding individuals for **FACULTY POSITIONS** in experimental physical chemistry. Only persons with exceptional promise and accomplishment in research should apply. Qualified applicants should submit curriculum vitae, a list of publications, a succinct outline of their research activities and future plans, and should arrange for three letters of recommendation to be sent to: **Professor Donald H. Levy, Chairman, Department of Chemistry, The University of Chicago, 5735 South Ellis Avenue, Chicago, Illinois 60637. An Equal Opportunity/Affirmative Action Employer.**

POSITIONS OPEN

FACULTY POSITION ÉCOLE DE PHARMACIE

UNIVERSITÉ LAVAL, QUÉBEC, CANADA

Assistant/associate professor, tenure-track research position at l'Université Laval School of Pharmacy. Candidates must have a Ph.D. degree with 2 years of postdoctoral experience; a Pharm.D. or M.D. degree with 5 years of research experience is also admissible. Candidate is expected to develop a research program in pharmacokinetics-biopharmacy or in factors modifying the effects of medications or in pharmacology. Candidate will be spending 75 percent of the time in research. English-speaking candidate will be allowed 3 years to learn to speak French. Send a résumé, a brief description of research interests, and three letters of reference by 15 October 1984 in confidence to: **Gaston Labrecque, Ph.D., Director École de pharmacie, Université Laval, Québec, Québec, Canada G1K 7P4. Equal Opportunity Employer.**

FACULTY POSITION—MOLECULAR VIROLOGY

The Department of Microbiology, University of Texas Health Sciences Center at San Antonio, has a tenure-track position (junior-to-senior level appointment) for a person with training in the molecular biology of animal viruses. Candidates with excellent records of research accomplishments in the molecular pathogenesis of viral disease(s), or in the mechanisms of viral replicative processes and gene expression are encouraged to apply. The department is seeking an innovative independent person to establish a high quality research program(s) and to participate in teaching. The department is an actively growing component of a large health science center located in a desirable geographic setting. Individuals committed to excellence in research and teaching are invited to send curriculum vitae, a statement of accomplishments and future goals, and arrange to send three letters of reference by 14 December 1984 to: **Dr. Joel B. Baseman, Chairman, Department of Microbiology, The University of Texas Health Science Center at San Antonio, 7703 Floyd Curl Drive, San Antonio, Texas 78284. An Equal Opportunity/Affirmative Action Employer.**



DEAN OF THE COLLEGE OF ARTS AND SCIENCES UNIVERSITY OF MIAMI

Coral Gables, Florida

The University invites applications and nominations for the position of Dean of the College of Arts and Sciences. The Dean is chief academic officer of the College and reports to the Provost and Executive Vice President for Academic Affairs. Appointment is planned for the Summer of 1985.

The University of Miami is the largest private institution of higher education in the Southeast with an enrollment of 11,000 full-time and 3,000 part-time students, a faculty of 1,400 in 13 academic units, including professional schools of law and medicine and graduate schools of international studies and of marine and atmospheric science. The University is a research-oriented institution with more than 1,000 research programs, placing it among the top 50 universities in federal obligations for research.

The College, located on the University's 260-acre campus in residential Coral Gables, is the largest unit of the University, with 19 departments, a faculty of 315 and an enrollment of approximately 3,300 students. The College offers courses leading to the bachelor's degree in the fine arts, humanities, sciences, social sciences, medical

technology, and general studies. There are 46 programs in 15 departments leading to the master's degree, as well as 39 areas of study leading to the doctorate in eight departments.

The University is seeking a person of high academic achievement who combines vigorous leadership with demonstrated administrative skills and an understanding of the broad range of disciplines within the College. A candidate must have an earned doctorate and a distinguished record in research and teaching.

The University of Miami has an active affirmative action program and encourages minorities and women to apply. Applications and nominations will be accepted until November 30, 1984, or until the position is filled.

Address correspondence to:

**Dean Claude R. Sowle, Chairman
Arts and Sciences Dean Search Committee
University of Miami School of Law
P.O. Box 248087
Coral Gables, Florida 33124-8087**

POSITIONS OPEN

FACULTY POSITIONS IN MICROBIOLOGY AND MOLECULAR GENETICS

The Department of Microbiology and Molecular Genetics at the University of Cincinnati College of Medicine has four faculty openings in the area of molecular genetics. These positions are in the tenure track and one or more will be filled with a molecular immunologist. Applicants should submit curriculum vitae and a short statement of research accomplishments and direction for future research, along with the names of three scientists willing to write letters of recommendation. These should be forwarded to: **Dr. Jerry B. Lingrel, Chairman, Department of Microbiology and Molecular Genetics, University of Cincinnati College of Medicine, Cincinnati, Ohio 45267-0524.** The University of Cincinnati is an Equal Opportunity/Affirmative Action Employer.

FACULTY POSITION IN MOLECULAR AND CELLULAR BIOLOGY

The Department of Biology and Biotechnology at Worcester Polytechnic Institute (WPI) seeks to fill a tenure-track faculty position at a level commensurate with the qualifications of the candidate. The successful candidate will be expected to establish a productive research program and to participate in research-oriented undergraduate and graduate teaching. Preference will be given to candidates with research interests in the areas of (i) gene structure and function and (ii) regulation of development. Applicants should forward curriculum vitae, a concise statement of research plans, and three letters of recommendation to: **Search Committee, c/o Dr. J. C. Bagshaw, Department Head, Department of Biology and Biotechnology, Worcester Polytechnic Institute, Worcester, Mass. 01609.** Applications will be accepted until 1 November 1984. WPI is an Equal Opportunity/Affirmative Action Employer.

FACULTY POSITION IN THEORETICAL EVOLUTIONARY ECOLOGY UNIVERSITY OF CALIFORNIA, IRVINE (UCI)

The Department of Ecology and Evolutionary Biology, University of California, Irvine, announces a tenure-track (assistant professor) or tenured (associate professor) position for a quantitative evolutionary theorist. We are seeking a person with a highly theoretical and quantitative approach to evolutionary studies of either plant or animal systems, who can interact effectively with two more empirically oriented, recent appointments in quantitative genetics and coevolutionary ecology. An individual with an established reputation is desired, but more recent graduates of special promise will be considered. Postdoctoral experience required. UCI is an Equal Opportunity/Affirmative Action Employer.

Please send letter of application, curriculum vitae, reprints (published) or manuscripts (in press) of key publications, statement of research interests, and names, addresses, and telephone numbers of at least four references to:

**Search Committee
Department of Ecology and Evolutionary Biology
University of California
Irvine, California 92717**

Deadline for receipt of application is 15 November 1984.

