

along through mostly Soviet literature, this book flows sedately back and forth across the borders of East and West to describe an intersect of cell biology and medicine with care and fairness. I can only hope that the authors may have the personal freedom commensurate with this learned, classical objectivity.

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Microbial Genetics

Genetics as a Tool in Microbiology. Papers from a symposium, Cambridge, England, April 1981. S. W. GLOVER and D. A. HOPWOOD, Eds. Published for the Society for General Microbiology by Cambridge University Press, New York, 1981. x, 428 pp. \$65. Society for General Microbiology Symposium 31.

In these days of host-vector systems, expression vectors, and cutting and splicing, it is easy to forget that current advances in studies of microorganisms, in spite of recombinant DNA, rely on a very substantial background of classical genetics. As is pointed out in the preface to this book, it is 21 years since the Society for General Microbiology last held and published the proceedings of a symposium on the genetics of microorganisms; it is highly appropriate that a sequel should appear now, both as a reminder of the importance of studies in this field and as a summary of how the field has advanced. There is no question but that genetics is an indispensable tool in the analysis of microbes, as it is in studies of higher organisms. The old saying (attributed to Luria) that "one mutant is better than no mutant" still has validity.

This collection of papers is an extremely valuable source of information on the application of classical genetic studies to the analysis of a number of microbial systems. It is one of the most useful and readable books that I have seen for some time, and it deserves a place on most bookshelves.

The papers include not only discussions of classical approaches to microbial genetics but also extensive reviews of subjects of more recent development. In this respect, the review by Ferenczy of protoplast fusion is especially timely and comprehensive and provides as complete a view of this subject as can be found in the literature. One other pleasing aspect of this volume is the inclusion of reviews of genetic studies of microorganisms that seem to have taken a back

seat to *Escherichia coli* in the present rush to clone. Thus Arst presents an excellent and concise summary of fungal genetics with special attention to *Aspergillus nidulans*; it is easy to forget the role that studies of this microorganism have played in our present understanding of many interesting genetic phenomena. The review also emphasizes our failure to explain many of these effects in biochemical terms. In a similar vein, Shapiro, Nisen, and Ely summarize the state of affairs of genetic studies of *Caulobacter crescentus*.

Most of the papers concentrate on specific aspects of the genetic analysis of interesting microorganisms, such as antibiotics and secondary metabolites in Actinomycetes (Hopwood), bacterial chemotaxis (Parkinson), bacterial virulence (Maas), nitrogen fixation (Dixon, Kennedy, and Merrick), photosynthesis (Bartlett, Boynton, and Gillham), the cell cycle (Nurse), and the bacterial cell surface (Mäkelä and Stocker). These papers vary in quality, but all provide valuable background information in their fields. Two subjects of interest in microbial biochemistry, translation and transcription, have been ignored, which is strange, for there has been so much excellent genetic analysis of the ribosome and RNA polymerase. A review of transcriptional regulation (Travers, Kari, and Mace) is out of place, since it contains very little discussion of genetic analysis and pays only lip service to studies of nucleotide sequences involved in transcriptional control.

Finally, the book contains two reviews of methodology, one on gene manipulation in vitro (Timmis), which gives as excellent an appraisal of recombinant DNA technology as one would want to find in 60 pages. This contrasts with the rather terse description of genetic manipulation in vivo (Sherratt), in which, for example, all the beautiful work on bacteriophage lambda as a tool for the genetic manipulation of *E. coli* is summarized in only 30 lines.

To summarize, this volume is a good buy—it has some deficiencies (why were *Bacillus subtilis* and *Saccharomyces cerevisiae* left out?), but it provides a lot of good, practical information. In addition, it was published in the same month as the symposium, so that it is generally up to date. The Society for General Microbiology has set a high standard in rapidity and quality of publication; it is to be hoped the American Society of Microbiology will try to match this in the future.

J. E. DAVIES

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Books Received

Advances in Radiation Biology. Vol. 9. John T. Lett and Howard Adler, Eds. Academic Press, New York, 1981. xviii, 474 pp., illus. \$55.

Bronchology. Research, Diagnostic, and Therapeutic Aspects. Proceedings of a congress, Düsseldorf, Germany, June 1980. John A. Nakhosteen and Werner Maassen, Eds. Nijhoff, The Hague, 1981 (U.S. distributor, Kluwer Boston, Hingham, Mass.). xxii, 630 pp., illus. \$79. Developments in Surgery, vol. 3.

Categories and Concepts. Edward E. Smith and Douglas L. Medin. Harvard University Press, Cambridge, Mass., 1981. xii, 204 pp., illus. \$15. Cognitive Science Series, 4.

Distribution and Ecology of Vascular Plants in a Tropical Rain Forest. Forest Vegetation in Ghana. J. B. Hall and M. D. Swaine. Junk, The Hague, 1981 (U.S. distributor, Kluwer Boston, Hingham, Mass.). xvi, 384 pp., illus. \$112. Geobotany 1.

Early Scientific Instruments. Nigel Hawkes. Abbeville Press, New York, 1981. 164 pp., illus. \$29.95.

The Earth. Its Birth and Growth. Minoru Ozima. Translated from the Japanese edition (Tokyo, 1979) by Judy Wakabayashi. Cambridge University Press, New York, 1981. x, 118 pp., illus. Cloth, \$22.50; paper, \$8.95.

The Foundations of Ethology. Konrad Z. Lorenz. Translated from the German edition (Vienna, 1978) by Konrad Z. Lorenz and Robert Warren Kickert. Springer-Verlag, New York, 1981. xviii, 380 pp. \$21.95.

Fuel Alcohol. How to Make It, How to Use It. James R. Ross. St. Martin, New York, 1981. xvi, 176 pp. Paper, \$5.95.

The Geology of Libya. Papers from a symposium, Tripoli, Sept. 1978. M. J. Salem and M. T. Busrewil, Eds. Academic Press, New York, 1980. 3 vols. xl, 1156 pp., illus., + plates. Each vol., \$48.

High-Density Lipoproteins. Charles E. Day, Ed. Dekker, New York, 1981. xiv, 684 pp., illus. \$65.

The Himalaya. Aspects of Change. J. S. Lall, Ed. India International Centre, New Delhi, and Oxford University Press, New York, 1981. xx, 482 pp., illus., + plates. \$39.95.

The Immunology of Parasitic Infections. A Handbook for Physicians, Veterinarians, and Biologists. Omar O. Barriga. University Park Press, Baltimore, 1981. xiv, 354 pp., illus. Paper, \$24.95.

Low-Noise Electrical Motors. S. J. Yang. Clarendon (Oxford University Press), New York, 1981. x, 102 pp., illus. \$34.50. Monographs in Electrical and Electronic Engineering.

Making It Crazy. An Ethnography of Psychiatric Clients in an American Community. Sue E. Estroff. University of California Press, Berkeley, 1981. xxii, 328 pp. \$19.95.

Man and Fisheries on an Amazon Frontier. Michael Goulding. Junk, The Hague, 1981 (U.S. distributor, Kluwer Boston, Hingham, Mass.). xiv, 138 pp., illus. \$47.50. Developments in Hydrobiology 4.

Nutrition and Child Health. Perspectives for the 1980s. Proceedings of a meeting, Bethesda, Md., Sept. 1980. Reginald C. Tsang and Buford Lee Nichols, Jr., Eds. Liss, New York, 1981. xii, 224 pp., illus. \$22. Progress in Clinical and Biological Research, vol. 61.

Observational Astronomy for Amateurs. J. B. Sidgwick. Third edition prepared by R. C. Gamble. Dover, New York, 1981. 358 pp., illus. Paper, \$4.50. Reprint of the 1971 edition.

Public Lands Politics. Interest Group Influence on the Forest Service and the Bureau of Land Management. Paul J. Culhane. Published for Resources for the Future by Johns Hopkins University Press, Baltimore, 1981. xviii, 398 pp., illus. Cloth, \$29.50; paper, \$11.95.

Quality in Stored and Processed Vegetables and Fruit. Proceedings of a symposium, Bristol, England, Apr. 1979. P. W. Goodenough and R. K. Atkin, Eds. Academic Press, New York, 1981. xii, 398 pp., illus. \$62.

Radiation Protection. Progress Report 1980. Published for the Commission of the European Communities by Harwood, New York, 1981. xxvi, 1342 pp. illus. \$180.

Suppressor Cells in Human Disease. James S. Goodwin, Ed. Dekker, New York, 1981. x, 364 pp., illus. \$39.75. Immunology Series 14.

Survival in the Cold. Hibernation and Other Adaptations. Proceedings of a symposium, Prague, July 1980. X. J. Musacchia and L. Jansky, Eds. Elsevier/North-Holland, New York, 1981. xiv, 226 pp., illus. \$50.

Vocal Fold Physiology. Proceedings of a conference, Kurume, Japan, Jan. 1980. Kenneth N. Stevens and Minoru Hirano, Eds. University of Tokyo Press, Tokyo, 1981 (U.S. distributor, Columbia University Press, New York), xiv, 422 pp., illus. Paper, \$17.50.

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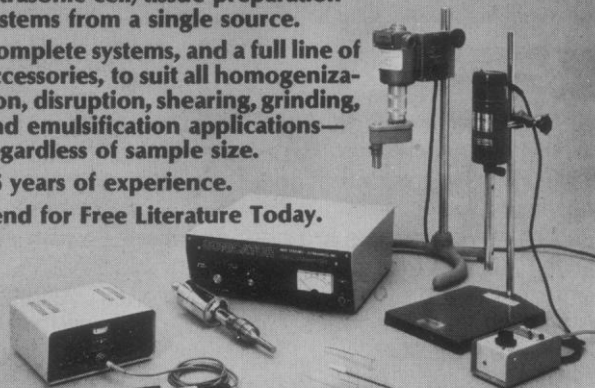
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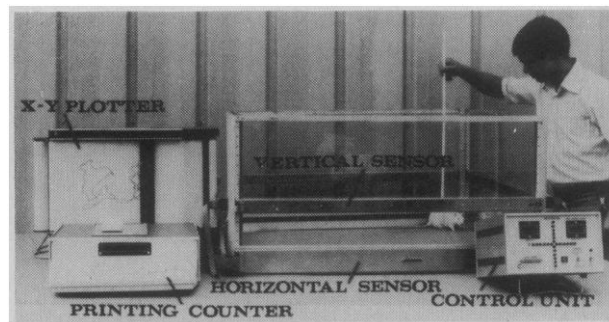


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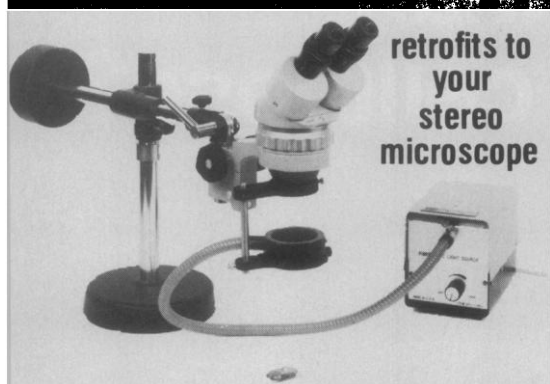
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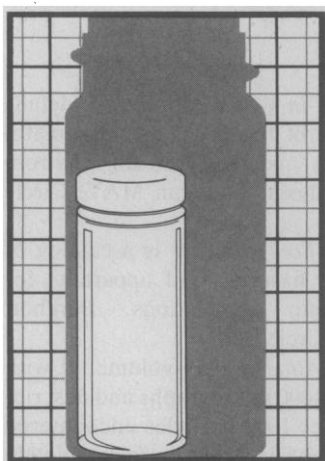
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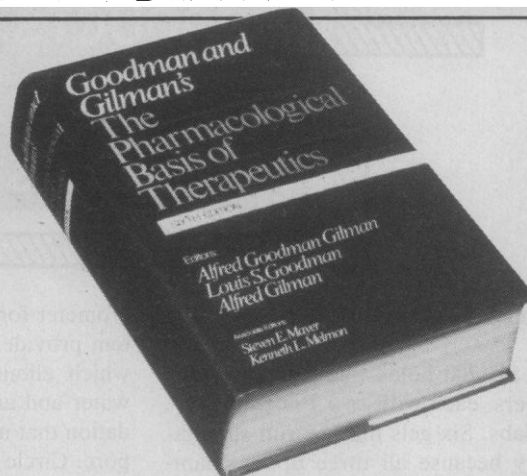
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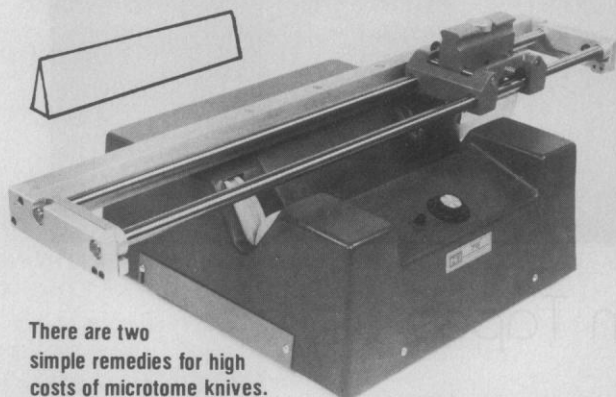
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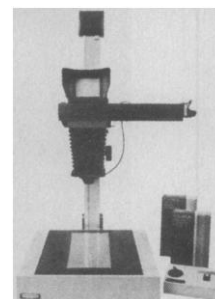
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POSITIONS WANTED

