

from the 21-centimeter line in 1951 and in 1954, his part in establishing the synchrotron nature of the emission in the continuum of the Crab Nebulae, his discovery of the high-velocity clouds in the central regions of our galaxy during the late '50's, and his continued participation in the work of the great radio-observatories of Holland. All these and much more testify to Oort's unique place in the astronomy of this century.

Oort's contributions to astronomy are enhanced by his inspiration and guidance of successive generations of astronomers who have gone to Leiden to learn from him. Besides, he has played a major role in international organizations such as the International Astronomical Union: Oort was the General Secretary of the International Astronomical Union for some 13 years (1935-1948) and President for three years (1958-1961). He was also the initiator and guiding spirit in the building of the radio astronomical observatories at Dwingeloo and Westerbork and in later years also of the European Southern Observatory.

This handsome volume describes all of these accomplishments and gives a picture—often intimate—of the manner of man Oort is. The reviewer was particularly impressed by the papers by Blaauw, by van der Laan, and by Margaret and Geoffrey Burbidge describing the many phases of Oort's scientific contributions. Papers by Christiansen and by Allen and Ekers describe in considerable detail Oort's contribution to radio astronomy and his part in the building of the great radio-observatories in Holland. And there are several papers devoted to recollections and remembrances which provide a charming picture of Oort's humaneness and of his relations with his students and his colleagues. It is clear from these tributes that his associates value his personal friendship almost as much as his scientific contributions.

I have not had the good fortune to have been associated with Oort in any substantial way, but I do recall his visiting the Yerkes Observatory of the University of Chicago, as a guest of his friend, the late Gerard Kuiper, in 1959. During an hour's discussion I had with Oort, he described with great enthusiasm his then recent discovery of the nature of the high-velocity clouds in the center of the galaxy. But toward the end, with his natural politeness, he asked me of my own interests. When I mentioned to him the results of some laboratory experiments in hydromagnetics that had just been completed by one of my associates, Oort asked me, "But when are you going

to come to grips with the real problems of astronomy?" The real problems of astronomy have always been Oort's abiding concern.

S. CHANDRASEKHAR

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Biogeochemistry

Environmental Chemistry of the Elements. H. J. M. BOWEN. Academic Press, New York, 1979. xvi, 334 pp., illus. \$43.50. Revision of *Trace Elements in Biochemistry* (1966).

How much copper is there in kale? Can fungi live without zinc? What is the titanium content of the average human diet? What elements tend to accumulate in cultivated soil? What is the metabolic role of molybdenum? For the answers to questions like these, consult this compilation of the basic data of biogeochemistry.

In chapter 6, "The elemental composition of living matter," we learn that kale contains 4.9 milligrams of copper per kilogram of dry matter. Chapter 8, "Essentiality, deficiencies and toxicities of the elements," tells us that fungi require zinc for healthy growth, as do bacteria, blue-green algae, green algae, and seed plants. Table 8.7 lists elements in human diets; these include titanium at the rate of 0.8 milligram per day. Chapter 12, "Environmental effects of human activities," includes an illuminating discussion of the geochemical budgets of typical soils. Arsenic, cadmium, fluorine, iron, lead, selenium, and vanadium are the elements that appear to be accumulating in moderately contaminated, cultivated soils. Chapter 9, "Chemical forms and functions of the elements," reveals that molybdenum is a constituent of several oxidases, a dehydrogenase, and the nitrogenase enzyme system.

The last chapter, "Elements in the geosphere and the biosphere," presents a summary of biogeochemical data, arranged alphabetically by element, for all of the elements in the periodic table up to curium. Data for a typical element occupy half a page and include: abundances and half-lives of naturally occurring stable and radioactive isotopes; average concentrations in various types of rock as well as fresh water, sea water, and air; common minerals; concentrations in various classes of organisms, as well as information on essentiality, toxicity, and accumulator species; natural organic compounds and biochemical functions; and a

list of recent review articles. This compilation of data is compact but easy to understand.

Perhaps a third of the rest of the book is occupied by detailed tabulations of data, and the text is equally rich in hard fact. There is little interpretation, explanation, or speculation, and perhaps this is a weakness. This is a book about the where and the what of biogeochemistry, not the why and the how. The tables provide ready answers to specific questions, but more extensive use of graphs might have made it easier to perceive patterns in the chemical interaction of organisms and their environment.

This interaction offers many opportunities for interesting and important research. Biogeochemical knowledge contributes to the realistic assessment of the hazards of pollution, improved potential for sustainable exploitation of earth's living resources, and a clearer understanding of factors that have affected the course of biological evolution. Bowen has advanced biogeochemistry both with his *Trace Elements in Biochemistry* (Academic Press, 1966) and with this expanded and up-to-date volume.

JAMES C. G. WALKER

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Books Received

Acute Toxicity in Theory and Practice. With Special Reference to the Toxicology of Pesticides. V. K. Brown. Wiley-Interscience, New York, 1980. x, 160 pp., illus. \$28. Monographs in Toxicology.

Adaptation to Thermal Environment. Man and His Productive Animals. Laurence E. Mount. University Park Press, Baltimore, 1980. xiv, 334 pp., illus. Paper, \$27.50. A Series of Student Texts in Contemporary Biology.

Advances in Aquatic Microbiology. Vol. 2. M. R. Droop and H. W. Jannasch, Eds. Academic Press, New York, 1980. xii, 356 pp., illus. \$46.

Basic Chemistry. General, Organic, Biological. Denis M. Callewaert and Julien Genyey. Worth, New York, 1980. xxiv, 838 pp., illus. \$19.95.

Basic Pharmacology for Health Occupations. Henry Hitner and Barbara T. Nagle. Bobbs-Merrill, Indianapolis, Ind., 1980. viii, 272 pp., illus. Paper, \$12.95.

Beginning Algebra for College Students. Karl J. Smith and Patrick J. Boyle. Brooks/Cole, Monterey, Calif., ed. 2, 1980. xiv, 448 pp., illus. \$15.95.

Biochemical Characterization of Lymphokines. Proceedings of a workshop, Ermatingen, Switzerland, May 1979. Alain L. de Weck, Flemming Kristensen, and Maurice Landy, Eds. Academic Press, New York, 1980. xxxii, 622 pp., illus. \$39.50.

Biochemical and Photosynthetic Aspects of Energy Production. Anthony San Pietro, Ed. Academic Press, New York, 1980. xiv, 232 pp., illus. \$24.50.

Can Health and Nutrition Interventions Make a Difference? Davidson R. Gwatkin, Janet R. Wilcox, and Joe D. Wray. Overseas Development Council, Washington, D.C., 1980. xii, 76 pp. Paper, \$5. Overseas Development Council Monograph No. 13.

Cancer Centers. Interdisciplinary Cancer Care and Cancer Epidemiology. Proceedings of a symposium, Düsseldorf, Nov. 1978. E. Grundmann and J. W. Cole, Eds. Gustav Fischer, Stuttgart, 1979. viii, 288 pp., illus. Paper, DM 78. Cancer Campaign, vol. 3.

Cancer Treatment Research. Joseph Aisner and Paul Chang, Eds. Nijhoff, The Hague, 1980 (U.S. distributor, Kluwer Boston, Hingham, Mass.). xvi, 272 pp., illus. \$44.75. Developments in Oncology, vol. 2.

Cardiovascular Risk Factors in Children. The Early Natural History of Atherosclerosis and Essential Hypertension. Gerald S. Berenson and seven others. Oxford University Press, New York, 1980. xviii, 454 pp., illus. \$29.50.

A Catalogue of British and Irish Prehistoric Bronzes in the Royal Ontario Museum. Francis Pryor. Drawings by Jirina Hosek and the author. Metal analyses by Paul Craddock. Royal Ontario Museum, Toronto, 1980. viii, 80 pp. \$12.50.

Collagenase in Normal and Pathological Connective Tissues. Papers from a conference, Manchester, England, 1978. David E. Wooley and John M. Evanson, Eds. Wiley-Interscience, New York, 1980. x, 292 pp., illus. \$46.

Community Power and Political Theory. A Further Look at Problems of Evidence and Inference. Nelson W. Polsby. Yale University Press, New Haven, Conn., ed. 2, 1980. xxvi, 246 pp. Cloth, \$22.50; paper, \$5.95.

Community Psychology. Theoretical and Empirical Approaches. Margaret S. Gibbs, Juliana Rasic Lachenmeyer, and Janet Sigal, Eds. Gardner Press, New York, 1980 (distributor, Halsted [Wiley], New York). xii, 410 pp. \$24.95.

Drug Abuse Deaths in Nine Cities. A Survey Report. Louis A. Gottschalk, Frederick L. McGuire, Jon F. Heiser, Eugene C. Dinovo, and Herman Birch. National Institute on Drug Abuse, Rockville, Md., 1980. xii, 176 pp. Paper, NIDA Research Monograph 29.

Dynamics of Snow and Ice Masses. Samuel C. Colbeck, Ed. Academic Press, New York, 1980. x, 468 pp., illus. \$55.

Early Life History of Marine Fish. The Egg Stage. Gotthilf Hempel. Washington Sea Grant, Seattle, 1979 (distributor, University of Washington Press, Seattle). xvi, 70 pp., illus. Paper, \$7.50.

The Earth's Variable Rotation. Geophysical Causes and Consequences. Kurt Lambeck. Cambridge University Press, New York, 1980. xii, 450 pp., illus. \$77.50. Cambridge Monographs on Mechanics and Applied Mathematics.

The Effects of Weapons on Ecosystems. J. P. Robinson. Published for the United Nations Environment Programme by Pergamon, New York, 1979. x, 70 pp. \$10. UNEP Studies, vol. 1.

The Evolution of Human Social Behavior. Joan S. Lockard, Ed. Elsevier, New York, 1980. xvi, 336 pp., illus. \$22.95.

The Exergy Method of Energy Systems Analysis. John E. Ahern. Wiley-Interscience, New York, 1980. xiv, 296 pp., illus. \$27.50.

The Excitation and Propagation of Elastic Waves. J. A. Hudson. Cambridge University Press, New York, 1980. viii, 226 pp., illus. \$32.50. Cambridge Monographs on Mechanics and Applied Mathematics.

Experimental Organic Chemistry. Michael P. Doyle and William S. Mungall. Wiley, New York, 1980. xx, 490 pp., illus. \$17.95.

Groups, Systems and Many-Body Physics. Peter Kramer and Mario Dal Cin, Eds. Vieweg, Braunschweig, 1980. xvi, 412 pp., illus. DM 136. Vieweg Tracts in Pure and Applied Physics, vol. 4.

Guatarrero Cave. Early Man in the Andes. Thomas F. Lynch, Ed. Academic Press, New York, 1980. xx, 330 pp., illus. \$24. Studies in Archaeology.

Handbook of Biological Psychiatry. Part 2, Brain Mechanisms and Abnormal Behavior—Psychophysiology. Herman M. van Praag, Malcolm H. Lader, Ole J. Rafaelsen, and Edward J. Sachar, Eds. Dekker, New York, 1980. x, 492 pp., illus. \$46.50. Experimental and Clinical Psychiatry, vol. 1.

Human Gene Mapping 5. Papers from a conference, Edinburgh, July 1979. H. John Evans and five others, Eds. Karger, Basel, 1980. vi, 236 pp. Paper, \$42.50. Birth Defects: Original Article Series, vol. 15, No. 11. *Cytogenetics and Cell Genetics*, vol. 25, No. 1-4.

Human Nutrition and Nutrition and Pesticides in Cattle. Geoffrey H. Bourne, Ed. Karger, Basel, 1980. x, 238 pp., illus. \$125.50. World Review of Nutrition and Dietetics, vol. 35.

Human Sexuality. A Social Psychological Approach. Jeffrey S. Victor. Prentice-Hall, Englewood Cliffs, N.J., 1980. xviii, 396 pp., illus. Paper, \$12.95.

An Introduction to Catastrophe Theory. P. T. Saunders. Cambridge University Press, New York, 1980. xii, 144 pp., illus. Cloth, \$22.95; paper, \$7.95.

Introduction to Computer Music. Wayne Bateman. Wiley-Interscience, New York, 1980. x, 314 pp., illus. \$24.95.

An Introduction to Digital and Analog Integrated Circuits and Applications. Sanjit K. Mitra. Harper and Row, New York, 1980. xx, 486 pp., illus. \$24.95.

Introduction to Floriculture. Roy A. Larson, Ed. Academic Press, New York, 1980. xx, 608 pp., illus. \$29.50.

Long-Term Properties of Polymers and Polymeric Materials. Proceedings of a symposium, Stockholm, Aug. 1976. Bengt Rånby and Jan F. Rabek, Eds. Interscience (Wiley), New York, 1980. x, 610 pp., illus. Paper, \$28. *Journal of Applied Polymer Science Applied Polymer Symposium* 35.

LSD. My Problem Child. Albert Hofmann. Translated from the German edition (1979) by Jonathan Ott. McGraw-Hill, New York, 1980. xiv, 210 pp. \$9.95.

The Macaques. Studies in Ecology, Behavior and Evolution. Donald G. Lindburg, Ed. Van Nostrand Reinhold, New York, 1980. xiv, 384 pp., illus. \$22.50. Van Nostrand Reinhold Primate Behavior and Development Series.

The Natural History of Fossils. Chris Paul. Holmes and Meier, New York, 1980. xii, 292 pp., illus. + plates. \$37.50. The World Naturalist.

Natural Resource Conservation. An Ecological Approach. Oliver S. Owen. Macmillan, New York, and Collier Macmillan, London, ed. 3, 1980. xii, 884 pp., illus. \$19.95.

Natural Sulfur Compounds. Novel Biochemical and Structural Aspects. Proceedings of a meeting, Rome, June 1979. Dorian Cav-

allini, Gerald E. Gaull, and Vincenzo Zappia, Eds. Plenum, New York, 1980. xvi, 552 pp., illus. \$49.50.

The Organic Chemistry of Drug Synthesis. Vol. 2. Daniel Lednicher and Lester A. Mitscher. Wiley-Interscience, New York, 1980. xviii, 526 pp., illus. \$28.