FLOW CYTOMETRY BIOPHYSICIST/TECHNICIAN to operate and maintain a dual laser Fluorescence Activated Cell Sorter (Becton-Dickinson FACS 440). Applicant must have experience in the operation and maintenance of either Ortho, Coulter, or Becton-Dickinson flow cytometry instruments. Computer skills are desired. Position will require scheduling of instrument time and running samples for research and clinical investigators. Excellent salary and benefits package offered. Send curriculum vitae and names of three references to: **Dr. Hal Broxmeyer or Dr. Edwin Walker, Indiana University School of Medicine, Department of Medicine, Clinical Building Room 379, Indiana University Medical Center, 541 Clinical Drive, Indianapolis, Indiana 46223; telephone 317-264-7221.**

IMMUNOLOGIST: Ph.D., at least 2 years of postdoctoral experience, demonstrated research achievement in modern immunology. Duties: Teach immunology to undergraduate, graduate, or medical professional students; mount a research program competitive for external funding. Rank commensurate with experience: assistant or associate professor. Salary negotiable. Send curriculum vitae and three recommendation letters to: **Chair, Immunology Search Committee, Department of Microbiology, Michigan State University, East Lansing, Mich. 48824-1101.** An Affirmative Action/Equal Opportunity Institution.

28 SEPTEMBER 1984

Assistant/Associate Research Scientists

Be part of a multidisciplinary research team in molecular biology

The Bristol-Myers Pharmaceutical Research and Development Division has two excellent research opportunities in its Molecular Biology Department. Selected candidates will participate in a research program on biological response modifiers in one of the following areas:

PROTEIN CHEMISTRY

Requires a BS or MS degree in Biochemistry, Molecular Biology or similar discipline with experience in identification, purification and characterization of proteins.

MOLECULAR GENETICS

Requires a BS or MS degree in Molecular Biology, Genetics or similar discipline with strong background in molecular genetics and gene cloning.

We offer good starting salaries, comprehensive benefits and a working environment conducive to your professional growth. For prompt, confidential consideration, forward your resume with salary history and requirement, to: Department Head, Genetic Engineering



**BRISTOL-MYERS COMPANY
RESEARCH AND DEVELOPMENT DIVISION**

P.O. Box 4655, Syracuse, New York 13221

An equal opportunity employer M/F



**National Research
Council Canada**

**Conseil national
de recherches Canada**

1985 RESEARCH ASSOCIATESHIPS

for research in science and engineering in the laboratories
of the NATIONAL RESEARCH COUNCIL OF CANADA

The National Research Council is Canada's leading federal research organization. NRC's laboratory projects cover most areas of the physical sciences, natural sciences and engineering.

Applicants for Research Associateships should have recently acquired a Ph.D. in the natural sciences or a Master degree in an engineering field or expect to obtain the degree before taking up the Associateship.

Associateships are open to nationals of all countries although preference will be given to Canadians.

Research Associates will be offered appointments to the staff of the National Research Council on a term basis and will be offered salaries and benefits currently available to members of the continuing staff. As a guide, the current Ph.D. recruiting rate is \$30,360 per annum.

The initial appointment will normally be for a two-year term and may be renewed, subject to the Associate's performance and subject to the requirements of the Division.

Application may be obtained from the Research Associates Office, National Research Council of Canada, Ottawa, Ontario, Canada, K1A 0R6.

Closing date: 15 December 1984

Canada

POSITIONS OPEN

TENURE-TRACK FACULTY. Anatomy Department, University of Medicine and Dentistry-New Jersey (UMDNJ)-Rutgers Medical School seeks tenure-track faculty for state-funded positions in expanding department. Rank dependent on qualifications. Applicants must have a strong and continuously funded research program in nerve and muscle cell biology involving developmental or regenerative mechanisms. Funds are available to successful candidates for postdoctoral and predoctoral assistants. Send curriculum vitae, including description of research, grant history and current status, and three letters of recommendation to: **A. Hess, Search Committee, Department of a Anatomy, UMDNJ-Rutgers Medical School, P.O. Box 101, Piscataway, N.J. 08854.** An Equal Opportunity/Affirmative Action Employer, M/F.

HEAD: DEPARTMENT OF BIOLOGY SEARCH EXTENDED

Position will be filled at rank of associate professor or higher, with one-half time teaching responsibility. Preferred area of expertise is human physiology, but other specialties will be considered. Requirements include earned doctorate, history of effective teaching and research; administrative experience desirable. Candidate selected will assume duties in January or July 1985, depending upon availability. Submit curriculum vitae and names, addresses, and phone numbers of three references by 1 November 1984 to: **Professor Samuel D. Paravonian, Chairman, Search Advisory Committee, Graduate Office, Purdue University Calumet, Hammond, Indiana 46323.**

Affirmative Action/Equal Opportunity Employer

IMMUNOLOGY FACULTY POSITION

Tenure track, at either assistant, associate, or full professor, Department of Microbiology, Southwestern Medical School, Dallas.

Areas of particular interest include molecular genetics, cellular immunology, and cell cloning. Rank and salary open. Current members of immunology faculty are: Drs. Capra, Forman, Kettman, Lipsky, Sullivan, Tucker, Uhr, Vitetta, and Wasserman. Applicants should submit curriculum vitae, description of research interests, and names of four references to: **Dr. J. W. Uhr, Department of Microbiology, Southwestern Medical School, 5323 Harry Hines Boulevard, Dallas, Texas 75235.**

The University of Texas Health Science Center is an Equal Opportunity/Affirmative Action Employer.

OLD DOMINION UNIVERSITY

MARINE ORGANIC GEOCHEMIST-Search Extended: The Department of Oceanography seeks candidates for a newly created, state-funded tenure-track faculty position in marine organic geochemistry. Specific research interest is open, although the major departmental emphasis is on coastal processes. The successful candidate is expected to pursue a vigorous funded research program, and to teach undergraduate and/or graduate level courses in his/her field. The expanding Oceanography Department offers programs leading to the M.S. and Ph.D. degrees. It currently has 15 faculty positions, with three in chemical oceanography, 70 graduate students, and the appropriate facilities for many chemical studies. The position will be at the assistant professor level. A Ph.D. is required and postdoctoral experience is desirable. The position is available for the 1985-1986 academic year. Applicants should submit curriculum vitae, statement of research interests, and the names of three references by 31 October 1984 to: **Dr. Gregory A. Cutter, Search Chairman, Department of Oceanography, Old Dominion University, Norfolk, Va. 23508, telephone: 804-440-4285.** An Affirmative Action/Equal Opportunity Institution.

The Department of Chemistry at Purdue University solicits applications for two tenure-track positions in **ORGANIC CHEMISTRY**, effective August 1985. One of these positions is for an assistant professor; minimum requirements include a Ph.D. in chemistry and exceptional promise in research and teaching at the undergraduate and graduate levels. Curriculum vitae, including undergraduate and graduate transcripts, a summary of planned research, and three letters of recommendation should be sent by 1 November 1984 to: **Professor Harry L. Pardue, Head, Department of Chemistry, Purdue University, West Lafayette, Ind. 47907.** The second organic position will be at the associate or full professor level. Interested applicants should provide a detailed curriculum vitae to the above address.

