

makes the proceedings ideal for the advanced student taking the steps from course work to research, as well as for the nonspecialist looking for access to a difficult and rapidly expanding field.

The first section of the book is devoted to extragalactic sources, which here means quasars, BL Lacterae objects, and Seyfert galaxies. The discussion is almost entirely observational and sadly out-of-date, for it does not take into account the new x-ray results from the orbiting Einstein observatory and the wealth of data in the ultraviolet from the International Ultraviolet Explorer satellite. There is very little theoretical discussion of the engines in these objects. Black holes and beaming jets of plasma are well entrenched in fashion, but certainly some progress has occurred in understanding the physical processes in these glamorous systems.

The symposium is at its best when dealing with the interplay between theory and observation. G. F. R. Ellis's "Limits to verification in cosmology" reviews the assumptions that must be made and the corrections that must be applied to cosmological data to answer the question of just what sort of universe is this one we find ourselves in. His results are skillfully tabulated and displayed in diagrams, thus being made accessible to the large body of astronomers who hope to make cosmologically meaningful observations.

S. Michael Fall and P. J. E. Peebles report on progress relating the statistics of galaxy clustering to the initial power spectrum of fluctuations and the mean mass density of the universe (which determines whether it will continue expanding forever or is destined to decelerate and collapse). The origin of fluctuations receives very little attention. There is a brief description of a paper presented by G. J. Lasher that proposes a quark-nucleon phase transition that can occur in certain models of the very early universe, given a particular model of the strong interactions. This seems to be a fruitful subject for a combined effort by particle physicists and cosmologists, and one hopes it will be included in future symposia.

There is a great deal of discussion of recent observations of the binary pulsar, discovered in 1974 by R. Hulse and J. H. Taylor. The system seems to be a remarkably "clean" arena for extrasolar testing of the post-Newtonian effects of gravitation. The pulsar is a highly accurate, easily read clock of large mass and small size moving at a speed of ~ 0.1 percent of the velocity of light in an eccentric orbit about a similar body, with-

out any perturbing object nearby. The precise measurements by Taylor and P. M. McCulloch of the pulsar's clock yield four distinct tests of general relativity. The most interesting are the advance of the periastron (similar to the excess advance of the perihelion of Mercury's orbit due to general relativistic effects) and the decay of the orbit due to gravitational radiation. The observed change in period has the sense and magnitude predicted by the quadrupole formalism in general relativity. As a bonus, a paper by Clifford M. Will includes a discussion of the magnitude of gravitational radiation in different post-Newtonian theories, and Ehlers reviews the problems inherent in the different approximation schemes for calculating the effect in any isolated system.

One of the most exciting revelations of the conference was B. Margon's report of the peculiar spectrum of SS433, the now legendary "coming and going object" whose finding chart has appeared on the 6 o'clock news. Margon briefly mentions the now accepted kinematical model of two precessing opposed plasma jets flowing outward at nearly a third of the velocity of light, producing the rapidly varying Doppler shifts that are observed.

In a short review, I can barely touch the wealth of information contained in the pages of this proceedings. It is unfortunate that the book is so expensive and has taken so long to produce. Even so, it is a quite worthwhile purchase for any departmental or group library.

GEORGE LAKE

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Cambridge CB3 0HA, England*

Books Received

Advances in Cancer Research. Vol. 32. George Klein and Sidney Weinhouse, Eds. Academic Press, New York, 1980. x, 362 pp., illus. \$36.

Advances in Clinical Child Psychology. Vol. 3. Benjamin B. Lahey and Alan E. Kazdin, Eds. Plenum, New York, 1980. xviii, 476 pp. \$29.50.

Advances in Electronics and Electron Physics. Vol. 50. L. Marton and C. Marton, Eds. Academic Press, New York, 1980. xviii, 494 pp., illus. \$55.

Annual Review of Plant Physiology. Vol. 31. Winslow R. Briggs, Paul B. Green, and Russell L. Jones, Eds. Annual Reviews, Palo Alto, Calif., 1980. x, 724 pp., illus. \$17.

Annual Review of Public Health. Vol. 1. Lester Breslow, Jonathan E. Fielding, and Lester B. Lave, Eds. Annual Reviews, Palo Alto, Calif., 1980. xiv, 412 pp. \$17.

APL in Practice. What You Need to Know to Install and Use Successful APL Systems and Major Applications. Papers from a con-

ference, Washington, D.C., Apr. 1980. Allen J. Rose and Barbara A. Schick, Eds. Wiley, New York, 1980. x, 376 pp., illus. \$25.

Applications of Functional Analysis and Operator Theory. V. Hutson and J. S. Pym. Academic Press, New York, 1980. xii, 390 pp., illus. \$39.50 Mathematics in Science and Engineering, vol. 146.

Applied Symbolic Logic. Edward P. Lynch. Wiley-Interscience, New York, 1980. xii, 260 pp., illus. \$36.

Biographical Memoirs. Vol. 51. National Academy of Sciences. Washington, D.C., 1980. viii, 418 pp., illus. \$10.

The Biosynthesis of Aromatic Compounds. Ulrich Weiss and J. Michael Edwards. Wiley-Interscience, New York, 1980. xvi, 728 pp., illus. \$29.50.

Breast Cancer. New Concepts in Etiology and Control. Papers from a meeting, Detroit, 1978. Michael J. Brennan, Charles M. McGrath, and Marvin A. Rich, Eds. Academic Press, New York, 1980. xvi, 406 pp., illus. \$31.50.

Breastfeeding Handbook. A Practical Reference for Physicians, Nurses, and Other Health Professionals. Johanna Goldfarb and Edith Tibbetts. Enslow Publishers, Hillside, N.J., 1980. 256 pp., illus. Paper, \$14.95.

Cadmium in the Environment. Part 1, Ecological Cycling. Jerome O. Nriagu, Ed. Wiley-Interscience, New York, 1980. xiv, 682 pp., illus. \$70.

Calculus and Its Applications. Larry J. Goldstein, David C. Lay, and David I. Schneider. Prentice-Hall, Englewood Cliffs, N.J., ed. 2, 1980. xx, 558 pp., illus. + appendix. \$19.95.

Cell Adhesion and Motility. Papers from a symposium. A. S. G. Curtis and J. D. Pitts, Eds. Cambridge University Press, New York, 1980. x, 500 pp., illus. \$95.

Cell Biology. A Comprehensive Treatise. Vol. 3, Gene Expression: The Production of RNA's. Lester Goldstein and David M. Prescott, Eds. Academic Press, New York, 1980. xiv, 684 pp., illus. \$65.

Cellular Receptors for Hormones and Neurotransmitters. Dennis Schulster and Alexander Levitzki, Eds. Wiley, New York, 1980. xx, 412 pp., illus. \$70.

Central and Peripheral Regulation of Pro-lactin Function. Papers from a symposium, Taormina, Italy. Robert M. MacLeod and Umberto Scapagnini, Eds. Raven, New York, 1980. xxiv, 394 pp., illus. \$36.

Disasters and the Mass Media. Proceedings of a workshop, Washington, D.C., Feb. 1979. National Academy of Sciences, Washington, D.C., 1980. xiv, 302 pp. Paper, \$9.75.

Diseases from Space. Fred Hoyle and Chandra Wickramasinghe. Harper and Row, New York, 1980. x, 196 pp., illus. \$11.95.

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Handbook of Range Distributions for Energetic Ions in All Elements. U. Littmark and J. F. Ziegler. Pergamon, New York, 1980. iv, 494 pp. \$65. The Stopping and Ranges of Ions in Matter, vol. 6.

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Malignant Neglect. Joseph H. Highland, Marcia E. Fine, Robert H. Boyle, and four others. Vintage Books, New York, 1980. x, 278 pp. Paper, \$3.95. Reprint of the 1979 edition.

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Non-Human Primate Models for Study of Human Reproduction. Papers from a symposium, Bangalore, India, Jan. 1979. T. C. Anand Kumar, Ed. Karger, Basel, 1980. viii, 232 pp., illus. Paper, \$58.25.

Nucleic Acid Geometry and Dynamics. Ramaswamy H. Sarma, Ed. Pergamon, New York, 1980. xii, 424 pp., illus. + plates. Cloth, \$50; paper, \$24.50.

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The Rediscovery of the Earth. Lloyd Motz, Ed. Translated from the Italian edition (1975). Van Nostrand Reinhold, New York, 1980. 280 pp., illus. \$35.

The Reign of ETS. The Corporation That Makes Up Minds. Allan Nairn and associates. Learning Research Project, Washington, D.C., 1980. xviii, 554 pp. Paper, \$30.

Renal Handling of Phosphate. Shaul G. Massry and Herbert Fleisch, Eds. Plenum, New York, 1980. xxii, 376 pp., illus. \$37.50.

The Reserve Mining Controversy. Science, Technology, and Environmental Quality. Robert V. Bartlett. Indiana University Press, Bloomington, 1980. xvi, 294 pp. \$17.50.

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Strength of Materials. Ferdinand L. Singer and Andrew Pytel. Harper and Row, New York, ed. 3, 1980. xxii, 662 pp., illus. \$26.50.

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Time Domain Electron Spin Resonance. Larry Kevan and Robert N. Schwartz, Eds. Wiley-Interscience, New York, 1979. x, 414 pp., illus. \$23.50.

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Weichselian Ice Movements, Sediments and Stratigraphy on Hardangervidda, South Norway. Tore O. Vorren. Universitetsforlaget, Trondheim, Norway, 1979 (U.S. distributor, Columbia University Press, New York). 118 pp., illus. Paper, \$16. Norges Geologiske Undersøkelse, No. 350.