Paper and Thin Layer Chromatographic Analysis of Environmental Toxicants. M. E. Getz. Heyden, Philadelphia, 1980. x, 164 pp., illus. \$16.50. Heyden International Topics in Science.

Petrology and Genesis of Leucite-Bearing Rocks. Springer-Verlag, New York, 1980. xvi, 254 pp., illus. \$39. Minerals and Rocks, 14.

Phonon Scattering in Condensed Matter. Proceedings of a conference, Providence, R.I., Aug. 1979. Humphrey J. Maris, Ed. Plenum, New York, 1980. xx, 482 pp., illus. \$52.50.

Quantitative Analysis. R. A. Day, Jr., and A. L. Underwood. Prentice-Hall, Englewood Cliffs, N.J., ed. 4, 1980. xii, 660 pp., illus. \$22.50.

Quest. An Autobiography. Leopold Infeld. Chelsea Publishing Company, New York, ed. 2, 1980. viii, 362 pp. \$17.50.

Radio Recombination Lines. Proceedings of a workshop, Ottawa, Ontario, Canada, Aug. 1979. P. A. Shaver, Ed. Reidel, Boston, 1980 (distributor, Kluwer Boston, Hingham, Mass.). x, 288 pp., illus. \$37. Astrophysics and Space Science Library, vol. 80.

The Self-Managing Environment. Alan Roberts. Rowman and Littlefield, Totowa, N.J., 1980. 190 pp. \$15.

Semiconductor Injection Lasers. Jerome E. Butler, Ed. IEEE Press, New York, 1980 (distributor, Wiley, New York). viii, 396 pp., illus. Paper, \$24. IEEE Press Selected Reprint Series.

Sensation and Perception. E. Bruce Goldstein. Wadsworth, Belmont, Calif., 1980. xx, 492 pp., illus. + plates. \$19.95.

Sex Equity in Education. Jean Stockard and five others. Academic Press, New York, 1980. xiv, 240 pp. \$18. Educational Physiology.

Social and Biological Predictors of Nutritional Status, Physical Growth, and Neurological Development. Lawrence S. Greene and Francis E. Johnson, Eds. Academic Press, New York, 1980. xvi, 344 pp., illus. \$25.

Sunnyhill. The Health Story of the 80's. Bruce and Barbara Small. Small and Associates, Goodwood, Ontario, Canada, 1980. xiv, 208 pp., illus. \$21.95.

Superconductivity in d- and f-Band Metals. Papers from a conference, San Diego, June 1979. Harry Suhl and M. Brian Maple, Eds. Academic Press, New York, 1980. xviii, 526 pp., illus. \$39.50.

SYMLOG Case Study Kit with Instructions for a Group Self Study. Robert F. Bales. Free Press (Macmillan), New York, and Collier Macmillan, London, 1980. Various pages. Paper, \$5.95.

Vitamins and Hormones. Advances in Research and Applications. Vol. 37. Paul L. Munson and seven others, Eds. Academic Press, New York, 1979. xiv, 354 pp., illus. \$35.

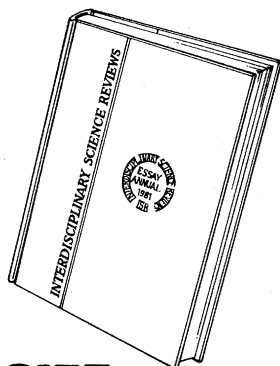
Waste Recycling and Pollution Control Handbook. A. V. Bridgewater and C. J. Mumford. Van Nostrand Reinhold, New York, 1980. xiv, 706 pp., illus. \$35. Van Nostrand Reinhold Environmental Engineering Series.

Waves in Layered Media. L. M. Brekhovskikh. Translated from the Russian edition (Moscow, 1973) by Robert T. Beyer. Academic Press, New York, ed. 2, 1980. xvi, 504 pp., illus. \$58.

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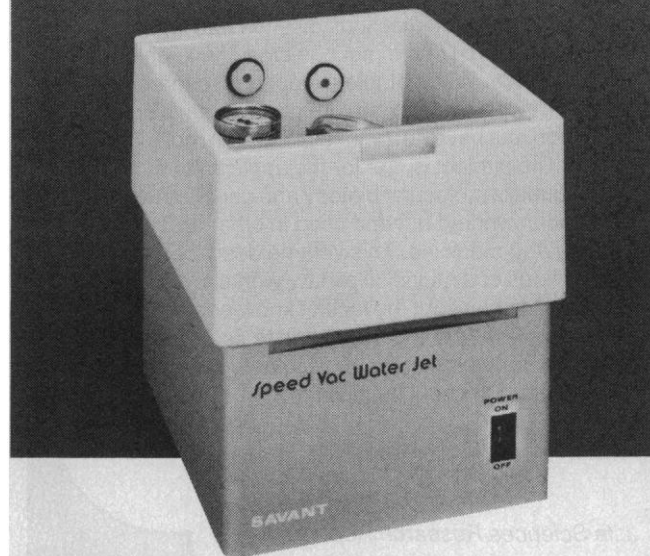
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DEPARTMENT OF ANATOMICAL SCIENCES has a tenure-track position available at the assistant or associate professor level beginning 1 September 1981. Candidates should have a Ph.D. or M.D. with at least 1 year of postdoctoral experience and must have teaching experience in gross anatomy. While the research area is open, the present programs in the department include neurobiology, cell biology (motility and reproduction), functional morphology, and morphologic hematology. Send curriculum vitae, a statement of research plans, and names of three references by 1 March 1981 to: Dr. Frances Sansone, Search Committee, Department of Anatomical Sciences, State University of New York-Buffalo, Buffalo, N.Y. 14214. *An Affirmative Action/Equal Opportunity Employer.*

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UNIVERSITY OF CALIFORNIA LOS ANGELES

Applications are invited for a tenure-track position in the Biology Department at the ASSISTANT PROFESSOR level, from qualified persons in entomology/behavior. Preference will be given to candidates with research and teaching interests firmly within the area of terrestrial arthropods, especially entomology, a background of training and research strongly tied to this taxonomic group, and a broad research perspective that encompasses behavior at the whole-organism level or above. Send curriculum vitae, the names (only) of at least three persons willing to write letters of reference, and any other relevant material before the end of January to:

Chair
Search Committee in Entomology/Behavior
Department of Biology
University of California
Los Angeles, California 90024

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

ASSISTANT PROFESSORS OF BIOLOGY (TWO) THE UNIVERSITY OF NORTH DAKOTA Population Biology/Evolutionary Ecology Aquatic Ecology/Limnology

One position involves teaching an undergraduate course in population biology; the other includes teaching undergraduate course in limnology. Both positions involve development of an advanced course in area of specialization and may include participation in lecture portion of a team-taught introductory biology course. Development of a strong research program and supervision of graduate students are required.

Both tenure-track positions begin 16 August. Salaries for 9 months will be \$18,000 to \$20,000. Applicants must have Ph.D.'s; postdoctoral research and/or teaching experience is desirable.

Before 15 February send curriculum vitae, reprints, transcripts, and have three letters of reference sent separately to either: POPULATION BIOLOGY SEARCH or AQUATIC ECOLOGY SEARCH, Department of Biology, The University of North Dakota, Grand Forks, N.D. 58202.

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

ASSISTANT/ASSOCIATE PROFESSOR OF COMPUTER SCIENCE with specialization in applied computer science, effective 1 September 1981. Duties: Teaching and research. Salary negotiable. Responses particularly solicited from persons with advanced degrees and experience in government and industry. Closing date for applications: 6 March 1981. Send application and three letters of recommendation to: Professor J. A. Archibald, Jr., Chairman, Computer Science Department, Box 1000, State University of New York, College at Plattsburgh, Plattsburgh, N.Y. 12901. *Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

ASSISTANT PROFESSOR OF BIOPSYCHOLOGY. The Department of Psychology and the Program in Animal Behavior at Bucknell University will have an opening in September 1981, for a biopsychologist, broadly defined. The position is for 2 or 3 years, renewable once, or possibly tenure track. *Women and minorities are particularly encouraged to apply.* Further information from: Ernest Keen, Department of Psychology, Bucknell University, Lewisburg, Pennsylvania 17837, by 30 January 1981.

The Department of Chemistry, University of Notre Dame, invites applications for a tenure-track position at the **ASSISTANT PROFESSOR** level. All areas of chemistry will be considered, but preference will be given to applicants whose research interests are biologically related and best suited to expanding NMR and other physical facilities. Candidates will be expected to have a strong interest and potential of excellence in both teaching and research. Send résumé, three letters of recommendation, and summary of research plans to: Dr. R. K. Brethauer, Department of Chemistry, University of Notre Dame, Notre Dame, Ind. 46556. *The University of Notre Dame is an Equal Opportunity/Affirmative Action Employer.*

UNIVERSITY OF ROCHESTER

Department of Geological Sciences is seeking candidates for appointment in 1981 at the assistant or associate professor level. Individuals who hold the Ph.D. degree, have a substantial research record in structural geology or geophysics and can teach structural geology, are urged to apply for the first position. Individuals active in research in geology-biology who could contribute to the department's program at the West Indies Laboratory are urged to apply for a possible second position. Candidates must have strong commitments to research and teaching. Candidates should submit a résumé, selected reprints, and at least three letters of recommendation to: Lawrence Lundgren, Chairman, Department of Geological Sciences, University of Rochester, Rochester, New York 14627.

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

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

POSITIONS OPEN

ASSISTANT/ASSOCIATE PROFESSOR CELLULAR NEUROPHYSIOLOGY

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 are seeking individuals employing a quantitative approach to neurophysiology at the cellular or molecular level with particular interests in vertebrate CNS function, neurodevelopment, plasticity, or cellular biophysics. Applicants must 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. Peter Getting, 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.

Applications are invited for appointment as **ASSISTANT PROFESSOR** in the Environmental Engineering Program. Specialization in biological or physical processes in water and wastewater treatment is desired. Duties will include teaching in both graduate and undergraduate courses as well as development of an active program of research and scholarship. Send curriculum vitae and list of three references to: Dr. J. S. Devinny, Search Committee, University of Southern California, University Park, BHE 213, Los Angeles, Calif. 90007. *USC is an Equal Opportunity/Affirmative Action Employer.*

The Industrial Environmental Health Sciences Department of the Graduate School of Public Health, University of Pittsburgh, has one position in **INDUSTRIAL HYGIENE** available immediately. The appointment may be at the assistant or associate professor level, depending upon qualifications. The applicant should have engineering or physical science undergraduate training and an appropriate doctoral degree in industrial hygiene.

The applicant will be expected to participate in research and teaching program of the department and develop his/her own research. Ample laboratory space, up-to-date equipment, and limited amount of seed funds are available.

Salary is commensurate with qualifications. Candidate should send curriculum vitae and supporting material to: Dr. Dwight Underhill, Search Committee, Industrial Environmental Health Sciences, Graduate School of Public Health, University of Pittsburgh, Pittsburgh, Pa. 15261.

BIOLOGICAL PSYCHOLOGY—Position Number 1

Applications are invited from behavioral neuroscientists for an anticipated position at the assistant professor level in the Department of Psychology, beginning in August 1981. Appointments will be made on the basis of strong research potential in the general area of behavioral and neuronal plasticity, emphasizing learning, memory, sensory processes, motivation, and/or development. For this position applicants are expected to use **electrophysiological methods** in their research and to be able to teach neurophysiology. Salary is \$16,000 or higher, commensurate with experience.

Applications, including a statement describing proposed research activities and objectives, curriculum vitae, and three to five letters of recommendation, should be sent to: Dr. Herbert P. Alpern, Chairman, Biological Psychology, Department of Psychology, University of Colorado, Boulder, Colorado 80309.

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

Application deadline: 21 March 1981.

Full-time, tenure-track appointment beginning September 1981 to teach undergraduate courses, especially general biology and physiology with a specialty in endocrinology or developmental biology. Ph.D. required. Contact: Dr. Frank J. MacEntee, S.J., Chairman, Biology Department, University of Scranton, Scranton, Pa. 18510.

The University of Scranton, a Jesuit University, is an Affirmative Action/Equal Opportunity Employer.

POSITIONS OPEN

ASSISTANT PROFESSORS OF PHARMACOLOGY. Applications are invited for one to three tenure-track positions at the level of beginning or advanced assistant professor of pharmacology. The openings are anticipated to be available as of 1 July 1981, depending on the release of funds. Applicants must be interested in pursuing experimental work at the biochemical or molecular level; although the overall thrust of their research may be at the cellular, organ, or whole body level. Some preference will be given to applicants working in cardiovascular (especially related to diabetes), antineoplastic, and infectious disease pharmacology; although persons working in other areas of pharmacology are strongly encouraged to apply. Two years of postdoctoral experience in pharmacology or a related field is desired. Successful applicants will be expected to develop an active, externally funded research program and to participate in the departmental teaching of medical students and graduate students. Start-up funds are anticipated. In applying, send curriculum vitae, list of publications, a brief statement of research plans (three pages or fewer), and the names and addresses of three people who can be contacted as references to: Dr. L. B. Wingard, Jr., Chairman of Faculty Search Committee, Department of Pharmacology, School of Medicine, University of Pittsburgh, Pittsburgh, Pa. 15261. *The University of Pittsburgh is an Equal Opportunity/Affirmative Action Employer.*

COLLEGE OF CHEMISTRY UNIVERSITY OF CALIFORNIA, BERKELEY

Applications are invited for a position at the level of **ASSISTANT SPECIALIST** which is to start 1 March 1981.

The successful candidate must have a Ph.D. in chemistry and substantial formal training in x-ray diffraction techniques. Proven adeptness of structure analysis and interpretation, as established by research publications, will be a requirement. Development and maintenance of an operating computer system (a DEC PDP-11/70 and associated hardware) will be part of the operational responsibility and experience in such a capacity is desired.

Candidates should submit curriculum vitae (including a list of publications) and request three letters of reference, all to be sent to: Assistant Dean, College of Chemistry, University of California, Berkeley, California 94720. Deadline for receipt of applications is 1 February 1981.