Purdue is an Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

INSTRUCTOR IN MICROBIOLOGY

The Department of Microbiology at the University of Alabama in Birmingham invites applications for a non-tenure earning position at the instructor level. The candidate will be expected to contribute to research on the mechanisms of bacterial attachment to tissues and methods of preventing this attachment. Applicants must have 2 to 3 years of postdoctoral experience and be experienced in clinical microbiology, connective tissue biochemistry, and modern techniques of protein fractionation and purification. Responsibilities will include teaching of graduate and professional students in clinical bacteriology. Salary range is from \$22,000 to \$25,000 per annum. Submit résumé and the names of three references to: **Chairman, Department of Microbiology, University of Alabama in Birmingham, University Station, Birmingham, Ala. 35294.** Reply by 30 October 1984. *We are an Equal Opportunity/Affirmative Action Employer.*

MATHEMATICAL ECOLOGY

Tenure-track assistant professorship

Active research on theoretical problems concerning ecological dynamics and an ability to teach a rigorous, wide-ranging graduate course in mathematical ecology are required. Those who combine important theory development with laboratory and/or field work may have an advantage. Please submit curriculum vitae (including biographic data), short statement of research objectives, names of at least five referees, and selected reprints to: **The Chairman, Department of Zoology, University of Texas at Austin, Austin, Tex. 78712,** before 1 November 1984.

The University of Texas at Austin is an Equal Opportunity/Affirmative Action Employer.

MOLECULAR BIOLOGY

One or more positions, assistant professor through endowed professorship

Active research program in molecular biology of gene expression of metazoans. Those who combine an active research program in molecular biology and its relation to genetics, developmental biology, and so forth, may have an advantage. Molecular biology is an expanding well-endowed field at the University of Texas at Austin. Please submit curriculum vitae (including biographic data), short statement of research objectives, names of at least five referees, and selected reprints to: **The Chairman, Department of Zoology, University of Texas at Austin, Austin, Tex. 78712,** before 1 November 1984.

The University of Texas at Austin is an Equal Opportunity/Affirmative Action Employer.

MOLECULAR BIOLOGY

The Noble Foundation invites applicants for research position in eukaryotic cell gene expression, genetics, cell-cell interaction, or developmental control.

Candidate should have sufficient postdoctoral experience to initiate an independent research program in a privately endowed research laboratory.

Send curriculum vitae, summary of proposed research program, and references to:

**Dr. M. K. Patterson, Jr.
Director, Biomedical Division
The Noble Foundation
P.O. Box 2180
Ardmore, Okla. 73402**

MOLECULAR GENETICIST DEPARTMENT OF GENETICS UNIVERSITY OF GEORGIA

The University of Georgia is seeking a molecular geneticist for a tenure-track position available fall 1985 or winter 1986. The exact area of research and academic rank are open, but candidates are expected to pursue an active research program and to teach at both the graduate and undergraduate levels. The Department of Genetics has 14 faculty members and strong research programs in molecular and population genetics. Applicants should send curriculum vitae, including reprints of representative publications and a statement of research objectives, and arrange to have at least three letters of recommendation sent to: **Dr. Sidney R. Kushner, Chairman, Molecular Geneticist Search Committee, Department of Genetics, University of Georgia, Athens, Georgia 30602.** The closing date for applications is 15 November 1984. *The University of Georgia is an Equal Opportunity/Affirmative Action Institution.*

POSITIONS OPEN

MASS SPECTROSCOPIST-RICE UNIVERSITY. The Department of Biochemistry announces the availability of a scientific staff position for an experienced bioorganic mass spectroscopist to operate the GC-MS unit, to participate in research on sterol biosynthesis and the chemistry of complex lipids, and to assist in teaching an advanced experimental biochemistry laboratory course. Salary is dependent on qualifications and experience. Position available immediately. Interested persons should send résumé and names of three references to: **G. J. Schroepfer, Jr., Department of Biochemistry, Rice University, P.O. Box 1892, Houston, Texas 77251.** *Rice University is an Equal Opportunity/Affirmative Action Employer.*

OCEANOGRAPHER

The National Oceanic and Atmospheric Administration (NOAA) announces a vacancy for oceanographer, National Ocean Service (NOS), National Marine Pollution Program Office, located in Rockville, Maryland. Duties include compiling and evaluating programmatic and technical information; performing analysis, and preparing documents and reports presenting the results of technical studies. The pay rate for this position is \$30,549 per annum. Apply to: **NOAA/NOS, 6001 Executive Boulevard, Rockville, Maryland 20852, Attention: RAS/DC25.** LT. Standard Form 171 must be received by 12 October 1984 to be considered. *Equal Opportunity Employer.*

Princeton University—**PHYSICAL CHEMISTRY.** The Department of Chemistry invites applications for a tenure-track position in physical chemistry beginning September 1985. Applicants with any field of specialization may apply, and we especially encourage candidates with interest in condensed matter physical chemistry. Applicants should send curriculum vitae, and a statement of future research plans and have three letters of recommendation sent to: **Professor Herschel Rabitz, Chairman of Recruiting Committee, Department of Chemistry, Princeton University, Princeton, N.J. 08544.** *Princeton is an Equal Opportunity/Affirmative Action Employer.*

PLANT MOLECULAR BIOLOGISTS

Plant Molecular Biology, Cornell University. Two tenure-track faculty positions, at the assistant or associate professor levels, one in Department of Plant Breeding and Biometry, the other in the Section of Plant Biology. Both are full-time, 12-month positions with research and teaching responsibilities. Applicants should have training and experience in plant molecular biology. The appointee in plant breeding and biometry will be expected to develop a strong program in plant molecular biology to expand our understanding of molecular genetics in important crop plants and will interact with ongoing research in the department. The appointee in plant biology will be expected to develop a strong program of research in basic aspects of plant molecular biology. With these and related positions we are developing a concentration of excellence in molecular biology at Cornell. This effort is enhanced by funds from the state of New York and a consortium of industries.

Inquiry is invited. Submit a letter of application, a résumé of biographical data and professional experience, and names and addresses of four referees and indicate departmental preference, if any. Deadline for applications is 31 October 1984. Send materials to:

**Dr. Vernon Gracen
Department of Plant Breeding and Biometry
Cornell University
Ithaca, New York 14853
Telephone: 607-256-3103**

Cornell University is an Affirmative Action/Equal Opportunity Employer.

PLANT SCIENTIST—TISSUE CULTURE

Crop Genetics International, a plant biotechnology company located in Dorsey, Maryland, in close proximity to the United States Department of Agriculture Beltsville facilities, is seeking B.S. and M.S. personnel to add to its scientific team. Individual with skills and experience in plant tissue culture manipulations and systems are encouraged to apply. Cellular selection experience is highly desirable. Please forward curriculum vitae and a statement of professional experience and objectives to: **M. Sandner, Crop Genetics International N.V., 7170 Standard Drive, Dorsey, Maryland 21076.**

An Equal Opportunity/Affirmative Action Employer

DIRECTOR RESEARCH INSTITUTE ON ALCOHOLISM BUFFALO, NEW YORK

This position heads a research institute in the New York State Division of Alcoholism and Alcohol Abuse. It is responsible for the development of basic and applied research programs in the alcoholism field and for the general management of the Institute. An adjunct Professorship with the State University at Buffalo may accompany the position.