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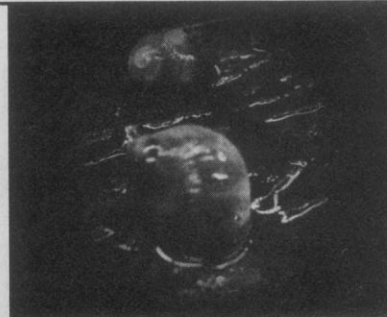
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ASSISTANT OR ASSOCIATE PROFESSOR OF BIOCHEMISTRY. The University of Wisconsin invites applications for an assistant or associate professor in the Department of Biochemistry, Madison, Wisconsin. The position requires research, teaching, and general supervision of the Biochemistry Department fermentation facilities. Candidates must have interest and substantial experience in the biology and large-scale growth of cells, and especially in the use of pilot plant fermentation procedures to generate biochemical substances such as cloned plasmids, antibiotics, and biochemical reagents. Candidates must have demonstrated the ability to conduct substantial and independent research in biochemistry; and he/she must have a strong background of training in biochemistry, appropriate for teaching of fundamental lecture or laboratory courses at both the undergraduate and graduate levels. *Women and minority candidates are especially encouraged to apply.* Application forms may be obtained by writing to: **H. F. DeLuca, Department of Biochemistry, University of Wisconsin, Madison, Wis. 53706.** Completed forms must be received by 28 February 1981, in order to assure consideration. *The University of Wisconsin is an Affirmative Action/Equal Opportunity Employer.*

ASSISTANT PROFESSOR in cellular biochemistry (plant or animal) for fall 1981. Teaching duties include a one-semester course in general biochemistry and an advanced-level course in the area of the instructor's major interest. This is a tenure-track appointment for 3 years at the assistant professor level and requires a Ph.D. degree. Send completed application, containing résumé, description of research interests, and three letters of recommendation, to: **Professor William C. Grant, Jr., Chairman, Biology Department, Williams College, Williamstown, Mass. 01267.** Application deadline: 1 March. *Equal Opportunity/Affirmative Action Employer*

ASSISTANT/ASSOCIATE PROFESSOR CELLULAR ENDOCRINOLOGY

The Department of Physiology and Biophysics at The University of Iowa College of Medicine invites applications for tenure-track appointments at the assistant or associate professor level. We seek individuals committed to investigation of endocrine mechanisms at the cellular or molecular level, preferably with interests in regulation of gene activity, receptor function, cell cycle events, or cellular differentiation. Applicants should have the Ph.D. and/or M.D. degree and two or more years of postdoctoral or faculty experience, with an excellent record of productivity in original research. Candidates should be prepared to conduct a strong independent research program and take an active role in the medical and graduate teaching activities of the department. Please send curriculum vitae, a brief description of research interests, teaching experience and career objectives, an indication of rank desired, and names of at least three references to: **Dr. Richard Maurer, Department of Physiology and Biophysics, The University of Iowa College of Medicine, Iowa City, Iowa 52242.**

The University of Iowa is an Equal Opportunity/Affirmative Action Employer. We welcome applications from qualified female and minority candidates.

CELL AND MOLECULAR BIOLOGY

Faculty positions at junior and senior levels are available in the Cell Biology Group of the Worcester Foundation for Experimental Biology. Research in this group focuses on eukaryotic genes, viruses, cell surfaces, and the cytoskeleton. Demonstrated research excellence is a prerequisite for these positions. Send curriculum vitae, a brief synopsis of research plans, and names of references to: **Dr. Thoru Pederson, Co-Director, Cell Biology Group, c/o Personnel Office, Worcester Foundation for Experimental Biology, 222 Maple Avenue, Shrewsbury, Mass. 01545.**

An Equal Opportunity/Affirmative Action Employer

POSITIONS OPEN

ASSISTANT PROFESSOR OF CHEMISTRY

Faculty position for chemistry. Assistant professor position open fall 1981. Recent Ph.D. with postdoctoral experience preferred. Background in bioinorganic or biophysical chemistry or chemical engineering desirable. Participation in general chemistry program required. Applicants should furnish résumé and transcript, and have three letters of recommendation sent to: **Dr. Donald Brandvold, Department of Chemistry, New Mexico Institute of Mining and Technology, Socorro, N.M. 87801.** *Affirmative Action/Equal Opportunity Employer.*

ASSISTANT PROFESSOR IMMUNOLOGY OR ENDOCRINOLOGY TUFTS UNIVERSITY BIOLOGY DEPARTMENT

Assistant professorship available starting 1 September 1981, for a broadly trained immunologist or endocrinologist. In addition to offering a course at the intermediate/advanced level in his/her research specialty, the applicant will be required to make a significant contribution as part of a team teaching introductory biology. The candidate will be expected to develop a strong independent research program. Preference will be given to applicants with postdoctoral experience.

Please send curriculum vitae, reprints, and three letters of recommendation to:

Norman B. Hecht, Ph.D.
Department of Biology
Tufts University
Medford, Mass. 02155

Application deadline: 1 March 1981.

Tufts University is an Affirmative Action Employer. Applications from women, minorities, and the handicapped are especially welcomed.

ASSISTANT PROFESSOR—NUTRITION

The Division of Environmental and Nutritional Sciences, University of California, Los Angeles (UCLA), School of Public Health, invites applications from qualified individuals for an assistant professorship in nutrition. This is a tenure-track position and, if qualifications of the applicant justify, appointment at a higher level could be considered. The applicant should have a doctorate, a demonstrated commitment to public health problems, and a research interest in human nutrition. The successful candidate will have responsibility for developing courses, seminars, and research in community nutrition and conducting a laboratory course on biochemical nutrition assessment. Position will be available 1 July 1981. Curriculum vitae, bibliography, and three letters of recommendation should be submitted to: **Chair, Search Committee, Division of Environmental and Nutritional Sciences, UCLA School of Public Health, Los Angeles, Calif. 90024.**

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

BIOCHEMIST

A 3-year term appointment as assistant professor may be available in the Department of Biochemistry, College of Medicine, University of Saskatchewan. Applicants must have a Ph.D. and/or M.D. degree. Effective date of appointment is 1 July 1981. Salary will be commensurate with experience and training. The appointment is conditional upon anticipated funds being available. Send curriculum vitae and names of three referees to: **Dr. J. D. Wood, Head, Department of Biochemistry, University of Saskatchewan, Saskatoon, Saskatchewan, Canada S7N 0W0.**

BIOCHEMIST

A position at the rank of assistant professor is available in the Department of Biochemistry, College of Medicine, University of Saskatchewan. Applicants must have a Ph.D. and/or M.D. degree. Duties will include research and teaching of biochemistry to undergraduate and graduate students. Effective date of appointment is 1 July 1981. Salary will be commensurate with experience and training. Send curriculum vitae and names of three referees to: **Dr. J. D. Wood, Head, Department of Biochemistry, University of Saskatchewan, Saskatoon, Saskatchewan, Canada S7N 0W0.**

POSITIONS OPEN

Department of Health Studies, University of Waterloo, has a position (pending funding) for an **ASSISTANT PROFESSOR IN PHYSIOLOGY**, with research interests in stress, cardiovascular, environmental, or developmental areas. Candidates should have 1 to 2 years of postdoctoral experience. The possibility exists for cross-appointments in the Departments of Biology and Kinesiology. The Department of Health Studies is concerned with health behavior related to diseases which involve personal choice (for example, smoking, eating, alcohol consumption, exercise habits) and the biological bases for these diseases. Ability to interact with a multidisciplinary behavioral and biomedical faculty is essential. Send curriculum vitae, reprints, and three letters of reference to:

J. Allan Best, Ph.D., Chairman
Health Studies Department
University of Waterloo
Waterloo, Ontario, Canada N2L 3G1

ATMOSPHERIC SCIENCES ASSISTANT PROFESSOR

Applications are invited for a tenure-track, 9-month academic appointment as assistant professor in the Department of Atmospheric Sciences, Oregon State University, beginning 14 September 1981.

This position's primary teaching duties are senior-level courses in synoptic weather analysis/forecasting and numerical weather prediction, and graduate courses in advanced analysis and diagnosis. In addition, the successful candidate is expected to develop an active program of sponsored research in these or related areas and to supervise the work of graduate students. A Ph.D. in meteorology or atmospheric sciences is required, and preference will be given to applicants with teaching and research experience in weather analysis and prediction, or in observational and diagnostic studies. Candidates should submit an application (including complete curriculum vitae, publications, and a statement of teaching and research interests) to: **Dr. W. L. Gates, Chairman, Department of Atmospheric Sciences, Oregon State University, Corvallis, Oregon 97331**, before 13 February 1981. The candidate must also arrange for three letters of recommendation to be sent directly to the department before the application deadline.

Oregon State University is an Equal Opportunity/Affirmative Action Employer and complies with Section 504 of the Rehabilitation Act of 1973.

ATMOSPHERIC SCIENCES, RESEARCH ASSISTANT

Applications are invited for a position as research assistant which will be available in the Climatic Research Institute, Oregon State University, beginning in February 1981. This position involves the documentation of numerical atmospheric and oceanic models and the analysis of related data, and requires a basic familiarity with dynamics, modeling and data analysis techniques. Interested candidates possessing a B.S. and/or M.S. degree in atmospheric science, meteorology, or physical oceanography are invited to submit an application with a summary of their university and research experience and the names of two professional references to: **Dr. W. L. Gates, Director, Climatic Research Institute, Oregon State University, Corvallis, Oregon 97331**, before 13 February 1981.

Oregon State University is an Affirmative Action/Equal Opportunity Employer and complies with Section 504 of the Rehabilitation Act of 1973.

ATMOSPHERIC SCIENCES RESEARCH ASSOCIATE

Applications are invited for a position as research associate which will be available in the Climatic Research Institute, Oregon State University, in February 1981. This position involves the design and application of numerical routines for the diagnostic analysis of both observed and model-simulated climate data, and requires a minimum of 1 year's experience in climate dynamics research and/or climate diagnostics, including familiarity with numerical methods, climate models, and climate data. Salary range is \$18,000 to \$20,000, depending upon qualifications and experience. Interested candidates possessing the Ph.D. in atmospheric science or meteorology are invited to submit curriculum vitae and the names of two references to: **Dr. W. L. Gates, Director, Climatic Research Institute, Oregon State University, Corvallis, Oregon 97331**, before 13 February 1981.

Oregon State University is an Affirmative Action/Equal Opportunity Employer and complies with Section 504 of the Rehabilitation Act of 1973.

