

Magnetosphere and Ionosphere

Wave Instabilities in Space Plasmas. Proceedings of a symposium, Helsinki, Finland, July 1978. PETER J. PALMADESSO and KONSTANTINOS PAPADOPOULOS, Eds. Reidel, Boston, 1979. viii, 312 pp., illus. \$39.50. Astrophysics and Space Science Library, vol. 74.

This book contains the sometimes significantly revised versions of 20 of the more than 60 papers given at a symposium on wave instabilities in space plasmas. Because only manuscripts submitted soon after the conference are included, the coverage of topics is uneven, but the papers are quite up to date compared with those in many conference proceedings. There is a nice mixture of reviews and papers on recent work. The reviews were deliberately limited in length; hence the discussions are usually on a fairly descriptive level, with a minimum of detailed mathematics. Unfortunately, the introductory material is sometimes also abbreviated a bit too much for nonspecialist readers. Both theory and experiments are discussed, but the emphasis is on theory.

The book is divided into four parts. Although this follows the conference organization, the resulting grouping of papers is probably not the most logical. The first part, entitled Natural Noise in Space, contains six papers dealing with extremely low frequency and very low frequency waves in the magnetosphere. This is a big subject, and the only general review included suffers from the problem of overspecialization (for example, the reader is presumed to know what "lion's roar" is). Nevertheless, there is much useful and readable material in this part, particularly on the subject of power line harmonic radiation effects in the magnetosphere.

The second and third parts, Plasma Turbulence and Nonlinear Effects, are highly overlapping, for there can be no turbulence without nonlinear effects, and contain a total of 12 papers on natural and artificially driven instabilities and wave-particle interactions in the magnetosphere (really a continuation of the first part), electrostatic double layers, ion sound instabilities, equatorial electrojet instabilities, and type III solar radio bursts. I found the papers on double layers interesting but perhaps a bit misleading, since they ignore magnetic field effects, which admittedly make life difficult for theorists but apparently play a key role in the actual magnetospheric acceleration process. A paper on electrojet instabilities contains important data that have not been published elsewhere as far

as I know. I enjoyed reading the two papers on type III bursts, a subject I am not very familiar with, because the strong turbulence theory that has been developed seems to be amazingly successful.

The last part of the book consists of two excellent reviews on instabilities in the F region of the equatorial ionosphere. They accurately describe the spectacular recent advances both in experimental studies of these intriguing processes and in our theoretical understanding of them.

In summary, this is a good book and conveys the flavor of the conference. I think most readers will find the papers in their own fields to be useful and papers in allied fields to be successful in conveying at least the major theoretical ideas.

D. T. FARLEY

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BOOKS RECEIVED

The Anticancer Drugs. William B. Pratt and Raymond W. Ruddon. Oxford University Press, New York, 1979. x, 324 pp., illus. Cloth, \$18.95; paper, \$12.95.

The Antigens. Vol. 5. Michael Sela, Ed. Academic Press, New York, 1979. xiv, 410 pp. \$35.

Anti-Herpesvirus Chemotherapy. Experimental and Clinical Aspects. Papers from a symposium. Hamburg, Sept. 1978. K. K. Gauri, Ed. Karger, Basel, 1979. xii, 300 pp., illus. \$97.25. Advances in Ophthalmology, vol. 38.

Biological Applications of Magnetic Resonance. R. G. Shulman, Ed. Academic Press, New York, 1979. viii, 588 pp., illus., \$29.50.

The Biological Aspects of Normal Personality. Readings selected and comments written by R. A. Prentsky. University Park Press, Baltimore, 1979. viii, 392, illus. \$24.50.

Biological/Biomedical Applications of Liquid Chromatography II. Papers from a symposium, Boston, Oct. 1978. Gerald L. Hawk, Paul B. Champlin, Robert F. Hutton, Howard C. Jordi, and Chris MOI, Eds. Dekker, New York, 1979, xiv, 504 pp., illus. \$45. Chromatographic Science, vol. 12.

Computer Vision and Sensor-Based Robots. Proceedings of a symposium, Warren, Mich., Sept. 1978. George G. Dodd and Lothar Rosol, Eds. Plenum, New York, 1979. x, 354 pp., illus. \$39.50.