To qualify, the candidate must have a doctorate in behavioral, biochemical, medical or social sciences plus a broad-based understanding of alcohol related research and proven ability to manage a large research support organization. Salary is open.

Send resume by Oct. 15, 1984 to
Mr. Francis DuCharme, Director of
Human Resources Management



**N.Y.S. DIVISION
OF ALCOHOLISM &
ALCOHOL ABUSE**

194 Washington Ave., Albany, NY 12210

An equal opportunity/Affirmative action employer

SENIOR DRUG DELIVERY SCIENTISTS

THE LILLY RESEARCH LABORATORIES, an established leader in pharmaceutical research, has vacancies for Senior Scientists in the expanding area of Drug Delivery System Research.

Applicants must have a doctoral degree in Pharmaceutics, Physical Pharmacy, Industrial Pharmacy, Physical Organic Chemistry, Polymer Chemistry, Physiology or related disciplines. Candidates must have a major interest in applying their expertise in a multi-disciplinary program involving all facets of Drug Delivery Research.

Post doctoral or industrial experience would be helpful, but newly qualified Ph.D.'s would also be considered. Applicants will be expected to integrate their research into existing programs or establish techniques for application in new research.

Qualified candidates should send their curriculum vitae to:

John W. Crooks, Manager
College Relations (SDD)
Eli Lilly and Company
307 East McCarty Street
Indianapolis, Indiana 46285



An Equal Opportunity
Employer M/F

NORDITA COPENHAGEN

ASSISTANT PROFESSOR IN THEORETICAL ASTROPHYSICS

NORDITA, the Nordic theoretical physics institute located at the Niels Bohr Institute of Copenhagen University, has an opening starting September 1985 for a second assistant professor in theoretical astrophysics. The initial appointment will be for three years, with the possibility of renewal up to a total of six years. The annual salary will be in the range of 190.000-270.000 Danish Kroner depending on experience. The successful applicant is expected to guide fellows at roughly the post-doctoral level and to interact with colleagues at NORDITA and elsewhere in the Nordic countries. There are good opportunities to participate in observational collaborations, through ESO and ESA, as well as common Nordic projects such as from 1988 the 2.5 m optical telescope, and the Swedish/ESO submillimeter telescope. This position provides excellent opportunities to pursue original research, to travel to other institutes and to meetings, and to invite guest scientists. There is no restriction on the applicant's field of research, though preference will be given to those areas where physics and astro-physics are most closely coupled. Recent research areas at NORDITA include neutron stars, supernovae, extra-galactic radio sources, radiation and plasma processes, cosmology, galaxy formation and solar astrophysics.

Those interested in the appointment should send curriculum vita, a list of publications and the names of three referees before 15 December 1984 to the **Director, Nordita, Blegdamsvej 17, DK-2100 Copenhagen Ø, Denmark**. There is no restriction on the nationality of the applicant. Those wishing to recommend suitable candidates are urged to contact the Director.



The **Naturwissenschaftliche Fakultät** of the **Technische Universität Braunschweig** and the **Gesellschaft für Biotechnologische Forschung mbH** (Institute of Biotechnological Research, GBF) offer the position of

Scientific Director of the GBF.

The successful applicant will be appointed as

Professor (C4) of Biotechnology

at the **TU Braunschweig** and will be given leave of absence to assume his duties as Scientific Director of the GBF.

The GBF is a federal institute for large scale research (**Großforschungseinrichtung**) with about 400 employees in the four research departments Microbiology, Cell Biology and Genetics, Enzyme Technology, and Biological Process Engineering. The GBF has two directors: the scientific director, who is chairman of the directorate, and an administrative director. The scientific director should be either a scientist or an engineer. His duty is to coordinate the research in the four departments and to determine the overall priorities of the research and development projects. He is the scientific representative of the GBF.

The **Technische Universität Braunschweig** expects an active participation in the development of the new Graduate Program in Biotechnology. For this program a Biocenter is planned at the **TU Braunschweig**, the establishment of which has been approved by the Government of Lower Saxony.

Applicants must meet the requirements for Professors specified in § 56 of the University Law of Lower Saxony. In particular, they must have a Ph.D. in science or engineering, a distinguished research record, and a habilitation or an equivalent qualification.

In addition it is expected that the applicants have experience as head of a research institute. Knowledge of the German language is desired.

Applications should be made before **15 October 1984** to: **Vorsitzender der Naturwissenschaftlichen Fakultät, TU Braunschweig, Pockelsstr. 14, D-3300 Braunschweig, W. Germany (FRG)**.

POSITIONS OPEN

PARASITOLOGIST with experience including immunochemistry or biochemistry. Contact: **Arden A. Kelton, Ph.D., Environmental Diagnostics, Inc., 17935 Sky Park Circle, Suite D, Irvine, Calif. 92714.**

POST- AND PREDOCTORAL POSITIONS—Anatomy Department, University of Medicine and Dentistry, New Jersey (UMDNJ)—Rutgers Medical School seeks applicants for postdoctoral and predoctoral positions in neuroscience. Emphasis will be in the areas of trophic interactions, cytoskeletal components, sensory and membrane receptors. Departmental focus is on developmental and regenerative mechanisms. Send curriculum vitae and names and addresses of three references to: **F. Roisen, Department of Anatomy, UMDNJ—Rutgers Medical School, P.O. Box 101, Piscataway, N.J. 08854. An Equal Opportunity/Affirmative Action Employer, M/F.**

POSTDOCTORAL immediately available for biochemical and immunological studies on protein neurotoxins. Ph.D. in biochemistry or immunology desired. Send curriculum vitae and names of two references to: **Richard Hudson, Department of Biochemistry, Wayne State University, Detroit, Mich. 48201.**

POSTDOCTORAL TO STUDY GENETIC RECOMBINATION

Position available immediately (but starting date is flexible) to study genetic recombination (and DNA repair) in *Escherichia coli* cell-free and in vivo systems, and possibly in eukaryotes. Extensive interaction within molecular biology cluster at University of Maryland Baltimore County, and with nearby scientists at NIH, Johns Hopkins, and Frederick Cancer Research. Background in molecular genetics and/or nucleic acid biochemistry desirable. Total compensation (salary plus portable retirement contribution plus terminal bonus) about \$18,000 to \$20,000, plus liberal health insurance and other benefits. Send curriculum vitae and names of three references to: **Dr. John Hays, Department of Chemistry, University of Maryland Baltimore County, Catonsville, Md. 21228. University of Maryland is an Equal Opportunity/Affirmative Action Employer. The university encourages qualified women and minorities to apply.**

POSTDOCTORAL FELLOW/RESEARCH ASSOCIATE to study the physico-chemical regulation of enzyme-catalyzed hydrolysis of cholesteryl esters. Work involves kinetic and thermodynamic characterization of enzyme adsorption to and catalysis at interfaces and of cholesterol movement. Anticipated starting date after 1 December 1984. Annual stipend (\$17,384 minimum) and position dependent on prior research experience. Submit curriculum vitae and names of three references to: **Dr. Howard L. Brockman, The Hormel Institute, University of Minnesota, 801 16th Avenue, NE, Austin, Minn. 55912; telephone: 507-433-8804. The University of Minnesota is an Equal Opportunity Educator and Employer and specifically invites and encourages women and minority applicants.**