POSITIONS OPEN

BIOBEHAVIORAL SCIENCES. Associate or full professor. Salary negotiable. To develop a graduate research and teaching program in endocrinology in relation to brain and behavior, including the training of predoctoral students, and possible collaborative research with other faculty. While comparative studies are appropriate, emphasis is on the mammalian brain. A doctorate in the relevant area, and postdoctoral research and teaching experience. Reply by 1 March 1981 to: **Dr. Benson E. Ginsburg, U-154, University of Connecticut, Storrs, Conn. 06268.**

Equal Opportunity Employer

BIOLOGIST. A tenure-track assistant professor position will be available September 1981, for candidates with active research interests in cellular and/or developmental biology. Teaching responsibilities include developing graduate-level courses in the area of expertise as well as teaching undergraduate courses, including an undergraduate botany course. Ph.D. required; postdoctoral experience preferred. Candidates should provide comprehensive curriculum vitae, list of publications, transcripts, pertinent reprints, three letters of recommendation, and a brief description of research goals to: **Chairman, Department of Biological Sciences, University of South Alabama, Mobile, Ala. 36688**, by 15 March 1981. *The University is an Equal Opportunity/Affirmative Action Employer.*

BIOLOGY DEPARTMENT, AMERICAN UNIVERSITY OF BEIRUT. A research/teaching position in animal ecology is available October 1981. Ph.D. required; rank normally assistant professor, but rank and salary depend on experience and qualifications. Usual contract is for 3 years, renewable. Curriculum vitae and three letters of recommendation should be air-mailed to: **Chairman, Biology Department, American University of Beirut, Beirut, Lebanon.** *An Affirmative Action/Equal Opportunity Employer.*

BIOLOGY. Botanist opening in the joint Biology Department of the College of Saint Benedict and Saint John's University for a person qualified to teach an upper division course in plant physiology. Duties include introductory level biology or botany courses for majors or nonmajors. Ph.D. required. Salary in accord with salary scale. Send résumé, official transcripts, and three letters of recommendation to: **S. Linda Kulzer, Vice President for Academic Affairs, College of Saint Benedict, Saint Joseph, Minn. 56374**, by 20 February 1981. *Equal Opportunity Employer, M/F/H.*

BIOPHYSICS—BIOCHEMISTRY

Postdoctoral position available immediately. Research involves resonance Raman studies of visual pigments, bacteriorhodopsin, and other biological chromophores in a well-equipped laboratory. This new probe provides a great deal of rich structural information concerning these chromophores and how these proteins work. Send curriculum vitae and letters of reference to: **Dr. R. Callender, Physics, City College of New York, New York, N.Y. 10031.** *An Affirmative Action Employer.*

BOTANIST/PLANT ECOLOGIST AND/OR POPULATION GENETICIST. One-year sabbatical replacement position in excellent small, liberal arts college. Teaching responsibilities include: general botany, either environmental science or evolution for nonscience majors, participation in courses in population and ecosystems (introductory), general genetics and possibly field botany or plant ecology (depending upon starting date). Salary competitive. *Kalamazoo College is an Affirmative Action/Equal Opportunity Employer.* Starting date: June 1981 or September 1981. Applicants should send curriculum vitae and have three recommendations sent to: **Dr. Paul D. Olecia, Chairman, Department of Biology, Kalamazoo College, Kalamazoo, Mich. 49007.** Application deadline is 27 February 1981.

CHAIRMAN DEPARTMENT OF OPHTHALMOLOGY BAYLOR COLLEGE OF MEDICINE

Applications and nominations are invited for the position of chairman, Department of Ophthalmology. Candidates should have a distinguished record of research, education, and administrative skills in academic medicine.

Dr. C. Eugene Carlton
Chairman, Ophthalmology Search Committee
Baylor College of Medicine
Texas Medical Center
Houston, Texas 77030

An Equal Opportunity/Affirmative Action Employer

POSITIONS OPEN

CELLULAR AND DEVELOPMENTAL BIOLOGY SENIOR FACULTY POSITION UNIVERSITY OF ARIZONA

Applications and nominations are invited for a tenured senior faculty position. Candidates should have a distinguished record of research accomplishments and the desire to pursue a creative research program in modern cellular or developmental biology. Participation in the department's teaching program will also be required. Please direct inquiries or applications to:

Professor Neil H. Mendelson, Head
Department of Cellular and Developmental Biology
Biosciences West Building
University of Arizona
Tucson, Arizona 85721

An Equal Opportunity/Affirmative Action Employer

CHAIRPERSON DEPARTMENT OF ZOOLOGY AND PHYSIOLOGY LOUISIANA STATE UNIVERSITY

Louisiana State University (LSU) invites applications and nominations for the position of chairperson of the Department of Zoology and Physiology. The department, consisting of 22 faculty members and 62 graduate students, has Ph.D. programs in zoology and physiology. The candidate must have a distinguished record of scholarly activity, administrative leadership, excellence in teaching, and the ability to interact effectively with faculty and students. An active research program in some area of zoology with demonstrated ability to generate extramural support is expected.

The salary is commensurate with qualifications. The appointment will become effective August 1981. Candidates should submit an application and curriculum vitae, including references, prior to 1 March 1981. Applications and nominations should be sent to: **Chairman, Search Committee, Department of Zoology and Physiology, Life Sciences Building, Louisiana State University, Baton Rouge, Louisiana 70803.** *LSU is an Equal Opportunity/Affirmative Action Employer.*

CHAIRPERSON—DEPARTMENT OF BIOLOGICAL SCIENCES

Fordham University invites applications for the position of chairperson at the rank of professor. The department, which has Ph.D., M.S., and B.S. programs, is housed in a newly renovated building.

The candidate must have a commitment to academic excellence, be a nationally recognized scientist with an ongoing funded research program, and have teaching and administrative experience. Send curriculum vitae by 15 March to:

Rev. Richard E. Doyle, S.J., Dean
Graduate School of Arts and Sciences
Chairman, Search Committee
Fordham University
Bronx, N.Y. 10458

An Equal Opportunity/Affirmative Action Employer

DEVELOPMENTAL GENETICIST. Assistant professor position beginning 1 July 1981. The successful applicant will be expected to teach an undergraduate course in general genetics and a graduate course in an area of expertise. Research emphases could include gene expression or regulation during animal or plant development or in lower eukaryotes with relevance to agriculture. Send curriculum vitae including research plans, reprints, and three letters of reference to:

Dr. James W. Fristrom
Department of Genetics
345 Mulford Hall
University of California
Berkeley, California 94720

Deadline for applications is 13 March 1981. *The University of California is an Affirmative Action Employer.*

DEVELOPMENTAL NEUROBIOLOGIST

The Department of Psychobiology at the University of California invites applications for an anticipated faculty position at the level of assistant professor in the area of developmental neurobiology. Preference will be given to the area of neural development from the aspect of membrane biochemistry. Postdoctoral experience is preferred. Interested persons should contact: **Gary Lynch, Department of Psychobiology, University of California, Irvine, California 92717.** *The University of California is an Affirmative Action/Equal Opportunity Employer.*

POSITIONS OPEN

ELEANOR DANA CHAIR Nutrition-Related Research in Disease Prevention

American Health Foundation announces the establishment of the Eleanor Dana Chair in Nutrition funded by a \$1.5 million grant from the Charles A. Dana Foundation. The American Health Foundation is a leading nonprofit institution specializing in disease prevention and health promotion research, education, and service.

The laboratory programs at its Naylor Dana Institute for Disease Prevention in Valhalla, N.Y., include biochemical, cell culture, animal-model and human-subject investigations into the links between nutritional factors and certain cancers and cardiovascular diseases. The Foundation's epidemiological, clinical research, and nutrition-related programs emanate from the Mahoney Institute for Health Maintenance in Manhattan.

Nominations and applications for the Dana Chair are solicited from leading scientists who wish to coordinate and conduct nutrition-related research and contribute to public and professional knowledge of causes and means of preventing our major diseases.

Mail résumés in confidence to:

N. Earl Barnwell, Director of Personnel
American Health Foundation
320 East 43 Street
New York, New York 10017
Equal Opportunity Employer, M/F/H

University of California, Los Angeles (UCLA), Neuropsychiatric Institute, seeks **CHIEF NEURO-PSYCHOLOGIST** to develop and direct major new training program in neuropsychology. **Qualifications:** Clinical and research experience with neurological, neurosurgical, and psychiatric patients, both adults and children, including mental retardation, learning disabilities, and substances abuse; substantial experience in training neuropsychologists; and academic achievements, including publications, sufficient to qualify for senior faculty appointment. **Contact:** **Peter Tanguay, M.D., Chairman, Neuropsychology Search Committee, 760 Westwood Plaza, Los Angeles, Calif. 90024.** *Equal Opportunity/Affirmative Action Employer.*

DEAN COLLEGE OF SCIENCE THE UNIVERSITY OF TEXAS AT EL PASO

The University of Texas at El Paso is seeking a person to lead, administratively and academically, its College of Science which is composed of five departments: Biological Sciences, Chemistry, Geological Sciences, Mathematics, and Physics. The College has 81 tenure-track faculty positions, and offers B.S. and M.S. degrees in all of its departments, and a doctor of geological science degree. Applicants must possess a Ph.D., demonstrated administrative ability, and research and teaching experience at both the undergraduate and graduate levels so as to qualify for the rank of professor in one of the College's departments. Closing date for nominations and applications is 21 March 1981, with date of appointment to be 1 September 1981.

Each applicant should send a résumé and the names of at least three persons qualified to evaluate his/her qualifications and accomplishments to:

Donald E. Bowen, Chairman
Search Committee for a Dean, College of Science
Office of the Vice President for Academic Affairs
The University of Texas at El Paso
El Paso, Texas 79968
Telephone: 915-747-5725

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

THE UNIVERSITY OF ALBERTA DEAN FACULTY OF SCIENCE EDMONTON, ALBERTA, CANADA

Candidates for the position of Dean are being sought. *The University is an Equal Opportunity Employer.*

The University of Alberta is seeking an experienced academic and administrative leader for its Faculty of Science.