Aquatic Biology. B.S. degree. Experience in fisheries, water analysis, invertebrate ecology. Seeks research technician position. Will relocate. 39 North Street, Binghamton, N.Y. 13905; telephone 607-724-9487. 11/27; 12/4

Cell Biologist/Immunologist. Ph.D. Research experience in cyclic nucleotides as related to cancer research. Experience in the development of hybridoma monoclonal antibodies, radioimmunoassay, and immunocytochemistry. Ability to maintain a vigorous research program. Capable of attracting external support. Excellent publications. Teaching. Seeks challenging research or industrial position. 6406 Lown Oak Drive, Bethesda, Maryland 20034. X

Chemical Engineer/Microbiologist. B.S.ChE., June 1982/Ph.D. microbiology, 1980. Research experience in cell culture techniques, enzymology, cell growth regulation. Seeks engineering position in scale-up or process development of microbial or enzyme systems. Box 299, SCIENCE. 11/27; 12/4

Clinical Immunologist. Ph.D., experienced cellular immunology, histocompatibility, serum proteins, serology, research interest autoimmune disease. Seeks clinical laboratory position, teaching, research at university or teaching hospital. Box 300, SCIENCE. 11/27; 12/4, 11, 18

Ecologist. Ph.D., 1975; chemical, systems, theoretical, aquatic ecology, fisheries. Strong experimentalist. Extensive laboratory, field, and supervisory experience. Seeks research or research administration position. R. A. Freeman, 484 East Elm Street, Sycamore, Illinois 60178; telephone 815-895-3411. X

POSITIONS OPEN

Clinical/Analytical Chemist. Ph.D. 1976. England. Five years of international experience in medical research; diabetes, cancer research, glycoproteins, drugs and metabolites, toxicology. Extensive experience in the application of GC, GC-MS, HPLC, electrofocusing, TLC, UV, AA, and IR in the development of methods. Currently World Health Organization employee. Publications. Desires faculty/senior research position. No agencies please. Box 262, SCIENCE. 11/27; 12/4, 11, 18

Genetic Toxicologist. Ph.D. 1975. Strong background in mammalian cell mutagenesis. Consultant. Editor and national meeting session chairperson. Numerous publications in basic and applied area of specialty. Hands on and supervisory experiences in all aspects of genetic toxicology testing. Seek research/administrative position in industry. Box 301, SCIENCE. 11/27; 12/4

Tissue Culture Specialist/Horticulturalist. Ph.D. in 1981; 8 years of previous research and teaching at assistant professor level. Seeking industrial research or academic research/teaching position. Will relocate. References and résumé on request. Box 289, SCIENCE. 11/27; 12/4

Virologist (Ph.D. 1972). Assistant professor with good publication record, interest in immunology, experience with viruses, radioimmunoassays, and tumor CSA detection. Current MMTV work funded by NIH through 31 December 1984. Medical center teaching experience in graduate education, medicine, dentistry, and pharmacy. Seeks secure teaching/research position. Box 302, SCIENCE. 11/27; 12/4, 11

POSITIONS OPEN

ANATOMIST, ASSISTANT OR ASSOCIATE PROFESSOR. Applications are invited for a tenure-track position involving participation in the osteopathic medical and/or physical therapy gross anatomy courses, and in the graduate program in the Department of Zoology and Microbiology. A strong research orientation is required. Start-up funds are available. Although the research area is open, one that would complement the existing strong areas of research (functional morphology, neurosciences, muscle biology) would be desirable. A Ph.D. degree or equivalent is required; prior medical or dental school teaching experience is highly desirable. Salary is competitive; campus location is attractive. Earliest starting date: 1 July 1982.

Send curriculum vitae, including a statement of teaching and research interests, before 1 January 1982 to: Dr. Louise L. Edds, Chairperson, Anatomist Search Committee, Ohio University, College of Osteopathic Medicine, Irvine Hall, Athens, Ohio 45701. Ohio University is an Affirmative Action/Equal Opportunity Employer.

ANATOMY

The Department of Oral Medicine and Hospital Dentistry, School of Dentistry, University of California, San Francisco, is inviting applications for a full-time, tenure-track position at the assistant professor or possibly the associate professor level, commencing 1 July 1982. A joint appointment in the School of Medicine is possible. Postdoctoral training in anatomy or cell biology is required. Teaching duties will be mainly in gross anatomy. Position requires evidence of the ability to undertake independent research, preferably in departmental areas of interest which currently include oral applications of cellular immunology, virology/oncology, epithelial biology, and salivary gland studies.

Curriculum vitae, including complete publication record plus the names and addresses of three references, should be directed to: John S. Greenspan, Chairman, Search Committee, Department of Oral Medicine and Hospital Dentistry, Room S-653, University of California, San Francisco, California 94143. Applications accepted through 4 January 1982. The University of California, San Francisco, is an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.

ANATOMY DEPARTMENT

One tenure-track faculty position for person who will contribute to teaching and research programs of the department. Salary and rank commensurate with training, experience, and documented productivity. Send information to: Dr. Dale E. Bockman, Department of Anatomy, Medical College of Georgia, Augusta, Georgia 30912.

An Equal Opportunity/Affirmative Action Employer

POSITIONS OPEN

ASSISTANT PROFESSOR

The University of Georgia, Department of Microbiology, invites applications for a tenure-track appointment as assistant professor beginning in September 1982. A minimum of 1 or 2 years of postdoctoral experience is required. The appointee will be expected to establish a strong program of research and scholarship in some aspect of physiological microbiology and to participate in the teaching of undergraduate microbiology. We welcome applications from women and minorities. Send curriculum vitae, résumé of past and present research, and the names of three reference sources by 15 January 1982 to:

Dr. W. R. Finnerty
Department of Microbiology
University of Georgia
Athens, Georgia 30602

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

ASSISTANT PROFESSOR—BIOCHEMISTRY

Applications are invited for a tenure-track position at the level of assistant professor to be filled on or before 1 July 1982. Applicants should hold the Ph.D. degree in biochemistry and have postdoctoral experience. They must have the potential for excellence in teaching, and evidence for outstanding ability in research. The successful candidate is expected to teach biochemical subjects to medical and graduate students, and to develop a productive research program. The area of primary research interest should be in biochemical genetics involving molecular studies of the synthesis and assembly of macromolecular structures. Included are the regulation of expression of receptor molecules, enzymes, and other biologically active proteins. Send curriculum vitae, concise summaries of present and proposed research, and three letters of recommendation to: Dr. F. P. Inman, Chairman, Department of Biochemistry, Quillen-Dishner College of Medicine, P.O. Box 19930A, East Tennessee State University, Johnson City, Tenn. 37614. An Affirmative Action/Equal Opportunity Employer.

ASSISTANT PROFESSOR BIOCHEMISTRY

The Department of Biochemistry at The University of Texas Health Science Center at San Antonio invites applications for a tenure-track faculty position.

Highly qualified candidates with a Ph.D. or M.D. degree and appropriate postdoctoral research training in biochemistry or cell biology who are interested in establishing an active research program and participating in departmental instructional activities are encouraged to apply. Recruiting priorities will include individuals with strong backgrounds in organic chemistry applied to biological problems, enzymology using kinetic or spectroscopic approaches, molecular endocrinology with an emphasis on hormone reception, synthesis, or mechanism of action, and molecular immunology such as in the area of production and characterization of monoclonal antibodies.

Interested candidates should submit curriculum vitae, the names of three references, and a brief summary of research interests by 31 January 1982 to:

Biochemistry Search Committee
Department of Biochemistry
The University of Texas Health Science Center
7703 Floyd Curl Drive
San Antonio, Texas 78284

An Equal Opportunity/Affirmative Action Employer

ASSISTANT/ASSOCIATE PROFESSOR BIOLOGICAL ANTHROPOLOGY

The Pennsylvania State University, Department of Anthropology, invites applications for a junior tenure-track position in biological anthropology available September 1982. Applicants must have completed the Ph.D. Candidates with demonstrated competence in human population genetics and capabilities in computer programming are preferred. Fieldwork experience is desirable. The application should include the names of four people who can provide letters of reference, but references should not be sent. The deadline for applications is 1 March 1982. Applications should be sent to: P. T. Baker, Head, Department of Anthropology, 409 Carpenter Building, The Pennsylvania State University, University Park, Pa. 16802.

The Pennsylvania State University is an Affirmative Action/Equal Opportunity Employer.

POSITIONS OPEN

ASSISTANT PROFESSOR DEPARTMENT OF BIOCHEMISTRY The Texas College of Osteopathic Medicine

Qualified individuals are invited to apply for a faculty position available immediately. Applicants should have experience and doctoral degree commensurate with the rank of the position. A vigorous, independent research program is necessary and teaching experience is desirable. Please send curriculum vitae, statement of research interests, and names of three references to:

R. W. Gracy, Ph.D., Chairman
Department of Biochemistry
Texas College of Osteopathic Medicine
Camp Bowie at Montgomery
Fort Worth, Texas 76107

The Texas College of Osteopathic Medicine is an Equal Opportunity/Affirmative Action Employer.

ASSISTANT PROFESSOR—BOTANY

Tenure-track position starting August 1982 for developmental botanist to teach introductory courses for majors and nonmajors and advanced courses in his/her area of specialization.

Minimum qualifications include Ph.D. with research experience in in vitro culture techniques, genetic expression, molecular or physiological aspects of developmental botany. Postdoctoral experience is desirable. A commitment to excellence in teaching is required. The successful candidate will be expected to develop an active research and graduate program and to seek outside funding.

To assure consideration, send letter of application, including a description of research interests, résumé, and names of three references, no later than 25 January 1982 to:

Dr. Glenn W. Todd, Head
Department of Botany
Oklahoma State University
Stillwater, Okla. 74078

Oklahoma State University is an Equal Opportunity/Affirmative Action Employer.

ASSISTANT PROFESSOR—FISH BIOLOGIST

The Department of Zoology, University of Georgia, invites applications for a tenure-track assistant professorship available 1 September 1982 for a fish biologist with expertise in the ecology, behavior, or physiology of marine fishes. Appointee is expected to teach an advanced undergraduate course in ichthyology and graduate courses in area of special interest and to develop an active research program to complement our highly diversified faculty of marine science. Send curriculum vitae, names of at least three references, and statement of research interests before 27 January 1982 to:

Chairman, Ichthyology Search Committee
Department of Zoology
University of Georgia
Athens, Georgia 30602

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

The Department of Psychology at the University of Victoria invites applications for two regular faculty appointments at the ASSISTANT PROFESSOR rank, to commence 1 July 1982. A Ph.D. and demonstrated research ability are required; evidence of successful teaching experience is preferred. Salary is dependent on qualifications; the salary floor for assistant professor in 1981/1982 is \$24,250.

For position one the candidate must be a trained neuropsychologist with a strong commitment to one or another aspect of psychology, such as behavioral medicine, developmental, human electrophysiology. In addition to teaching undergraduates, the applicant will be expected to contribute significantly to the clinical and research competence of graduate students in neuropsychology.

For position two the candidate must have excellent training and teaching competence in quantitative methods (multivariate analysis or psychometrics) and in one other substantive area of psychology.

Candidates should send curriculum vitae and arrange for three letters of reference to be forwarded to: **Dr. M. E. Corcoran, Acting Chairman, Department of Psychology, University of Victoria, P.O. Box 1700, Victoria, British Columbia, Canada V8W 2Y2.** Canadian immigration regulations now require the university to assess applications from Canadian citizens and permanent residents of Canada before assessing applications from other persons. Closing date for receipt of applications is 1 February 1982.

POSITIONS OPEN

ASSISTANT PROFESSORS IN VERTEBRATE BIOLOGY

Two tenure-track assistant professorships are available September 1982, in the Department of Biology, The University of Texas at Arlington (UTA).