The University of California is an Affirmative Action Employer.

BIOCHEMISTRY POSTDOCTORAL

Recent Ph.D. graduates in biochemistry or chemistry are needed for research in enzyme mechanisms and metabolic regulations. Projects include: (i) the regulation of adenine nucleotide pools and the mechanism of the AMP degrading enzyme; and (ii) regulation at gluconeogenesis of the P-enolpyruvate carboxykinase step. Stipends are highly competitive. Please submit your curriculum vitae and the names of three references to: Dr. V. L. Schramm, Department of Biochemistry, Temple University School of Medicine, Philadelphia, Pa. 19140. *Equal Opportunity/Affirmative Action Employer.*

BIOLOGY. Vertebrate endocrinologist-ethologist. Tenure-track position at assistant professor level. Ph.D. and demonstrated excellence as a teacher required. Course responsibilities include vertebrate endocrinology, ethology, and basic biology (for non-science majors). Participation in the M.S. program expected; research encouraged. Position effective 22 August 1981. Availability of position contingent upon funding. Send curriculum vitae, transcripts, and three letters of recommendation by 30 January 1981 to: Dr. John Williams, Biology Department, Clarion State College, Clarion, Pa. 16214. *An Affirmative Action/Equal Opportunity Employer.*

CHAIRPERSON—PHARMACOLOGY. A search has just begun to find a chairperson for the Department of Pharmacology, University of Missouri-Columbia, School of Medicine, Columbia campus. The department has a good number of active investigators and newly renovated laboratories. We are looking for someone with an active research program, administrative abilities, and a commitment to maintain quality courses in pharmacology. Please send curriculum vitae to: Dr. Allen W. Jones, Chairman, Pharmacology Search Committee, Department of Physiology, M412 Medical Science Building, University of Missouri-Columbia, Columbia, Missouri 65211, by 31 March 1981. *An Equal Opportunity/Affirmative Action Employer.*

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 post-doctoral 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

BIOCHEMIST. Position as staff associate or research associate, depending on prior experience, available immediately in Department of Pediatrics. Duties will consist of: (i) management of facility for analyzing amino acids in blood and tissues; and (ii) participation in design, development, and implementation of clinical studies of amino acid and protein metabolism. Ph.D. in biochemistry or related discipline is required. Experience in amino acid analysis and protein and amino acid metabolism would be helpful.

Interested persons should send curriculum vitae, together with the names of three references, to: **Dr. Ralph Dell, Department of Pediatrics, College of Physicians and Surgeons of Columbia University, 630 West 168 Street, New York, N.Y. 10032.**

Columbia University is an Equal Opportunity Employer.

BIOCHEMIST—Ph.D. (7 to 8 years college) in chemistry and 5 years of experience in described position or in administration/environmental research. Will manage, coordinate, and actively participate in a broadly based research program (25 to 30 staff) investigating the transport, transformation, ecological effects, and geochemical fate of pollutants in aquatic and terrestrial environments; activities include the Argonne National Laboratory Great Lakes Research Program. Responsibilities include program planning, the solicitation of financial support, and the assurance of timely production and delivery of relevant research results to sponsoring agencies and to the scientific community at large. Salary: \$3000 per month, 40 hours per week. Apply to: **Argonne National Laboratory, 9700 South Cass Avenue, Argonne, Illinois 60439 (NLG-RER6502).** *An Affirmative Action/Equal Opportunity Employer. Women, minorities, the handicapped, and veterans are urged to apply.*

BIOLOGICAL OCEANOGRAPHER. Junior research scientist with strong background in zooplankton experimental physiology/biochemistry to investigate phytoplankton-zooplankton interactions via grazing and excretion. Applicant should be familiar with techniques of zooplankton culture and have research experience in zooplankton sampling at sea. Position funded for 2 years. Subsequent funding dependent on investigator. Send curriculum vitae, three recommendations, and letter of interest by 15 February 1981 to: **Robert Kidd, Bigelow Laboratory for Ocean Sciences, West Boothbay Harbor, Maine 04575.** *Equal Opportunity/Affirmative Action Employer.*

BIOLOGY TEACHING OVERSEAS AMERICAN UNIVERSITY OF BEIRUT

Research-teaching positions in biology available October 1981 in the following specialties: developmental biology, plant taxonomy/anatomy, and plant physiology. Ph.D. required; rank and salary depend on experience and qualifications. Usual contract is for 3 years, normally as assistant professor, renewable. Curriculum vitae and three letters of recommendation should be airmailed to: **Chairman, Biology Department, American University of Beirut, Beirut, Lebanon.** *An Equal Opportunity/Affirmative Action Employer.*

BIOLOGIST. Continuing appointment in the Department of Biology, effective fall 1981, at the McKeesport Campus of The Pennsylvania State University. The position requires the teaching of introductory courses in general biology, general botany, general zoology, and intermediate courses in genetics. Microbiology background desirable. Ph.D. is required and appointment is expected on assistant professor level. Continuing scholarly activity, including research and publication, will be required. Application deadline: 1 March. Send curriculum vitae, transcripts, and three letters of reference to: **Dr. William H. Neff, Box G, 208 Mueller Building, University Park, Pa. 16802.** *The Pennsylvania State University is an Affirmative Action/Equal Opportunity Employer.*

Career Opportunities

ENZYME TECHNOLOGY DNA SEQUENCING

Our commitment to excellence is demonstrated by the growth and expansion of our biotechnology product line.

Career positions include:

- Develop matrix bound enzyme technology for nucleic acid enzymes. Interact with marketing and production to introduce immobilized enzyme products to the market. Ph.D. Biochemistry with significant post doctoral experience.
- DNA Sequencing. Research and development of new products for sequencing of nucleic acids, including method innovation and adaptation to systems approach. Ph.D. with experience in DNA Sequencing using Maxam-Gilbert or Sanger Methodology.

BRL is a leader in the field of biotechnology and can offer challenging career opportunities to both senior and junior level Ph.D.s. We invite your inquiry. Send C.V., in confidence to:

Mr. Wayne E. Fowler
Personnel Director

BRL

**BETHESDA RESEARCH
LABORATORIES**
Box 577, 8705 Grovemont Circle
Gaithersburg, Maryland 20760

An Equal Opportunity Employer, M/F/H

RESEARCH SCIENTISTS INDUSTRIAL APPLICATIONS OF RECOMBINANT DNA AND GENETICS

The Genetics Division of Bethesda Research Laboratories is once again undergoing expansion, and needs to increase its staff of highly qualified scientific personnel. The aim of BRL Genetics is the application of recombinant DNA genetics and microbial physiology to the development of economically important prokaryotic and eukaryotic microorganisms. BRL scientists are encouraged to publish independent research in recognized scientific journals and at scientific meetings. Opportunities exist for scientific interaction with other divisions of BRL including Cell Biology and Enzymology.

BRL Genetics currently has openings for senior and junior scientists (Ph.D., M.S., B.S.) skilled in the following areas:

- cDNA CLONING
- GENE OVEREXPRESSION VIA PROMOTER MANIPULATION
- GENETIC AND RECOMBINANT DNA EXPERTISE IN YEAST
- MICROBIAL PHYSIOLOGY

If you have expertise in one or more of these areas, and would be available for a position in 1981, please forward resume to:

Mr. Wayne E. Fowler
Personnel Director, Dept. 381

BRL

**BETHESDA RESEARCH
LABORATORIES**
Box 577, 8705 Grovemont Circle
Gaithersburg, Maryland 20760

An Equal Opportunity Employer, M/F/H

Dean

School of Medicine

Applications and nominations are invited for the position of Dean. Individuals with strong academic credentials and significant experience in medical education and medical administration are sought for this position. Stanford University is dedicated to equal opportunity and welcomes applications from and nominations of women and minority group members.

Please send nominations or applications by 1 February to: Jack D. Barchas, M.D., Chair, Deanship Search Committee, Nancy Friend Pritzker, Professor of Psychiatry and Behavioral Sciences, Stanford University School of Medicine, Stanford, CA 94305, (415) 497-7522. An Equal Opportunity Employer Through Affirmative Action.



STANFORD UNIVERSITY

The Caswell Silver Distinguished Professorship in Geology

THE UNIVERSITY OF NEW MEXICO

The Department of Geology of the University of New Mexico is pleased to invite nominations or applications for the Caswell Silver Distinguished Professorship in Geology. This endowed professorship shall be awarded for periods of up to two years to earth scientists of distinguished accomplishment and international reputation. The professorship may be held by scientists of all specialties of the earth sciences in the broadest sense, and the major criterion for selection is that the individual be an active, productive leader in his or her field of research. The recipient must carry out a vigorous research program while in residence at UNM. The recipient is expected to interact with the faculty and students of the Department and to provide one or more seminars, in an advanced topic of his/her choice, during each academic year. The Foundation will provide unusually advantageous remuneration commensurate with the distinguished nature of the appointment. In addition, a generous allocation for travel and operating expenses (to include secretarial support, analytical services in department laboratories, use of field vehicles, and preparation of manuscripts) will be provided.

Applications or nominations should include a detailed resume and brief statement of major research accomplishments. Applications or nominations should be forwarded to:

Rodney C. Ewing, Chairman
Department of Geology
University of New Mexico
Albuquerque, New Mexico 87131



The Caswell Silver Foundation is an equal opportunity employer.

POSITIONS OPEN

BIOMEDICAL ENGINEERING—The Biomedical Engineering and Science Institute has an immediate opening for a tenure-track or visiting faculty member. Responsibilities include teaching undergraduate and graduate courses in biomedical engineering and/or electrical engineering. Candidate must have strong training in engineering and experience in computer software and hardware. He or she must have research interests related to the cardiovascular system. Candidate will be expected to take an active role in ongoing team research in the area of control and optimization of cardiac assist devices and to develop independent research interests. Send curriculum vitae and names of three references to: **Dov Jaron, Ph.D., Director, Biomedical Engineering and Science Institute, Drexel University, Philadelphia, Pa. 19104.** *Equal Opportunity/Affirmative Action Employer.*

CELL BIOLOGIST DIVISION OF MOLECULAR, CELL AND DEVELOPMENTAL BIOLOGY BIOLOGY DEPARTMENT UCLA

Applications are invited for a tenure-track position in plant or animal cell biology. The research interests of applicants may include, but are not limited to, biochemical, ultrastructural, immunological, or molecular biological approaches to studying problems of cell behavior including membrane structure and function, cytoskeletal architecture, cellular metabolism and differentiation, cell-cell interactions, and so forth. The position includes teaching courses in cell biology at the undergraduate and/or graduate level.

Applicants are requested to forward curriculum vitae, bibliography, a summary of research objectives, relevant recent reprints, and the names of three references to:

Chair
Search Committee in Cell Biology
Biology Department
University of California
Los Angeles, California 90024

Deadline for receipt of applications is 15 February 1981.

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

SEARCH FOR CHAIRPERSON DEPARTMENT OF PHYSICS UNIVERSITY OF DELAWARE

The university is a small (12,000 undergraduates and 3,000 graduate students), state-supported institution located in a town on the eastern seaboard close to Philadelphia, Washington, and New York. The department (18 faculty) is an expanding unit working in close cooperation with Bartol Research Foundation of the Franklin Institute (13 members), with which it shares laboratories, shops, offices, and classrooms on the campus. The appointment will begin 1 September 1981; 1 February 1981 is the terminal date for completion of applications. Please send letters of inquiry, nomination, or application to:

Professor Richard J. Libera
Department of Mathematical Sciences
University of Delaware
Newark, Delaware 19711

The University is an Equal Opportunity/Affirmative Action Employer.

CHAIRMAN, Department of Pharmacology, University of Rochester. Applicant should have strong record of academic achievement as indicated by scientific contributions, publications, and peer recognition. Experience in administration and graduate and medical school teaching desired. Contact: **Dean Lockwood, Box Endocrine-Metabolism, University of Rochester Medical Center, Rochester, N.Y. 14642.** *An Equal Opportunity/Affirmative Action Employer, M/F.*

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

CHAIRPERSON, DEPARTMENT OF MICROBIOLOGY

Applications are requested from vigorous, innovative, proven leaders for the position of chairperson of the Department of Microbiology at the New York State College of Veterinary Medicine. Successful applicant will lead an experienced faculty in the development and conduct of professional/graduate teaching programs, public service, and basic and applied faculty research; assume responsibility and accountability for departmental budgets; stimulate faculty interest in and encourage development of external support for research; and provide leadership in coordinating and unifying the various professional activities of a substantial group of virologists, bacteriologists, and immunologists whose emphasis has historically been directed toward infectious diseases. The successful applicant should have proven and documented administrative and research experience, appropriate professional or advanced degree(s), be willing to accept challenges and to recognize opportunities. Send letters of nomination or application and requests for further information to: **Dr. David O. Slauson, Chairman, Search Committee, New York State College of Veterinary Medicine, Cornell University, Ithaca, New York 14853.** Applicants should include a résumé and names of at least three references who have been asked to write letters of support. All application materials must be received by 1 March 1981. *Cornell University is an Affirmative Action/Equal Opportunity Employer.*

CHAIRPERSON, Department of Pediatrics, University of Texas Southwestern Medical School (UTSWMS) at Dallas, Dallas, Texas. Chief of Staff, Parkland Memorial Hospital (125 beds, plus newborn facilities) and Children's Medical Center (122 beds), teaching affiliates of UTSWMS. The Department of Pediatrics has full-time staff, house staff, fellowship, and research programs under the direction of the full-time chairperson. Required are demonstrated leadership capabilities and experience in academic pediatrics, including research, qualifying for rank of full professor. Send curriculum vitae to: **Paul C. MacDonald, M.D., Chairman, Pediatric Search Committee, University of Texas Southwestern Medical School, 5323 Harry Hines Boulevard, Dallas, Texas 75235.** *An Affirmative Action/Equal Opportunity Employer, M/F/H.*

University of California, Los Angeles (UCLA), Neuropsychiatric Institute, seeks **CHIEF NEUROPSYCHOLOGIST** 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.*

Anticipated open positions. New York State Geological Survey. The New York State Geological Survey, in Albany, N.Y., invites nominations and applications for the positions of: **CURATOR OF MINERALOGY, CURATOR OF PALEONTOLOGY, and OIL AND GAS GEOLOGIST.** All positions require a bachelor's degree in geology and 7 years of additional training or work experience in one of the respective specialties listed above. Starting salaries: \$21,675 plus liberal fringe benefits. Applications or nominations, including résumé or curriculum vitae, or requests for additional information, should be sent to: **Personnel Office, Box R, Room 364 EBA, NEW YORK STATE EDUCATION DEPARTMENT, Albany, New York 12234.** *An Affirmative Action/Equal Opportunity Employer, M/F.*

ENDOCRINE PHYSIOLOGIST with active research on cellular or subcellular mechanisms sought for tenure-track position. Doctoral degree and postdoctoral experience required. Assistant professor preferred although junior associate professor rank possible. Teaching capability would be considered. *An Equal Opportunity/Affirmative Action search; applications by women and members of minorities welcomed.* Applicants should send curriculum vitae, a short statement of research plans, and a list of at least three references by 1 March to: **Endocrine Search, Department of Physiology 206H, University of North Carolina at Chapel Hill, Chapel Hill, N.C. 27514.** *An Affirmative Action/Equal Opportunity Employer.*

HYBRIDOMA RESEARCH SCIENTISTS AND TECHNICIANS

Southern Medical and Pharmaceutical Corporation, a Florida based corporation, currently engaged in production and research and development of various biological response modifiers (interferons, growth factors, lymphokines), is currently increasing its staff for hybridoma research and development, for synthesis of monoclonal antibodies to each of these important physiological agents.