Written nominations or applications for the position, accompanied in the latter case by a résumé of qualifications and experience and the names of three referees, should be forwarded by 13 February 1981 to:

Vice-President (Academic)
3-5 University Hall
The University of Alberta
Edmonton, Alberta, Canada T6G 2J9

POSITIONS OPEN

University of Oklahoma College of Medicine, University of Oklahoma Health Sciences Center, needs a **FACULTY MEMBER** with a doctorate degree with advanced training and expertise in the areas of exocrine physiology and biochemistry. Individual should have independent research support or be capable of obtaining such support. Responsibilities of individual are to develop a research program in the areas of exocrine secretion and to be involved in the teaching of medical students, house staff officers, and clinical fellows. Specialty training is a doctorate degree (M.D. or Ph.D.) with expertise in secretory physiology and biochemistry. Contact with curriculum vitae: **Owen M. Rennert, M.D., P.O. Box 26901, Oklahoma City, Oklahoma 73190.** *Equal Opportunity Employer.*

A FACULTY POSITION in the Program in Biostatistics Department of Biomedical and Environmental Health Sciences School of Public Health University of California, Berkeley

A health services biostatistician position will be available beginning fall 1981 at the assistant professor level. This is a tenure-track faculty position. Duties include developing and teaching a course in health services research, teaching other courses in biostatistics, and directing graduate student research. Applicants should possess a strong background in biostatistics and an ability to engage in in-depth biostatistical research. An interest and some experience in health services is desirable but not required. A Ph.D. in biostatistics or in a related area is necessary. Applications will be accepted until satisfactory candidates are located but must be submitted before 30 June 1981. Please send curriculum vitae, list of publications, and names and addresses of five individuals who may be contacted to:

Chin Long Chiang, Chairman
Search Committee for Health Services
Department of Biomedical and
Environmental Health Sciences
School of Public Health
University of California
Berkeley, California 94720

The University of California is an Affirmative Action Employer.

FACULTY OPENING IN ORGANIC CHEMISTRY. Seek organic chemist with deep commitment to undergraduate interdisciplinary team teaching for a permanent or visiting position beginning fall 1981. Requires Ph.D. or equivalent experience and demonstrable excellence in teaching. Must be capable of teaching in environmental studies and/or biochemistry (especially nutrition). Evergreen is a public, liberal arts college. No department, no faculty ranks. Salary based upon experience. Completed applications must be received by 15 March 1981. To apply, send a résumé, two letters of recommendation from students and colleagues, and a statement of educational philosophy to: **Barbara Smith, Academic Dean, The Evergreen State College, Olympia, Wash. 98505.**

UNIVERSITY OF CALIFORNIA AT IRVINE FACULTY POSITIONS IN COMPUTER SCIENCE

The Department of Information and Computer Science expects open faculty positions at tenured and non-tenured levels. Preferred fields of research interest are computer architecture, theoretical computer science, software and software engineering, social analysis and social impacts of computing, and artificial intelligence.

Duties include research, teaching graduate and undergraduate courses, and participation in departmental governance. Applicants must have Ph.D. or equivalent at the time of appointment. Applicants for tenured appointments must have significant research achievements and demonstrated competence in teaching.

Opportunities for visitors for one, two, or three quarters of the 1981-1982 academic year will also be available.

Affirmative Action/Equal Opportunity Employer

Send résumé and names of three references to:

Julian Feldman, Chairman
Department of Information and Computer Science
University of California
Irvine, California 92717

To insure consideration, apply by 1 March 1981.

POSITIONS OPEN

DEVELOPMENT and APPLICATION of ATOMIC and NUCLEAR ANALYTICAL METHODS

BROOKHAVEN NATIONAL LABORATORY

The Department of Physics has a research position open for an experimentalist with recent doctorate who is interested in developing and applying atomic and nuclear analytical methods (PIXE, RES, microbeams, and so forth) to problems in fields such as archeology, biology, materials science, medicine, and zoology. Candidates must have a firm grasp of physical principles and the flexibility, resourcefulness, and desire to collaborate with scientists in many different disciplines. Research will be conducted primarily with a 3.5-MV electrostatic accelerator, MP Tandem Van de Graaff Facility, and the National Synchrotron Light Source at Brookhaven. For further information, candidates should write to:

Dr. K. W. Jones
Department of Physics, Building 901-A

BROOKHAVEN NATIONAL LABORATORY

Associated Universities, Inc.
Upton, Long Island, N.Y. 11973
An Equal Opportunity Employer, M/F

FACULTY POSITION CELL BIOLOGIST/ELECTRON MICROSCOPIST

To head intercollegiate (Colleges of Medicine and Veterinary Medicine) electron microscopy facility. Tenure-track faculty position in the College of Veterinary Medicine's newly proposed Department of Comparative and Experimental Pathology with a joint appointment, if desired, in the College of Medicine's Department of Pathology or other appropriate department. Responsibilities: supervision of and consultation with trainees and faculty members pursuing diagnostic problems or research projects requiring EM; development of a training program in EM techniques; teaching in appropriate areas of general and/or systemic pathology; and administrative support of the laboratory. Half-time available for independent research at a basic level, preferably in some aspect of cell biology, membranes, immunology, or disease pathogenesis. Requirements: an earned doctoral degree or equivalent with experience in transmission and, preferably, scanning EM. Experience with either morphometric, freeze etch, or analytical techniques is desired. Must be willing to seek extramural funding. Salary and academic rank dependent on experience and qualifications. Reply with curriculum vitae, bibliography, statement of research and career goals, and names of three references to: Dr. Stephen W. Russell, Director, Comparative and Experimental Pathology, Box J-145 JHMH, University of Florida, Gainesville, Fla. 32610. Application deadline 1 April 1981. An Affirmative Action/Equal Opportunity Employer.

JOSIAH T. MACY FELLOWS Division of Health Policy Research and Education Harvard University

Harvard University is seeking applications from professionals in a variety of disciplines for a 1-year fellowship in health policy research and management, commencing 1 July 1981. Fellows will pursue individual research on health policy matters, participate in Division activities, and interact with students and faculty in schools and institutions affiliated with the Division, including the Harvard Schools of Business, Government, Medicine, and Public Health. Stipends will range from \$25,000 to \$30,000, depending on individual circumstances. Send résumés to: Dr. David Blumenthal, Kennedy School of Government, 79 Boylston Street, Cambridge, Mass. 02138.

Harvard University is an Equal Opportunity/Affirmative Action Employer.

IMMUNOBIOLOGIST with postdoctoral experience and expertise in hybridoma technology. For exciting new immunotherapeutic project at Baylor College of Medicine. Houston, Texas. Please send curriculum vitae and bibliography to:

Box 306, SCIENCE

POSITIONS OPEN

FACULTY POSITION IN PHARMACOKINETICS. Applications are invited for a tenure-track position for a Ph.D. or Pharm.D. with teaching expertise and an active research program in pharmacokinetics. The successful applicant will hold a joint appointment in the Clinical Pharmacy Department, School of Pharmacy, Samford University, and the Department of Pharmacology, University of Alabama in Birmingham, and will be expected to cooperate in the research and teaching activities of both departments in conjunction with clinical pharmacists, clinicians, and basic scientists. Applicants should submit complete curriculum vitae, statement of research interests, and request that three letters of recommendation be sent to: Dr. Tim Burelle, Head, Department of Clinical Pharmacy, Samford University, or Dr. Elias Meezan, Chairman, Department of Pharmacology, University of Alabama in Birmingham, Birmingham, Alabama 35294. Samford University and the University of Alabama in Birmingham are Affirmative Action/Equal Opportunity Employers.

FACULTY POSITION—BIOCHEMISTRY

Applications are invited for a tenure-track appointment at the assistant professor level. Preference will be given to candidates with research interests complementary to those of the present members of the faculty. Please direct, by 15 March, curriculum vitae, a brief description of research plans, and letters from three references to: Search Committee, Department of Biochemistry, Dartmouth Medical School, Hanover, N.H. 03755. An Equal Opportunity/Affirmative Action Employer.

FACULTY POSITION in aerosol physics or laser applications in engineering and biomedical fields. Applications or nominations are invited for an opening in the Department of Electronics and Instrumentation at the University of Arkansas Graduate Institute of Technology. Applicants should have demonstrated ability to do outstanding research in applied optics/aerosol physics and show promise of excellence in teaching. Appointment will probably be at the assistant professor level, but applications and nominations for other levels will be considered. Current projects are funded by NASA, EPA, DOE, and NIH; applicant should be willing to perform as a team member in these research projects. Salary is competitive. Candidates should submit résumé, a publications list, a description of research interests, and three letters of recommendation not later than 1 March 1981 to: Dr. J. W. Fredrickson, Director, Graduate Institute of Technology, P.O. Box 3017, Little Rock, Arkansas 72203.

FACULTY POSITION: The Division of Science of the City College of City University of New York (CUNY) invites applications for a faculty position. A successful candidate will be expected to teach at the undergraduate and graduate levels and to undertake a vigorous program of research. In addition candidates must have a demonstrated interest and competence in the formulation and evaluation of public policy, in order to play a leading role in the program called "Liberal Arts, Pre-Professional Studies and Public Policy" which combines a strong liberal arts education with pre-professional training in various fields. The successful applicant will be appointed for the first year on a visiting basis in an appropriate college department and will be considered for a tenured position as associate professor or professor, depending upon qualifications and experience. A Ph.D. with equivalent experience is required. Salary range: \$23,660 to \$42,640. Material should be sent by 22 February 1981 to: Dr. Stanley C. Wecker, City College of CUNY, Shepard Hall, Room 112, Convent Avenue and 138th Street, New York, N.Y. 10031.

An Equal Opportunity/Affirmative Action Employer, M/F

GROSS ANATOMIST

Applications are invited for a tenure-track position at the level of assistant professor in the Department of Anatomy at St. Louis University, beginning 1 July 1981. Applicants should hold the Ph.D. or M.D. degree and preference will be given to those with postdoctoral training. Candidates should be strongly committed to teaching in medical gross anatomy and to research in neurobiology. Send curriculum vitae and names of three references by 1 March 1981, to: Chairman, Search Committee, Department of Anatomy, St. Louis University Medical Center, 1402 South Grand, St. Louis, Missouri 63104. St. Louis University Medical Center is an Equal Opportunity/Affirmative Action Employer, M/F/H.

POSITIONS OPEN

FELLOW of the

INSTITUTE OF BIOLOGICAL CHEMISTRY

An established senior investigator with a distinguished record of research accomplishment in an area of biochemistry relevant to agriculture is being sought to fill the position of fellow of the Institute of Biological Chemistry and professor of biochemistry at Washington State University, Pullman, Washington. This permanent senior faculty member will be expected to conduct a vigorous productive research program and participate in graduate education.

Send nominations or applications, including curriculum vitae, a short description of research accomplishments and goals, and a list of three or more references, by 3 April to: C. A. Ryan, Institute of Biological Chemistry, Washington State University, Pullman, Washington 99164.

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

HEAD OF THE DEPARTMENT OF BIOCHEMISTRY AND NUTRITION, College of Agriculture and Life Sciences, Virginia Polytechnic Institute and State University, Blacksburg, Virginia 24061. All candidates must have Ph.D. degree in biochemistry or closely related discipline. Position available summer 1981. Applications will be received until 1 March 1981, or until the position has been filled. Send complete résumé and the names of three references to: Dr. James R. Nichols, Dean. An Equal Opportunity/Affirmative Action Employer.