VERTEBRATE PHYSIOLOGIST: Candidates are expected to establish a quality research program. Emphasis on lower vertebrates is desirable. Teaching responsibilities include participation in courses in human anatomy and physiology, comparative animal physiology, development of courses in specialty, and direction of graduate student research. There are presently two animal physiologists in the department with interests in cellular and ecological physiology.

VERTEBRATE SYSTEMATIST: Research interests in herpetology with emphasis on systematics of neotropical faunas. This position includes curatorial responsibility for the herpetological collection. The applicant selected will be expected to teach undergraduate and graduate courses and to direct graduate student research.

UTA's Biology Department consists of 22 full-time faculty and offers both B.S. and M.A. degrees. Please submit curriculum vitae, a statement of research and teaching experience and interests, transcripts, reprints, and three letters of reference by 1 February 1982 to: **Dr. William C. McDonald, Chairman, Department of Biology, Box 19498, The University of Texas at Arlington, Arlington, Texas 76019.** An Equal Opportunity Employer.

ASSOCIATE PROFESSOR—ANATOMY

Anatomist to teach human gross anatomy. Applicant must have at least four years of postdoctoral training, hold a Ph.D. or M.D. degree, have a knowledge of the clinical applications of gross anatomy, and have demonstrated competence in both teaching and research. Strong research record in either embryology or neuroanatomy is essential. Faculty members are expected to obtain extramural support for their research activities. Send complete curriculum vitae, descriptions of teaching and research experience, and three letters of recommendation to: **Dr. E. S. Crelin, Section of Anatomy, Department of Surgery, Yale University School of Medicine, 333 Cedar Street, New Haven, Connecticut 06510.** The deadline is 1 March 1982. *Yale University is an Equal Opportunity/Affirmative Action Employer. Qualified women and minority group members are encouraged to apply.*

ASSOCIATE PROFESSOR OF MICROBIOLOGY

The Faculty of Natural Sciences, University of Tulsa, invites applications for a faculty position in microbiology. Appointment will be made at the ASSOCIATE PROFESSOR level. The appointee must have an active research program; a record of grantsmanship and publication; and demonstrated excellence in a field of microbiology. Investigative area is open, however, preference will be given to those individuals involved in genetic recombinant or hybridoma research. Teaching will involve microbiology, immunology, and courses in area of expertise. Salary highly competitive; research funding available. Applicants should submit curriculum vitae, a brief statement of research interests, reprints, and the names of three references to: **Dr. Harrington Wells, Faculty of Natural Sciences, University of Tulsa, Tulsa, Oklahoma 74104.** *The University of Tulsa is an Equal Opportunity/Affirmative Action Employer.*

BIOCHEMISTRY RESEARCH POSITIONS. Two positions available to study the interrelationships between enzyme structure and regulation. (i) **Postdoctoral research associate** requires substantial background in enzymology and/or protein chemistry. (ii) **Project assistant** requires an M.S. or equivalent in one of the natural sciences and an acquaintance with biochemical techniques. Send résumé, publications list, and the names of two or three references to: **Dr. L. F. Hass, Department of Biological Chemistry, The Milton S. Eshelby Medical Center of The Pennsylvania State University, Hershey, Pa. 17033.** Salary is both competitive and negotiable. *An Equal Opportunity University.*

BIOCHEMIST. Experienced Ph.D. sought for R & D position in enzymology. Areas of expertise desired include enzyme purification for research and commercial application, and skills for enzyme immobilization. We are a new biotechnology company, with excellent growth potential. We offer a competitive salary and an attractive benefits package. Please send résumé and references to: **Biological Energy Corporation, 3401 Science Center, Suite 320, Philadelphia, Pa. 19104, Attention: JDF.**

POSITIONS OPEN

BIOCHEMIST, postdoctoral research position. To study mechanism of brain dysfunction in experimental PKU. Three-year appointment at competitive salary. Send résumé and three letters of recommendation to: **Personnel, New York State Institute for Basic Research in Developmental Disabilities (Attention: Dr. Y H Loo), 1050 Forest Hill Road, Staten Island, N.Y. 10314.**

TENURE-TRACK POSITION is available fall 1982. Postdoctoral training is preferred. Teaching responsibilities will include participation in the introductory botany lecture and an advanced course in specialty. Appointee will be expected to establish a productive research program.

This position in the **Department of Biological Science** offers an excellent opportunity for the successful candidate to achieve career and personal goals. The department's 43 faculty members are housed in four buildings on campus. Ancillary facilities include a marine biology laboratory, a greenhouse field station, and access to ecological areas. Tallahassee is an attractive city of 100,000, has two universities, and is the state capital.

To ensure consideration, please arrange for curriculum vitae, statement of future research interests, two reprints (if available), and three letters of reference to arrive not later than 15 January 1982.

William H. Outlaw, Jr.
Chairman of the Search Committee
Department of Biological Science
Florida State University
Tallahassee, Florida 32306
Telephone: 904-644-1228

Florida State University is an Equal Opportunity/Affirmative Action Employer.

BIOLOGY: ASSISTANT PROFESSOR—Applications are being accepted by Jacksonville University for a tenure-track position in biology to begin 1 September 1982. Teaching responsibilities will be at the undergraduate level in general zoology, vertebrate zoology, and ecology. Ph.D. preferred. Send résumé, official transcripts, and three letters of recommendation to: **Dr. Jesse S. Robertson, Chairman of Search Committee, Box 146, Jacksonville University, Jacksonville, Florida 32211.** Closing date for applications is 31 December 1981. *Jacksonville University is an Affirmative Action/Equal Opportunity Employer.*

BIOLOGIST. Position for assistant professor starting July 1982, to teach cell and general biology, with expertise in developmental biology and/or genetics. Requirements: Ph.D., excellence as a teacher, commitment to undergraduate education, and research program with opportunity for student involvement. For detailed information and application procedure, write to: **Dr. Louis Irwin, Department of Biology, Simmons College, 300 The Fenway, Boston, Mass. 02115.** *An Affirmative Action/Equal Opportunity Employer.*

CARDIOVASCULAR PHYSIOLOGIST

A tenure-track position at the rank of assistant professor or associate professor is available in the Department of Physiology and Biophysics of the University of Tennessee Center for the Health Sciences. Candidates should have a Ph.D. or M.D. degree, a minimum of 2 years of postdoctoral training, and a strong research background in cardiovascular physiology. Demonstrated ability to initiate a strong, independent research program and to engage in the teaching activities of the department are expected. Send curriculum vitae, a brief statement of research interests, and the names of three references to: **Dr. Leonard Share, Chairman, Department of Physiology and Biophysics, University of Tennessee Center for the Health Sciences, Memphis, Tennessee 38163.** *An Equal Opportunity/Affirmative Action Employer.*

The Department of Biology at Bryn Mawr College seeks a **CELL OR DEVELOPMENTAL BIOLOGIST** for a faculty appointment at the assistant professor level. Ph.D. required. The appointee will be expected to conduct an active research program, to teach graduate and undergraduate courses in cell or developmental biology, and to participate in an introductory biology course. Send curriculum vitae, a description of current research and future plans, a summary of teaching experience and capabilities, the names and addresses of three referees to: **Dr. Betty M. Twarog, Department of Biology, Biology Building, Bryn Mawr College, Bryn Mawr, Pa. 19010.** Closing date for receipt of applications is 15 February 1982. *Bryn Mawr College is an Equal Opportunity/Affirmative Action Employer.*

**POSTDOCTORAL TRAINING IN
VETERINARY ANATOMIC AND
CLINICAL PATHOLOGY**

**Department of Pathology
College of Veterinary Medicine and
Biomedical Sciences
Colorado State University**

Positions are available in a broad-based training program funded by the National Cancer Institute in veterinary anatomic and clinical pathology. This program has grown out of a national need for veterinary pathologists to work as integral members of research teams evaluating the potential hazards of toxic agents in the environment. The program provides for 3-year postdoctoral traineeships oriented toward either anatomic or clinical pathology but which include training in both areas. Practical training in animal pathology, selected academic courses, and supervised research experience are designed to provide trainees with a firm grounding in general pathology and an understanding of disease problems associated with environmental factors. All trainees will be enrolled in the Graduate School of Colorado State University. For holders of the D.V.M. degree, successful completion of the program can lead to eligibility to examination and certification by the American College of Veterinary Pathologists. Graduate research programs leading to the M.S. or Ph.D. degrees are available in the department. Applicants must have a D.V.M., M.D., Ph.D. or equivalent degree. Minimum requirements for those not holding a D.V.M. or M.D. degree will be the completion of basic medical sciences courses equivalent to those given in the first 2 years of a medical or veterinary medicine curriculum.

Applications should be sent to: **Department of Pathology, College of Veterinary Medicine and Biomedical Sciences, Colorado State University, Fort Collins, Colo. 80523.** For information, contact: **Dr. Stephen A. Benjamin, telephone: 303-491-8522.**

Colorado State University is an Equal Opportunity/Title IX Employer. Equal Opportunity Office: 314 Student Services Building.

**CSIRO, CHIEF OF DIVISION
DIVISION OF FISHERIES RESEARCH
CSIRO MARINE LABORATORIES
SYDNEY, N.S.W., AUSTRALIA**

Applications are invited for the position of **CHIEF** of the Division of Fisheries Research from scientists who have a record of personal research achievement and leadership in an appropriate field of science.

CSIRO is Australia's largest and most comprehensive research organization, having approximately 7500 employees of whom 2700 are research and professional scientists. Its broad charter covers research into problems of primary and secondary industries and also such fields of community interest as human nutrition, the environment, and the development and use of natural resources. The organization has recently grouped its research activities in five institutes.

Previously, CSIRO's work in marine science was carried out mainly within the Division of Fisheries and Oceanography, with headquarters at Cronulla, Sydney, N.S.W., and laboratories also at Cleveland, Queensland, and Marmion, Perth, W.A. The CSIRO Executive recently decided that the division would be reorganized to become the CSIRO Marine Laboratories. These comprise a Division of Fisheries Research within the Institute of Animal and Food Sciences, and a Division of Oceanography within the Institute of Physical Sciences. The two divisions have headquarters at the same site, initially at Cronulla. Arrangements are in train for the relocation of the headquarters of the two divisions to Hobart, Tasmania, where new laboratories will be constructed. It is expected that the divisions will move to the new site by 1985.

The Division of Fisheries Research has about 80 research and associated technical staff, including some 57 professional scientists. The two divisions share the services of some 70 special support and administrative staff, including general workshop, electronics, computing, and library staff.

The Division of Fisheries Research undertakes work on marine biology and ecology, ocean productivity, and the population dynamics of commercial and potentially commercial species. The research includes both strategic and resource-oriented studies. The Australian Fishing Zone receives special attention. A 53-metre chartered vessel is available for the division's research.

The objective of the Division of Oceanography is to conduct physical and chemical research aimed at the understanding of oceanographic processes and phenomena. A chartered vessel is available to this division, and biological oceanographers from the Division of Fisheries Research have access to it.

The chief of a division is responsible to the institute director for the leadership, development, scientific direction, and integration of the research programs of the division, and is encouraged to promote active collaboration with other divisions, industry, and research bodies working in associated areas.

Salary for the position is negotiable, but will be not less than A\$43,158 per annum. Appointment to the organization is for an indefinite period and carries Commonwealth Superannuation privileges subject to normal conditions. The position of chief is offered for a negotiable term of the order of 5 to 7 years, with subsequent options for a further term, if mutually desired, or for a senior position in the organization.

Dr. K. A. Ferguson, FTS, Director of the Institute of Animal and Food Sciences, and chairman of the Search Committee, would be pleased to provide further information about the new division and discuss the position with potential applicants. He would also be pleased to receive other advice concerning the appointment from people with a particular interest in it. **Dr. Ferguson** may be contacted at the address below. Applications, stating full personal and professional details and names of at least three professional referees, and quoting Reference Number A2267, should reach:

**The Director, Institute of Animal and Food Sciences
CSIRO Headquarters
P.O. Box 225
Dickson, A.C.T. 2602, Australia**

by 31 December 1981.

BIOTECHNOLOGY

Meloy Laboratories, a Revlon Health Care Group subsidiary, located in suburban Washington, D.C., is seeking to expand its technical staff with individuals possessing expertise in one or more of the following areas:

- **MOLECULAR BIOLOGY (Ph.D.).** Experience with gene regulation, fermentation, and/or protein purification and characterization. Expressional cloning of mammalian genes cloned in bacteria or yeasts.
- **CELL BIOLOGY (Ph.D.).** Experience with serum-free cell cultures, normal epithelial cells, fibroblasts and tumor cell lines.
- **CELL BIOLOGY (Ph.D.).** Experience with production and characterization of biological response modifiers, QC of biologicals, and GMP's.
- **PROTEIN CHEMISTRY (Ph.D.).** Supervises purification and characterization of biological fluid based proteins. PAGE and HPLC required.
- **ANTISERUM PRODUCTION (M.S./Ph.D.).** Requires 3 years plus of supervisory experience with immunodiagnostic reagents. Manages production of antiserum, control sera, fluorescent conjugates.