The Corporation is soliciting curriculum vitae from qualified scientists at the Ph.D. and Master's level with backgrounds in hybridoma-monoclonal antibody research for immediate employment and/or future placement on several exciting projects in these areas.

The Company is located on the beautiful west coast of Florida, an area with superb recreational, cultural and educational opportunities. Excellent salaries, working conditions, fringe benefits and attractive stock options are available to qualified scientists.

Southern Medical and Pharmaceutical Corporation
128 South Moon Avenue
Brandon, Florida 33511

An equal opportunity employer

Protein Chemists Protein Biochemistry Department

We are the Research and Development Division of the Revlon Health Care Group, a world wide group of diversified companies providing products and services in the field of human health. As additions to our staff, we are seeking several experienced scientists with demonstrated records of accomplishment. Primary responsibility will be to conduct laboratory investigations in the isolation and characterization of plasma proteins in a broadly based program to develop new therapeutic products.

These positions require a PhD in Biochemistry or related disciplines with 5 years

minimum experience. Experience in immunochemistry or enzymology would be valuable, as well as established experience in large scale protein fractionation.

We offer a competitive salary and excellent fringe benefits. Please send resume, including salary history, in complete confidence to Manager of Selection and Placement, Research and Development Division, Dept. 5235, Revlon Health Care Group, 1 Scarsdale Road, Tuckahoe, NY 10707

An equal opportunity employer M/F

REVLON Health Care Group

POSITIONS OPEN

DEAN College of Graduate Studies Thomas Jefferson University

Thomas Jefferson University is a private, non-sectarian, health-oriented University comprised of the Jefferson Medical College, the College of Graduate Studies, the College of Allied Health Sciences, and the Thomas Jefferson University Hospital.

The College of Graduate Studies consists of a graduate faculty with joint appointments in other academic divisions of the University with approximately 100 students pursuing doctoral or master's degrees in the basic medical sciences.

The Dean of the College serves as its chief executive and reports directly to the President of the University. He/she is responsible for the development and administrative supervision of the College's educational and research programs.

The dean serves as one of the University's senior officers who, with the president and the trustees, formulate and carry out University policies. The dean is also a member of the University Council of Academic Officers having University-wide administrative purview for academic development.

The dean is expected to pursue scholarly activities in one of the basic medical sciences and be an outstanding administrator with proven experience. Reply in confidence to: Dr. Allan M. Lefer, Search Committee, Department of Physiology, Jefferson Alumni Hall, Philadelphia, Pa. 19107.

DEVELOPMENTAL BIOLOGIST. The Department of Biology has a tenure-track faculty position open in August 1981 for an assistant professor in developmental biology. Preference will be given to those able to teach and carry out research in cellular and molecular aspects of development or developmental genetics. Applicants must hold the Ph.D. or equivalent, teach courses at the undergraduate and graduate level, develop a strong research program, and supervise thesis and nonthesis M.S. candidates. Please submit a résumé, transcripts, statement of teaching and research interests, and have three letters of recommendation sent before 18 February 1981 to: Dr. Richard O. McCracken, Search Committee Chairman, Department of Biology, Indiana University-Purdue University at Indianapolis, Indianapolis, Indiana 46205.

An Affirmative Action/Equal Opportunity Employer

ELECTRON MICROSCOPIST. Ph.D., with diagnostic or research experience in anatomy or pathology, technically expert in electron microscopy, wanted for private medical school affiliated hospital. Primary duty in diagnostic surgical pathology and cytology, with opportunity for teaching and clinical research. Salary open, excellent benefits. Submit inquiries with curriculum vitae to: W. H. Kern, M.D., Director, Department of Pathology, Hospital of the Good Samaritan, 616 South Wiltner Street, Los Angeles, Calif. 90017.

ENTOMOLOGIST—FOREST PROTECTION. Assistant professor with responsibilities for research and teaching in the area of management of insect pests of Oregon forests. Ph.D. required with appropriate experience. Salary range: \$21,000 to \$26,000. Applications must be postmarked no later than 15 March 1981. For complete details, contact: Dr. N. H. Anderson, Chairman, Search Committee, Department of Entomology, Oregon State University, Corvallis, Oregon 97331. *Oregon State University is an Affirmative Action/Equal Opportunity Employer and complies with Section 504 of the Rehabilitation Act of 1973. Applications from females and minorities are encouraged.*

FISHERIES PRINCIPAL ACADEMIC OFFICER University of Washington—Degree programs: B.S. in fisheries; B.S. with major in fisheries; B.S. with major in food science; M.S. and Ph.D. divisions: Institutes of Food Science and Technology; Radiation Ecology; Fisheries Research Institute. Intercollege programs in conjunction with Center for Quantitative Science in Forest Resources, Fisheries and Wildlife; the Wildlife Science Program; Institute for Marine Studies; Division of Marine Resources. Cooperative Fishery Research Unit (Department of the Interior). **Qualifications:** Distinguished scholar/scientist with appropriate administrative experience. **Deadline for applications and nominations:** 16 February 1981. Respond to: Fisheries Search Committee, Office of the Provost, AH-20, University of Washington, Seattle, Wash. 98195. *An Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

ENVIRONMENTAL PATHOLOGY

Pre- and postdoctoral positions available July 1981. Research emphasis is on cellular and molecular effects (mutagenesis, teratogenesis, biotransformation) of toxic chemicals (especially trace metals, aromatic hydrocarbons). Inquiries: N. Karle Mottet, M.D., Department of Pathology, SM-30, University of Washington, Seattle, Wash. 98195. *The University of Washington is an Affirmative Action/Equal Opportunity Employer.*

THE COUNCIL ON EDUCATION FOR PUBLIC HEALTH is seeking candidates for the position of EXECUTIVE DIRECTOR

The independent Council on Education for Public Health was created and is supported by the American Public Health Association and the Association of Schools of Public Health. It is the recognized accrediting agency for graduate education in public health.

In addition to administering the accreditation program, the executive director must be able to establish and maintain working relations with people and agencies in higher education generally, in education for community health, and in community health practice.

Candidates should have a master's or higher degree in the field of public and community health. Salary negotiable. Permanent position available after 1 March 1981. Application deadline: 15 February 1981.

Send application letter and curriculum vitae with references to:

Frank I. Moore, Ph.D., President
Council on Education for Public Health
c/o University of Texas School of Public Health
P.O. Box 20186
Houston, Texas 77025
An Equal Opportunity Employer

EXECUTIVE VICE PRESIDENT. The American Board of Medical Specialties is seeking a chief executive officer to replace retiring incumbent. Applicant should be a mature Board-certified physician with a proven record of accomplishment in medical education and administration.

The American Board of Medical Specialties serves and coordinates the activities of its 23-member certifying boards and represents them in a variety of national committees and organizations.

Address applications, nominations, and inquiries to:

Bruce E. Spivey, M.D., President
American Board of Medical Specialties
1603 Orrington Avenue, Suite 1160
Evanston, Illinois 60201

FACULTY POSITION: CELL BIOLOGIST

The Cornelius Vanderbilt Whitney Laboratory for Experimental Marine Biology and Medicine, a rapidly growing, well-equipped quantitative biology research center of the University of Florida, invites applications from qualified individuals for a tenure-earning, full-time (12-month) research professorship at the assistant or associate level. We desire a person with a strong background in quantitative biology with emphasis in immunology, membrane biochemistry, or receptor biology who is interested in the basic mechanisms underlying cell-cell interaction. We would prefer to appoint a candidate whose research utilizes marine organisms or could apply their current research expertise to marine systems.

Please submit curriculum vitae, names and addresses of three references, and a statement of research and teaching interests by 1 March 1981 to: Dr. Vernon C. Malno, Chairman, Search Committee, C.V.W. Laboratory, University of Florida, Route 1, Box 121, St. Augustine, Florida 32084. *University of Florida is an Equal Opportunity/Affirmative Action Employer.*

University of Maryland University College seeks excellent classroom teachers for nonlaboratory science courses offered to students on U.S. bases overseas. **GEOLOGISTS, ZOOLOGISTS, AND BOTANISTS** with competence to teach in two of these areas sought. (i) Ph.D. or two M.A.'s, (ii) recent undergraduate teaching experience, and (iii) U.S. citizenship all essential. Families: positions require frequent travel; housing and schools not provided. Send résumé to: Dr. Julian S. Jones, University of Maryland University College, College Park, Md. 20742. *Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

FACULTY POSITION

The University of Kentucky College of Pharmacy invites applications for a faculty position in medicinal chemistry-pharmacognosy to begin in summer or fall 1981. A Ph.D. in the pharmaceutical or related sciences is required. A pharmacy background and postdoctoral experience or a record of successful original research accomplishment would be desirable. The successful applicant is expected to be an effective teacher at the undergraduate and graduate levels and develop a rigorous program of research in one or more of the following areas: drug metabolism, drug mechanisms, biochemical/molecular pharmacology, or toxicology. The deadline for application and submission of curriculum vitae is 31 March 1981; these should be mailed to:

Joseph V. Swintosky, Dean
College of Pharmacy
University of Kentucky
Lexington, Kentucky 40506

The University of Kentucky is an Equal Opportunity Employer.

FACULTY POSITIONS—The Division of Environmental Chemistry is seeking applicants for two positions of **ASSISTANT PROFESSOR** to be filled by fall 1981. Only applicants who have demonstrated excellence in research and who are prepared to conduct vigorous and innovative independent research projects will be considered. They should also be equipped to teach courses at the graduate level. One of the goals of our program is to pursue and promote research on and to teach about molecular mechanisms of deleterious biological effects caused by physical and chemical pollutants. Recent Ph.D.'s with postdoctoral experience and with unusual ability and promise are desirable. Interested individuals should send curriculum vitae, the names of three references, and a brief description of their research to: Dr. Shih Yi Wang, Division of Environmental Chemistry, The Johns Hopkins University, c/o COEH-USPHS Hospital, 3100 Wyman Park Drive, Building 6, Baltimore, Md. 21211. *An Equal Opportunity/Affirmative Action Employer.*

FACULTY POSITIONS IN BIOORGANIC CHEMISTRY AND EUKARYOTIC MOLECULAR BIOLOGY

The Departments of Biological Sciences and of Chemistry, University of Maryland Baltimore County (UMBC), anticipate appointing two tenure-track assistant professors for September 1981, concurrent with the initiation of an interdepartmental program in Applied Molecular Biology. Appointees will be expected to establish productive research programs and to interact with a large and active group of biochemists and molecular biologists at UMBC. Postdoctoral experience is required. Candidates for assistant professor of chemistry should be able to teach undergraduate organic chemistry and more specialized courses; research interests in synthesis of DNA/RNA are strongly preferred, but other areas of synthetic, organic chemistry will be considered. Candidates for assistant professor of biological sciences should be broadly trained in molecular biology, with research interests in a eucaryotic system; teaching duties include an advanced laboratory course in molecular biology (heavy emphasis on recombinant DNA techniques) and a graduate seminar. The Applied Molecular Biology Program, developed in conjunction with biotechnology companies in the Baltimore-Washington-Frederick area, will train students at the B.S./M.S. level to fill research positions in molecular biology at university, government, and industry laboratories, and complement existing M.S. and Ph.D. programs in the respective departments. Curriculum vitae, description of research interests, and three letters of reference should go to the respective search committee chairman: Dr. Nelly Craig, Department of Biological Sciences, or Dr. Donald Creighton, Department of Chemistry, University of Maryland Baltimore County, Catonsville, Md. 21228.

UMBC is an Equal Opportunity/Affirmative Action Employer.

UNIVERSITY FACULTY POSITION HORTICULTURE AND FRUIT SCIENCE

Position available as assistant or associate professor to teach fruit science classes with research responsibility in breeding of fruit crops. Ph.D. degree in horticulture or closely related field required. For more information, write: Harold Pellett, Department of Horticulture, University of Minnesota, St. Paul, Minn. 55108. *An Equal Opportunity/Affirmative Action Employer.*

**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
Agonomy	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—\$18,570 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.

Ophthalmologist-In-Chief

Wills Eye Hospital

Chairperson, Ophthalmology Department

Jefferson Medical College of Thomas Jefferson University

Applications and nominations are invited for an individual to fill the dual position of Ophthalmologist-In-Chief of Wills Eye Hospital and Chairperson of the Department of Ophthalmology of Jefferson Medical College of Thomas Jefferson University, with which Wills is affiliated. Both institutions are located in Philadelphia.