HUMAN QUANTITATIVE GENETICS POSTDOCTORAL RESEARCH ASSOCIATE

Experience in pedigree and/or path analysis of human multifactorial traits desired. Participate in studies related to hypertension, body composition, and growth. Available immediately. Salary: \$16,000 to \$20,000. Send résumé and three reference letters to: R. M. Siervogel, Ph.D., Fels Research Institute, Wright State University, School of Medicine, Yellow Springs, Ohio 45387.

FACULTY POSITIONS OPEN COLLEGE OF AGRICULTURAL SCIENCES AND FOODS

KING FAISAL UNIVERSITY HOFUF, SAUDI ARABIA Academic Year 1981-1982

The expanding College of Agricultural Sciences and Foods of King Faisal University invites inquiries from qualified applicants for the 1981-1982 academic year in the following fields:

Biology	Plant Pathology
Chemistry	Agricultural
Physics	Economics
Biochemistry	Animal Science
Agronomy	Animal Ecology
Horticulture	Dairy Science
Bee Keeping	Agricultural Engineering
Poultry Science	Water Resources and
Home Economics	Climatology
Agricultural Extension	Aquatic Wealth

PREREQUISITES: Ph.D. or master's or equivalent degrees, practical and/or teaching experience. Knowledge of Arabic helpful, but not required. Language of instruction is English.

Positions available September 1981; interviews scheduled with the dean in Houston and London in April/May 1981.

SALARY RANGES (approximate annual U.S. dollars):

Professor—\$25,469 to \$33,965
Associate professor—\$22,779 to \$28,973
Assistant professor—\$18,750 to \$27,487
Lecturer—\$11,611 to \$16,035

Salaries are paid monthly in Saudi riyals.

BENEFITS: Free furnished accommodations; substantial educational allowance for up to four children. Air tickets to and from Saudi Arabia once per year for family of four. Sixty-day paid summer holiday, overweight allowance. No Saudi income tax. Contracts are for 1 year and renewable.

Send curriculum vitae with current telephone number, and the names, addresses, and telephone numbers of three references to: Dr. Abdul Mannan Turjoman, Dean, College of Agricultural Sciences and Foods, King Faisal University, c/o Saudi Arabian Educational Mission, 2425 West Loop South, Houston, Texas 77027, OR c/o P.O. Box 2, Sudbury-on-Thames, Middlesex, TW16 5JP, England.

POSITIONS OPEN

DEPARTMENT OF GEOLOGY THE UNIVERSITY OF ALBERTA EDMONTON, ALBERTA, CANADA T6G 2E3

The Department of Geology of The University of Alberta is seeking a person for a 1-year (academic year 1981-1982) sabbatical replacement in economic geology. A senior person from industry, government, or university is preferred. The applicant will be expected to share the teaching load in an ore-deposits program and to offer a course in his or her specialty. The University of Alberta maintains exceptional research facilities and is well located in terms of access to a wide variety of deposits. Salary will be commensurate with the level of appointment. Please contact: **Dr. Bruce Nesbitt, Department of Geology, The University of Alberta, Edmonton, Alberta, Canada T6G 2E3. Telephone: 403-432-5071/3265/5395.** Application deadline: 1 April 1981.

The University of Alberta is an Equal Opportunity Employer.

IMMUNOLOGIST RESEARCH DIVISION CLEVELAND CLINIC FOUNDATION

A position is available at the staff or associate staff member level in the Department of Immunology. Major responsibility is full-time research in some aspect of basic or clinical cellular-molecular immunology, preferably oriented toward lymphokines and/or immunoregulation. The individual will be expected to maintain an independent program of investigation. Interested applicants, with M.D. or Ph.D. degree, should send their curriculum vitae and three names of references to: **Scientific Director, Department of Immunology, Research Division, Cleveland Clinic Foundation, 9500 Euclid Avenue, Cleveland, Ohio 44106.**

INSTRUCTOR/ASSISTANT PROFESSOR OF BIOLOGY

The College of St. Francis seeks to fill the following position: teach courses in cellular biology, microbiology, immunology, and nonmajor general biology. Ph.D. preferred. General information: salary negotiable; appointment for 9 months. No tenure system; rather a system of multi-year rolling contracts. Appointment: 17 August 1981. Application deadline: 6 March 1981. Application: letter of application, curriculum vitae, transcripts, and three letters of recommendation. Send to: **Olga Kraske, 500 Wilcox, Joliet, Illinois 60435.** *An Equal Opportunity Employer.*

POLICY RESEARCH POSITION: Researcher wanted for ongoing interdisciplinary projects in transportation and energy. Projects include comparison of alternatives for reducing petroleum use in transportation with emphasis on electric vehicles and alcohol fuels; design, execution, and evaluation of transportation and energy conservation experiments in the United States and other countries with emphasis on the automobile; policies to encourage commercialization of renewable resources (wind, solar, biomass, hydro, geothermal). Appointment as research associate. Training and experience could be in the fields of engineering, public policy, transportation, business, political science, economics, or sociology. Good writing skills and Ph.D. or equivalent research experience are required. Technical background (for example, undergraduate degree in engineering, science, or mathematics) and experience with government contract work will count favorably.

Submit résumé and examples of writing (before 1 March 1981) to: **Dr. R. Eugene Goodson, Institute for Interdisciplinary Engineering Studies, Purdue University, West Lafayette, Indiana 47907.**

An Equal Opportunity/Affirmative Action Employer

RESEARCH ASSOCIATE. Peptide chemist, Ph.D., February 1981. Peptide synthesis and protein modification. Send résumé and two letters of recommendation to: **Dr. Christian Schwabe, Department of Biochemistry, Medical University of South Carolina, Charleston, S.C. 29403**

SCIENTIST with managerial experience to build a clinical radiolabeling and radiopharmaceutical group at University of New Mexico (UNM), Radiology Department. Must have Ph.D. with experience in clinical nuclear medicine chemistry and synthetic organic chemistry. Must have record of recognized accomplishment in research. Rank and salary commensurate with qualifications. Apply: **Robert D. Moseley, Jr., Chairman, Radiology Department, UNM School of Medicine, Albuquerque, N.M. 87131.** *Affirmative Action/Equal Opportunity Employer.*

POSITIONS OPEN

Established **INVESTIGATORS** at the assistant to full professor level are sought for the following positions: (i) **clinical investigator to study lipoprotein metabolism;** (ii) **cell biologist with strong electron microscopic background;** and (iii) **platelet physiologist to study the role of thrombosis in atherogenesis.** Send résumé to: **Gladstone Foundation Laboratories for Cardiovascular Disease, University of California, San Francisco, P.O. Box 40608, San Francisco, California 94140.** *The University of California, San Francisco, is an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.*

UNIVERSITY OF DELAWARE: Three nontenure positions available as **LECTURER** for the 1981-1982 academic year. Teaching responsibilities in general chemistry. Opportunity for collaborative research. Ph.D. in chemistry required. Background in analytical, physical, or inorganic chemistry preferred. Send curriculum vitae and three teaching recommendations by 1 March 1981 to: **Dr. Seymour Volles, Department of Chemistry, University of Delaware, Newark, Del. 19711.** *The University of Delaware is an Equal Opportunity/Affirmative Action Employer.*

MATHEMATICAL PLANT ECOLOGIST

The Department of Botany at the University of Alberta invites applicants for a tenurable position at the assistant professor level. Qualifications include training in system modelling and/or plant population biology. The successful candidate will be expected to develop a research program in ecophysiological and/or population modelling. Interest in team research on plants and processes of cold regions is desired. Responsibilities include teaching elementary ecology and graduate courses in the applicant's area of specialization. Exceptional computing and controlled environmental facilities are available. The current minimum salary for an assistant professor at the University of Alberta is \$21,269.

The University of Alberta is an Equal Opportunity Employer. Starting date: 1 July 1981. Application deadline: 15 March 1981. Applications with curriculum vitae and three letters of reference should be submitted to:

Search Committee
c/o J. B. Kurie
Department of Botany
The University of Alberta
Edmonton, Alberta, Canada T6G 2E9
Telephone: 403-432-5631

DEPARTMENT OF PHARMACOLOGY THE MEDICAL CENTER

The University of Alabama in Birmingham. Applications are invited for tenure-track faculty positions as a result of the expansion in size and space of the Department of Pharmacology of the University of Alabama in Birmingham (UAB) comprising the Medical Center, University College, and the graduate school. UAB is a young and growing university with one of the most comprehensive health and research centers in the southeast. Candidates should have a Ph.D. or M.D. degree, postdoctoral or faculty experience, and be committed to a productive, funded, research program and excellence in teaching. Rank is open but assistant professor is the likely level of appointment. The Department is particularly interested in individuals with a biochemical or molecular approach to pharmacology including toxicology. *The University of Alabama in Birmingham, Birmingham, Alabama, is an Affirmative Action Employer and invites applications from women and minority applicants.* Applicants should send complete curriculum vitae, including a brief statement of research interests and plans and the names of three references, to:

**Dr. Elias Meezan, Professor and Chairman
Department of Pharmacology
The University of Alabama in Birmingham
Birmingham, Alabama 35294**

POSTDOCTORAL POSITIONS available in 1981-1982 in NIH Training Program in the physiology of exercise. Current support expires 30 June 1981; renewal grant submitted. Program designed to raise level of research accomplishment in exercise and environmental physiology research programs. Must have Ph.D. or M.D. Send résumé and names of three persons who can write a letter of recommendation to:

**Steven M. Horvath
Institute of Environmental Stress
University of California
Santa Barbara, Calif. 93106
An Affirmative Action Employer**

POSITIONS OPEN

MOLECULAR GENETICS/BOTANY assistant professor. Nontenure-track position available fall 1981. Annual appointment, not to exceed 3 years. Ph.D. required. Primary responsibilities will be teaching undergraduate and graduate courses in botany, genetics, and microbiology, and advising students. Send curriculum vitae, statement of teaching experience, official transcripts, and three current letters of reference to: **Thomas L. Pearce, Chairman, Department of Biology, John Carroll University, Cleveland, Ohio 44118.** *An Equal Opportunity Employer.*