Conquering Cancer. Lucien Israël. Translated from the French edition (Paris, 1976) by Joan Pinkham. Vintage, New York, 1979. xx, 284 pp. Paper, \$2.95. Reprint of the 1978 edition.

The Electrochemistry of Lead. A. T. Kuhn, Ed. Academic Press, New York, 1979. xviii, 468 pp., illus. \$59.

Electron Spectroscopy of Crystals. V. V. Nemoshkalenko and V. G. Aleshin. Translated from the Russian edition (Kiev, 1976) by Irina Curelaru. Stig Lundqvist and Per-Olof Nilsson, Transl. Eds. Plenum, New York,

1979. xiv, 360 pp., illus. \$49.50. Physics of Solids and Liquids.

Elementary Hearing Science. Lawrence J. Deutsch and Alan Richards. University Park Press, Baltimore, 1979. xii, 192 pp., illus. \$12.95.

Fermented Food Beverages in Nutrition. Papers from a symposium. Rochester, Minn., June 1977. Clifford F. Gastineau, William J. Darby, and Thomas B. Turner, Eds. Academic Press, New York, 1979. xxii, 538 pp., illus. \$45. Nutrition Foundation Monograph Series.

Hokule'a. The Way to Tahiti. Ben R. Finney. Illustrations by Richard Rhodes. Photographs by Francis Wandell and Ben R. Finney. Dodd, Mead, New York, 1979. x, 310 pp., illus. + plates. \$17.50.

Holographic Interferometry. From the Scope of Deformation Analysis of Opaque Bodies. W. Schumann and M. Dubas. Springer-Verlag, New York, 1979. x, 196 pp., illus. \$32.40. Springer Series in Optical Sciences, 16.

The Hudson River Basin. Environmental Problems and Institutional Response. Ralph W. Richardson, Jr., and Gilbert Tauber, Eds. Academic Press, New York, 1979. vol. 1, xviii, 354 pp. \$19.50. vol. 2, xviii, 402 pp., illus. \$19.50.

The Iceland Papers. Select Papers on Experimental and Theoretical Research on the Physics of Consciousness. Papers from a conference, Reykjavik, Iceland, Nov. 1977. Adria Puharich, Ed. Essentia Research Associates, Amherst, Wis., 1979. 192 pp., illus. \$25.

Image Reconstruction from Projections. Implementation and Applications. G. T. Herman, Ed. Springer-Verlag, New York, 1979. xii, 286 pp., illus. \$49. Topics in Applied Physics, vol. 32.

The Imagination of Reality. Essays in Southeast Asian Coherence Systems. Papers from a conference, Ann Arbor, Mich., May 1974. A. L. Becker and Aram A. Yengoyan, Eds. Ablex Publishing Corporation, Norwood, N.J., 1979. xvi, 336 pp., illus. \$25.

Immune Mechanisms and Disease. Proceedings of a meeting, Brook Lodge, Mich., Dec. 1977. D. Bernard Amos, Robert S. Schwartz, and Bernard W. Janicki, Eds. Academic Press, New York, 1979. xx, 376 pp., illus. \$22.

Immunodiagnosis of Cancer. Part 2. Ronald B. Herberman and K. Robert McIntire, Eds. Dekker, New York, 1979. xvi + pp. 701-1258. \$55. Immunology Series, vol. 9.

Immunological Aspects of Infectious Diseases. George Dick, Ed. University Park Press, Baltimore, 1979. xii, 524 pp. \$24.50.

Immunological Tolerance and Enhancement. F. P. Stuart and F. W. Fitch, Eds. University Park Press, Baltimore, 1979. viii, 196 pp., illus. \$29.50.

Immunological Xenogenization of Tumor Cells. Papers from a workshop, Sapporo, Japan, June 1978. Hiroshi Kobayashi, Ed. Japan Scientific Societies Press, Tokyo, and University Park Press, Baltimore, 1979. x, 292 pp., illus. \$49.50. Japanese Cancer Association GANN Monograph on Cancer Research No. 23.

Making Decisions. A Multidisciplinary Introduction. Percy H. Hill and eight others. Addison-Wesley Advanced Book Program, Reading, Mass., 1979. xx, 244 pp. Paper, \$14.50.