Wills Eye Hospital is the oldest eye hospital in the United States and the largest eye care facility in the country. It has recently moved into a modern, well-equipped building adjacent to Thomas Jefferson University campus.

The candidate must be an ophthalmologist of national prominence recognized for both achievement and distinguished leadership in academic ophthalmology. He or she must demonstrate a capacity to effectively and imaginatively supervise all aspects of ophthalmic patient care and teaching, to knowledgeably support the expanding research programs, to provide administrative coordination between the two institutions, and to articulately represent both of them in national and international organizations and before the various branches of the federal government.

Submit applications or nominations by February 15, along with curriculum vitae and list of suggested references to:

Jay L. Federman, M.D., Chairman
Search Committee
Wills Eye Hospital
9th and Walnut Streets
Philadelphia, Pennsylvania 19107

Submissions and inquiries will be held in strict confidence.

Wills Eye Hospital and Thomas Jefferson University are equal opportunity employers.

Wills Eye Hospital

Thomas Jefferson University

SQUIBB TOXICOLOGIST

We are currently seeking a Senior Scientist in the Division of Drug Safety Evaluation. This individual will assume the responsibilities of Study Director for subacute and chronic toxicologic studies on drug candidates. These responsibilities will include: participation in the design of experiments; preparation of protocols; scheduling and overall supervision of studies; interpretation and evaluation of results of clinical laboratory tests; and preparation of written summaries and reports. In addition, it will be the responsibility of this individual to insure that study protocols and standard operation procedures are followed precisely, and that good laboratory practices are employed.

Candidates for this position must have a PhD in Toxicology or in a related field; no experience is required for those with an appropriate educational background. Qualified individuals are invited to submit a brief resume to: E.R. SQUIBB & SONS, INC., Department PS, P.O. Box 191, New Brunswick, N.J. 08903. Equal Opportunity Employer, M/F/H.

Recombinant DNA Research



Frito-Lay, Inc., is a recognized leader in the growing \$12 billion snack food industry. During the past 5 years, our revenues have doubled to almost \$2 billion, and 1980 will be our 12th consecutive year of record earnings. As you would expect, state-of-the-art technology is a key ingredient in our success.

Frito-Lay's centralized Corporate Research and Development Department is expanding. Currently, positions are available in Recombinant DNA Research. The positions involve designing and conducting a research program in recombinant DNA with the objective of genetic alteration of plants.

To qualify, you must have a Ph.D. in biological science or biochemistry with thorough experience in the area of molecular biology and recombinant DNA technology. Experience with plant tissue would be helpful.

Frito-Lay, Inc., offers an excellent starting salary and a comprehensive benefits package as well as the chance to grow with a leader. Send replies, including salary history, in strictest confidence to:

FRITO-LAY, INC.
MANAGER, TECHNICAL PLACEMENT
P.O. BOX 35034
DALLAS, TEXAS 75235
Equal Opportunity Employer M/F

POSITIONS OPEN

GENETICS/DEVELOPMENTAL BIOLOGY

A tenure-track position at the assistant professor level is available beginning August 1981. Responsibilities will include teaching undergraduate courses in genetics and developmental biology, as well as a graduate course in the candidate's area of expertise. The candidate will also be expected to participate in teaching introductory biology. Hood College emphasizes teaching excellence.

Submit curriculum vitae, three letters of reference, and transcripts to: Search Committee, Department of Biology, Hood College, Frederick, Maryland 21701. Deadline for application: 15 March 1981. Hood College is an Equal Opportunity Employer.

GEOLOGIST/HYDROLOGIST

Teaching/research position. Ph.D. with competence to teach and perform research in both geology and hydrology is required. Professional experience is desirable. Duties include research activity with The Geological Survey of Alabama. Potentially tenure-earning position; rank and salary commensurate with training and experience. The University of Alabama in Huntsville is an Affirmative Action/Equal Opportunity Institution. Send résumés and names and addresses of three references to: Dr. Curtis H. Adams, Chairman, Environmental Science, The University of Alabama in Huntsville, Huntsville, Alabama 35899.

HUMAN ANATOMY—PREPROFESSIONAL ADVISER

ASSISTANT PROFESSOR OF ZOOLOGY. Applications are invited for a full-time, tenure-track, human anatomy-preprofessional advising position. Salary of \$17,964 to \$21,000 (9-month appointment), beginning August 1981. Duties include one-half time lecturing and coordinating the teaching of human anatomy laboratory sections by graduate students and supervision of the Anatomy Learning Resource Center. An additional one-half time will be spent in advising and interviewing health-related preprofessional students. Applicants are expected to develop a research program of high quality and must hold the Ph.D. degree or equivalent in human anatomy or a closely related field. Preference will be given to candidates with a high-quality research record in vertebrate anatomy. Submit complete curriculum vitae with a description of teaching background, areas of research experience and future interests, and three letters of recommendation by 1 February 1981 to: Neil Kjekorin, Anatomy-Preprofessional Search Committee Chair, Department of Zoology, San Diego State University, San Diego, Calif. 92182. An Equal Opportunity/Affirmative Action/Title IX Employer.

HYPERTENSION RESEARCH

The Departments of Medicine and Pharmacy at the University of California, San Francisco (UCSF), are seeking an internist, clinical pharmacologist, or cardiologist with interest in hypertension for the position of assistant professor. The individual accepting this position will participate in the clinical research activities of the Drug Studies Unit and will function as an attending physician in the Hypertension Unit and Divisions of Cardiology (Ft. Miley VA Hospital) and Clinical Pharmacology (Moffitt Hospital). Appointment to begin on or before 1 July 1981. Send curriculum vitae to: Henry R. Bourne, M.D., Chairman of Search Committee, 570 Medical Sciences Building, UCSF, San Francisco, Calif. 94143.

UCSF is an Equal Opportunity/Affirmative Action Employer. Woman and minorities are encouraged to apply.

PHYSIOLOGIST

A tenure-track position at the associate professor rank is available. Duties include the teaching of basic physiology to professional and graduate students. A candidate should have the D.V.M. or Ph.D. degree, should be firmly committed to a career of teaching, and have a strong or potentially strong research program. Preferred research interests include endocrine, gastrointestinal, or reproductive physiology. Applicants should submit curriculum vitae, statement of research plans, and representative publications and have three letters of recommendation sent by 1 April 1981 to: Dr. Donald C. Dyer, Chairman, Department of Veterinary Physiology and Pharmacology, College of Veterinary Medicine, Iowa State University, Ames, Iowa 50011. Iowa State University is an Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

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

INVERTEBRATE ZOOLOGIST/CHAIRPERSON.

Applications are invited from individuals with an earned doctorate, a demonstrated research record in invertebrate zoology, and excellence in teaching. Duties include teaching invertebrate zoology and chairing the department. The department of eight full-time faculty has a strong research emphasis in environmental biology. Send letter of application, curriculum vitae, transcripts, and letters of recommendation to: Dr. John J. Peterka, Department of Zoology, North Dakota State University, Fargo, N.D. 58105. Completed applications must be received by 15 February 1981. The position is available 1 July 1981. An Equal Opportunity Institution.

Wanted: **JUNIOR LEVEL Ph.D.** with experience in tissue culture and/or hormone receptor assay to work in well-equipped cancer research laboratory in Long Island (N.Y.) teaching hospital with academic affiliation (State University of New York-Stony Brook). Please send curriculum vitae and three references to: Larry Nathanson, M.D., Director, Oncology-Hematology Division, Nassau Hospital, Mineola, Long Island, New York 11501. Telephone: 516-663-2336.

LABORATORY MICROBIOLOGY FELLOW

The University of California, Irvine, Department of Pathology, is recruiting a 1- to 2-year laboratory microbiology fellowship position at the clinical instructor level beginning 1 July 1981. Required: M.D., Board-eligible in anatomic and/or clinical pathology. Position consists of 50 percent clinical laboratory work and 50 percent research. Post-residency training in diagnostic bacteriology, mycology, serology, parasitology, and virology. Research in the areas of molecular pathology and viral oncology is available for interested candidates. An Affirmative Action Employer. Send curriculum vitae and three references to: Luis M. de la Maza, M.D., Ph.D., Director, Division of Microbiology, University of California Medical Center, Orange, Calif. 92668, by 16 February 1981.

MARINE BIOLOGIST with background in marine birds and/or mammals needed for tenure-track position at assistant or associate professor level beginning fall 1981. Ph.D. required. Teaching responsibilities include undergraduate and graduate vertebrate zoology and marine birds and mammals; ability to teach statistics strongly desired. Research focusing on some aspect of marine birds and/or mammals will be expected. Salary range is from \$17,964 to \$27,252 per academic year. Résumé, representative reprints, and the names of three referees should be sent by 15 March 1981 to: Dr. John H. Martin, Moss Landing Marine Laboratories, P.O. Box 223, Moss Landing, Calif. 95039. The California State University and Colleges is an Equal Opportunity/Affirmative Action Employer.

MARINE SCIENTIST POSITION. The University of California, Santa Cruz, is seeking applications for a tenure-track position by a well-established marine scientist at an organized research unit with a focus on coastal and nearshore processes. Faculty associated with the Center are affiliated with appropriate disciplines for graduate and undergraduate instruction. The appointee will have graduate and undergraduate teaching responsibilities in biology.

Minimum qualifications: Applicant must have an active research program with an oceanographic or marine perspective. Persons sought to enhance interaction among existing faculty interests, especially between biological and physical/chemical areas of marine science. Two areas have highest priority: (i) marine microbiology (prokaryotes or eukaryotes), and (ii) nearshore ecology, both with emphasis on biochemical or ecological processes.

Rank and salary: Commensurate with qualifications and experience. Effective: 1 July 1981. Applicants should send curriculum vitae, names and addresses of three references, and other pertinent information to: Search Committee, Center for Coastal Marine Studies, University of California, Santa Cruz, Calif. 95064.

Closing date is 15 February 1981.

An Equal Opportunity/Affirmative Action Employer

POSITIONS OPEN

MICROBIAL GENETICIST/MOLECULAR BIOLOGIST

The Department of Microbiology, University of Notre Dame, has a tenure-track opening at the assistant or associate professor level beginning 1 September 1981 in the area of microbial genetics and molecular biology. The successful candidate will be expected to develop a strong research program in microbial molecular genetics which utilizes recombinant DNA technology and, in so doing, be capable of training Ph.D. candidates in this area. Formal teaching duties include an upper level course in microbial genetics and one in molecular biology. Postdoctoral experience is preferred. Send curriculum vitae, a description of future plans, official transcripts, and names of three references by 1 March 1981 to: Dr. Morris Pollard, Department of Microbiology, University of Notre Dame, Notre Dame, Indiana 46556.

This University is an Equal Opportunity/Affirmative Action Employer.

MOLECULAR BIOLOGISTS

Three molecular biologists are being recruited to do research in the area of recombinant DNA. The individuals are required to have a Ph.D. in biochemistry, genetics, or microbiology and research experience in the areas of recombinant DNA or nitrogen-fixing bacteria. This research is directed toward the enhancement of biological nitrogen fixation in crop plants such as soybean and alfalfa. Each person will be responsible for managing a research project on the basic biology and applications of symbiotic root nodule bacteria. The research will require biochemical and genetic engineering studies of the crucial genes governing biological nitrogen fixation in root nodule bacteria.

Applicants should submit résumé, transcripts, copies of publications, and the names and addresses of at least three references to: R. C. Valentine, Plant Growth Laboratory, University of California, Davis, Calif. 95616. Application deadline: 15 February 1981.

In compliance with federal and state laws and University policy, the University of California does not discriminate on the basis of race, color, national origin, religion, sex, handicap, age, or against disabled veterans or veterans of the Vietnam era. The University of California is an Affirmative Action/Equal Opportunity Employer.

MOLECULAR BIOLOGISTS BIOCHEMISTS ORGANIC CHEMISTS

SYNERGEN, a creative biotechnology firm with laboratories in Boulder, Colorado, conducts basic research with commercial applications. We are recruiting organic chemists with expertise in nucleic acid synthesis, molecular biologists, and biochemists.

Energetic persons with broad interests are encouraged to apply. We offer competitive salaries and other benefits, as well as opportunities for original work.

To apply in strictest confidence, please send a résumé, statement of your interests, references, and reprints to:

Search Committee
SYNERGEN
1885 Thirty-Third Street
Boulder, Colorado 80301

An Equal Opportunity/Affirmative Action Employer

The Science and Education Administration (SEA) of U.S. Department of Agriculture (USDA) has an opening for a **PLANT PHYSIOLOGIST** with a strong background in molecular biology. The position is located at the Richard B. Russell Agricultural Research Center, Athens, Georgia. The incumbent will explore the feasibility of improving crop plants through genetic engineering. This requires a knowledge of nucleic acid hybridization and two-dimensional gel electrophoretic techniques, cell-free protein synthesis, and recombinant DNA techniques. This is a career-conditional Civil Service position and will be filled at the GS-11 (\$22,486 per annum) or GS-12 (\$26,951 per annum) level. Submit Form SF-171 and transcripts to: Joanne M. Ward, Personnel Assistant, USDA, SEA-AR, Russell Research Center, P.O. Box 5677, Athens, Ga. 30613. You will then be furnished with additional application requirements. Deadline for applications: 30 January 1981. SEA-USDA is an Equal Opportunity Employer.

ASSISTANT PROFESSOR

The Salk Institute announces the establishment of Assistant Professorships in Reproductive Biology, sponsored by a grant from the Andrew W. Mellon Foundation.

The main emphasis of the candidate's research should be in the field of fertility control. Candidates should have a doctoral degree and post-doctoral research experience.

Applicants should send a curriculum vitae, description of research interests, and names of references to:

Mellon Asst.
Professorships Committee



**THE SALK
INSTITUTE**

P.O. Box 85800, San Diego, CA 92138
The Salk Institute is an
Equal Opportunity Employer m/f/h

RESEARCH SCIENTISTS and RESEARCH ENGINEERS

The Amoco Research Center currently requires the immediate staffing of scientists and engineers with Ph.D. degrees and postdoctoral and industrial experience in the following fields of specialization:

- BIOCHEMICAL ENGINEERING
- FERMENTATION TECHNOLOGY
- ENZYME TECHNOLOGY
- ALGAE MASS CULTURE
- IMMUNOCHEMISTRY
- PLANT MOLECULAR BIOLOGY
- PLANT GENETIC ENGINEERING
- FUNGAL MASS CULTURE

The above positions involve research, engineering and market studies toward industrial applications of new biology. Candidates should have recent Ph.D. degrees or up to two (2) years of postdoctoral or equivalent industrial experience.