MUSEUM DIRECTOR, Idaho Museum of Natural History. The Museum is a state-supported unit of Idaho State University with major collections in paleontology, archeology, botany, and ethnography. Duties of the director include fund-raising, budget management, working with professional curators, general responsibility for educational programs, and preparing interpretive materials for a diversified public. Applicants should have an advanced degree in biological science, anthropology, or museology and experience in museum management emphasizing public programs. Demonstrated ability in fund-raising for general museum support is required. The appointment is a permanent, 12-month, non-academic position at a salary of \$25,000. Deadline for applications, including at least three letters of evaluation, is 15 March 1981. Duties begin 1 July 1981. Applications and letters solicited by the application should be sent directly to: **Kenneth T. Faler, Chairperson, Museum Search Committee, Campus Box 8087, Idaho State University, Pocatello, Idaho 83209.**

An Equal Opportunity/Affirmative Action Employer

Ph.D. NEUROPSYCHOLOGIST. For research assistant professor (nontenure-track) in the Division of Neurosurgery and the Head Injury Clinical Research Center, University of Pennsylvania. Two or more years of experience in the neuropsychological assessment of head trauma patients is required. Candidates must have an understanding of diagnostic neuroradiology and be able to provide adjustment counseling. Send curriculum vitae and three references to: **Division of Neurosurgery, attention E. Fillman, Hospital of the University of Pennsylvania, 3400 Spruce Street, Philadelphia, Pa. 19104.** *Equal Opportunity/Affirmative Action Employer.*

University of Oklahoma College of Medicine. University of Oklahoma Health Sciences Center needs a **PEDIATRICIAN**, Board-certified. Must have completed 2-year fellowship in pulmonary medicine. Must have expertise and evidence of productivity in the area of clinical investigation and research in pulmonary diseases. Individual will head the section of Pediatric Pulmonary Medicine within Department of Pediatrics and Oklahoma Children's Memorial Hospital. Individual will develop an active research program in the area of pulmonary diseases and physiology and develop a training program in that area. Will be involved in the teaching of house officers, medical students, and postgraduate fellows. Excellent salary and benefits. Send curriculum vitae to: **Owen M. Rennert, M.D., P.O. Box 26901, Oklahoma City, Oklahoma 73190.** *Equal Opportunity Employer.*

PHARMACOLOGY—Research associate or postdoctoral fellow for studies on the pharmacokinetics and metabolic fate in laboratory animals and humans of new anthracycline antitumor agents, and for molecular and/or biochemical pharmacology studies relating to drug mechanism of action. Successful candidate will interface in a professionally stimulating and productive way with a major drug research and development team representing diverse backgrounds and disciplines. Position available immediately; salary to \$18,500, depending on qualifications. Reply with curriculum vitae and names of three references to: **Dr. Mervyn Israel, Associate Chief for Drug Development, Division of Pharmacology, Sidney Farber Cancer Institute, 44 Binney Street, Boston, Mass. 02115.** *An Affirmative Action/Equal Opportunity Employer.*

POSTDOCTORAL POSITION available. A person with training in biochemistry, cell biology, or molecular biology. Position is for the study of the role of mammary epithelial cellular endomembranes in the synthesis, postsynthetic modification, and secretion of the constituents of milk. Applicants with experience in electron microscopy and/or in vitro translation are particularly welcomed. Please submit curriculum vitae and three letters of recommendation to: **Dr. T. W. Keenan, Department of Animal Sciences, Purdue University, West Lafayette, Ind. 47907.** *Purdue University is an Equal Opportunity/Affirmative Action Employer.*

**KING FAISAL UNIVERSITY
COLLEGE OF MEDICINE
DAMMAN, SAUDI ARABIA
FACULTY POSITIONS OPEN
1981-1982**

King Faisal University College of Medicine, now in its seventh year, invites applications from qualified men and women for the 1981-1982 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 February and April 1981.

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, liberal overweight allowance. No Saudi income tax. Send curriculum vitae with current telephone number and the names and addresses of three references to:

Dr. Tawfiq Tamimi
Dean, College of Medicine
King Faisal University
c/o Saudi Arabian
Educational Mission
2425 West Loop South
Houston, Texas 77027

OR

c/o P.O. Box 2
Sudbury-on-Thames
Middlesex TW16 5JR
England

**KING FAISAL UNIVERSITY
COLLEGE OF VETERINARY MEDICINE
AND ANIMAL WEALTH
Hofuf, Saudi Arabia**

Faculty positions are presently open for the 1981-1982 academic year in the following fields:

Biology	Veterinary Medicine and Therapeutics
Mathematics	Veterinary Anatomy and Histology
Veterinary Surgery	Veterinary Clinical Pathology
Veterinary Ob/Gyn	Food Hygiene and Meat Inspection
Clinical Parasitology	Toxicology and Forensic Medicine
Animal Production	
Genetics and Breeding	
Veterinary Bacteriology	
Forensic Medicine	
Veterinarian	
Fish Diseases	

PREREQUISITES: Advanced degrees (B.A., Ph.D., or D.V.M.) with both practical and teaching experience.

Language of instruction is English. Positions open in September 1981. Interview dates to be announced.

BENEFITS: Free furnished apartments (2-bedroom), educational allowance for up to four children, annual air tickets to and from Saudi Arabia for up to four persons. 60-day paid vacation each summer, baggage allowance of one-half of one month's salary one time only. No Saudi income tax. Contracts for 1 year, renewable.

SEND curriculum vitae, copies of certificates, and names, addresses, and telephone numbers of three references to:

Dr. Ibrahim El Desougi Mustafa
Dean, College of Veterinary Medicine
King Faisal University
c/o Saudi Arabian Educational Mission
2425 West Loop South
Houston, Texas 77027

OR

c/o P.O. Box 2
Sudbury-on-Thames
Middlesex TW16 5JP, England

**DIRECTOR, DIVISION OF
RADIATION ONCOLOGY**

**University of Wisconsin
Medical School**

The Department of Human Oncology and the Wisconsin Clinical Cancer Center seek an Associate/Full Professor as a Director of Radiation Oncology to lead clinical and laboratory programs in the Division of Radiation Oncology.

Will have direct responsibility for clinical radiotherapy (1000 new patients per year), radiotherapy physics and radiobiology research in the various educational programs. Administers 10,000 sq. ft. clinical and 10,000 sq. ft. research space in a Division with 17 faculty, 48 supporting staff, and 25 trainees.

Candidates should have demonstrated clinical care, research, and administrative experience. Send curriculum vitae, references, or letters of nomination to:

Dr. Delores A. Buchler
Chair, Radiation Oncology
Research Committee
H4/635 Clinical Science Center
600 Highland Ave.
Madison, Wisconsin 53792

Equal Opportunity Employer M/F



MARINE BIOLOGICAL LABORATORY
Woods Hole, Massachusetts 02543

announces **SUMMER COURSES, 1981**

BIOLOGY OF PARASITISM

John R. David, Harvard Medical School
(Instructor in Chief)

EMBRYOLOGY

Rudolf A. Raff, Indiana University

MARINE ECOLOGY

Ivan Valiela, Boston University & MBL, and
John Teal, Woods Hole Oceanographic
Institution

MICROBIAL ECOLOGY

Harlyn O. Halvorson, Brandeis University

NEURAL SYSTEMS AND BEHAVIOR

Ronald Hoy, Cornell University, and Eduardo
Macagno, Columbia University

NEUROBIOLOGY

Thomas Reese, National Institutes of Health,
and John Hildebrand, Columbia University

PHYSIOLOGY

Joel L. Rosenbaum, Yale University

The instruction is intended for postdoctoral, graduate, and advanced undergraduate students; laboratory work is emphasized.

These full-time courses begin in mid-June with a formal program of five to seven weeks followed by a post-course research session of four to six weeks (optional in some cases) in which the student does individual research under the tutelage of an instructor.

Limited financial aid is available for all courses. Completed applications must be received by MBL by *February 27, 1981*.

ADDITIONAL INFORMATION on course content and application materials may be obtained from the Admissions Office, Marine Biological Laboratory, Woods Hole, Massachusetts 02543; telephone 617-548-3705. MBL is an Equal Opportunity Institution.

POSITIONS OPEN

MEMBRANE BIOCHEMISTRY

POSTDOCTORAL POSITION available immediately for a recent Ph.D. to participate in biochemical research on the structure and mechanism of ion translocating ATPases. We have recently demonstrated that the electrogenic proton-translocating ATPase in the plasma membrane of the eukaryotic microorganism, *Neurospora*, operates via a mechanism that is quite similar to that of the Na^+/K^+ - and Ca^{2+} -translocating ATPases of animal cell origin. We are now probing the structure and mechanism of this ATPase with the goal of elucidating the molecular mechanism of ion-translocating ATPases in general. Our unique experimental system, including functional isolated plasma membrane vesicles, the purified ATPase, and the availability of genetics, offers hope for continued progress. Research will include investigation of the orientation of the ATPase in the membrane and investigation of its molecular mechanism, utilizing a variety of biochemical techniques. Reply with curriculum vitae and names of three references to: **Dr. Gene A. Scarborough, Department of Pharmacology, School of Medicine, The University of North Carolina at Chapel Hill, Chapel Hill, N.C. 27514. Equal Opportunity Employer.**

DREXEL UNIVERSITY

Physics, Biophysics, Atmospheric Science

Three tenure-track faculty positions are anticipated starting fall 1981. Applications are solicited from Ph.D.'s with independent research experience in one of the following areas—**Theoretical:** all fields of theoretical physics will be considered with special attention given to condensed matter, atomic and low energy nuclear physics. **Experimental:** quantum optics, biophysics, solid-state physics. **Atmospheric Science:** general circulation; climate dynamics with application in satellite meteorology; atmospheric optics, experimental or theoretical with emphasis in mesoscale probing; boundary layer turbulence modeling and atmospheric chemistry modeling. Rank and salary commensurate with experience. Send résumé and references to: **Dr. William W. Eidson, Head, Department of Physics and Atmospheric Science, Drexel University, Philadelphia, Pa. 19104. An Equal Opportunity/Affirmative Action Employer.**