We offer salary commensurate with experience, liberal benefits, and company-paid relocation. Interested applicants should submit résumé/curriculum vitae in confidence to **Personnel Administrator** at:

**MELOY LABORATORIES, INC.
Revlon Health Care Group
6715 Electronic Drive
Springfield, Virginia 22151**

Equal Opportunity Employer

SENIOR EXECUTIVE

The U.S. Army is seeking a **Deputy Director** for the Chemical Systems Laboratory, a major laboratory of the U.S. Army Armament Research and Development Command. This Civil Service position is in the Senior Executive Service (SES) and is responsible for the broad management of diverse activities. Salary ranges from \$52,247 to \$61,600 but currently limited to \$50,112.50 by statute.

Located on Aberdeen Proving Ground in Maryland, approximately 20 miles east of Baltimore, Chemical Systems Laboratory conducts research and development activities for material related to chemical and biological defense and chemical deterrent. This area has recently received intense attention with the result of substantially increased programs, and support at all levels within the Department of Defense. This position is one of considerable responsibility and challenge requiring a person with vision, insight, and the skill to effectively direct multiple programs of high dollar value. The organization is comprised of four operating divisions and numerous support offices, and employs approximately 1000 personnel.

Candidate should possess as a minimum a B.S. degree in chemistry, chemical engineering, or a related physical science or engineering field and have had direct experience in line management of research and development activities. Further information about the position, including additional qualifications, requirements, and application materials may be obtained by **telephoning Kay Driscoll at 202-274-7676** or by writing to:

**Commander
U.S. Army Materiel Development & Readiness Command
Attention: DRCLD
5001 Eisenhower Avenue
Alexandria, Va. 22333**

All applications must be received by 8 January 1982.

An Equal Opportunity Employer

**KING FAISAL UNIVERSITY
COLLEGE OF MEDICINE
DAMMAM, SAUDI ARABIA**
Faculty Positions Open
1982-1983

King Faisal University College of Medicine, now in its eighth year, invites applications from qualified men and women for the 1982-1983 academic year in:

Chemistry	Pathology
Biology	Epidemiology
Physics	Microbiology
Biochemistry	Parasitology
Anatomy	Pharmacology
Physiology	Community Medicine

Doctorate or equivalent degree required. Language of instruction is English. Interviews to be held in London and Houston during spring 1982.

Salaries are highly competitive and negotiable; comparable to other Saudi universities. Benefits include free furnished housing, educational allowances, air tickets to and from Saudi Arabia once each year for a family of four, 60-day paid vacation, and liberal overweight allowance. No Saudi income tax.

Send curriculum vitae with current telephone number and the names and addresses of three references to:

Dr. Tawfik Tamimi
Dean, College of Medicine
King Faisal University Office
Suite 540
2425 West Loop South
Houston, Texas 77027

OR
c/o Saudi Arabian Educational Office
29 Belgrave Square
London, S.W. 1X 8QB, England

POSTDOCTORAL RESEARCH AWARDS
Sponsored by the
BALLISTIC RESEARCH LABORATORY
in association with
THE NATIONAL RESEARCH COUNCIL

The National Research Council will make awards in 1982 under the Resident Associateship Program, which provides awardees with opportunities to conduct experimental and theoretical research as visiting scientists and engineers in the fields of:

Applied Computer Sciences
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Combustion Research
Fluid Mechanics
Continuum Mechanics
Materials Sciences
Nuclear and Radiation Physics
Physical Chemistry
Quantum Chemistry

In the Ballistic Research Laboratory complex located in the beautiful Chesapeake Bay country of Maryland, within easy driving distance of the metropolitan centers of Baltimore, Philadelphia, and Washington, D.C.

Programs are open to senior investigators as well as recent doctorates.

Further details on research programs may be obtained from: **Dr. L. J. Puckett, Ballistic Research Laboratory, Aberdeen Proving Ground, Md. 21005, telephone: 301-278-2236.**

For application materials and details on specific research opportunities, write promptly, giving areas of interest, to:

Associateship Office (610-E1)
NATIONAL RESEARCH COUNCIL
2101 Constitution Avenue, NW
Washington, D.C. 20418

Postmark deadline for application is 15 January.

POSITIONS OPEN

**CANADIAN RED CROSS
BLOOD TRANSFUSION SERVICE
CELL BIOLOGIST (Ph.D.)**

1981 salary scale: \$24,000 to \$37,200. Required to head Quality Control Section and work in platelet storage. Please forward applications to: **Dr. G. Rock, Medical Director, Ottawa Centre, 85 Plymouth Street, Ottawa, Ontario, Canada K1S 3E2.**

CELLULAR AND MOLECULAR BIOLOGY

The Department of Biochemistry and Molecular and Cell Biology of Northwestern University invites applications for tenure-track faculty positions at the rank of assistant/associate professor. Responsibilities will include development of an independent research program, and teaching in the College of Arts and Sciences and the Graduate School. Applicants should submit curriculum vitae, reprints, a statement of research interests, and three letters of reference to: **Emanuel Margoliash, Chairman, Department of Biochemistry and Molecular and Cell Biology, Northwestern University, Evanston, Ill. 60201. Northwestern University is an Equal Opportunity/Affirmative Action Employer and invites applications from all qualified individuals.**

CELL MEMBRANES/CELL SURFACE

The Department of Developmental and Cell Biology, University of California, Irvine, is looking for a cell biologist who studies cell membranes in relation to one or more of the following areas: cell movement and migration, cytoskeleton and cell shape, cell surface interactions with substrates, and cell-cell interactions. We are looking for a person whose research program could closely relate to some of the 21 other faculty whose emphasis is in developmental biology and cell physiology. Although we are looking primarily for a senior person, the position can be filled at either the senior or junior level. For the former we want an individual who has a well-established research program, and for the latter at least 2 years of postdoctoral experience is desired. Please submit curriculum vitae plus the names of three references to:

Grover Stephens, Acting Chairman
Developmental and Cell Biology
University of California, Irvine
Irvine, Calif. 92717

An Equal Opportunity/Affirmative Action Employer

CLINICAL PHARMACOLOGIST(S) for full-time faculty position(s). Departments of Medicine and Pharmacology, to develop a Section of Clinical Pharmacology. Salary and rank commensurate with experience and qualifications. Address inquiries and curriculum vitae to: **Department of Medicine, East Carolina University, School of Medicine, Greenville, N.C. 27834. Equal Opportunity Employer through Affirmative Action.**

**COLLEGE AT PURCHASE
State University of New York (SUNY)
DEAN OF LETTERS AND SCIENCE**

Nominations and applications are invited for the position of Dean of the College of Letters and Science at the State University College at Purchase.

The college, founded in 1967, offers the B.A. and B.F.A. degrees and currently enrolls 2700 FTE students, almost equally distributed between Letters and Science and the School of the Arts (Dance, Music, Theatre/Film, and Visual Arts). Other major programs include the Divisions of Educational Opportunity and Continuing Education. The college occupies a well-equipped campus in Westchester County, 30 miles northeast of New York City.

The new position of Dean of Letters and Science represents the consolidation of separate deanships in humanities, natural sciences, and social sciences. Substantial growth targets are projected specifically for Letters and Science over the next 4 years.

Candidates should hold the Ph.D. in an area of the liberal arts or sciences, demonstrate academic achievement which merits a senior academic appointment, and have considerable experience in academic administration. They should be dedicated to academic excellence and possess qualities of leadership, energy, imagination, and collegiality. The dean reports to the Vice President for Academic Affairs.

Send applications or nominations to: **Deanne Molinari, Affirmative Action Officer, SUNY College at Purchase, Purchase, New York 10577. The Search Committee will begin its review in mid-December. The appointment will be effective on or about 1 July 1982.**

**● IMMUNOLOGISTS
● MICROBIAL CHEMISTS
● MOLECULAR BIOLOGISTS**

Tokyo, Japan

Hoechst is one of the world's largest pharmaceutical companies. Our Research Institute, based in the suburbs of Tokyo, offers an independent research environment. We are presently seeking innovative, motivated and resourceful individuals with outstanding scientific backgrounds and capabilities to join our research staff.

The current program in the Department of Basic Research entails creative research in the areas of immunology, microbial chemistry and bioengineering.

The Research Institute seeks researchers, preferably with several years of experience in recombinant DNA technology, immunopotential and hybridoma formation, cancer promotion, and purification and characterization of antibiotics and physiologically active natural compounds.

Successful candidates should be capable of working independently and directing co-workers in research programs.

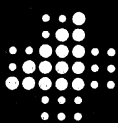
Please send curriculum vitae, together with list of publications, to:

Dr. A. Fukuda
Hoechst Japan Ltd.
8-10-116 Akasaka,
Minato-ku, Tokyo 170 Japan

Hoechst



Cardiovascular Pharmacologist



American Critical Care is the ethical pharmaceutical division of American Hospital Supply Corporation, a \$2.6 billion leader in the health care industry. We're currently seeking an innovative professional to join our active research group engaged in the discovery and evaluation of new therapeutic agents for treatment of cardiovascular disease, with emphasis on congestive heart failure.

A Ph.D. in Cardiovascular Pharmacology or Physiology and at least 1-2 years postdoctoral experience are required for this position. The ideal candidate will have a minimum of 1-2 years of industrial research experience and a strong background in in vitro and in vivo evaluation of cardiovascular drugs, particularly cardiotonic agents.

If you would like to contribute to the R&D efforts of a small but progressive Pharmacology Department, please send resume, in confidence, to:

Personnel Manager—Dept. CP

American Critical Care



Division of
American Hospital Supply Corporation
1600 Waukegan Road
McGaw Park IL USA 60085

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ORGANIC CHEMIST

ANTIBIOTICS • ISOLATION CHARACTERIZATION

SmithKline Corporation, a diversified multinational health care firm located in Philadelphia, Pennsylvania, is seeking an Organic Chemist for its suburban Philadelphia facility who:

- is able to isolate and characterize a variety of biologically active compounds from fermentation sources and other natural sources.
- can develop methods for detecting and isolating these substances.
- can supervise a group in isolation and structure determination work.

Requirements include:

- PhD in organic chemistry with demonstrated post doctoral or industrial competence in isolation/characterization and structure determination.
- strong background in modern instrumental techniques including: HPLC, IR, UV, CMR, PMR, and MS.
- experience and desire to work at the bench with small and sensitive samples.
- ability and interest to participate in research planning with an interdisciplinary group of scientists.

SmithKline offers an excellent compensation and benefits package along with opportunity for personal and professional growth. Please forward your resume, in confidence, to: W. B. Flagg, Senior Employment Administrator, SMITHKLINE CORPORATION, 1576 Spring Garden Street, Philadelphia, PA 19101.

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a SmithKline company

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Biotechnology and Genetic Toxicology Research Opportunities

Microbiological Associates, a leader in viral and chemical carcinogenesis, gene expression and cell control research for over 20 years, is expanding its research laboratories and is seeking experienced molecular biologists in recombinant DNA technology and monoclonal antibody studies. The following four research positions are currently available:

RECOMBINANT DNA SR. RESEARCH SCIENTIST

We require a PhD experienced with recombinant DNA technology and nucleic acid biochemistry. Post doctoral experience and 5 years experience directing independent research projects. This person will establish and direct research in animal cell or viral gene expression and control utilizing recombinant DNA methodology.

RECOMBINANT DNA RESEARCH SCIENTIST
An ongoing research project requires a molecular virologist with recent PhD or post doctoral experience in recombinant DNA technology and nucleic acid biochemistry to initiate and develop basic research studies with human DNA viruses.

MONOCLONAL ANTIBODY RESEARCH SCIENTIST

PhD, preferably in immunology, is sought with experience in monoclonal antibody technology, to initiate studies for the production of antibodies to cells, viruses or parasites.

SECTION HEAD/SR. RESEARCH HEAD

Expansion in our Department of Genetic Toxicology will require expertise in mammalian genetics, cell transformation, cytogenetics, mutagenesis, or microbial genetics to integrate with ongoing research projects and commercial testing services. A position as Senior Research Scientist is now available.

We provide an attractive, competitive compensation package. If interested, please send C.V. and the names of 3 references to: MICROBIOLOGICAL ASSOCIATES, Dept. SM-11/81, 5221 River Road, Bethesda, Maryland 20816. We are an equal opportunity employer M/F.