In addition to professional growth and outstanding opportunities, the AMOCO RESEARCH CENTER offers superior working conditions and is located in a highly desirable community just west of Chicago. An excellent compensation package and a comprehensive benefit package is provided. Please send a resume with a detailed qualifying letter in confidence to:

Professional Recruiting Coordinator



**AMOCO
RESEARCH
CENTER**

P.O. Box 400
Naperville, Illinois 60566

An Equal Opportunity Employer M/F

DIRECTOR of CLINICAL AFFAIRS

LOCATED IN THE SUN BELT

The proprietary drug division of a major pharmaceutical corporation is looking for an individual with solid experience in designing and conducting clinical studies in an industrial environment.

Reporting to a headquarters Vice President, this position directs a professional staff, has full budgetary responsibility, and will determine the resource allocation and direction of the Clinical Department. You will also be required to serve on organization review committees and may represent the company in dealing with federal agencies.

In addition to the above this position requires:

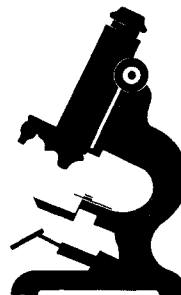
- an M.D. or PH.D. degree in biological or life sciences with four years' experience in protocol design and analysis.
- working knowledge of FDA regulations.
- demonstrated management skills and the ability to work well with other departments.

We offer a comprehensive benefits package and an attractive salary. Please forward a detailed resume, in confidence to:

Box 15, SCIENCE
Equal opportunity employer M/F

CHEMIST

**phd
biochemist**



FMC's Chemical R & D Center in Princeton, N.J., has an opportunity for a PhD Biochemist with 0 to 3 years experience, for research in the area of Collagen Chemistry. Must have a good background in biochemical methods of analysis.

We offer a salary commensurate with experience, a full range of benefits plus opportunity and challenge in a R & D environment. Contact Ed Politi, FMC CORPORATION, U.S. Route 1, P.O. Box 8, Princeton, N.J. 08540 or (609) 452-2300 COLLECT. Equal Opportunity Employer, M/F.

FMC

POSITIONS OPEN

PHARMACOLOGIST/TOXICOLOGIST

Tenure-track position as assistant professor is available to teach courses in pharmacology, toxicology, and other areas. Candidates completing their degree by the appointment date will be considered. An active research program and grant potential are essential. The area of research is open. Send curriculum vitae, including research and grant information, and three letters of recommendation to:

Dr. Leon W. Bone
Department of Physiology
Southern Illinois University
Carbondale, Ill. 62901
Telephone: 618-453-2745

Application deadline: 31 January 1981. Appointment date: 15 August 1981.

Southern Illinois University, Carbondale, is an Equal Opportunity/Affirmative Action Employer.

The University of Wisconsin Physical Sciences Laboratory seeks a **PHYSICIST/ENGINEER** (B.S. or higher) to design and direct construction of an x-ray source for speech research.

Responsibilities include:

- 1) Design/specify: electron gun and acceleration system, beam line components, vacuum system, high voltage system, and electron target,
- 2) Oversee mechanical design, and
- 3) Participate in computer interface design.

Expertise in all these areas is not required. Experience with electron optics is necessary.

The instrument, funded by NIH, is to be completed in 2.5 years (March 1983).

Application deadline is 30 January 1981. Send résumés to: Esther Olson, Physical Sciences Laboratory, 3725 Schneider Drive, Stoughton, Wis. 53589. Direct inquiries to: Phil Robl, telephone: 608-873-6651 (same address). *Equal Opportunity/Affirmative Action Employer.*

PLANT ECOLOGY. Applications are sought from individuals interested in establishing an outstanding teaching and research program in plant ecology. Preference will be given to individuals specializing in population, community, or ecosystem ecology. We will consider candidates at any rank. Teaching will include advanced undergraduate plant ecology plus other courses to be negotiated. Résumé and names and addresses of references should be sent to: Brian F. Chabot, Chairman, Section of Ecology and Systematics, Langmuir Laboratory, Cornell University, Ithaca, New York 14850. Closing date for applications will be 28 February 1981.

Cornell University is an Equal Opportunity/Affirmative Action Employer.

PLANT ECOLOGIST/PLANT TAXONOMIST. Assistant professor required August 1981. Tenure-track position. Primary duties involve teaching undergraduate courses in plant ecology and plant taxonomy as well as participation in the introductory biology and/or botany courses. Emphasis is on quality instruction but research is encouraged and expected. Ph.D. required. Apply with curriculum vitae, unofficial transcripts, reprints, and three letters of reference to: Dr. Robert L. Watson, Chairman, Department of Biology, University of Arkansas at Little Rock, 33rd and University, Little Rock, Ark. 72204. *An Affirmative Action Employer.*

PLANT ECOLOGIST

Assistant or associate professor, tenure-accruing, to start August 1981. Experience beyond the doctorate desirable; salary negotiable. Research should emphasize experimental approach to plant communities or ecosystems. Duties include teaching graduate/undergraduate ecology and general biology. Send curriculum vitae, description of research and teaching interests, four letters of recommendation, and transcripts or course work summary, before 20 February 1981, to: Dr. John Ewel, Search Committee Chair, Department of Botany, Bartram Hall, University of Florida, Gainesville, Florida 32611. *An Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL POSITION available after 1 February 1980 for individual interested in the function of hypermodified nucleosides in transfer RNA. Preference given those with backgrounds in nucleic acid biochemistry and/or NMR. Salary: \$13,000 to \$14,000. Send curriculum vitae and have three reference letters sent to: Dr. Martin P. Schweizer, Department of Medicinal Chemistry, University of Utah, Salt Lake City, Utah 84112. *The University of Utah is an Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

POSTDOCTORAL FELLOW in reproductive biochemistry to study the role of cyclic nucleotides in sperm maturation. Ph.D. in biochemistry or biophysics preferred. Beginning date: 1 January 1982. Salary: \$13,380. Period of support: 2 years. Before 15 April 1981, send curriculum vitae and names of two references to:

Dr. Dale D. Hoskins
Department of Reproductive Physiology
Oregon Regional Primate Research Center
505 Northwest 185 Avenue
Beaverton, Oregon 97006

An Equal Opportunity/Affirmative Action Employer

POSTDOCTORAL POSITION for 2 years starting 1 February 1981 for cardiovascular research in ion transport across subcellular membranes. Recent Ph.D. in biochemistry preferred. U.S. citizenship required. Send résumé and names of three references to: Dr. M. Kirchberger, Department of Physiology and Biophysics, The Mount Sinai School of Medicine, One Gustave L. Levy Place, New York, N.Y. 10029.

POSTDOCTORAL POSITIONS in DNA repair; positions available for recent Ph.D.'s in cell biology, biochemistry, or molecular biology to study the regulation of DNA repair in normal and repair deficient human cells. Salary negotiable. Send application with curriculum vitae and names of two references to:

Dr. Michael A. Sirover
Fels Research Institute
Temple University School of Medicine
Philadelphia, Pa. 19140

Georgetown University, Vincent T. Lombardi Cancer Center, **POSTDOCTORAL POSITION IN MOLECULAR PHARMACOLOGY.** Applicants with Ph.D.'s are sought for a 2- to 3-year fellowship in ongoing research projects with anticancer drugs. Areas of interest include: (i) alkylating agent pharmacology, (ii) interactions with nuclear macromolecules, (iii) development of new anticancer drugs, and (iv) mechanisms of cytotoxicity and drug resistance. Salary will be competitive and commensurate with experience. Send curriculum vitae with the names of two referees to: Dr. Kenneth D. Tew, Division of Medical Oncology, Georgetown University Hospital, 3800 Reservoir Road, Washington, D.C. 20007.

POSTDOCTORAL POSITION in human cytogenetics to participate in studies of X-linked mental retardation and genetics of human fetal wastage. Ph.D. training in genetics required and some experience in human cytogenetics desirable. Position available from early 1981. Please send curriculum vitae and names of two references to: Dr. Patricia A. Jacobs, University of Hawaii School of Medicine, Department of Anatomy, 1960 East-West Road, Honolulu, Hawaii 96822.

POSTDOCTORAL POSITION available immediately to work on the molecular biology of gene expression of mouse teratocarcinoma cells in culture. The laboratory is currently involved in using viral and cellular nucleic acid probes in this work. Experience in recombinant DNA technology and/or in vitro translation would be useful. Write to: El Linney, La Jolla Cancer Research Foundation, 2945 Science Park Road, La Jolla, Calif. 92037. *We are an Equal Opportunity Employer.*

POSTDOCTORAL POSITION

Available immediately to study the structure, organization and expression of sea urchin actin genes. Background in molecular and/or developmental biology preferred. Please send curriculum vitae and names of three references to:

Dr. William Crain, Jr.
Cell and Molecular Biology Group
Worcester Foundation for Experimental Biology
c/o Personnel Office
222 Maple Avenue
Shrewsbury, Mass. 01545

An Equal Opportunity/Affirmative Action Employer

POSTDOCTORAL POSITION available immediately to participate in interdisciplinary study of the mechanism of action of opiates and the physiological importance of endorphin-containing systems. Candidate with strong background in radioreceptor assays and measurement of neurotransmitter levels preferred. Salary negotiable. Send curriculum vitae to: Dr. Alan Gintzler, Department of Biochemistry, State University of New York/DOWNSTATE MEDICAL CENTER, 450 Clarkson Avenue, Brooklyn, N.Y. 11203. *Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

POSTDOCTORAL POSITION for studies of the lymphohematopoietic microenvironment. Involves culture and transplantation of stromal cell populations including the evaluation of their interaction with hematopoietic and lymphocyte stem or progenitor cells; the assay of the effects of various growth factors and the development and application of reagents for cloning and characterizing stromal cell populations. Background experience including either culture or hematopoietic/lymphocyte progenitor cells of hybridoma technology (a cytofluorograf 50 H will be available) or immunocytochemistry would be an advantage. The stipend will be in accord with current NIH postdoctoral fellowship rates. Applicants should send résumé and names of three references to: Dr. J. G. Sharp, Department of Anatomy, University of Nebraska Medical Center, 42nd and Dewey Avenue, Omaha, Neb. 68105. *An Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL POSITIONS

The Department of Physiology at Northwestern University Medical School, in collaboration with the Rehabilitation Institute of Chicago, has established a laboratory directed towards the study of sensorimotor performance in normal and disordered human subjects. Investigators attached to this laboratory are Dr. B. Peterson (vestibular function), Dr. J. C. Houk (limb movement control), and Dr. W. Z. Rymer (spasticity and Parkinson's disease). Postdoctoral positions are being offered to allow fellows to work in collaboration with one or more of these investigators, in the stated areas of interest. Training and experience with the use of related animal models is also available. Salary commensurate with experience. Send résumé, statement of scientific interests, and names of three referees to: Dr. W. Z. Rymer, Department of Physiology, Northwestern University Medical School, 303 East Chicago Avenue, Chicago, Illinois 60611.

POSTDOCTORAL RESEARCH ASSOCIATE for the synthesis of peptide derivatives that may act as transition-state analogs [reference *Biochemistry* 18, 349 (1979)] to be used in the study of proteases/enzymes of haemostasis. Strong background in organic and/or peptide synthesis required. Position available immediately; salary: \$14,500. Apply to: Dr. Richard Schultz, Department of Biochemistry, Loyola Stritch School of Medicine, Maywood, Ill. 60153.

POSTDOCTORAL RESEARCH ASSOCIATE

Postdoctoral position in drug development in Biochemistry Department, University of Iowa, Iowa City, Iowa, available 1 March 1981. Research will involve design, synthesis, and testing of antitumor drugs that act by inhibition of ribonucleotide reduction. Minimum requirements are a Ph.D. degree in biochemistry or a related field in addition to experience in enzyme preparation and characterization, nucleotide chemistry and biochemistry, cell culture techniques and HPLC. Salary: \$14,715 up to \$17,000. Send curriculum vitae and three letters of recommendation to:

Job Service of Iowa
1910 Lower Mascatine Road
Iowa City, Iowa 52240
Attention: Thomas Cannon

POSTDOCTORAL RESEARCH ASSOCIATE

Applications are invited from candidates with experience in polydeoxynucleotide synthesis. Other useful backgrounds would be molecular genetics, chemistry, or biophysics. Research areas actively pursued are: (i) molecular mechanisms of mutation, (ii) the alteration of gene expression by carcinogens and mutagens, and (iii) physical interactions between planar hydrocarbons and DNA. Send curriculum vitae to: Personnel Officer, Michigan Molecular Institute, 1910 West St. Andrews Road, Midland, Michigan 48640. *An 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 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.*



Open to both
men and women

Agriculture Canada
Research Station
Vineland Station, Ontario

RESEARCH SCIENTISTS

Salary: \$17,660 – \$36,428

The Vineland, Ontario Research Station of Agriculture Canada requires three scientists to develop independent research programs in the following scientific areas:

GRAPEVINE PATHOLOGIST (80-NCRSO-AGR-5) (S)

To develop programs directed at the prevention and control of virus and other diseases which attack grapevines of the Niagara Peninsula. The scientist will work closely with the grape and wine industries; will provide diagnostic services, and develop and maintain plantings of virus-tested grapevines. A knowledge of, and working experience in, viticulture and modern methods in general plant pathology is required. The scientist will provide advice and recommendations to plant quarantine personnel and deal effectively with practical field problems.

PLANT PATHOLOGIST (ORNAMENTALS) (80-NCRSO-AGR-3) (S)

To develop programs on disease problems and control in greenhouse ornamental crops. A knowledge of plant disease identification; of methods of disease measurement, spread and severity is required. The scientist will work closely with the greenhouse ornamentals industry in providing a diagnostic service and advise on the control of plant diseases.