Man-Made Gemstones. D. Elwell. Halsted (Wiley), New York 1979. 192 pp., illus. \$44.95.

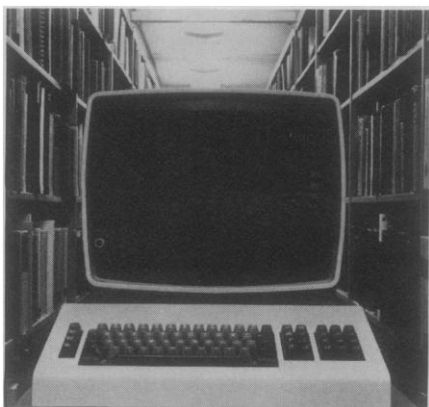
Manual of Gynecologic Surgery. Byron J. (Continued on page 526)

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Masterson with contributions by Kermit E. Krantz and four others. Springer-Verlag, New York, 1979. xvi, 256 pp., illus. \$79.80. Comprehensive Manuals of Surgical Specialties.

Marine Geology and Oceanography of the Pacific Manganese Nodule Province. James L. Bischoff and David Z. Piper, Eds. Plenum, New York, 1979. xii, 842 pp., illus. + microfiche appendix. \$49.50. Marine Science, vol. 9.

Nomenclature of Organic Chemistry. Sections A, B, C, D, F, and H. J. Rigaudy and S. P. Klesney. Pergamon, New York, xx, 560 pp., illus. \$60.

Non-Commutative Harmonic Analysis. Proceedings of a conference. Marseille-Luminy, France, June 1978. Jacques Carmona and Michèle Vergne. Eds. Springer-Verlag, New York, 1979. vi, 244 pp. Paper, \$12.50. Lecture Notes in Mathematics, vol. 728.

Noninvasive Access to Cardiovascular Dynamics. Experimental and Applied. Papers from a congress, Ljubljana, Yugoslavia, Mar. 1978. Gojmir Južnič, Ed. Karger, Basel, 1979. xvi, 224 pp., illus. Paper, \$92. Bibliotheca Cardiologica, No. 37.

Non-Invasive Physiological Measurements. Vol 1, Peter Rolfe, Ed. Academic Press, New York, 1979. xiv, 350 pp., illus. \$43.50. Medical Physics Series.

Nonlinear Problems in Theoretical Physics. Proceedings of a seminar. Jaca. Huesca, Spain, June 1978. A. F. Ranaña, Ed. Springer-Verlag, New York, 1979. x, 218 pp. Paper, \$12.50. Lecture Notes in Physics, vol. 98.

The Porphyrins. Vol. 6, Biochemistry, Part A. David Dolphin, Ed. Academic Press, New York, 1979. xxii, 932 pp., illus. \$90.

Posture and Movement. Papers from a symposium. Anaheim, Calif. Richard E. Talbot and Donald R. Humphrey, Eds. Raven, New York, 1979. xiv, 312 pp., illus. \$25.

Practical Mathematics in Allied Health. A Textbook for the Medical Disciplines. Marian Waterhouse. Urban & Schwarzenberg, Baltimore, 1979. xii, 244 pp., illus. Spiral bound, \$15.95.

Prehistoric Heritage. Felix R. Paturi. Translated from the German edition (Dusseldorf, 1976) by Tania and Bernard Alexander. Scribner, New York, 1979. 280 pp., illus. \$14.95.

Probability and Statistics in Particle Physics. A. G. Frodesen, O. Skjeggstad, and H. Tøfte. Universitetsforlaget, Oslo, 1979 (U.S. distributor, Columbia University Press, New York). xviii, 502 pp., illus. \$35.

Problems of Genetics. William Bateson. Historical introduction by G. Evelyn Hutchinson and Stan Rachootin. Yale University Press, New Haven, Conn., 1979. xxiv, 258 pp., illus. Cloth, \$19.50; paper, \$4.95. Reprint of 1913 edition. Silliman Milestones in Sciences.

Psychedelic Drugs Reconsidered. Lester Grinspoon and James B. Bakalar. Basic Books, New York, 1979. xiv, 344 pp. \$15.95.