**MICROBIOLOGICAL
ASSOCIATES**

Whittaker

POSITIONS OPEN

DIRECTOR, CENTRAL LABORATORY ANIMAL CARE PROGRAM. Management of major university laboratory animal care program. Will interface and cooperate with all colleges using laboratory animals in their teaching and research programs. Must be ACLAM Board-certified or -eligible. Position reports to Assistant Vice President for Research and Laboratory Animal Care Committee. Will supervise animal technicians and caretakers and pursue individual professional career goals. Applicants should include names of three references who can be contacted, an up-to-date résumé, and date of availability. Send application materials to: **W. J. Dorson, Jr., Engineering Center, Arizona State University, Tempe, Arizona 85287.**

ELECTRON MICROSCOPIST AND DIRECTOR OF EM FACILITY—An outstanding scientist is sought to conduct vigorous research, teach in the areas of cell biology, TEM and SEM including X-ray microanalysis, and direct a modern, well-equipped EM laboratory complex. The facility includes two TEM's, two SEM's, a Kevex X-ray analysis system, and full ancillary equipment in a 12-room suite. Rank at assistant or associate professor depending upon credentials. Submit résumé and the names of five references by 25 January 1982 to: **Dr. Reginald D. Noble, Chair, Department of Biological Sciences, Bowling Green State University, Bowling Green, Ohio 43403. An Affirmative Action/Equal Opportunity Employer.**

STATE UNIVERSITY OF NEW YORK (SUNY) COLLEGE AT OSWEGO POSITION AVAILABLE

Research position available early in 1982 for a qualified **ENVIRONMENTAL CHEMIST** to study organic contaminants in Lake Ontario ecosystems. One year, nontenure-track appointment with opportunities for renewal of funding through 1983 and beyond. Ph.D. degree required, and research experience in environmental organic chemistry desirable. Salary in low \$20,000's, commensurate with achievement and experience. Candidate review will begin 21 December 1981. Résumé, graduate transcripts, and three letters of recommendation should be sent to: **Dr. John Gannon, State University Research Center at Oswego, King Hall, SUNY Oswego, Oswego, N.Y. 13126. SUNY Oswego and the Research Foundation are Equal Opportunity/Affirmative Action Employers.**

UNIVERSITY OF STOCKHOLM DEPARTMENT OF ZOOLOGY

ETHOLOGIST OR ECOLOGIST. Applications are invited for a position as "eo docent" (roughly equivalent to U.S. assistant professor). The position is primarily intended for a person with several years of postdoctoral research experience. The position is advertised for a period of 3 years, but is usually renewed for another 3-year period. Starting salary L 18 (Swedish crowns 107,088 per annum—roughly U.S.\$19,000). The position is a research and teaching position, and requires a minimum of 75 hours of lecturing per annum or equivalent supervision of graduate student research, some administrative duties, and a vigorous research programme. Applicants are selected primarily on the basis of their scientific publications, but teaching experience is also required. For further information, contact: **Professor T. Radesäter, Department of Zoology, University of Stockholm, P.O. Box 6801, S-113 86 Stockholm, Sweden (telephone: 00946-8340860, extension 332).** Applications, including curriculum vitae plus one copy of published, accepted, and submitted papers, a short summary of the applicant's research and teaching experience, names and addresses of three references, and any other documents the applicant wishes to submit, should be addressed to: **The Board of Stockholm University, Fredrik Bloms Hus, University of Stockholm, S-106 81 Stockholm, Sweden,** and should be received no later than 1 March 1982. Quote reference number 728/81.

Applications are invited for a tenure-acruing **FACULTY POSITION** with negotiable rank and salary, starting August 1982. Applications are invited from candidates with a vigorous, state-of-the-art research program in any area of physiological psychology, but special consideration will be given to those with interests in experimental neuropsychology or behaviorally relevant electrophysiology. Send curriculum vitae, three letters of reference, and a statement of present and future research plans by 31 December 1981 to: **Dr. Neil Rowland, Psychology Department, University of Florida, Gainesville, Florida 32611. An Equal Opportunity/Affirmative Action Employer.**

POSITIONS OPEN

Simon Fraser University Burnaby, British Columbia, Canada DEPARTMENT OF BIOLOGICAL SCIENCES ENVIRONMENTAL TOXICOLOGY

Applications are invited for two tenure-track positions, one at the **assistant professor** level and one at the **associate professor** level. The successful applicants will teach undergraduate courses in environmental toxicology and graduate courses in industrial toxicology and food and drug toxicology. Candidates must have a Ph.D. degree with experience in toxicology and a strong record in research. The successful applicants will be expected to develop and maintain an active research programme in an area of toxicology appropriate to a life sciences department. Preference will be given to candidates eligible for employment in Canada at the time of application.

The positions are available from 1 September 1982 subject to budgetary constraints. The current salary base for the assistant and associate professor ranks are \$25,000 and \$31,600 per year, respectively.

Applications should include curriculum vitae, a brief statement of research interests and objectives, and selected reprints of published research. Applicants should request confidential assessments of their research and teaching ability from three referees, to be forwarded directly to:

**Dr. K. K. Nair, Chairman
Department of Biological Sciences
Simon Fraser University
Burnaby, B.C., Canada V5A 1S6**

Deadline for receipt of applications is 31 January 1982, or until the positions are filled.

FACULTY POSITION available; M.D. or Ph.D. required. Teaching capability in one or more areas: gross, neuro, histo; plus strong, fundable research orientation. Rank and salary determined by background and experience. Application, three reference letters, and curriculum vitae should be mailed to: **Dr. T. H. Williams, Head, Department of Anatomy, 1-474 BSB, University of Iowa College of Medicine, Iowa City, Iowa 52242. The University of Iowa is an Equal Opportunity/Affirmative Action Employer.**

University of California, Los Angeles (UCLA) School of Medicine Department of Microbiology and Immunology Faculty Position

Academic appointment for tenure-track assistant professor with training in the area of macrophages as they relate to pathogenesis of diseases. Applicant must possess postdoctoral experience in the general fields of biology, microbiology and/or immunology. Applicant must be able to develop an independent research program and interact with members of department with emphasis in microbiology, immunology, and virology. Responsibilities include participation in the departmental teaching of medical, dental and/or graduate students, as well as development of a graduate course in the field of interest. Applicants should submit curriculum vitae, list of publications, a brief description of current and future interests, and names of at least three references. Deadline for receipt of applications: 31 January 1982. Send applications to: **Ben Bonavida, Associate Professor, or Jack Stevens, Professor and Chairman, Department of Microbiology and Immunology, School of Medicine, University of California at Los Angeles, Los Angeles, Calif. 90024. UCLA is an Equal Opportunity/Affirmative Action Employer.**

FORENSIC SCIENTIST. A large governmental laboratory on the Eastern seaboard needs a forensic scientist proficient in examining material for toxicological and physical evidence. Doctorate degree preferred. Should have both managerial and analytical abilities. Résumé should list publications and indicate experience with the judicial system. Salary open. Send résumé and salary requirements to: **Box 298, SCIENCE**

An Affirmative Action Employer

MICROBIOLOGIST. Ph.D., preferably with postdoctoral experience. A probably tenure-track opening at Swarthmore College beginning September 1982. We seek a candidate with broad experience in microbiology to teach general microbiology, virology, an advanced offering, and to participate in introductory biology. We anticipate making the appointment at the assistant professor level. Send curriculum vitae, and transcripts by 18 December 1981 to: **Dr. John B. Jenkins, Chairman, Department of Biology, Swarthmore College, Swarthmore, Pa. 19081.**

Swarthmore College is an Equal Opportunity Employer.

POSITIONS OPEN

UNIVERSITY OF OKLAHOMA COLLEGE OF MEDICINE

Applicants are solicited for **FACULTY POSITIONS** in the following departments:

MEDICINE—(Number 332) **Assistant professor/professor.** Participating member of the Pulmonary Disease and Critical Care Section. M.D. or Ph.D. If M.D., general ward and intensive care attending, serve on consultation service and bronchoscopy service. Assist in research and conduct own research in fundamental problems relating to pulmonary biology and disease. Must have experience in clinical and/or basic research in pulmonary physiology, pathophysiology, morphology, biochemistry, or pharmacology. (Number 333) **Assistant professor/associate professor.** Participating member of the Pulmonary Disease and Critical Care Section of the Department of Medicine. General ward and intensive care attending. Serve on consultation and bronchoscopy service in the Pulmonary Disease Section. Applicant must have experience in clinical and/or basic research. M.D. degree and Board-eligible. (Number 335) **Associate professor/professor.** Chief of Infectious Disease. Will be recruiting for vacancies within this section. Qualified teacher, clinician, and investigator. Must have M.D. degree and be Board-eligible.

Applicants should send curriculum vitae, identifying vacancy number for which they are applying, to: **O. C. Coleman, Assistant Dean, College of Medicine, University of Oklahoma Health Sciences Center, P. O. Box 26901, Oklahoma City, Okla. 73190. We are an Equal Opportunity Employer.**

GENETICS, UNIVERSITY OF GUELPH

Applications are invited from qualified individuals with postdoctoral experience to join the department in a tenure-track position and to participate in the graduate and undergraduate teaching programs of the department. Research areas of particular interest are human or molecular genetics, although other areas will also be considered. The successful applicant will join an active, diverse group of six other geneticists and should be prepared to establish a productive research program. The salary and rank will be commensurate with experience. Only those applicants legally eligible to work in Canada need apply. Subject to final budgetary approval. Submit curriculum vitae, résumé of research, and the names and addresses of three references before January 1982 to: **Professor W. G. Barker, Chairman, Department of Botany and Genetics, College of Biological Science, University of Guelph, Guelph, Ontario, Canada N1G 2W1.**

HAZARDOUS MATERIALS MANAGEMENT AND CONTROL

The Departments of Engineering and Public Policy and Civil Engineering at Carnegie-Mellon University (CGMU) are seeking to add a new jointly appointed faculty member at the level of assistant professor to collaborate in an existing research effort related to the management and control of toxic and hazardous materials. Problem areas of particular interest include ground-water contamination, air impacts of waste incineration, and applied risk assessment and hazard screening, and geostatistics. Send résumé with list of publications and statement of research interests to:

**Dr. Indira Nair
Department of Engineering and Public Policy
Carnegie-Mellon University
Pittsburgh, Pa. 15213**

C-MU is an Equal Opportunity Employer.

MICROBIOLOGIST

The tenure-track position of **assistant professor in microbiology** is available in the Department of Biological Science, Florida State University.

Applicants should possess the Ph.D. degree, a thorough training in microbiology, and an ability to teach and conduct independent research. The successful candidate will aid in the development of, and participate actively in, a graduate program in microbiology.

Applicants considered will have research experience in the ecology, physiology, or molecular biology of prokaryotes. Areas of particular interest include cyanobacteria, N₂-fixation, plant-microbe interactions, and biotechnology.

Send complete curriculum vitae and three letters of recommendation to: **A. Gib. deBusk, Chairman, Department of Biological Science, Florida State University, Tallahassee, Florida 32306.**

Florida State University is an Affirmative Action/Equal Opportunity Employer.

COWLES DISTINGUISHED PROFESSORSHIP IN BIOLOGY

Trinity University invites applications and seeks nominations for an outstanding scientist to fill the position of the Ruth C. and Andrew G. Cowles Distinguished Professorship in Biology. The Professorship is to augment a well established curriculum in biological sciences and to contribute significantly to the academic community.

The University seeks an individual of distinguished reputation in the biological sciences with an established record of excellence in teaching and scholarship, as well as a commitment to liberal arts education. The Cowles Professor will be selected from candidates with superior credentials in the biological sciences. Developmental biology and/or genetics are fields of particular interest.

Trinity University is an independent institution committed to excellence in the liberal arts and selected professional programs, including engineering. Present enrollment is 3,200, of which 2,600 are undergraduates. The Department of Biology has nine faculty members with the earned doctorate degree and 150 majors. The department offers a Bachelor of Arts, Bachelor of Science, and Master of Science degrees. Trinity University is located in the San Antonio metropolitan area which has a population of over one million.

Nominations and applications must be received by December 31, 1981, and should be mailed to:



Dr. Harold D. Murray, Chairman
Department of Biology
Trinity University
San Antonio, Texas 78284

An equal opportunity/affirmative action employer

Postdoctoral Research~ Immunology

G. D. Searle & Co., Research and Development Division, has a postdoctoral research position available immediately in the Department of Biological Research. Qualified candidates should have a recent Ph.D. or equivalent degree with emphasis in cellular immunology and/or immunopharmacology. Familiarity with cell culture methodology and with the immunology and biochemistry of immediate-type hypersensitivity is preferred. The individual would be involved in exploratory research as a member of a multi-disciplinary group that conducts research focused on discovery of new drugs for treating allergic and inflammatory diseases. Research activities will be directed towards immunoregulation of IgE biosynthesis by lymphokines. The appointment is for 1 year, renewable for a second year.