ECONOMIC ENTOMOLOGIST (ORNAMENTALS) (80-NCRSO-AGR-4) (S)

To conduct research on the ecology of pest and beneficial species of arthropods associated with greenhouse production systems both ornamental and vegetable. A knowledge of the principles underlying the relationship between biological activity and development of arthropod species and their environment is required. The scientist will assess the significance of micro-and macro-environmental factors on arthropod control and pest management systems. The successful candidate will evaluate chemical pesticides to provide a diagnostic service and provide advice on means of pest control relative to ornamental crops.

Qualifications for all the above positions

Ph.D. graduate specializing in subjects related to the advertised positions or a Masters or Bachelor degree coupled with independent research experience equivalent to that of a Doctorate degree.
Knowledge of English is essential.

Clearance Nos.: 500-277-004, 310-330-070, 400-282-035

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

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

How to apply

Send your application form and/or résumé to:
Paul Hamelin

National Capital Region Staffing Office
Public Service Commission of Canada
300 Laurier Avenue West
Ottawa, Ontario K1A 0M7

Closing date: January 31, 1981

Please quote the applicable reference number at all times.



Open to both
men and women

SCIENTIFIC ADVISOR

Salary: \$26,193 to \$31,794

Ref. No.: 80-NCRSO-NHW-7 (SC)

Health and Welfare Canada
Health Protection Branch
Ottawa, Ontario

The Environmental and Occupational Toxicology Division requires a biologist capable of providing advice in toxicology and evaluating toxicological data in order to assess the health hazards associated with commercial, industrial and consumer products, and other dangerous goods in transit. The biologist will also advise management with respect to toxicological and other studies required to carry out health hazard evaluations. Experience in conducting animal experiments involving the measurement of biochemical, physiological and toxicological parameters and their evaluation would be a definite asset for this position.

Qualifications

University graduation with a degree in a biological science including courses in chemistry, mammalian biochemistry and physiology.

Language requirements

Knowledge of English and French is essential. Unilingual persons may apply but must indicate their willingness to become bilingual. The Public Service Commission will assess the aptitude of candidates to become bilingual. Language training will be provided at public expense.

Clearance No.: 310-323-061

Note

There is a continuing need for toxicology advisors. Others who may be interested in employment in the future are invited to submit their applications for retention in our applicant inventory.

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

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

How to apply

Send your application form and/or résumé to:

Diane Léger

National Capital Region Staffing Office
Public Service Commission of Canada

300 Laurier Avenue West
Ottawa, Ontario K1A 0M7

Closing date: January 30, 1981

Please quote the applicable reference number at all times.

POSITIONS OPEN

POSTDOCTORAL RESEARCHER, pathology; Ph.D. in biological sciences; determines cholesterol and triglyceride concentrations in blood serum; prepares animal diets; studies drug effects on lipids and lipoprotein metabolism. Salary: \$12,000 to \$13,000. Contact: Dr. H. A. I. Newman, M-352 Starling-Loving Hall, Department of Pathology, The Ohio State University, Columbus, Ohio 43210. *The Ohio State University is an Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL RESEARCH POSITION

Available beginning 1 July 1981. Applicant with experience in reproductive biology to carry out studies of subcellular action of gonadotropins. Send résumé and two letters of reference to: Doctor Judith Valtukaitis, Boston University School of Medicine, 818 Harrison Avenue, Boston, Mass. 02118.

An Equal Opportunity Employer, M/F

PROFESSOR OF EXPERIMENTAL PATHOLOGY DEPARTMENT OF PATHOLOGY Vanderbilt University School of Medicine

The Department of Pathology of Vanderbilt University Medical Center announces the establishment of the Ernest W. Goodpasture Professorship of Experimental Pathology and invites the nomination of suitable individuals. Candidates should have a considerable background in academic medicine with demonstrated interest and excellence in research and graduate training. Special consideration will be given to individuals who can be expected to serve as a focus for departmental investigative programs. Nominations and applications will be received until 1 March 1981. Interested individuals or those wishing to propose suitable candidates should send a letter and brief résumé to:

Fred Gorstein, M.D., Chairman,
Goodpasture Professorship Search Committee
Vanderbilt University Medical Center, T-2212
Nashville, Tennessee 37232

Vanderbilt University is an Equal Opportunity/Affirmative Action Employer.

RESEARCH ASSISTANT PROFESSOR—A nontenure-track faculty position is available for a Ph.D. with postdoctoral experience and expertise in recombinant DNA technology to participate in research in the collagen/elastin area. Appointment is on a 3-year basis and is renewable. Salary commensurate with experience. Send curriculum vitae and references to: Dr. Joel Rosenbloom, Center for Oral Health Research, School of Dental Medicine, University of Pennsylvania, Philadelphia, Pa. 19104. *An Equal Opportunity/Affirmative Action Employer.*

RESEARCH ASSOCIATE—Ph.D. with postdoctoral experience and expertise in recombinant DNA technology for position in collagen/elastin research laboratory. Position is immediately available. Salary commensurate with experience. Send curriculum vitae and references to: Dr. Joel Rosenbloom, Center for Oral Health Research, School of Dental Medicine, University of Pennsylvania, Philadelphia, Pa. 19104. *An Equal Opportunity/Affirmative Action Employer.*

RESEARCH ASSOCIATE. A position is available for a Ph.D. with postdoctoral experience to organize and conduct experiments on the organization and function of the eukaryotic genome. Postdoctoral experience required; expertise in molecular cloning and DNA sequencing. Send curriculum vitae and three letters of reference to: Dr. Harris Busch, Department of Pharmacology, Baylor College of Medicine, Houston, Texas 77030. *An Equal Opportunity Employer.*

RESEARCH INSTRUCTOR IN BIOLOGICAL CHEMISTRY. Nontenure-track appointment to carry out and to help direct research in a large laboratory investigating structure and transcription of eukaryotic genes. Applicant must have both graduate and postdoctoral training, including experience with nucleic acid enzymology (including purification of vertebrate RNA polymerases), immunological techniques, recombinant DNA technology, protein chemistry, and animal cell culture. Position will include considerable routine work in these areas, including supervision and training of technicians and new laboratory members, as well as developmental work and some laboratory administration. Salary will range from \$16,000 to \$18,000, depending on experience. Applicant must be legally qualified to accept U.S. employment. Letters of application, curriculum vitae, and three letters of recommendation should be sent to: Jean Rose, Box 8094, Washington University, School of Medicine, 660 South Euclid, St. Louis, Mo. 63110. *An Equal Opportunity/Affirmative Action Employer, M/F/H/V.*

POSITIONS OPEN

RESEARCH ASSOCIATE. A position is available for a Ph.D. with postdoctoral experience to conduct experiments on nuclear and nucleolar antigens in cancer cells. Postdoctoral experience required; expertise in immunology and/or immunochemistry. Send curriculum vitae and three letters of reference to: Dr. Harris Busch, Department of Pharmacology, Baylor College of Medicine, Houston, Texas 77030. *An Equal Opportunity Employer*

RESEARCH SCIENTIST with background in sickle cell research, calcium pump in red cells, interaction of red cells with vascular endothelium or coagulation for the position of research associate or nontenure-track faculty depending on experience. Ph.D.; salary negotiable. The selected candidate will assist a clinical hematologist in sickle cell research and will have opportunity to pursue independent projects. Interested individuals should send curriculum vitae, a description of their research interest, and names of referees to: Dr. Vipul Mankad, Director, U.S.A. Children's Medical Center, 555 Stanton Road, Mobile, Alabama 36617.

SENIOR FACULTY POSITIONS—THE JOHNS HOPKINS UNIVERSITY. The Department of Chemistry is seeking two bio-organic chemists and/or enzymologists to fill tenured faculty positions at the full professor level. Candidates must have a strong ongoing program, an outstanding research record and must be interested in graduate and undergraduate teaching. Please send curriculum vitae and a publication list to: Dr. Dean W. Robinson, Chairman, Department of Chemistry, The Johns Hopkins University, Baltimore, Maryland 21218. *The Johns Hopkins University is an Equal Opportunity/Affirmative Action Employer.* The deadline for applications is 16 February 1981.

SENIOR RESEARCH ASSOCIATE

Applications are invited for a senior research associate to undertake long-term advanced research projects in the area of reaction dynamics, provide continuity and coordination of the total research effort, supervise members of a research group, and assist in preparing research proposals and presentations. Applicants must have a Ph.D. in chemistry or physics; five or more years of experience in molecular beams and laser spectroscopy; demonstrated ability to work independently; proven record of publications; good communication skills; and ability to manage research group and work harmoniously with others. The salary range is \$29,000 to \$34,000, depending upon experience. Send résumé to: Professor R. N. Zare, Department of Chemistry, Stanford University, Stanford, Calif. 94305. *Stanford is committed to Equal Opportunity through Affirmative Action in Employment, and we are especially eager to identify minority persons and women with appropriate qualifications.* The deadline for receipt of applications is 9 February 1981.

The University of Colorado, Boulder, Colorado, is seeking a **FACULTY MEMBER IN SOCIAL PSYCHOLOGY** with methodological skills in evaluation research.

Job description: The position is to include the following responsibilities: (i) supervision of graduate students in field studies involving evaluation research methodology, (ii) graduate teaching in social-personality psychology, and (iii) teaching at the undergraduate level in courses such as general psychology, social psychology, personality psychology, statistics, and psychology of social issues.

Qualifications: (i) Statistical skills appropriate to the analysis of data from quasi-experiments, natural experiments, and program evaluation, (ii) research experience in field settings, (iii) substantive and theoretical interests in one or more of the following: cognitive factors in social psychology, behavior in organizations, group and cultural influences on behavior, and (iv) Ph.D. in psychology.

Our preference is for a person at the assistant professor level and salary at this level is \$16,000 or higher depending upon experience. We will, however, consider applicants at the associate and full professor levels.

Application procedures: Interested persons should submit current curriculum vitae, at least three letters of recommendation, and any additional information required to clarify the qualifications stated above. Materials should be addressed to: Stuart W. Cook, Ph.D., Department of Psychology, Box 345, University of Colorado, Boulder, Colorado 80309.

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

Application deadline: 21 March 1981.

POSITIONS OPEN

FOUR RESEARCH TECHNOLOGISTS: start \$12,900. **PATHOLOGY HISTOLOGY SPECIAL TECHNIQUES TECHNOLOGIST**, B.S. degree. Assist in development of special immuno- and histochemical procedures. Biochemistry and immunology experience or training required. **TRANSMISSION EM TECHNOLOGIST**, B.S. or B.A. or 2 years of experience in EM microscopy with tissue sectioning and process. **CYTOLOGY/CYTOGENETICS C.T.** ASCP, will train in cytogenetics. **NEUROPATHOLOGY RESEARCH**, B.S. or B.A., biochemical background; transmission EM experience may substitute for degree. Send résumé to: Pathology (517), University of Arkansas Medical Sciences, 4301 West Markham, Little Rock, Arkansas 72205. *Equal Opportunity Employer.*

SENIOR RESEARCH ASSOCIATE/ ASSISTANT PROFESSOR

A research position is available in the developing program of cellular toxicology at The Rockefeller University. Applicants should have a Ph.D., M.D., D.V.M., or equivalent. Experience in using cell biology and/or ophthalmic research techniques is most desirable. A proven ability for productive research and funding potential is preferred. Salary is competitive and commensurate with qualifications. Send résumé to: Box 3192, 420 Madison Avenue, New York, N.Y. 10017. *An Equal Opportunity Employer, M/F.*

UNIVERSITY OF SASKATCHEWAN TUMOR BIOLOGIST

Applications are invited for a position at the level of assistant professor/associate professor in either the Department of Microbiology or the Department of Biochemistry to be sponsored by a National Cancer Institute of Canada development program for cancer research at the University of Saskatchewan. The program provides for salary support for up to 5 years and funds for research and equipment. The appointee would be expected to work in collaboration with a multidisciplinary team whose research areas include tumor metastasis, membrane biochemistry, chemotherapy, and tumor immunology.

A Ph.D. with at least 2 or 3 years of postdoctoral training is required.

Applicants should send curriculum vitae, research interests, reprints, and names of three references to: Dr. S. Carlsen, Department of Microbiology, University of Saskatchewan, Saskatoon, Saskatchewan, Canada S7N 0W0.

ANNOUNCEMENT

The **MARCH OF DIMES BIRTH DEFECTS FOUNDATION** is interested in receiving applications for small-scale research projects designed for the recognition, elucidation, and ultimate prevention of reproductive hazards in the workplace. Projects with emphasis on human experience are particularly encouraged. For further information, please write to: Vice President for Research, March of Dimes Birth Defects Foundation, 1275 Mamaroneck Avenue, White Plains, N.Y. 10605.

WORKSHOP

International Workshop on Herpesviruses 27 to 31 July 1981—Bologna, Italy

This workshop will cover topics related to herpesvirus genome structure, function and replication, cell transformation, latency, immunology, and chemotherapy. Individuals interested in participating in the workshop should write to: Dr. Fred Rapp, Department of Microbiology, The Pennsylvania State University, Hershey, Pa. 17033. Telephone: 717-534-8253.

PROGRAM

PREDOCTORAL AND POSTDOCTORAL NUTRITION EMPHASIS PROGRAMS

Available in nine different Health and Social Science Departments. Brochures are available through: Multidisciplinary Graduate Group in Nutritional Sciences, Biochemistry Department, Cary Hall, State University of New York at Buffalo, Buffalo, N.Y. 14214.

Analytical Chemist

G. D. Searle & Co. Research & Development Division currently has a position for a Research Investigator within its Product Development Analytical Development Department.

This position requires a Ph.D. in analytical chemistry with 2 to 5 years of experience in chromatographic methods development and problem solving. Responsibilities include the development, characterization, and transfer of chromatographic methods in the analysis of test articles and clinical dosage forms in support of new product development projects.