SEVERAL POSTDOCTORAL POSITIONS available during 1984 for research into mammalian appendage, organ, and tissue regeneration at: **Developmental Biology Center, University of California, Irvine, Calif. 92717.** Ph.D. required, preferably in cell, molecular, or developmental biology; neurobiology; or genetics. Positions available for work on cell communication, extracellular matrix, growth factors, effects of cyclosporin, limb development. With Susan Bryant, Scott Fraser, Dennis Cunningham, Marianne Bronner-Fraser, or Kirby Black. Submit résumé, brief description of research interests and experience, and names of three individuals qualified to evaluate your work to: **Susan Bryant (address above).** Please indicate the person or area of your interest. *The University of California is an Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL POSITIONS

A position in comparative physiology with specific interest in the uptake and utilization of organic materials by marine organisms; Ph.D. required. Contact: **Dr. Grover C. Stephens.**

A position in cell biology with specific interests in cell division and other motility processes combining laser microbeam irradiation and monoclonal antibodies; Ph.D. required. Contact: **Dr. Michael Berns, Department of Developmental and Cell Biology, School of Biological Sciences, University of California, Irvine, California 92717. The University of California is an Equal Opportunity/Affirmative Action Employer.**

POSITIONS OPEN

POSTDOCTORAL POSITIONS in biochemical or molecular genetics. Will study chromosomal alterations, selected genes, and their products as a part of a multidisciplinary program on mammary cancer biology or study lipid peroxidation and the regulation of enzymes in Down syndrome patients. Experience in molecular biology, tissue culture, and biochemistry preferred. Send curriculum vitae and names of two or three references to: **Dr. Burhan Say, Director, Chapman Research Institute, 5300 East Skelly Drive, Tulsa, Okla. 74135, by 15 October. An Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL POSITIONS available immediately to study the immunological and biochemical mechanism of action of tuftsin, an immunomodulating peptide hormone. Send curriculum vitae and names and addresses of three references to: **Dr. Kenji Nishioka, The University of Texas, M. D. Anderson Hospital and Tumor Institute, Box 107, Surgical Research Laboratory, Houston, Texas 77030. M. D. Anderson Hospital is an Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL POSITION available in molecular immunology laboratory. Candidates with experience in cellular immunology and/or molecular biology preferred. Send curriculum vitae and have two letters of reference by 31 October to: **Dr. Linda R. Gooding, Department of Microbiology and Immunology, Emory School of Medicine, Atlanta, Ga. 30322.** Salary range: \$14,500 to \$18,000 depending on experience.

Emory University is an Equal Educational/Affirmative Action Institution.

POSTDOCTORAL POSITION for research on mouse embryos. Work includes microinjection of genes into eggs, cell culture, embryo transfer, and development of mouse strains containing foreign genes. Apply with curriculum vitae to: **R. L. Brinster, School of Veterinary Medicine, University of Pennsylvania, Philadelphia, Pennsylvania 19104.**

POSTDOCTORAL POSITION available 1 January 1985 to study the multicomponent membrane-bound complexes involved in blood coagulation. Experience with protein biochemistry and fluorescence spectroscopy preferred. Send résumé, names of three references, and brief summary of research experience to: **Dr. Arthur E. Johnson, Department of Chemistry, University of Oklahoma, Norman, Okla. 73019.**

POSTDOCTORAL POSITION available 1 January 1985 to study sensorimotor processing in the basal ganglia. Experiments involve single unit recording in moving animals, microstimulation, and online computer-assisted data analysis. Send curriculum vitae and the names of three references to: **Dr. T. I. Lidsky, Division of Veterinary Biology, Virginia-Maryland College of Veterinary Medicine, Virginia Tech, Blacksburg, Virginia 24061.**

POSTDOCTORAL POSITION

A postdoctoral position is open for NSF-supported research on the evolution of endocrine systems controlling reproduction. Major emphasis is on steroid hormone synthesis, regulation and action associated with oviparous and viviparous reproduction, and luteal function in reptilian and elasmobranch models. Applicants should have a good background in physiology and biochemical endocrinology. Position available 1 November 1984; salary: \$16,000 per year. Contact: **Dr. Ian P. Callard, Department of Biology, Boston University, 2 Cummings Street, Boston, Mass. 02215. Boston University is an Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL POSITIONS IN STRUCTURAL BIOLOGY. One or two postdoctoral positions will become available between 1 November 1984 and 1 April 1985 for the study of the structure of macromolecular assemblies using x-ray and neutron diffraction from noncrystalline specimens. This research will involve the development and use of new techniques of specimen preparation and data analysis aimed at obtaining structural images at atomic resolution. Structures to be studied include the filamentous bacteriophages and recA-DNA complexes. Background in protein crystallography, small angle diffraction, or image processing of electron micrographs is desirable but not essential. Send curriculum vitae and the names of three references to: **Dr. Lee Makowski, Columbia University, Department of Biochemistry and Molecular Biophysics, 630 West 168 Street, New York, N.Y. 10032.**

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POSITIONS OPEN

POSTDOCTORAL POSITION available 1 April 1985 to study the central and peripheral components of the neural circuitry controlling choroidal blood flow in the avian eye. Experience with immunohistochemical, pathway tracing, or electron microscopic techniques desirable. Position will be in the Department of Anatomy at the University of Tennessee Center for Health Sciences in Memphis. Send curriculum vitae to: **Dr. Anton Reiner, Department of Anatomy and Cell Biology, University of Michigan, Ann Arbor, Mich. 48109.**

POSTDOCTORAL POSITIONS—RESEARCH HEMATOLOGY. The Hematology Division of The Johns Hopkins University School of Medicine has positions beginning July 1985 for individuals with an M.D. or Ph.D. degree and an interest in hematology research (normal and neoplastic cell proliferation, coagulation, immunohematology, membrane proteins, genetic control of globin synthesis, oxygen transport, red cell enzymes). U.S. citizenship required. Send curriculum vitae and three references to: **J. L. Spivak, M.D., Hematology Division, The Johns Hopkins University School of Medicine, Baltimore, Md. 21205. Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL/RESEARCH ASSOCIATE

Combined Los Alamos—University of New Mexico research position. Investigations of the maturation sequence of mouse and human monomyelocytic cell lineage cells. Work involves cell culture, monoclonal antibody production, flow cytometry and cell sorting, cellular immunology, and possibly involvement in molecular biology (oncogene expression) on normal and tumor cells. Contact: **T. B. Tomasi, M.D., Ph.D., University of New Mexico Cancer Center, Albuquerque, N.M. 87131, or Carleton Stewart, Ph.D., Group LS-4, MS M888, Los Alamos National Laboratory, Los Alamos, N.M. 87545.**