We offer a liberal salary and benefits package. Candidates are encouraged to send resume, including summary of research experience and three references to:

Sheila Copeland
Employment Counselor
Research & Development Division
G. D. Searle & Co.
P.O. Box 5110
Chicago, IL 60680

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Not Just A Policy*



electronics
Gould Inc., an international developer and manufacturer of electronic and electrical products has a position in its modern research center in Rolling Meadows, a northwest suburb of Chicago for a

Program Manager



Materials for Electronic and Electrical Products

The position involves the growth and management of projects for developing new and improved processes and materials for applications in electronic and electrical products. Good planning and interpersonal skills are necessary as the project must be relevant to the technical strategy of the corporation.

Candidates should have a Ph.D. in physical chemistry, materials science or metallurgy. A minimum of 10 years of relevant experience with at least 3 years in project/program management is required. Applicants should have a good publications and/or patents record together with a strong awareness of the imperatives of product development in an industrial laboratory.

For immediate and confidential consideration, send a resume to: The Employee Relations Department, Dept. 642-1, **GOULD INC.**, Gould Laboratories, 40 Gould Center, Rolling Meadows, IL 60008. An Equal Opportunity Employer M/F/H.

Electronics & Electrical Products

POST-DOCTORAL SCIENTISTS

PHARMACOLOGY - CELL BIOLOGY MEDICINAL CHEMISTRY

SmithKline, a leader in pharmaceutical research, is seeking post-doctoral scientists to join interdisciplinary research programs in an environment designed to foster creative, innovative research and to promote personal and professional growth.

We consider post-doctoral studies to be of major importance in an individual's career and encourage advanced research, publication of findings in leading journals and a full interaction with the scientific community.

Applications are invited from individuals with training in the following subjects:

- Pharmacology
 - cardiovascular physiology/pharmacology
 - renal physiology/pharmacology
 - GI physiology/pharmacology
- Cell Biology
 - receptor isolation and reconstitution
 - membrane transport
 - cell sorting techniques
 - platelet physiology
- Medicinal Chemistry
 - peptide synthesis
 - transition state metals
 - computer-based drug design

Send C.V. and names of two references citing reference MB-PD-2 to: Mr. Walter B. Flagg, **SMITHKLINE CORPORATION**, P.O. Box 7929, 1570 Spring Garden Street, Philadelphia, PA 19101.

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We are an equal opportunity employer, M/F/H/V

POSITIONS OPEN

HISTOLOGIST or HISTOPATHOLOGIST at the assistant professor level for leading academic Biomaterials/Bioengineering Program; to teach, perform independent research, and cooperate in research programs in the area of histocompatibility of implant materials. Ongoing projects deal with skeletal, percutaneous, and cardiovascular implants. Responsibility includes management of histolab equipped for hard and soft tissue processing. Contact: **Dr. James Wolf, Search Committee Chairman, College of Engineering, DIS, Clemson University, Clemson, S.C. 29631.** Résumés will be accepted until 30 January 1982 or thereafter until the position is filled. *Clemson University is an Equal Opportunity/Affirmative Action Employer.*

INSTRUCTOR/ASSISTANT PROFESSOR, BIOLOGY DEPARTMENT—School of Natural Sciences and Mathematics. Tenure-track position beginning September 1982. Duties: Primary teaching responsibility in human physiology and human anatomy, nonmajors courses (nurses, nutrition, home economics, health and physical education, and safety science majors); secondary teaching responsibilities in general biology (nonmajors service course). Academic preparation: Ph.D. preferred. Experience: College/university teaching experience preferred. Send application, résumé, transcripts, and three letters of recommendation to: **Dr. Walter W. Gallati, Biology Department, Indiana University of Pennsylvania, Indiana, Pa. 15705.** Application deadline is 11 January 1982. *An Affirmative Action/Equal Opportunity Employer.*

MARINE SCIENCE UNIVERSITY OF MIAMI

The University of Miami is searching for a **DEAN** who will serve as the **DIRECTOR** of its oceanographic and atmospheric Institution which has 86 full-time faculty, 162 graduate and 305 undergraduate students, and a \$14 million budget. The main function of this position is to provide leadership to a thriving, multidisciplinary community of oceanographic researchers and students, including biological, chemical, physical, and geological oceanographers, ocean engineers, atmospheric scientists, and specialists in marine affairs. The person who directs this Institution will be expected to promote its aims and provide liaison with federal agencies as well as private foundations and to encourage new programs to meet the needs of both developed and developing nations, especially those of the Caribbean and South America.

Applications, including a current professional résumé, nominations, and further information should be sent to: **Dr. Norman G. Einspruch, Chairman of the RSMAS Dean Search Committee, University of Miami, School of Engineering and Architecture, P.O. Box 248294, Coral Gables, Florida 33124.** Nominations and applications desired by 15 December 1981. Position will remain open until filled.

An Equal Opportunity/Affirmative Action Employer

NEUROENDOCRINOLOGIST

Tenure-track assistant professorship available for scientist with a strong commitment to research at the cellular and molecular levels on neuroendocrine regulation of reproductive or cardiovascular function in mammals. This individual will be expected to establish a strong, independent research program and to teach physiology to M.D. and Ph.D. students. Submit curriculum vitae and letters of recommendation by 1 February 1982 to: **Dr. Howard Kutchai, Department of Physiology, Box 449, University of Virginia School of Medicine, Charlottesville, Va. 22908 (804-924-2195).** *An Affirmative Action/Equal Opportunity Employer.*

NEUROPHYSIOLOGY/RESPIRATORY PHYSIOLOGY. Research associate position, available immediately, for studies of neural and chemical control of ventilation. Doctorate required and postdoctoral experience preferred. Salary commensurate with experience. Curriculum vitae and names of three references should be sent to: **Walter M. St. John, Ph.D., Department of Physiology, Dartmouth Medical School, Hanover, N.H. 03755.** *Dartmouth College is an Equal Opportunity/Affirmative Action Employer, M/F.*

POSITIONS OPEN

MOLECULAR BIOLOGIST with a strong background in eukaryotic cell biology and protein biosynthesis wanted to fill a tenure-track position at the assistant professor rank beginning 1 September 1982. The successful candidate will be expected to participate in the biochemistry program offered jointly with the Chemistry Department, develop one or more courses for the biology major, and prepare a course for nonscience students. The candidate should have a demonstrated commitment to undergraduate teaching and will be expected to develop an active research program involving advanced undergraduates. Persons with interests in cell physiology, immunology, or marine biology are especially encouraged to apply. Submit curriculum vitae, a complete set of transcripts, statement of teaching and research goals, and three letters of recommendation by 1 February 1982 to: **Dr. James Carlson, Chairman, Biology Department, Rider College, Lawrenceville, New Jersey 08648.** *Rider College is an Equal Opportunity/Affirmative Action Employer, M/F/H.*

MOLECULAR BIOLOGIST

Stauffer Chemical Company is seeking applications for a molecular biologist position in our biological research group. The position is located in recently constructed laboratories in Richmond, Calif. Applicants should have a Ph.D., preferably with postdoctoral experience. A background in recombinant DNA technology is essential, together with expertise in any of the following areas: immunology, nucleic acid chemistry, isolation of eukaryotic messenger RNA, the preparation of cDNA, and cloning and prokaryotic host-vector systems.

We offer a competitive salary and fringe benefits package, in addition to an attractive San Francisco Bay location. If you are interested in an opportunity with Stauffer, send your confidential résumé, statement of research interests and experience, and names of three references to: **D. A. Walker, Personnel Manager, Stauffer Chemical Company, 1200 South 47 Street, Richmond, Calif. 94804.** *Stauffer is an Affirmative Action/Equal Opportunity Employer.*

NEUROSCIENTIST, ASSISTANT OR ASSOCIATE PROFESSOR. Applications are invited for a tenure-track position involving participation in the neuroanatomy and/or histology courses for osteopathic medical students, and in the graduate curriculum of the Department of Zoology and Microbiology. A strong research orientation is required. Start-up funds are available. The research area is open, but an interest that would complement one of the existing strong areas of research (developmental neurobiology, neuromuscular biology, functional morphology) would be desirable. A Ph.D. degree or equivalent is required; prior medical or dental school teaching experience is highly desirable. Salary is competitive; campus location is attractive. Earliest starting date is 1 July 1982.

Send curriculum vitae, including a statement of teaching and research interests, before 1 January 1982 to: **Dr. Louis L. Edds, Chairperson, Neuroscientist Search Committee, Ohio University, College of Osteopathic Medicine, Irvine Hall, Athens, Ohio 45701.** *Ohio University is an Affirmative Action/Equal Opportunity Employer.*

University of Michigan Medical School, Department of Internal Medicine, Division of Hematology/Oncology, has two academic positions available for **ONCOLOGIST OR HEMATOLOGY/ONCOLOGIST** with interest in clinical research (experimental therapeutics). The program has 18 faculty with both University Hospital and VAH components. Positions available as of 1 July 1982. Please send curriculum vitae and letter outlining clinical and research interests to: **Albert F. LoBuglio, M.D., 102 Observatory Street, Simpson Memorial Institute, Ann Arbor, Michigan 48109.** Code 84D0, 200FO. *A nondiscriminatory, Affirmative Action Employer.*

ORAL ROBERTS UNIVERSITY, DEPARTMENT OF PHARMACOLOGY, is recruiting faculty, preferably at the full or associate professor level. The department desires applicants who are highly qualified to teach both preclinical and clinical pharmacology and who will engage in basic and/or clinical pharmacology research with extramural funding and who are qualified to obtain a medical license in Oklahoma. *The University is an Affirmative Action Employer and a nondenominational, private Christian institution.* M.D.'s and Ph.D./M.D.'s are invited to inquire. **Clinton N. Corder, Ph.D., M.D., Chairman, Department of Pharmacology, Oral Roberts University, 7777 South Lewis Avenue, Tulsa, Oklahoma 74171; telephone 918-495-6311.**

POSITIONS OPEN

PHARMACOLOGIST (Marshall University School of Medicine). Tenure-track faculty position involving medical/graduate student teaching. Salary commensurate with qualifications and experience. Minimum qualifications: Candidate should have Ph.D. or M.D. degree and postdoctoral experience. Training and experience in receptor binding techniques, drug metabolism/pharmacokinetics, CNS or clinical pharmacology preferred. Application deadline: 15 January 1982. Apply to: **Donald S. Robinson, M.D., Professor and Chairman, Department of Pharmacology, Marshall University School of Medicine, Huntington, W.Va. 25701.** *An Equal Opportunity Employer.*

PHYSICAL OCEANOGRAPHER—The School of Oceanography, Oregon State University, is soliciting applications for an assistant or associate professor, depending on experience. Applicants may be observationalists or theoreticians, but must have a Ph.D. in the physical sciences and have demonstrated ability to conduct independent high-quality research and obtain research funding. Duties include teaching and supervision of graduate students. Interested candidates should submit a résumé and names of three references by 1 January 1982 to: **G. Ross Heath, Dean, School of Oceanography, Oregon State University, Corvallis, Oregon 97331.** *Affirmative Action/Equal Opportunity Employer.*

PHYSIOLOGY

Faculty position at a New England medical school for recent Ph.D. with interest in renal physiology-membrane transport. Must have experience in the manufacture of microelectrodes. Send curriculum vitae to: **Box 296, SCIENCE.**

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PHYSIOLOGIST

THE AMERICAN UNIVERSITY OF THE CARIBBEAN (AUC), School of Medicine, located in Montserrat, British West Indies, has a physiology position opening. The main duty consists of providing lectures to first-year medical students. Submit résumé to: **Selection Committee, AUC, 100 Northwest 37 Avenue, Miami, Fla. 33125.**

PHYSIOLOGIST—ENDOCRINOLOGIST THE DEPARTMENT OF PHYSIOLOGY-ANATOMY UNIVERSITY OF CALIFORNIA, BERKELEY

Invites applications to fill a tenure-track position in physiology at the assistant professor level, pending final budgetary approval. Applicants must be engaged in an active research program in the area of hormonal regulation of cell functions at the molecular level. Teaching responsibilities will include giving lectures in courses in physiology, organizing and overseeing laboratory courses in physiology, and offering an advanced graduate course in the candidate's area of expertise. Only candidates who have demonstrated excellence in research and teaching will be considered. Interested individuals should write a letter explaining their qualifications for the particular position and enclose current curriculum vitae and a list of three or more persons who could act as referees to: **Physiology Search Committee, Department of Physiology-Anatomy, 2549 Life Sciences Building, University of California, Berkeley, Calif. 94720.** Applications must be received by 15 January 1982. *The University of California is an Equal Opportunity/Affirmative Action Employer.*

PLANT ECOLOGIST

The Department of Environmental, Population and Organismic (EPO) Biology, University of Colorado, Boulder, seeks qualified applicants for a tenure-track assistant professor level opening anticipated for fall 1982. Candidates must have a Ph.D., evidence of ability to develop a strong research program, and excellent teaching skills. Research program emphasis must be in the fields of plant ecophysiology or ecology of terrestrial plant communities. Salary commensurate with experience. Submit curriculum vitae, statement of future research plans, and four letters of reference by 15 January 1982 to:

**Dr. Michael C. Grant
Department of EPO Biology
University of Colorado
Boulder, Colorado 80309**

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

Manager of Clinical R & D

Join Us on the
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Product Development

Industry standards are now being set at Becton Dickinson's Immunodiagnostics Division in Orangeburg, New York. Join us in an atmosphere of cooperation, and surround yourself with highly-talented colleagues and the most advanced technological support.