The Psychoanalytic Study of the Child. Vol. 34. Albert J. Solnit, Ruth S. Eissler, Anna Freud, Marianne Kris, and Peter B. Neubauer, Eds. Yale University Press, New Haven, Conn., 1979. viii, 646 pp. \$25.

The Psychogenic Biochemical Aspects of Cancer. Harold E. Simmons. Psychogenic Disease Publishing Company, Sacramento, Calif., 1979. iv, 316 pp. Paper, \$9.95.

Psychology Encounters Judaism. Joel Klein.

Philosophical Library, New York, 1979. x, 128 pp. \$7.95.

The Psychology of Learning and Motivation. Advances in Research and Theory. Vol. 13. Gordon H. Bower, Ed. Academic Press, New York, 1979. xvi, 426 pp., illus. \$35.

Pulsed Neutron Research. N. G. Basov, Ed. Translated from the Russian edition (Moscow, 1977). Consultants Bureau (Plenum), New York, 1979. viii, 104 pp., illus. Paper, \$35. Lebedev Physics Series, vol. 94.

Quadratic Forms in Infinite Dimensional Vector Spaces. Herbert Gross. Birkhäuser, Boston, 1979. xii, 420 pp. Paper, \$20. Progress in Mathematics, vol. 1.

Quality Assurance in Ceramic Industries. Proceedings of a conference, Alfred, N.Y., June 1978. V. D. Fréchette, L. D. Pye, and D. E. Rase, Eds. Plenum, New York, 1979. x, 266 pp., illus. \$39.50.

Software Reliability Guidebook. Robert L. Glass. Prentice-Hall, Englewood Cliffs, N.J., 1979. xii, 242 pp., illus. \$18.95.

Solar-Hydrogen Energy Systems. An Authoritative Review of Water-splitting Systems by Solar Beam and Solar Heat: Hydrogen Production, Storage and Utilisation. Tokio Ohta, Ed. Pergamon, New York, 1979. xii, 264 pp., illus. \$35.

Solution Chemistry of Surfactants. Proceedings of a symposium, Knoxville, Tenn., June 1978. K. L. Mittal, Ed. Plenum, New York, 1979. 2 vols., illus. Vol. 1, xvi + pp. 1-516 + index. \$45. Vol. 2, xvi 517-962. \$39.50.

Somatic Selection and Adaptive Evolution. On the Inheritance of Acquired Characters. E. J. Steele. Williams and Wallace, Toronto, 1979. xii, 92 pp. \$14.95.

Structure and Function of Cerebral Commissures. Papers from a workshop, Rotterdam, Netherlands, Mar. 1977. I. Steele Russell, M. W. van Hoff, and G. Berlucchi, Eds. University Park Press, Baltimore, 1979. xviii, 502 pp., illus. \$69.50.

A Theory of Biochemical Supersystems. And Its Application to Problems of Natural and Artificial Biogenesis. Tibor Gánti. University Park Press, Baltimore, 1979. 136 pp., illus. \$9.95.

Theory of Operator Algebras I. Masamichi Takesaki. Springer-Verlag, New York, 1979. viii, 416 pp. \$39.50.

Today's Art of Peritoneal Dialysis. Papers from a symposium, Chapala, Mexico, June 1978. Alejandro Treviño-Becerra and Fred S. T. Boen, Eds. Karger, Basel, 1979. x, 150 pp., illus. Paper, \$49. Contributions to Nephrology, vol. 17.

The Tokyo Puzzles. Kobon Fujimura. Translated from the Japanese by Fumie Adachi. Martin Gardner, Ed. Scribner, New York, 1979. vi, 184 pp., illus. Paper, \$3.95. Reprint of the 1978 edition.

Topics in Graph Theory. Papers from a meeting, New York, May 1977. Frank Harary, Ed. New York Academy of Sciences, New York, 1979. x, 208 pp., illus. Paper, \$40. *Annals of the New York Academy of Sciences*, vol. 328.

Use of Library Materials. The University of Pittsburgh Study. Allen Kent and seven others. Dekker, New York, 1979. xiv, 272 pp. \$25. Books in Library and Information Science, vol. 26.