We offer a competitive salary and benefits, including relocation assistance, tuition reimbursement as well as a rewarding environment of growth and challenge. Applicants are encouraged to send a detailed curriculum vitae or resume including salary history to: R. Rook.

*Research & Development
Division*

G. D. Searle & Co.
Box 5110/Chicago, IL 60680

*Equal Opportunity M/F/H...
A Practice, Not Just A Policy*



POLYPEPTIDE SYNTHESIS SCIENTISTS AND TECHNICIANS

Southern Medical and Pharmaceutical Corporation, a Florida based corporation, currently engaged in production and research and development of various biological response modifiers (interferons, growth factors, lymphokines), is currently increasing its staff for polypeptide synthesis, for synthesis of fragments of those modifiers whose amino acid sequences become known.

The Corporation is soliciting curriculum vitae from qualified scientists at the Ph.D. and Master's level with backgrounds in polypeptide synthesis for immediate employment and/or future placement on several exciting projects in these areas.

The Company is located on the beautiful west coast of Florida, an area with superb recreational, cultural and educational opportunities. Excellent salaries, working conditions, fringe benefits and attractive stock options are available to qualified scientists.

Southern Medical and Pharmaceutical Corporation
128 South Moon Avenue
Brandon, Florida 33511

An equal opportunity employer

SYMPOSIUM ANNOUNCEMENT

**Progress in Research and Clinical Application
of Corticosteroids**

20-22 February 1981

Florida A&M University, Tallahassee, FL 32307

The Symposium will take a multidisciplinary approach to examine the current status of corticosteroids from practical & theoretical view points for future research directions. Topics will include pharmacology, mechanisms of action, metabolism and diurnal rhythms, structure-activity relationships, inflammatory diseases and clinical application of anti-inflammatory steroids.

A Partial List of Speakers Includes: J. Baxter, M.D. (Univ of CA); W. Benson, Ph.D. (FDA); S. Bernstein, Ph.D. (Lederle Lab); P. Bilka, M.D. (Univ/MN); L. Bradlow, Ph.D. (Rockefeller Univ); E. B. Hall, Ph.D. (N.E. Ohio/Univ); A. Mellors, Ph.D. (Univ/Guelph); C. Monder, Ph.D. (Mt. Sinai Sch/Med); A. Munk, Ph.D. (Dartmouth Med/Sch); R. Ochillo, Ph.D. (Xavier Univ); W. Rosner, M.D. (Roosevelt Hosp); I. R. Senciall, Ph.D. (Univ/Newfoundland); M. Sherman, Ph.D. (Sloan-Kettering); S. S. Simons, Jr., Ph.D. (NIH); K. Soliman, Ph.D. (FAMU); R. Taylor, M.D. (Howard Univ); E. B. Thompson, M.D. (NIH); and J. Walton, M.D. (MSU).

For further information and registration, write to Dr. H. J. Lee, or Dr. C. A. Walker, Florida A&M Univ., School of Pharmacy, Tallahassee, Florida, or call (904) 599-3301.

MOLECULAR GENETICIST—PhD

• Southern Location

Ethyl Corporation, a Fortune 500 company located in Baton Rouge, Louisiana, is seeking an innovative individual to join our expanding Biological Processes Group. This group has corporate responsibility for investigation and development of novel biological processes for production of industrial products.

The position requires a PhD degree and 1-5 years postdoctoral or industrial experience, including training in the techniques and applications of recombinant DNA. Responsibilities will include imaginative research directed toward novel biological processes for new and existing products, development of bench-scale processes to demonstrate feasibility and interaction with engineering staff during scale-up and commercialization. This is an excellent opportunity for a creative individual to contribute to all phases of development of a biological process.

Baton Rouge is located 80 miles northwest of New Orleans on the Mississippi River, where the climate is extremely favorable and the cost of living among the very lowest. In addition to an excellent opportunity for professional recognition and growth, Ethyl offers a comprehensive salary/benefits package and an attractive working environment. For confidential consideration, please send detailed resume with salary requirements to:

MR. A. J. ROBICHAUX, Recruiting Supervisor



**ETHYL
CORPORATION**
P.O. Box 341
Baton Rouge, LA 70821

We are an equal opportunity employer

PROGRAM

PLANETARY BIOLOGY INTERNSHIP PROGRAM Funded by NASA

The Department of Biology at Boston University invites applications from graduate students and seniors accepted at graduate institutions for awards to carry out research at NASA centers and a number of collaborating universities for 6 to 10 weeks, primarily in summer 1981. Studies include development of life-support systems in closed environments; biogenic contributions to metalliferous deposits and atmospheric gases; origins and maintenance of life in extreme environments and remote sensing of the biota. Interns will be paid the costs of transportation, living expenses, and a stipend of \$100 per week. A research summary is required at the termination of the internship. Deadline for applications: April 1981; announcements made 1 May 1981. For a brochure and application form, contact: Linda M. Reeves, Administrator, Planetary Biology Internship, Department of Biology, Boston University, 2 Cummings Street, Boston, Massachusetts 02215. An Equal Opportunity/Affirmative Action Institution.

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.

FELLOWSHIPS

CARDIOVASCULAR RESEARCH FELLOWSHIP. Postdoctoral fellowship position for research training in:

- 1) Physiology, pathophysiology, and pharmacology of cardiac and skeletal muscle,
- 2) Reflex control of circulation,
- 3) Ultrasound—clinical and basic,
- 4) X-ray videometry, three-dimensional reconstruction,
- 5) Atherosclerosis, platelet inhibitors, hypertension, and
- 6) Computer applications in clinical cardiology.

Position available immediately, with additional positions opening in July 1981, for candidates with M.D. or Ph.D.; competitive stipend. May combine with advanced clinical training in cardiovascular medicine. Contact: Robert G. Tancredi, M.D., Director, Cardiovascular Research Training Program, Mayo Clinic, Rochester, Minn. 55901.

An Equal Opportunity/Affirmative Action Institution

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.

FELLOWSHIPS

RESEARCH FELLOWSHIP for Ph.D. with extensive experience in molecular genetics. Individual will initially map and sequence the genes specifying the human apolipoproteins in normal and diseased states. Subsequent studies could involve other human inborn errors of metabolism. Salary: \$15,000 per year. Harvard Medical School fellowship appointment. Contact: Dr. J. L. Breslow, Children's Hospital Medical Center, 300 Longwood Avenue, Boston, Mass. 02115. An Affirmative Action/Equal Opportunity Employer.

RESEARCH FELLOWSHIP for Ph.D. with extensive experience in either cell biology, protein chemistry, or immunochemistry. Individual will study the synthesis and catabolism of human lipoproteins in cultured cells including hepatocytes. Salary: \$15,000 per year. Harvard Medical School fellowship appointment. Contact: Dr. J. L. Breslow, Children's Hospital Medical Center, 300 Longwood Avenue, Boston, Mass. 02115. An Affirmative Action/Equal Opportunity Employer.

HARVARD UNIVERSITY DEPARTMENT OF BIOCHEMISTRY AND MOLECULAR BIOLOGY POSTDOCTORAL FELLOWSHIPS

A limited number of postdoctoral research positions become available from time to time. Appointments are funded through research grants awarded to faculty members, are for 1 year, and are renewable. For a list of faculty members who have postdoctoral positions available, write, but do not send applications, to: Administrative Assistant, Department of Biochemistry and Molecular Biology, Harvard University, 7 Divinity Avenue, Cambridge, Mass. 02138.

Harvard University is an Equal Opportunity/Affirmative Action Employer.

Perinatal Physiology Postdoctoral Fellowship

The University of Cincinnati, Department of Obstetrics and Gynecology, is in need of a postdoctoral fellow to study humoral regulation of uterine blood flow and mechanisms of hypertension of pregnancy in chronically instrumented animals.

Applicants should have a Ph.D. in physiology or pharmacology with strong interest in hemodynamics. Interested applicants send résumé plus two references to:

Kenneth E. Clark, Ph.D.
Department of Obstetrics and Gynecology
University of Cincinnati
Medical Center
Cincinnati, Ohio 45267

An Equal Opportunity Employer, M/F/H

PRE- AND POSTDOCTORAL FELLOWSHIPS now available for training in radiation research. Research areas include physics, biochemistry, or molecular biology. Send curriculum vitae and letter stating career goals to: Dr. Ronald M. Humphrey, Program Director, The University of Texas System Cancer Center, Science Park—Research Division, P.O. Box 389, Smithville, Texas 78957.

Graduate Fellowships in molecular botany. M.S. or Ph.D. studies starting fall 1981. Research projects in chloroplast DNA structure and chloroplast proteins, plant glycoproteins and lectins, electrophysiology of plant membranes, *Rhizobium*-legume symbiosis, plant amino acid transport, and recombinant DNA of regulatory genes. Full tuition and tax-free stipend of \$4500 to \$5000 per year. Write: Dr. William Currler, Microbiology-Biochemistry, 115 Hills, University of Vermont, Burlington, Vt. 05405.

FELLOWSHIPS

SEVEN POSTDOCTORAL FELLOWSHIP positions are available in fall 1981 for research in estuarine lagoon and nearshore continental shelf waters. Research areas include algal systematics and ecology, zooplankton ecology and behavior, invertebrate development, benthic community ecology, sedimentary processes, and biogeochemistry. Deadline for application is 7 April 1981. Request information brochure and application packet from: Dr. Marsh J. Youngbluth, Postdoctoral Program, Harbor Branch Institution, Inc., RR 1, Box 196-A, Ft. Pierce, Fla. 33450. The Institution admits students of any race, age, sex, or national and ethnic origin.

Two-year POSTDOCTORAL NIH FELLOWSHIP available immediately to study neuropsychological aspects of dementia and pharmacological approaches to treatment. Opportunity to collaborate on studies of neuropsychological deficit, computed tomography and cholinergic mechanisms in Alzheimer's disease, and other types of dementia. The amount of the NIH stipend depends upon past experience.

Address inquires to:

Harvey S. Levin, Ph.D.
Division of Neuropsychology
Department of Neurology
Baylor College of Medicine
1200 Moursund Avenue
Houston, Texas 77030

GRADUATE STUDY

GRADUATE TRAINING IN ANATOMY AND CELL BIOLOGY. Predoctoral graduate fellowships are available to qualified candidates for Ph.D. training in anatomy. The program includes training in anatomical sciences with emphasis on research into a wide variety of current problems of reproductive, cell, and developmental biology. A full spectrum of biochemical and microscopic approaches is employed. Stipends consist of \$5000 for 12 months plus partial tuition waivers. For information and applications, write to: Dr. Tom Hollinger, Graduate Coordinator, Department of Anatomy, Box J-235, College of Medicine, University of Florida, Gainesville, Fla. 32610. We are an Equal Opportunity/Affirmative Action Employer.

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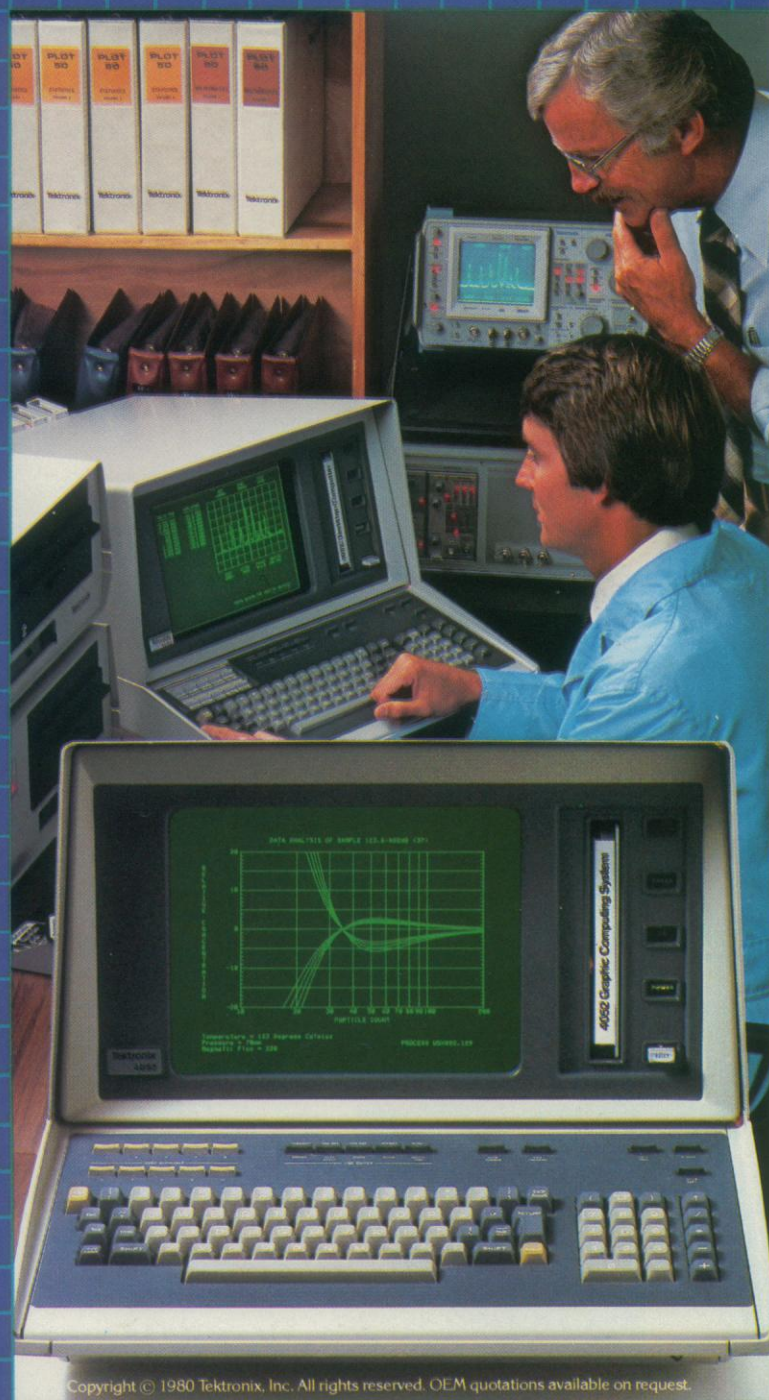
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