Supervising your own R&D team, you'll direct research programs and participate in all phases of their planning and implementation. Your credentials should include a PhD in chemistry, biochemistry or other biomedical discipline, five or more years supervisory experience, and a background in RIA development. A knowledge of analytical instrumentation, clinical chemistry, and immunochemistry would be helpful. Preference will be given to candidates with industrial experience.

Becton Dickinson is a billion dollar multinational health care leader. Investigate the career advantages at our rapidly expanding Immunodiagnostics Division . . . including an excellent salary, bonus, stock option eligibility, and comprehensive benefits . . . by sending your resume and salary history in confidence to Ms. M. McGrane, Manager Human Resources, Becton Dickinson Immunodiagnostics Division, Mountain View Avenue, Orangeburg, New York 10962. An equal opportunity/affirmative action employer.

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CHIEF, INVERTEBRATE & MARINE PLANTS DIVISION

Salary: \$37,703 -- \$47,448 (under review)
Ref. No.: 81-PSCH-DFO-12

Department of Fisheries & Oceans
Halifax, Nova Scotia

Plans, directs and manages the Invertebrates and Marine Plants Division; organizes and administers activities aimed at maintaining the welfare of marine invertebrates and plant resources and maximizing continuing biological production from stocks; co-ordinates work of the Division with that of industry, provincial departments and other units within the Fisheries organization.

Qualifications

Either graduation with an acceptable doctoral degree from a recognized university in Biology or an equivalency. (Equivalency refers to graduation with an acceptable Master's Degree or an acceptable Bachelor's Degree from a recognized university in Marine Biology coupled with acceptable research training and experience in which the capability has been clearly demonstrated to do independent research equivalent to that required for a doctoral degree.); evidence of authorship of published or unpublished reports or papers resulting from research in the field of fisheries; and recognition by the scientific community of achievement in fisheries research; experience in carrying out research projects related to marine invertebrates and plant resources and in the management of research resources, including supervision and financial budgeting and control. Knowledge of the English language is essential.

Clearance No.: 331-259-001

Additional job information is available by writing to the address below:

Toute information relative à ce concours est disponible en français et peut être obtenue en écrivant à l'adresse suivante:

How to apply

Send your application form and/or résumé to:

Mrs. B.J. Firth, Staffing Officer
Public Service Commission of Canada
4th Floor Royal Bank Building
5161 George Street
Halifax, N.S. B3J 1M8
902-426-5878

Closing date: December 31, 1981

Please quote the applicable reference number at all times.

Canada

POSITIONS OPEN

PLANT MOLECULAR BIOLOGIST

Tenure-track position for assistant or associate professor, available 1 September 1982. Duties: Teaching undergraduate courses, including general molecular biology; graduate plant molecular biology; and active participation in the Lehman College-New York Botanical Garden specialization in plant science, a part of the City University of New York (CUNY) Doctoral Program in Biology. Required: Doctorate, active research in plant molecular biology, and willingness to supervise doctoral dissertation. Salary competitive and commensurate with experience. Send résumé and three letters of reference to:

Dr. C. Robert Jones, Chair
Department of Biological Sciences
Herbert H. Lehman College/CUNY
Bronx, New York 10468

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POSTDOCTORAL FELLOW

Position available immediately for studies of hemopoietic cell surface glycoproteins. Experience in molecular cloning techniques desirable but not essential. For further information contact:

Dr. I. S. Trowbridge
Department of Cancer Biology
THE SALK INSTITUTE
P.O. Box 85800
San Diego, Calif. 92138
Telephone: 714-453-4100

POSTDOCTORAL POSITION available immediately; postdoctoral position in biochemistry to study the regulation of synthesis of specific proteins in normal and diseased animal cells. Research background in protein synthesis, mRNA isolation and translation, and DNA/mRNA hybridization preferred but not essential. Salary: \$13,500 to \$15,500. Send curriculum vitae, brief summary of research interest and experience, and names of three references to: **Dr. Herbert G. Leberer, Department of Chemistry, San Diego State University, San Diego, Calif. 92182-0328.** *An Equal Opportunity/Affirmative Action/Title IX Employer.*

POSTDOCTORAL POSITION

Postgraduate research position available immediately. The research emphasizes the quantitative analysis of regulated protein synthesis (primarily in *S. cerevisiae*) by means of 2D gels, using a computer-coupled scanner. We also continue to refine our analytical-computational methods. A background in biochemistry, cell biology, or genetics is advisable. Some prior computer experience is highly desirable. Salary range: \$15,936 to \$19,848 per year. Please send curriculum vitae and letters of reference by 31 December to: **Dr. Xoung Nguyen Huu, Department of Physics B-019, or Dr. E. Peter Geiduschek, Department of Biology B-022, University of California, San Diego, La Jolla, California 92093.**

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

POSTDOCTORAL POSITION for research on macrophage surface antigens, available immediately. Background in biochemistry, cell biology, immunology, or molecular genetics required. Ongoing research involves the biosynthesis, structure, membrane orientation, function, and molecular genetics of mouse macrophage cell surface antigens defined by monoclonal antibodies. Please send curriculum vitae and the names of two references to: **Dr. Timothy Springer, Laboratory of Membrane Immunology, SIDNEY FARBER CANCER INSTITUTE, Harvard Medical School, 44 Binney Street, Boston, Mass. 02115.** *An Affirmative Action/Equal Opportunity Employer.*

POSTDOCTORAL POSITION—MOLECULAR NEUROBIOLOGY. Position for candidate with training in the biochemical or pharmacological aspects of neuroscience to study the effects of psychotropic drugs (PCP and analogs) upon brain metabolism. Interest and/or experience in electrophoresis, HPLC, protein and glucose metabolism, cell culture, animal behavior, and state-of-the-art technology desirable. Competitive salary. Send résumé with names of three references to: **Dale Deutsch, Department of Pathology, State University of New York at Stony Brook, Stony Brook, N.Y. 11794.** *An Equal Opportunity/Affirmative Action Employer. AK Number 206A.*

POSITIONS OPEN

POSTDOCTORAL POSITION (plant biology) to investigate metabolism of stomatal guard cells is available January 1982 or later.

Please send application and three letters of reference to:

William H. Outlaw Jr.
Department of Biological Science (Unit I)
Florida State University
Tallahassee, Florida 32306

POSTDOCTORAL POSITION available for research concerning detection and function of mammalian CNS acetylcholine receptors. Candidates experienced in biochemical, pharmacological, immunological, OR cell culture techniques should send curriculum vitae, names and addresses of three references, and a brief statement of research experience and objectives to: **Ronald J. Lukas, Division of Neurobiology, Barrow Neurological Institute, 350 West Thomas, Phoenix, Ariz. 85013.** *An Equal Opportunity Employer.*

POSTDOCTORAL POSITION available immediately to study control of collagen production and matrix-cell interaction in diabetes aging and transformation. Experience in protein synthesis, recombinant DNA, immunochemistry, cell biology, or protein chemistry is desirable. Send curriculum vitae and three references to: **Dr. Barbara D. Smith, College and Research Laboratory, VA Outpatient Clinic, 17 Court Street, Number 209, Boston, Mass. 02108.** *An Equal Opportunity Employer, M/F.*

POSTDOCTORAL POSITIONS to study: (i) mechanism of ATP-dependent proteolysis in normal and disease erythroid cells, and (ii) calcium-dependent regulation of protein turnover and gene expression in cardiac and skeletal muscles. Send curriculum vitae to: **Dr. Joseph D. Etlinger, Box 5, Department of Anatomy and Cell Biology, Downstate Medical Center, 450 Clarkson Avenue, Brooklyn, N.Y. 11203.** *Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL POSITION available January 1982, to study control mechanisms in allergic (Type I) mediator release, both at the mast cell level and with respect to the control of IgE synthesis. Applicants should have experience in membrane biochemistry or immunology. Send curriculum vitae and names of two references to: **Dr. Daniel Conrad, O'Neill Laboratories, The Good Samaritan Hospital, 5601 Loch Raven Boulevard, Baltimore, Md. 21239.**

POSTDOCTORAL RESEARCH FELLOW OR RESEARCH ASSOCIATE position available immediately in the field of thrombosis and hemostasis to study the role of calcium, calmodulin, and calcium activated protease in platelet function, phosphoprotein formation, and prostaglandin metabolism. Salary range: \$17,000 to \$22,000, depending on experience. Send curriculum vitae, statement of research background, and three names for reference to: **Pat Bryant, Center for Thrombosis and Hemostasis, University of North Carolina, 436 Burnett-Womack 229H, Chapel Hill, N.C. 27514.** *An Equal Opportunity/Affirmative Action Employer.*

The Department of Neurosciences, School of Medicine, University of California, San Diego, is seeking qualified candidates (Ph.D. in biochemistry) for **TWO POSTGRADUATE RESEARCH POSITIONS** to work in a laboratory of human biochemical genetics, available immediately. Positions require background in (i) enzymology and protein chemistry, or (ii) nucleic acid biochemistry. Salary is competitive nationally. Send curriculum vitae and names of three referees to: **John S. O'Brien, M.D., Department of Neurosciences, M-008, University of California, San Diego, La Jolla, Calif. 92093.** *The University of California, San Diego, is an Equal Opportunity/Affirmative Action Employer.*

REPRODUCTIVE PHARMACOLOGIST

Ph.D. or equivalent with expertise in steroid biochemistry and radioimmunoassays to work on bioavailability studies and evaluation of drug delivery systems. One to 2 years of postdoctoral experience desirable. Salary competitive with excellent fringe benefits. Forward résumé, transcripts, and two letters of recommendation to:

EG&G Mason Research Institute
57 Union Street
Worcester, Mass. 01608
Attention: Donna Perron, Personnel Manager
EG&G Mason Research Institute is an Equal Opportunity Employer, M/F.

POSITIONS OPEN

PRESIDENT MEDICAL UNIVERSITY OF SOUTH CAROLINA CHARLESTON, SOUTH CAROLINA

The Medical University of South Carolina invites nominations and applications for the position of president. The president is elected by the Board of Trustees. The Medical University is comprised of Colleges of Medicine, Dental Medicine, Graduate Studies, Pharmacy, Nursing, Allied Health Sciences, and a 510-bed comprehensive, teaching hospital.

Nominations or applications should be submitted by 11 December 1981 to:

Secretary of the Board of Trustees'
Medical University of South Carolina
171 Ashley Avenue
Charleston, South Carolina 29425
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WASSERMAN PROFESSOR OF OPHTHALMOLOGY

The Department of Ophthalmology and the Jules Stein Eye Institute, University of California, Los Angeles (UCLA) School of Medicine, are seeking applicants for the Wasserman Professorship of Ophthalmology. Individuals dedicated to a career in vision research, teaching, and ophthalmic patient care are encouraged to apply. The Search Committee favors candidates who are ophthalmologists with special interest and expertise in medical and surgical aspects of retinovitreal diseases.

Applications should be submitted with curriculum vitae, bibliography, and a letter discussing career goals to:

Bradley R. Straatsma, M.D., Chairman
Wasserman Professorship Search Committee
Jules Stein Eye Institute
UCLA School of Medicine
Los Angeles, California 90024

All applications and inquiries will be treated in strict confidence. *Candidates are encouraged to apply regardless of sex or ethnic origin. UCLA is an Equal Opportunity/Affirmative Action Employer.*

PROJECT ENGINEER—300-INCH TELESCOPE

The University of Texas (UT), McDonald Observatory, is seeking applications from senior-level engineers interested in undertaking leading role in development of 300-inch monolithic primary, optical telescope. Successful candidate will hold title of special research associate and form the nucleus of a team responsible for final specification and design of the total observing system, including telescope, housing, aluminizing facility, and control systems. Position requires experienced, versatile individual with demonstrated ability to develop cost-effective solutions to technical and engineering management problems involved in the construction of large, dynamic mechanical assemblies. Pending completion of funding, an appropriate candidate could assume role of chief project engineer for the multi-year construction effort on this facility.