Water Resources Assessment. Methodology and Technology Sourcebook. Larry W. Canter. Ann Arbor Science, Ann Arbor, Mich., 1979. xxii, 530 pp. \$29.50.

Welded Joint Design. J. G. Hicks. Halsted (Wiley), New York, 1979. x, 82 pp., illus. \$17.95.

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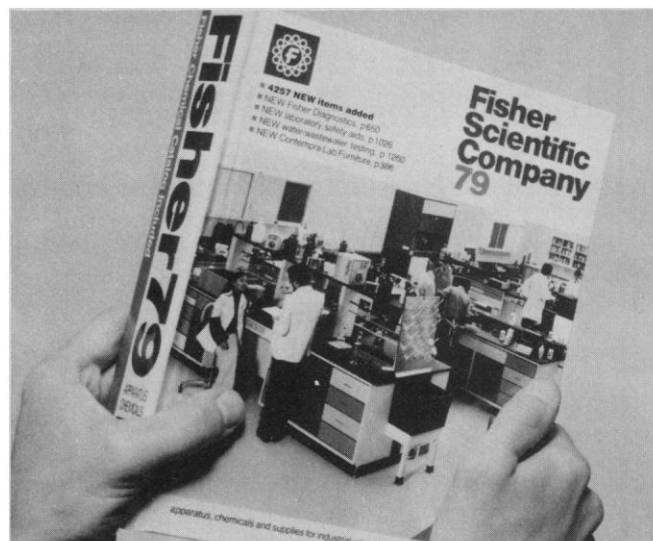


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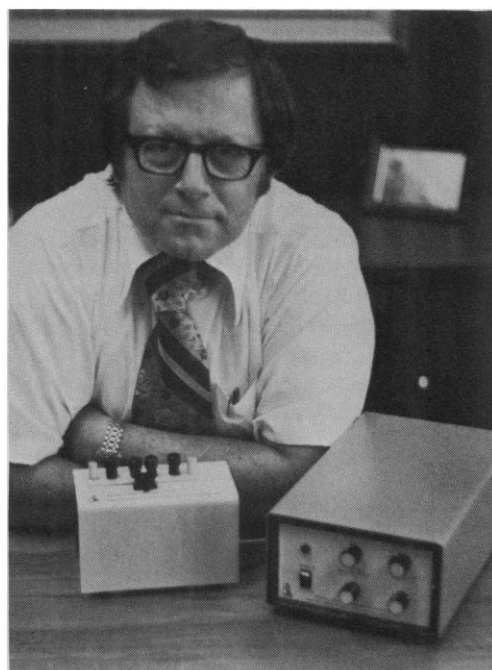
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CELL PHYSIOLOGIST THE DEPARTMENT OF PHYSIOLOGY-ANATOMY UNIVERSITY OF CALIFORNIA BERKELEY

Invites applications to fill a tenure-track position in physiology at the assistant professor level. Responsibilities will include teaching in undergraduate cellular physiology and advanced courses in the candidate's area of research expertise. In addition to excellence in teaching, candidates should be thoroughly involved in an ongoing, active research project and be successful contributors to that area. Research emphasis should be on physiological problems at the cellular level in areas of neural receptor function, muscle or cytoskeletal function. Interested individuals should write a letter explaining their qualifications for the particular position and enclose current curriculum vitae and a list of three or more persons who could act as referees to: Physiology-Search Committee, Department of Physiology-Anatomy, 2549 Life Sciences Building, University of California, Berkeley, California 94720. Applications must be received by 1 December 1980. The University of California is an Affirmative Action Employer.

CYTOGENETICS TECHNOLOGIST to join five others in a high-volume laboratory using the most modern equipment. Applicant must be familiar with lymphocyte and amniotic fluid cell culture, harvesting, chromosome "banding" methods, and photomicrography. "Sight" analysis of banded chromosomes ("scope analysis") is essential. Salary and benefits are competitive. Send résumé to: William D. Loughman, Ph.D., Director, Cytogenetics Laboratory (AC-28), University of California, San Francisco, Calif. 94143; telephone: 415-666-3121.