POSTDOCTORAL RESEARCH ASSOCIATE

Postdoctoral position for NIH-funded research and training in the molecular aspects of eukaryotic RNA virus replication (vesicular stomatitis) with emphasis in the regulation of virus-coded polymerase activities and attenuation by defective interfering particles. Strong background in recombinant DNA technology and/or protein chemistry is preferred. San Diego offers highly desirable living conditions as well as excellent growth opportunities for biological research. Starting salary: \$18,000 to \$20,000 per year, based on experience. Earliest starting date, on or about 1 January 1985. Please send résumé and three letters of reference to: **Dr. Jacques Perrault, Department of Biology and Molecular Biology Institute, San Diego State University, San Diego, Calif. 92182. An Equal Opportunity/Affirmative Action Employer.**

PROTEIN CHEMIST. The Department of Biology at the University of Oregon is seeking a person to supervise its protein chemistry facility. The post to be filled is a permanent position at the level of senior research associate. Experience in protein sequencing and some knowledge of protein synthesizing methodology are a necessity. Salary commensurate with background and experience. Send curriculum vitae and names of three references to: **Dr. R. A. Capaldi, Department of Biology, University of Oregon, Eugene, Oregon 97403.** Closing date: 22 October 1984. *An Equal Opportunity/Affirmative Action Employer.*

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We are looking for a professional to assist the executive officer of the American Society of Biological Chemists in monitoring science-related activities of the federal government, including Congress, and to maintain liaison with private biomedical and scientific research groups based in the District of Columbia.

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The Department of Botany, The University of Texas at Austin, seeks applications for an endowed faculty position. We wish to recruit a senior biologist of international repute who is using techniques in molecular genetics to study important problems in plant science. Applicants should have an active research program in this field, and interest in teaching molecular biology at the graduate and undergraduate levels. Applicants for the professorship, which will be available 1 September 1985, should submit their curriculum vitae, record of publications, three letters of recommendation, and a statement of interests in research and teaching to: **Dr. S. J. Roux, Department of Botany, The University of Texas, Austin, Texas 78713**, no later than 1 December 1984. *The University of Texas at Austin is an Equal Opportunity/Affirmative Action Employer.*

RESEARCH ASSISTANT PROFESSOR position in the Department of Medicinal Chemistry, University of Pittsburgh, for a Ph.D. biophysicist or Ph.D. chemical physicist with extensive experience in solid-state NMR of biological materials. Postdoctoral experience and quality publications required. The responsibilities will include the application of high-resolution and solid-state NMR techniques to the study of biological (including human) tissues. Salary \$18,000 to \$20,000 per year, depending on qualifications and experience. Send applications and three letters of recommendation before 15 November to: **Dr. J. W. Pettegrew, Department of Medicinal Chemistry, Salk Hall, University of Pittsburgh, Pittsburgh Pa. 15261.** *The University of Pittsburgh is an Equal Opportunity/Affirmative Action Employer.*

RESEARCH ASSOCIATE with experience in electron microscopy, tissue culture, and epithelial physiology to coordinate relatively independent research in renal laboratory. Masters degree required. Address inquiries and curriculum vitae to: **Section Head, Renal Medicine, East Carolina University, School of Medicine, Greenville, N.C. 27834**, by 14 October 1984. *Equal Opportunity Employer through Affirmative Action.*

RESEARCH IMMUNOLOGIST

The Department of Ophthalmology, Baylor College of Medicine, is seeking applicants for a tenure-track position as research instructor or assistant professor of ophthalmology to participate in basic research in the immunology of ocular infectious and inflammatory diseases. Candidates should have postdoctoral research experience, a record of research accomplishment, and a capacity to function as a collaborative and independent investigator. Current research areas in the department include immune mechanisms of bacterial and fungal keratitis, herpes simplex keratitis, microbial retinchoroiditis, and corneal allograft reaction. Salary and position will be commensurate with experience and qualifications. Please send curriculum vitae and list of three references to:

**Dr. Dan B. Jones, Professor and Chairman
Department of Ophthalmology
Cullen Eye Institute
Texas Medical Center
Houston, Texas 77030**

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SENIOR NEUROBIOLOGIST

Bryn Mawr College, Department of Biology, seeks a neurobiologist for the position of **professor of biology** and **chairman** of the department. A specialist in neurophysiology is preferred although applicants from other areas of neurobiology will be considered. Applicants must have a proven record of funded research, and currently be at the rank of professor or qualified for promotion to that rank. The position requires establishing an active program of research and participating in the development of an interdepartmental program in neuroscience and behavior. Teaching responsibilities for the academic year normally consist of a one-semester graduate seminar, a one-semester advanced undergraduate course with laboratory, and limited participation in one semester of the introductory course in biology. Send résumé, copies of representative publications, a brief description of research plans, and three letters of recommendation to: **Neurobiology Search Committee, Department of Biology, Bryn Mawr College, Bryn Mawr, Pa. 19010.** Closing date: 30 November 1984. *Affirmative Action/Equal Opportunity Employer.*

POSITIONS OPEN

RESEARCH BIOLOGIST—HAZARDOUS WASTES

Assistant or Associate Professional Scientist

Ecological physiologist with expertise and experience in the effects of hazardous wastes in the environment; Ph.D. in related field; will identify biological research needs as related to problem assessment and problem solving; will conduct research in these topical areas. Salary competitive.

Send letter of application, résumé, and the names of three references by 30 November 1984 to: **Dr. Robert W. Gordon, Illinois Natural History Survey, 607 East Peabody Drive, Champaign, Ill. 61820; telephone: 217-333-6889.** Starting date will be 1 November 1984.

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RESEARCH STAFF MEMBER: Behavioral scientist with record of leadership in energy conservation studies in buildings. Ph.D. and extensive publications required. Self-starter for nonfaculty position working closely with engineers and physical scientists. Versatility with data reduction, data analysis, computer programming. Salary open. *An Affirmative Action/Equal Opportunity Employer.* Send résumé to: **SLL, Center for Energy and Environmental Studies, H106 Engineering Quadrangle, Princeton University, Princeton, N.J. 08544.**

Immediate opening for **SCIENTIFIC AND CURRICULUM COORDINATOR** of the Space Life Sciences Training Program for college-level students at the Kennedy Space Center. Ph.D. in plant, animal, or human physiology and a minimum of 3 years of research experience is required. Desire experience with curriculum development, lecture, and laboratory presentation. Apply to: **J. R. Puleo, BIO-1, Kennedy Space Center, Fla. 32899.** Applications must be postmarked no later than 12 October 1984. *Equal Opportunity Employer.*

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Tenure-track faculty position for transplantation immunologist in the Department of Surgery, with a joint appointment in the Department of Microbiology and Immunology. This person will direct a human tissue typing laboratory staffed by five technicians, and 75 percent effort may be devoted to independent research in transplantation immunology, teaching, and graduate student training program in the Department of Microbiology and Immunology. Candidates should have a Ph.D. or M.D. (or equivalent), postdoctoral research experience in transplantation immunology, and a commitment to developing a research program. Research laboratory and support facilities including a cell sorter are provided. Applicants should submit curriculum vitae, the names of three references, and a summary of research interests to:

**John C. McDonald, M.D.
Professor and Chairman
Department of Surgery**

**Dennis J. O'Callaghan, Ph.D.
Professor and Chairman**

**Department of Microbiology and Immunology
Louisiana State University Medical Center
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POSTDOCTORAL FELLOWSHIP/RESEARCH ASSOCIATE

Position available for individuals with a Ph.D. in biochemistry, pharmacology, or physiology to participate in research related to (i) the regulation of renal arachidonic acid metabolism, or (ii) the characterization of interactions between vasopressin and the renal kallikrein-kinin system. Experience in lipid biochemistry or in renal physiology is desirable. Position available in October 1984. Send curriculum vitae, and names and addresses of three references to: **Dr. Alberto Nasjletti, Department of Pharmacology, University of Tennessee Center for the Health Sciences, 874 Union Avenue, Memphis, Tennessee 38163.** *Equal Opportunity/Affirmative Action Employer.*

FELLOWSHIPS

POSTDOCTORAL FELLOWSHIPS IN NEUROCHEMISTRY

Positions are available for biochemists (new Ph.D. is preferred) to study: (i) the role of the complex carbohydrates in cell differentiation and intercellular interaction in primary cultures of brain cells, (ii) structure of oligosaccharides of brain glycoproteins with emphasis on age-related changes, (iii) the interrelationship between serotonin and LSD receptors, or (iv) the functional response of neurotransmitter receptors and the consequent transmembrane processes. The Neurochemistry Unit at the Missouri Institute of Psychiatry in St. Louis occupies well-equipped laboratories in a modern building. This is part of the Biochemistry Department, University of Missouri-Columbia. *An Affirmative Action/Equal Opportunity Employer.*

Applicants should send curriculum vitae and three references to:

**Dr. Ingming Jeng
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TRAINING GRANT

NIH TRAINING GRANT POSITIONS are now available for postdoctoral studies in the molecular biology of peptide growth factors. Applicants should possess a keen interest in eukaryotic gene regulation and have demonstrated expertise in recombinant DNA methodology. United States citizenship required. Graduate studies are also available for outstanding predoctoral candidates. Please send curriculum vitae and two letters of recommendation to: **Dr. Michael J. Getz, Department of Cell Biology, Mayo Clinic, Rochester, Minn. 55905.** *An Affirmative Action/Equal Opportunity Institution.*

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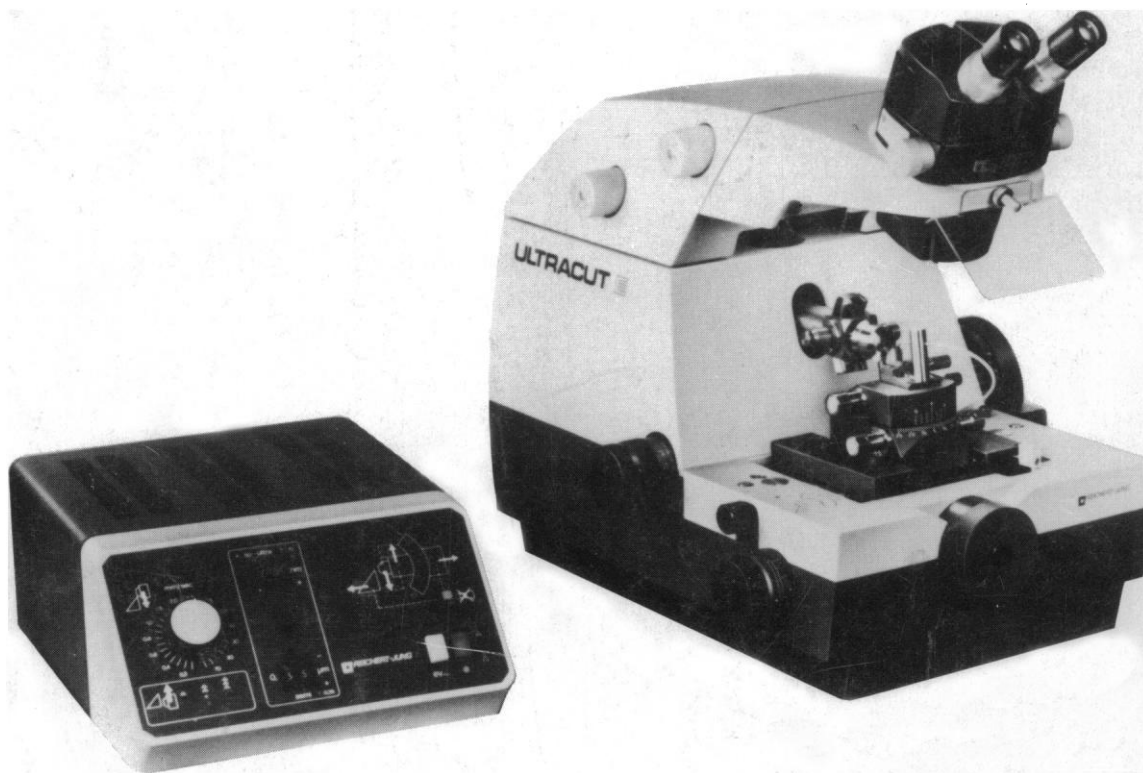
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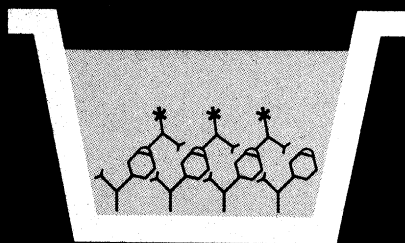
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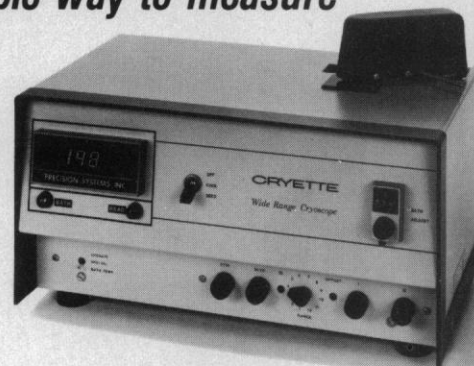
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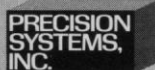
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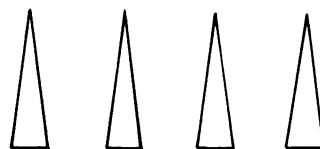
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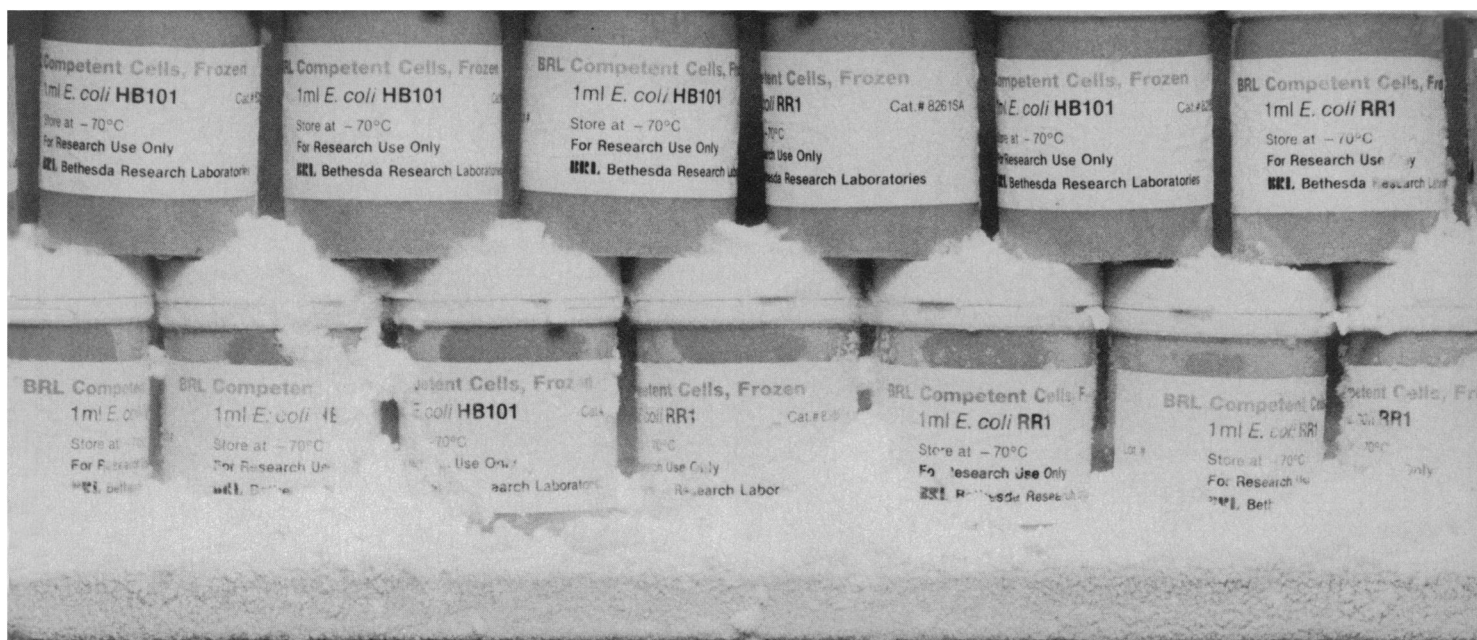
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*Hanahan, Douglas (1983) *J. Mol. Biol.* 166, 557-580.