PLANT ECOLOGIST, assistant professor (tenure-track). Candidate expected to establish strong externally funded research program in ecosystems or plant populations and to teach in ecology program at undergraduate and graduate level. Ph.D. required; postdoctorate preferred. Send curriculum vitae and three letters of recommendation to: **Dr. T. H. Nash III, Department of Botany/Microbiology, Arizona State University, Tempe, Ariz. 85281, by 13 February 1981. An Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL CANCER BIOLOGY RESEARCH POSITIONS. Two positions are immediately available to work on the relationship of prostacyclin and thromboxane A_2 to tumor cell metastasis. Demonstrated skill in biochemistry or cell biology necessary. Experience in prostaglandin biochemistry or platelet research desirable. Appointment for 2 to 3 years; salary and fringes competitive; active and growing research group. Strong interactions with basic science and clinical faculty. Send curriculum vitae and three letters of recommendation to: **Dr. Kenneth V. Honn, Departments of Radiation Oncology and Biological Sciences, Wayne State University, 210 Science Hall, Detroit, Michigan 48202. An Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL—DRUG DISPOSITION. Position available in broad area of fate of drugs and pharmacokinetics especially in disease states. Opportunities for in vitro, animal, and human studies in a well-equipped and established clinical pharmacology program. Applicants should have a recent Ph.D. in a pharmaceutical science or related area. Send curriculum vitae and three letters of reference to: **Dr. G. R. Wilkinson, Department of Pharmacology, Vanderbilt University, Nashville, Tenn. 37232. An Affirmative Action/Equal Opportunity Employer.**

POSTDOCTORAL RESEARCH ASSOCIATE (Marshall University School of Medicine). Salary: negotiable. Available immediately for a period of 2 years to study the role of DNA repair in the chemotherapeutic response of tumor cells. Application deadline: 20 February 1981. Send résumé and two references to: **Helene Z. Hill, Ph.D., Department of Biochemistry, Marshall University, School of Medicine, Huntington, W.Va. 25701. An Equal Opportunity Employer.**

POSITIONS OPEN

POSTDOCTORAL POSITION to study hormonal influences on body fluid dynamics in humans and/or rats. Experience with stereotax, animal cardiovascular surgery, and exercise physiology desired. Available immediately. Contact: **Dr. Leo C. Senay, Jr., Department of Physiology, St. Louis University Medical Center, 1402 South Grand, St. Louis, Mo. 63104. An Equal Opportunity/Affirmative Action Employer, M/F/H.**

POSTDOCTORAL POSITION, LEPROSY RESEARCH. Two-year position available immediately for studies on immunology of leprosy. Applicant should have doctoral degree and strong background in microbiology and cellular or humoral aspects of immunology. Salary: \$15,000 per year. Send curriculum vitae and names of three references to: **Dr. James L. Krahenbuhl, Chief, Leprosy Research Unit, USPHS Hospital, 15th Avenue and Lake Street, San Francisco, Calif. 94118.**

POSTDOCTORAL POSITION available winter 1981 to study the effect of aging on the reproductive system in laboratory animals. Candidate should have experience in pituitary cell culture, radioimmunoassay, and receptor analysis. Salary commensurate with experience. Applicants should send their curriculum vitae plus at least two letters of recommendation to: **Personnel Manpower Director, attention: Robert A. Vigersky, M.D., Department of Medicine, Uniformed Services University of the Health Sciences, Bethesda, Md. 20014. An Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL POSITION available on or after 1 July 1981 for neurophysiologic research on the motor functions of the basal ganglia. Research involves chronic extracellular recording in behaving primates. Some experience with computer programming desired. Interested applicants should send their curriculum vitae and references to:

M. R. DeLong, M.D.

Department of Neurology and Neuroscience
Johns Hopkins Hospital and School of Medicine
Baltimore, Maryland 21205

An Equal Opportunity Employer

POSTDOCTORAL RESEARCH ASSOCIATE POSITION IN IMMUNOLOGY-MICROBIOLOGY. Available 1 March 1981. U.S. Department of Agriculture-funded project involving the evaluation of brush border glycoproteins and their role in enteric disease. Candidates should possess an M.S. or Ph.D. degree with experience in immunological techniques. Appointment for 1 year, subject to renewal for duration of grant period. Applications close 28 February 1981. Salary: \$15,000 per year. Send résumé and names of three references to: **Dr. T. E. Staley, Department of Physiological Sciences, College of Veterinary Medicine, Oklahoma State University, Stillwater, Oklahoma 74078.**

POSTDOCTORAL RESEARCH ASSOCIATE. Amino acid sequence determination and interaction properties of smooth muscle desmin. Background in protein chemistry and/or acid sequencing required. Position available September 1981, contingent upon continued funding. Résumé and three letters of reference to: **Dr. P. Johnson, Department of Chemistry, Ohio University, Athens, Ohio 45701. Affirmative Action/Equal Opportunity Employer.**

RESEARCH ASSOCIATE

Biochemical endocrinologist with training and experience in steroid hormone mechanisms to aid in investigation of cholecalciferol (vitamin D)-induction of a specific intestinal calcium-binding protein. Knowledge of tissue culture and immunoassay techniques are helpful. Salary negotiable. Starting date: April 1981. Send résumé and names of three references to: **Dr. R. A. Corradino, Department of Physiology, 720 Veterinary Residence Tower, New York State College of Veterinary Medicine, Cornell University, Ithaca, New York 14853. An Affirmative Action/Equal Opportunity Employer.**

RESEARCH ASSOCIATE—Position available for research concerning biochemical aspects of leukocyte chemotaxis. Strong background in receptors, transduction mechanisms, or membrane function is essential. Stipend depends on background. Send curriculum vitae and bibliography to: **Dr. Ralph Snyderman, Box 3892, Duke University Medical Center, Durham, N.C. 27710.**

POSITIONS OPEN

POSTDOCTORAL POSITION IN FETAL AND NEONATAL BIOLOGY

Fields of investigation include the physiology, biochemistry, and pharmacology of the cardiovascular, respiratory, renal, and central nervous systems. Emphasis is on theoretical (mathematical modeling) and experimental studies. The fellowship commences immediately and is available for 2 years. Please send curriculum vitae and bibliography to: **Dr. Lawrence D. Longo, Division of Perinatal Biology, School of Medicine, Loma Linda University, Loma Linda, Calif. 92350.**

PSYCHIATRIST. Recruitment for chairman of psychiatry at the University of Colorado Medical School. Department has four approved training programs, 73 residents and fellows in 4-year program, 70 full- and part-time faculty. Acts as director of psychiatric hospital and 40 inpatient beds, 26,000 outpatient, and 4,000 emergency visits per year; 142 staff employed by the hospital. *The University is an Equal Opportunity/Affirmative Action Employer.* Send curriculum vitae to: **F. C. Battaglia, M.D., 4200 East Ninth Avenue, Denver, Colorado 80262.**

POSTDOCTORAL RESEARCH ASSOCIATE. Immediate opening for candidates with an interest in developmental biology and a degree in biochemistry or pharmacology. Research related to carcinogenesis and studies of the anti-tumor properties of vitamin A. Polyamine biosynthesis will be monitored as a reliable marker of growth stimulation or inhibition. Salary competitive and negotiable. Send curriculum vitae and names of three references to: **Dr. Diane H. Russell, Department of Pharmacology, University of Arizona Health Sciences Center, Tucson, Ariz. 85724. The University of Arizona is an Equal Opportunity/Affirmative Action Employer.**

Scientific Advisor to the Director of the Armed Forces Radiobiology Research Institute (AFRRI)

As Scientific Advisor to the Director AFRRI, a sub command of the Defense Nuclear Agency, the person selected for this Senior Executive Service position will be responsible for the overall technical content and execution of the AFRRI scientific program and for advising the Director of all aspects of ionizing radiation, radiobiology, and matters related to the biomedical effects of nuclear weapons. The emphasis of the program managed is centered around the radiobiological effects of ionizing radiation as they relate to man's responses in a nuclear weapons environment.

The qualifications of applicants should reflect education or equivalent experience above the Bachelor's level in radiation biology, health physics or a related field. Applicants should have a high professional stature within the scientific community and have demonstrated experience in managing research programs.

Interested individuals who feel they qualify should contact David Woodend at 202-325-7591 for more complete information about the position and qualification requirements. This position is published under Announcement No. 55/80. The deadline for submission of applications is February 11, 1981.

STAFF RADIATION ONCOLOGIST—Joint Center for Radiation Therapy. A 1-year, postresidency position as a staff radiation oncologist in the Joint Center for Radiation Therapy is available July 1981. The Joint Center is a collaborative venture of the Beth Israel Hospital, Brigham and Women's Hospital, Children's Hospital Medical Center, New England Deaconess Hospital, and the Sidney Farber Cancer Institute under the auspices of Harvard Medical School. The position includes appointment to the Department of Radiation Therapy at Harvard Medical School. Applicants are expected to have some evidence of experience in clinical and/or laboratory investigation. Interested applicants should write to: **Dr. Jay Harris, Joint Center for Radiation Therapy, 50 Binney Street, Boston, Massachusetts 02115. An Affirmative Action/Equal Opportunity Employer.**

NUCLEIC ACID BIOCHEMIST

Immediate opportunity to apply molecular biology enzymes to the synthesis of reagents for recombinant DNA research. Ph.D. plus postdoctoral experience and expertise in the use of nucleic acid enzymes are required.

P-L BIOCHEMICALS, INC. is a leading producer of biochemical reagents for molecular biology and offers a unique environment combining academic expression with private enterprise.

Send letter, curriculum vitae, and list of three references in confidence to:

Dr. Robert Naylor
Vice President and
Technical Director,
Research Biochemicals



P-L biochemicals, inc.
1037 WEST MCKINLEY AVENUE, MILWAUKEE, WIS. 53205

Equal Opportunity Employer, M/F

BIOSTATISTICIAN

Rohm and Haas, a leading multinational chemical company, is seeking a Biostatistician to support our toxicological research effort. The position is located at our Research Center in Spring House, PA — a suburban community 20 miles north of Philadelphia.

Your responsibilities will include the following:

- Establishing procedures for statistical review and approval of protocols and reports.
- Providing statistical consulting on specific projects and preparing reports.
- Interfacing with government regulatory officials on statistical matters.
- Providing training in statistics for our toxicology staff.
- Developing a Risk Assessment Program.

You should have a PhD in Statistics or the equivalent. Two or more years of industrial experience using SAS and IBM systems are preferred.

We offer an excellent salary and benefits program, including relocation assistance, and an environment conducive to professional advancement.

Please send a complete resume, including salary history, in confidence, to:

Recruiting and Placement #481



PHILADELPHIA, PA. 19105

An equal opportunity employer M/F.