DIRECTOR OF LABORATORIES—Pathologist for senior professional position with AP or AP/CP Boards and documented experience in administration, teaching, and research. Position is at Roosevelt Division of St. Luke's-Roosevelt Hospital Center. Salary negotiable. Send résumé to: Ronald B. Connors, Ph.D., Assistant Vice President, St. Luke's-Roosevelt Hospital Center, 428 West 59 Street, New York, N.Y. 10019. An Equal Opportunity Employer.

DIRECTOR, SCHOOL OF OPTOMETRY

The School of Optometry, University of Waterloo, Canada, invites applications and nominations for the position of director. The appointment, effective 1 July 1981, is for an initial 3-year term, normally renewable once. A candidate selected by the Search Committee must meet the approval of faculty members of the School. Applications, with résumés, or nominations should be sent by 31 August 1980 to: Dr. R. N. Farvolden, Chairman, Optometry Search Committee, Office of the Dean of Science, University of Waterloo, Waterloo, Ontario, Canada N2L 3G1.

POSITIONS OPEN

BIOCHEMIST, assistant professor, 1-year temporary position beginning fall 1980. Possibility of permanent position. Teach upper-level biochemistry, introductory chemistry, and elementary biochemistry. Ph.D. and previous teaching experience required. Submit curriculum vitae, list of publications, and three letters of recommendation before 15 August 1980 to: **Dr. John P. Harrington, Department of Chemistry, University of Alaska, Anchorage, 3211 Providence Drive, Anchorage, Alaska 99504.** *The University of Alaska is an Equal Opportunity/Affirmative Action Employer.*

DIRECTOR—VIRGINIA GRADUATE MARINE SCIENCE CONSORTIUM. Experienced marine science administrator to serve as director of Graduate Marine Science Consortium in the Commonwealth of Virginia. Primary responsibilities will be to develop and coordinate the Virginia Sea Grant Office and to facilitate matters concerning graduate marine science activities in Virginia. The director's office will be located at the University of Virginia in Charlottesville and the director will be eligible for academic appointment at that institution. Salary commensurate with education and experience. Résumés should be submitted, along with names of three references, to: **Dr. W. Dexter Whitehead, Dean, Graduate School of Arts and Sciences, 444 Cabell Hall, University of Virginia, Charlottesville, Virginia 22903.** Deadline: 1 September 1980. *The Commonwealth of Virginia is an Equal Opportunity Employer.*

FACULTY POSITIONS BIOCHEMICAL PHARMACOLOGISTS

The New York State College of Veterinary Medicine at Cornell University announces faculty level openings in an expanded program in biochemical pharmacology/toxicology. Applicants should present evidence of successful experience in teaching and research. Title and salary commensurate with ability and experience.

Send complete curriculum vitae and references to: **Dr. William Hansel, New York State College of Veterinary Medicine, Cornell University, Ithaca, New York 14853.** *An Equal Opportunity Employer.*

ENVIRONMENTAL SCIENTISTS

Consumers Power Company, a major gas and electric utility operating in the lower peninsula of Michigan, is currently seeking an aquatic ecologist and an environmental planner for our Environmental Services Department.

AQUATIC ECOLOGIST

New position providing the opportunity to participate in the development, implementation, and management of various bioassay and aquatic programs. Individual would also provide counseling and assessment of issues related to water quality and toxic substances to various projects. Position requires master's degree or its equivalent in aquatic ecology or related aquatic fields and bioassay and biometric training and experience.

ENVIRONMENTAL PLANNER

Seeking candidate to develop, coordinate, and conduct terrestrial and land-use environmental assessments and monitoring programs. Individual would also assist in the preparation of environmental reports. Master's degree or its equivalent required. Background in plant ecology and land-use planning is preferred.

Both positions are located at our General Office in Jackson, Michigan. Salary will be commensurate with training and experience. To apply, please send résumé, including salary history and at least three references, to the address below. As both positions require strong written communication skills, materials demonstrating writing skills should also be submitted with résumé.