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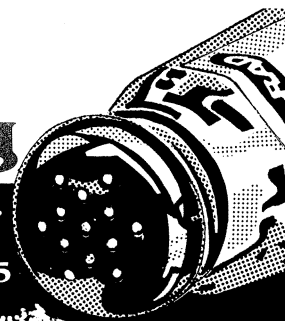
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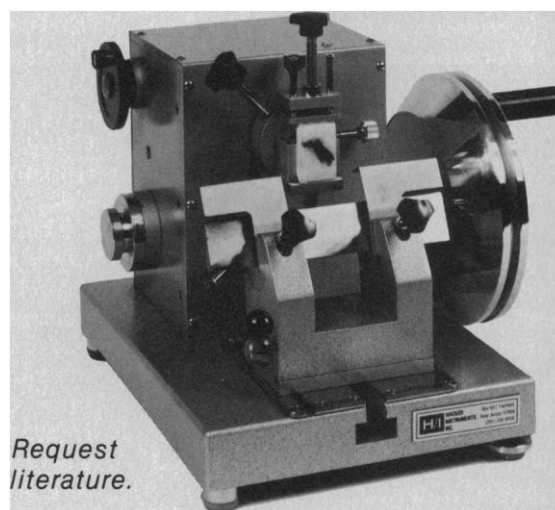
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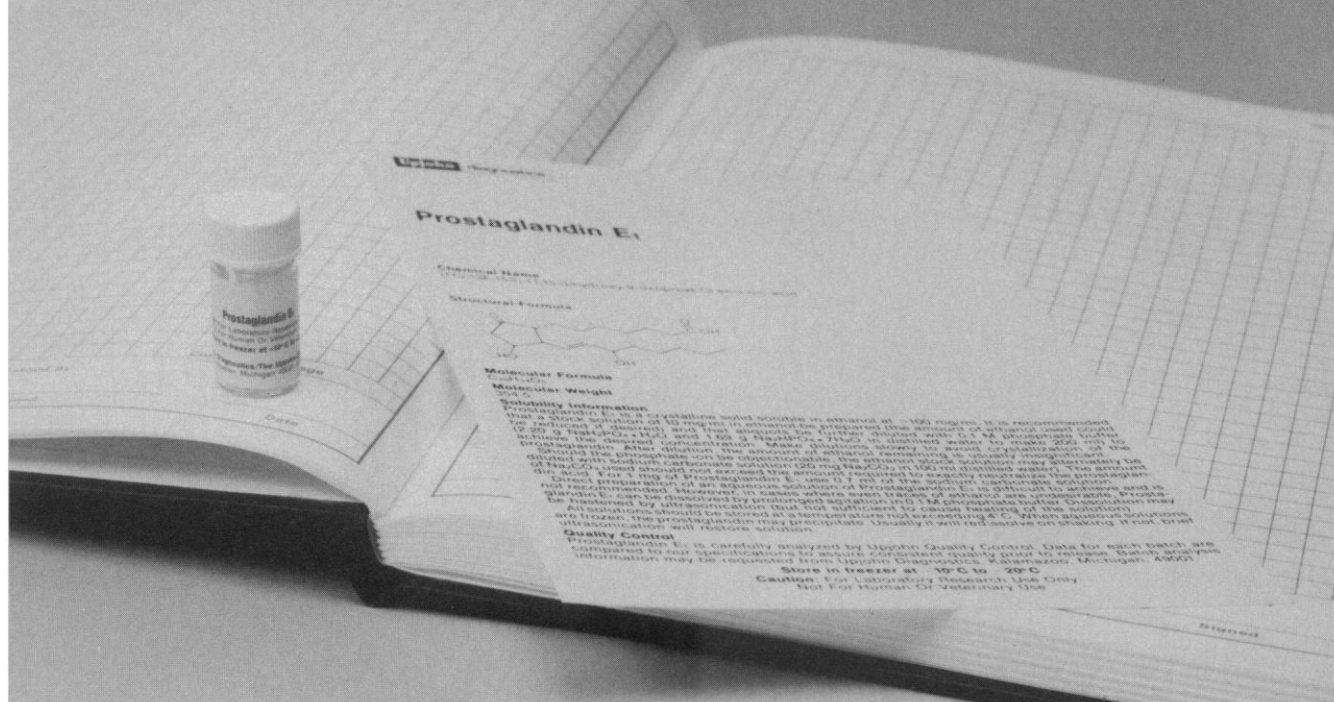
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