Molecular Genetics, Inc. is a young and rapidly expanding company designing products based upon recombinant DNA and hybridoma technologies. Our laboratory facility supports projects involving molecular biology, immunology, genetic, tissue culture and animal research. We are now seeking additional personnel in the fields of:

Plant Molecular Biology/Genetics Plant Tissue Culture

Qualified candidates should have doctoral degrees with postdoctoral experience and an interest in participating in a unique, academically-oriented work program.

We are located in the pleasant environs of Minnesota offering easy access to some of the country's authentic wilderness areas and an excellent quality of life in Minneapolis.

Please supply resume and salary history to:

Molecular Genetics Inc.
5245 Edina Industrial Blvd.
Edina, MN 55435

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 - ☐ \$38 USA ☐ \$62 Canada, PUAS ☐ \$65 Foreign
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MW 1

POSITIONS OPEN

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FINANCIAL ASSISTANCE

Lerner-Gray Fund for Marine Research provides financial assistance to scientists starting careers in marine biology, exclusive of botany. Level: graduate and postdoctoral. Range: \$200 to \$1000. Projects can be carried out anywhere in the world. Applications due by 15 March on prescribed forms. Write: **Lerner-Gray Fund for Marine Research, American Museum of Natural History, Central Park West at 79th Street, New York, New York 10024.**

REQUEST FOR PROPOSALS

NRRFSS NATIONAL RESEARCH AND RESOURCE FACILITY FOR SUBMICRON STRUCTURES

Proposals are now being accepted for research to be carried out at NRRFSS, the National Research and Resource Facility at Cornell University, Ithaca, New York. This facility has been established to promote research in submicron fabrication, to provide a resource for the fabrication of advanced devices and research structures requiring submicron dimensions, and to stimulate innovative research in areas of science outside the electronic device field by providing access to advanced submicron technology.

Research at the facility is expected to explore advanced areas which go beyond current integrated circuit practice and which depend intimately on submicrometer dimensions. To be appropriate, proposed projects should substantially further the art of submicron technology or its applications to science and engineering. Proposed projects should not be of a service nature where such services are commercially available and should be of a nature that centrally depends on the specialized equipment and expertise of the facility.

Most approved projects will be expected to begin after the completion of the new laboratory, summer 1981. Some projects can, however, be initiated earlier.

For a copy of a users manual which contains information on available instruments and proposal submission forms, write or telephone: **NRRFSS, Phillips Hall, Cornell University, Ithaca, New York 14853; telephone: 607-256-2329.**

SYMPOSIUM

EPA/NCI SYMPOSIUM ON ORGAN AND SPECIES SPECIFICITY IN CHEMICAL CARCINOGENESIS

March 2-4, 1981, Raleigh, NC. Discuss current and future approaches: *in vivo* versus *in vitro* systems; promotional effects; interspecies extrapolation; and more. Poster presentations invited. Contact Ms. Wierbicki, Northrop Services, Inc., P.O. Box 12313, Research Triangle Park, NC. 27709 (919) 549-0411

GRADUATE STUDY

GRADUATE STUDY IN OCCUPATIONAL AND ENVIRONMENTAL HEALTH

School of Public Health
Harvard University

Traineeships are available for the 1981-1982 academic year for M.S. and doctoral candidates in industrial hygiene, occupational health, air pollution control, radiation protection, and environmental and toxic waste management. Prompt application necessary for fall 1981 admission. Contact: **Department of Environmental Health Sciences, 665 Huntington Avenue, Boston, Mass. 02115.** *Affirmative Action Employer.*

GRADUATE STUDY

GRADUATE PROGRAM IN PHARMACOLOGY

The Department of Pharmacology, Northwestern University Medical School, invites applications from qualified individuals interested in pursuing a Ph.D. degree in pharmacology. The rapidly developing department has 20 faculty members who maintain very active research programs in the areas of neuropharmacology; molecular, cardiovascular, endocrine and clinical pharmacology; drug metabolism; cancer pharmacology; and environmental toxicology. The emphasis is on molecular and electrophysiological approaches. The graduate program is supported by an Institutional National Research Service Award Predoctoral Training Grant in Pharmacological Sciences. For information and application forms, write to: **Dr. Toshio Narahashi, Department of Pharmacology, Northwestern University Medical School, 303 East Chicago Avenue, Chicago, Ill. 60611.**

ASSISTANTSHIPS

RESEARCH ASSISTANTSHIPS Plant and Mammalian Ecology DEPARTMENT OF BIOLOGY IDAHO STATE UNIVERSITY

Research assistantships leading to Ph.D. in biology for two qualified applicants with M.S. and strong background in: (i) plant-water relations and ecology, and (ii) population ecology of small mammals. Support level approximately \$6800 plus tuition. Positions begin 1 June 1981 (plant) or 1 September 1981 (mammal). Successful applicants will study plant-water status in relation to fire or the effects of fire on small mammal communities in sagebrush-steppe communities on the Idaho National Engineering Laboratory National Environmental Research Park in southeastern Idaho. Application deadline: 13 March 1981. Send three letters of reference, official transcript, résumé, and GRE scores to: **Dr. Jay E. Anderson (plant position) or Dr. Barry L. Keller (animal position), Department of Biology, Idaho State University, Pocatello, Idaho 83209.**

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FELLOWSHIPS

POSTDOCTORAL TRAINING FELLOWSHIP available March 1981, for Ph.D. interested in norepinephrine metabolism. Experience with current biochemical isolation procedures and membrane biochemical procedures helpful. Contact: **Dr. Nathaniel Revis, Biology Division, Oak Ridge National Laboratory, P.O. Box Y, Oak Ridge, Tenn. 37830.** *An Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL FELLOWSHIP IN TUMOR IMMUNOLOGY (1 to 2 years). Immediate opening to perform research in tumor antigenicity. Grant-supported projects involve isolation and characterization of murine tumor-specific transplantation antigens, immunotherapy models, and isolation of genetically uniform tumor sublines. Experience in the production of monoclonal antibodies is desired but not essential. Salary: \$13,000 per annum. Send curriculum vitae, graduate transcripts, and three letters of reference to: **Dr. Neal R. Pellis, Division of Organ Transplantation, Department of Surgery, University of Texas Medical School, Houston, Texas 77030.**

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Drexel University is pleased to announce competition for **CALHOUN GRADUATE RESEARCH FELLOWSHIPS** in Biomedical Engineering and Science. Supported by the Calhoun endowment to Drexel University, each fellowship provides a minimum of \$6000 tax-free stipend, plus waiver of all tuition and fees for 12-month appointments. Exceptional first-year graduate students are eligible for awards beginning fall term 1981. Deadline for completed application is 20 March 1981. For applications, please write:

**Dov Jaron, Ph.D., Director
Biomedical Engineering and Science Institute
Drexel University
Philadelphia, Pennsylvania 19104**

FELLOWSHIPS

POSTDOCTORAL FELLOWSHIP

Position available for 2 to 3 years in basic research on the pathophysiology of vascular diseases. M.D. or Ph.D. with background in **CELL BIOLOGY** and experience in cell culture, lipoprotein metabolism, endocytosis, or growth-control preferred. Apply by sending curriculum vitae, brief summary of research experience and interests, and names and addresses of three references to: **Dr. M. A. Gimbrone, Jr., Vascular Pathophysiology Laboratory, Department of Pathology, Brigham and Women's Hospital, 75 Francis Street, Boston, Mass. 02115.** *We are an Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL FELLOWSHIPS IN CHEMISTRY OF PROTEIN HORMONES (2 to 3 years), beginning July 1981, or earlier. Opportunities are available for individuals with Ph.D. or M.D. interested in joining an interdisciplinary group engaged in structure function studies of proteins. Current research involves human and animal pituitary hormones, using modern sequence technology, carbohydrate chemistry, RIA, EIA, bioassay, to study hormone structure and function. Stipends are open. Send curriculum vitae and names of references to: **Dr. A. F. Parlow, Harbor-UCLA Medical Center, 1000 West Carson Street, Torrance, California 90509.**

POSTDOCTORAL FELLOWSHIPS available for studies on cloning, structure, and regulation of expression of human apolipoprotein genes. Emphasis will be placed, in these studies, on the ability of sex-steroids to influence expression of particular apolipoprotein genes. Applicants should have a background in molecular and/or developmental biology. Experience in recombinant DNA technology is desirable but not essential. Interested applicants should send curriculum vitae and three letters of reference to: **Dr. Roger Deeley, Department of Biochemistry, Queen's University, Kingston, Ontario, Canada K7L 3N6.**

POSTDOCTORAL RESEARCH FELLOWSHIP applications are being accepted for a limited number of investigations in neuroscience with potential application to CNS regeneration at any accredited institution (worldwide). Applications must be received by 1 April. Stipends: \$12,000 to \$15,000. For information and application forms, contact: **Research Director, National Spinal Cord Injury Foundation Research Division, Suite L-111, 4440 North West 19 Street, Lauderhill, Florida 33313. Telephone: 305-735-9050.**

PROGRAMS

DOCTORAL PROGRAM—ANATOMY

Department of Anatomy, The University of Texas Health Science Center at San Antonio, offers opportunities for graduate study in a wide variety of fields including neurobiology, endocrinology, reproductive biology, and cell biology. Excellent opportunity for individuals interested in careers in medical education and biomedical research. Stipends available. Contact: **Graduate Advisor, Department of Anatomy, The University of Texas Health Science Center, 7703 Floyd Curl Drive, San Antonio, Texas 78284.**

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ELECTRON MICROSCOPY in the BIOLOGICAL SCIENCES — May 3 - 15, 1981

Blair Bowers, NIH, and Morton Maser, MBL, Co-Instructors in Chief. Attendance limited to 12.

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Carl J. Berg, Jr. of MBL, Instructor in Chief. Attendance limited to 20.

SHORT COURSES for FALL, 1981, will include "Protein Analysis by Polyacrylamide Gel Electrophoresis," November 1-6, 1981, Raymond Stephens of MBL, Instructor in Chief, and "Liquid Scintillation Counting in Biology and Medicine," October 18-23, 1981, Yutaka Kobayashi of New England Nuclear, Instructor in Chief. The complete fall schedule will be available in March.

ADDITIONAL INFORMATION on course content and application materials may be obtained from the Admissions Office, Marine Biological Laboratory, Woods Hole, MA 02543; telephone 617-548-3705.

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Jean L. Marx and Gina Bari Kolata

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