**Professional Employment
Department ES-S-80
1945 West Parnall Road
Jackson, Mich. 49201**

*Equal Opportunity
Employer, M/F*



**Consumers
Power
Company**

POSITIONS OPEN

CHAIRPERSON Department of Microbiology

The Medical College of Pennsylvania is seeking an individual with an outstanding record of achievement in research and demonstrated abilities and administration to chair the Department of Microbiology. Department has a range of scientific interest and activities in medical and graduate education. Nominations or applications with curriculum vitae and names of three or more references should be submitted to:

DR. GEORGE ROTHBLAT
Chairman, Microbiology
Search Committee
Department of
Physiology/Biochemistry
**MEDICAL COLLEGE
OF PENNSYLVANIA**
3300 Henry Avenue
Philadelphia, Pa. 19129

Equal Opportunity Employer, M/F

CHAIRPERSON DEPARTMENT OF BIOLOGY EMORY UNIVERSITY

Emory University is seeking a biologist with a record of scholarly achievement and excellence in teaching, and preferably some administrative experience, to chair the Department of Biology. Candidates are expected to have an active research program of national stature and a demonstrated ability to generate research grant support. The position requires a strong commitment to graduate and undergraduate education in biology within the context of a liberal arts education. The new chairperson will help in the planning and design of a new biology building and in developing the direction of the department with new faculty appointments. At present, the Biology Department has 16 faculty and graduate programs at the M.S. and Ph.D. levels.

The appointment is to become effective 1 September 1981. Send curriculum vitae and names and addresses of at least three references to: **William H. Murdy, Chairman, Search Committee, Biology Department, Emory University, Atlanta, Ga. 30322.** Applications will be considered beginning 1 November 1980. *Emory University is an Equal Opportunity/Affirmative Action Employer.*

COORDINATOR OF ELECTRON MICROSCOPE CENTER

North Carolina State University at Raleigh announces an opening for a coordinator of the Electron Microscope Center in the School of Agriculture and Life Sciences. This is a tenure-track position at the assistant or associate professor level. Salary will be commensurate with qualifications and experience. A Ph.D. degree in a biological science is required with a major emphasis in ultrastructure and experience in an electron microscope laboratory. The coordinator supervises the maintenance of facilities and equipment and provides technical assistance to TEM and SEM users from several departments of the School of Agriculture and Life Sciences. The department of appointment will be determined by the academic background of the candidate. The individual should pursue and maintain an active research program. The teaching responsibility of the position involves two separate graduate courses in transmission and scanning electron microscopy. Applications will be accepted until 15 September 1980 or until a suitable applicant is found. Send curriculum vitae and three letters of reference to: **Dr. R. E. Johnston, Department of Microbiology, North Carolina State University, Raleigh, N.C. 27650.**

North Carolina State University is an Equal Opportunity/Affirmative Action Employer and strongly encourages all qualified and interested applicants to apply.

POSITIONS OPEN

GENETICS UNIVERSITY OF GUELPH

Applications are invited from qualified individuals with postdoctoral experience to join the department in a tenure-track position at the level of assistant professor. Research areas of particular interest include somatic cell genetics, immunogenetics, and human biochemical genetics, although other related areas will also be considered. The successful applicant will join an active, diverse group of five other geneticists and should be prepared to establish a productive research program, to offer an upper-level undergraduate course in human genetics, and to otherwise participate in the graduate and undergraduate genetics teaching programs of the department.

Applications for this position, which is subject to budgetary approval, will be accepted preferably until 8 August 1980, or thereafter, until the position is filled.

Submit curriculum vitae, résumé of research, and the names and addresses of three references to: **Professor W. G. Barker, Chairman, Department of Botany and Genetics, College of Biological Science, University of Guelph, Guelph, Ontario, Canada N1G 2W1.**

CHEMISTRY DEPARTMENT HEAD VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY (VPI & SU)

Applications or nominations are invited for the position of department head. The department consists of 35 faculty and 80 graduate students in a land-grant university of 20,000 students. We seek an individual with leadership ability, an active research program, and a strong commitment to education. The individual must be able to represent the department effectively both within and outside the university. Salary is open and competitive. Support for a research associate is provided. Desired starting date: July 1981. Applications should be sent by 1 November 1980 to: **Professor John G. Dillard, Search Committee, Department of Chemistry, VPI & SU, Blacksburg, Va. 24061.** *Equal Opportunity/Affirmative Action Employer.*