Send résumé including salary history to: **Dr. Harlan Smith, Director, UT McDonald Observatory, Austin, Texas 78712; telephone: 512-471-4461.** *We are an Equal Opportunity/Affirmative Action Employer.*

RENAL PHYSIOLOGIST (Ph.D.)—A Ph.D. renal physiologist research position is available in a newly developing Nephrology Division of a university-affiliated hospital located in a highly desirable area. The position is hospital based and not grant dependent. Salary is negotiable. Send curriculum vitae to: **Vincent DiScala, M.D., Professor of Medicine, Director, Division of Nephrology, Nassau Hospital, 259 First Street, Mineola, Long Island, New York 11501.**

RESEARCH ASSISTANT PROFESSOR OF PHYSIOLOGY. Requirements: Ph.D. in biophysics or physiology, demonstrated skills in construction and use of Na and Ca sensitive microelectrodes for intracellular recording, experience in voltage-clamp methods and cellular cardiac electrophysiology, with two years of postdoctoral experience. Responsibilities will include doing research and teaching medical and graduate students in cardiac muscle physiology. Salary and rank related to experience and productivity. Send curriculum vitae, names of two references, and supporting material to: **Dr. M. P. Blaustein, Chairman, Department of Physiology, University of Maryland Medical School, 660 West Redwood Street, Baltimore, Md. 21201.** *Affirmative Action/Equal Opportunity Employer.*

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Senior Immunochemist

Applicant should have a PhD in Immunochemistry or related field and two to five years experience in Immunoassay related activities.

Experience in non-isotopic methods for immunoassay, including fluorescence detection systems is desirable. Duties will include development of automated assay systems and non-isotopic methods for clinical instrumentation.

This position will have responsibility for project development including coordinating research activities and liaison with engineering.

Please send resume complete with salary history to:

BECTON DICKINSON
Human Resources Department
P.O. Box 15350
Salt Lake City, Utah 84115

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POST-DOCTORAL SCIENTISTS MOLECULAR GENETICS AND IMMUNOLOGY

SmithKline, a leader in pharmaceutical research, is seeking post-doctoral scientists to join interdisciplinary research programs in an environment designed to foster creative, innovative research and to promote personal and professional growth.

We consider post-doctoral studies to be of major importance in an individual's career and encourage advanced research, publication of findings in leading journals and a full interaction with the scientific community.

Applications are invited from individuals with training in the following subjects:

- Recombinant DNA
 - gene cloning and expression
 - nucleic acid enzymology
 - transfection methods
- Immunology
 - suppressor cell biology
 - lymphokines
 - hybridoma technology
- Biochemistry
 - isolation and sequencing of proteins
- Microbiology
 - physiology and fermentation

Send C.V. and names of two references citing reference MB-PD-1 to: Mr. Walter B. Flagg, **SMITHKLINE CORPORATION**, P.O. Box 7929, 1568 Spring Garden Street, Philadelphia, PA 19101.

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Senior Scientist

Hoffmann-La Roche, a leader in Pharmaceutical Research, has a career opportunity in an established group involved with protein isolation and analysis in its Department of Molecular Genetics.

The research will include determination and comparison of protein structure as well as the development of new techniques for protein microsequencing.

Qualifications: Ph.D., plus at least two years' post-doctoral experience, and a strong background in protein sequencing and chemistry.

Roche offers outstanding fringe benefits and an environment that encourages professional growth. Only responses including present salary will be acknowledged. Please send resume to: Mrs. Eleanor M. Malone, Professional Placement Specialist.



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POSITIONS OPEN

RESEARCH ASSOCIATE

Ph.D. or equivalent with training in tissue and cell culture to work on research related to experimental liver carcinogenesis. Postdoctoral position available immediately. Salary negotiable. Send résumé to: **A. David Gibson, Research Administrator, Department of Pathology, School of Medicine, University of Pittsburgh, Pittsburgh, Pa. 15261.**

An Equal Opportunity/Affirmative Action Employer

RESEARCH DIRECTOR. A local company involved in health effects research wants a research director (full time, 40 hours per week) to supervise its inhalation toxicology projects. In addition, the candidate should be able to work as an analytical chemist, train and supervise the technicians working in the project, manage grants, and carry out associated administrative work. Qualifications: Ph.D. in analytical chemistry and minimum of 2 years of experience as analytical chemist in inhalation toxicology work. Salary: \$28,000 per year. Applications should be forwarded to:

**Ohio Bureau of Employment Services
1916 Central Parkway
Cincinnati, Ohio 45214**

RESEARCH AND GRADUATE DEVELOPMENT, DEAN

The Bloomington campus of Indiana University (IU) seeks a **Dean for Research and Graduate Development.** The dean has primary responsibility for the stimulation, support, and coordination of research and graduate development for programs on the Bloomington campus. He or she will be expected to stimulate campus liaison with private and government funding agencies and to develop and to maintain a wide range of programs significantly increasing cooperation and interaction between the research facilities of IU Bloomington and private business and industry.

Demonstrated academic achievement and a commitment to research are essential qualifications for the position. Preference will be given to candidates with experience in administration at a relatively high level and with the demonstrated ability creatively and successfully to promote extramural funding. Address all correspondence to: **Professor J. Rufus Fears, Chairperson, Research and Graduate Development Search Committee, Department of History, Ballantine Hall, Indiana University, Bloomington, Indiana 47405. Telephone: 812-337-7581.** Nominations and requests for applications should be made by 15 December; completed applications are due by 15 January.

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SCIENCE IN THE PUBLIC INTEREST—New York State Department, Environmental Protection Bureau, seeks **geologist, geochemist, or geohydrologist** for professional staff. Ph.D. or M.S. with appropriate experience. Opportunity to apply scientific expertise to resolution of diverse environmental problems and provide support for litigation, negotiation, and legislation. Rush letter of interest, résumé, and names of three references to: **Peter Skinner, Environmental Protection Bureau, Justice Building, Albany, New York 12224.**

Graduate School of Public Health at San Diego State University (SDSU) is seeking a **TOXICOLOGIST** whose duties include developing, organizing, and teaching courses related to toxicology, hazardous substances, occupational and environmental toxicology, and toxicologic pathology. Doctoral degree required. Salary: \$19,044 to \$28,884. Joint appointment with Department of Biology. Applications addressed to: **Tee L. Guidotti, M.D., Graduate School of Public Health, San Diego State University, San Diego Calif. 92182.** SDSU is an Affirmative Action/Equal Opportunity/Title IX Employer.

VICE PRESIDENT FOR ACADEMIC AFFAIRS, California Polytechnic State University, San Luis Obispo, Calif. Chief academic officer for large, public, career-oriented university offering programs in agriculture, applied arts, applied science, architecture, business, engineering, and preparation for elementary and secondary teaching. Approximately 16,000 students. Earned doctorate and at least five years of successful experience as responsible academic administrator. Salary commensurate with qualifications and experience. Position available 1 August 1981. Apply by 1 February 1982 to: **President Warren J. Baker, California Polytechnic State University, San Luis Obispo, Calif. 93407.** Affirmative Action/Equal Opportunity/Title IX Employer.

SCIENTIFIC EXCHANGES

NAS SCIENTIFIC EXCHANGE PROGRAMS WITH USSR AND EASTERN EUROPE

Applications are invited from American scientists who wish to make professional visits in the USSR, Bulgaria, Czechoslovakia, the German Democratic Republic, Hungary, Poland, Romania, and Yugoslavia between January and December 1983. Applicants must be U.S. citizens and have a doctoral degree in the natural or social and behavioral sciences by the time of visit. Deadline for requesting applications is Monday, 1 March 1982. Please contact:

**Section of USSR and Eastern Europe
National Academy of Sciences
2101 Constitution Avenue, NW
Washington, D.C. 20418
Telephone: 202-334-2644/45**

SUMMER RESEARCH

FIELD BIOLOGY. Postdoctoral fellowships are available for summer research at the Mountain Lake Biological Station of the University of Virginia. Proposals will be considered for a wide variety of ecological and evolutionary studies. Stipend: \$1900. Deadline: 1 April 1982. Write to: **Director, Mountain Lake Biological Station, Gilmer Hall, University of Virginia, Charlottesville, Va. 22901.** *Equal Opportunity/Affirmative Action Employer.*

GRADUATE STUDY

GRADUATE STUDY IN BIOCHEMISTRY

GRADUATE ASSISTANTSHIPS IN BIOCHEMISTRY leading to the Ph.D. degree are available for the 1982-1983 academic year to qualified applicants. The department has a challenging academic and vigorous research program with training available in a broad range of biochemical disciplines. Stipends for 12-month appointments begin at \$6500. Write: **Dr. William P. Kolb, Department of Biochemistry, The University of Texas Health Science Center at San Antonio, San Antonio, Texas 78284.** *An Equal Opportunity/Affirmative Action Employer.*

FELLOWSHIPS

POSTDOCTORAL FELLOWSHIP. A position is available for up to 4 years in a laboratory involved in research on various aspects of membrane transport in mammalian red cells. Current research problems include: voltage dependence of cation transport, membrane-controlled synthesis of ATP for active transport, and modulation of transport by membrane antigens. The position is supported by an NIH research grant. Applicants should send curriculum vitae and names of three references to: **Dr. P. B. Dunham, Biological Research Laboratory, Syracuse University, Syracuse, N.Y. 13210.** *An Equal Opportunity/Affirmative Action Employer.*

MARINE POLICY AND OCEAN MANAGEMENT RESEARCH FELLOWSHIPS

Woods Hole Oceanographic Institution offers one-year fellowships to professionals in social sciences, law, or natural sciences to conduct research in marine policy and ocean management with emphasis on ocean waste disposal, fisheries, marine mineral management, and marine policy problems and opportunities in developing countries. (A second year's appointment may be possible.) Recipients of awards are selected on a competitive basis, with primary emphasis placed on research promise.

Applicants must have completed a doctoral level degree or possess equivalent professional qualifications through career experience.

Fellowship stipend is \$20,000. Appointees are eligible for group health insurance and a modest research budget. Recipients are encouraged to pursue their own research interests independently or in association with resident staff. Completed applications must be received by 1 March 1982 for 1982-1983 awards. Awards will be announced in April. Write for application forms to: **Dean of Graduate Studies, Education Office, Woods Hole Oceanographic Institution, Woods Hole, Massachusetts 02543.**

Equal Opportunity/Affirmative Action Institution

FELLOWSHIPS

POSTDOCTORAL FELLOWSHIP IN NEPHROLOGY AND RESEARCH IN ION TRANSPORT. Position available for M.D. or M.D.-Ph.D. who has completed medical residency and is planning an academic career in nephrology. Research training in electrolyte transport related to kidney physiology. Clinical training at the University of Connecticut Health Center with rotations at other greater Hartford hospitals. Contact: **Philip R. Steinmetz, M.D., Chairman, Nephrology Program, University of Connecticut School of Medicine, Farmington, Connecticut 06032.**

MOLECULAR CELL BIOLOGY

PREDOCTORAL FELLOWSHIPS. The Graduate Program in Molecular Cell Biology invites applications from highly qualified students interested in an interdisciplinary Ph.D. program. Major areas of emphasis include animal virology, bacterial and somatic cell genetics, cancer biology, cellular immunology and immunochemistry, connective tissue and protein biochemistry, infectious diseases and host defense, membrane biochemistry, nucleic acid synthesis, and research involving the cause and prevention of dental caries. All students admitted to the program receive stipends of \$6300 plus tuition and fees per year. After admission to candidacy, the stipend is increased to \$7000 per year. Contact: **Dr. Roy Curtiss III, Director of Molecular Cell Biology Graduate Program, Department of Microbiology, University of Alabama in Birmingham, Birmingham, Alabama 35294.**

POSTDOCTORAL FELLOWSHIP CLINICAL PSYCHOLOGY AND BEHAVIORAL PHARMACOLOGY

Postdoctoral fellowship available for person interested in studying behavioral and psychophysiological (autonomic) characteristics of patients with affective disorders or agoraphobia and their response to treatment. Skills in some of the following areas are required: clinical interviewing and rating of psychopathology, psychotherapy, cardiovascular and electrodermal psychophysiology, behavior analysis and behavioral pharmacology, experimental design and statistics, data management and analysis by computer, and microcomputer hardware and software (process control). Will have opportunity for training in above areas and major responsibility for laboratory operations. Must be able to function as full partner in clinical research team and will receive appropriate publication credits.

Write to: **E. H. Uhlenhuth, M.D., Box 411, Department of Psychiatry, The University of Chicago, 950 East 59 Street, Chicago, Ill. 60637, or telephone: 312-947-6403.**

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