HEAD, DEPARTMENT OF INFORMATION ENGINEERING UNIVERSITY OF ILLINOIS AT CHICAGO CIRCLE (UICC)

Nominations and applications are invited for the position of head of the Department of Information Engineering at UICC, beginning 1 September 1981 or earlier. The department offers programs leading to B.S., M.S., and Ph.D. degrees in the general areas of electrical engineering and computer science (EECS). Candidates should have an earned doctorate, a distinguished research record in one or more areas in EECS, and evidence of administrative skills and academic leadership. Interest or experience in both electrical engineering and computer science is highly desirable. Send a complete résumé, including lists of publications, research grants, and names and addresses of five references, before 14 November 1980, to:

Professor Tadao Murata
Chairman, Department Head Search Committee
Department of Information Engineering
University of Illinois Box 4348,
Chicago, Illinois 60680

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

PHARMACOLOGISTS needed in all fields of teaching subjects for accredited School of Medicine. Preferred attention will be given to appointment of an experienced chairperson but other ranks for teachers qualified in pharmacology are also requested. Research encouraged. Please send curriculum vitae and three references to: **Acting Chairperson, Pharmacology Department, Ponce School of Medicine, P.O. Box 7004, Ponce, P.R. 00731.** *Equal Opportunity Employer.*

POSTDOCTORAL ASSOCIATE

A 2- to 3-year position is available for a recent Ph.D. for studies of regulation of acute phase plasma protein synthesis. Background in protein biochemistry, immunochemistry, molecular biology, or cell culture appropriate. Position available in latter half of 1980 or January 1981. Send curriculum vitae and letters of recommendation to: **Dr. Irving Kushner, Case Western Reserve University School of Medicine at Metropolitan General Hospital, Cleveland, Ohio 44109.** *An Equal Opportunity Employer.*

POSITIONS OPEN

IMMUNOLOGIST/VIROLOGIST

Applications are invited for an anticipated immunologist/virologist position at the assistant professor level, effective 1 January 1980 in the Department of Biology at Georgia State University. Applicants should have postdoctoral experience and strong background in molecular and biological aspects of animal viruses, preferably tumor viruses. Salary will be competitive and commensurate with qualifications. The candidate will be expected to teach undergraduate and graduate courses in virology and/or immunology and develop a strong and independent research program. Applications, including curriculum vitae, reprints, a statement of research plans, and names of three references, should be sent to: **Chairman, Biology Department, Georgia State University, University Plaza, Atlanta, Georgia 30303.** Deadline for receipt of applications is 15 October 1980. *Georgia State University is an Equal Educational Opportunity/Affirmative Action Employer in compliance with Title IX and other Civil Rights laws.*

MeSH INDEXER

The Franklin Institute Biomedical Services Division is seeking someone with National Library of Medicine Training in MeSH indexing; experience in MeSH indexing for NLM; master's level biomedical degree or equivalent experience, and reading knowledge of several foreign languages.

This is a regular full-time position working in Philadelphia, indexing cancer-related literature for an NCI-sponsored data base.

Benefits include health insurance, paid vacation, tuition reimbursement, and relocation. Telephone or send résumé to:

DEBORAH TIVE
Personnel Department
Telephone: 215-448-1495

THE FRANKLIN INSTITUTE

20th and Parkway
Philadelphia, Pa. 19103

Equal Opportunity Employer, M/F/H

MICROBIOLOGIST/GENETICIST. Career federal service. To conduct research on development of recombinant microorganisms capable of more efficient conversion of biomass sources to alternative energy fuels. Salary based on qualifications and experience. GS-11/12/13 level position. Position located at Northern Regional Research Center, Peoria, Illinois. For application forms, contact: **Jane Giles, North Central Regional Administrative Office, USDA, SEA/AR-2, 2000 West Pioneer Parkway, Peoria, Illinois 61615.** Telephone: 309-671-7135. *An Equal Opportunity Employer.*

NEUROENDOCRINOLOGY, IMMUNOCYTO-CHEMISTRY. Position open immediately for staff research associate to perform immunocytochemical studies on hypothalamic peptide systems and on pituitary receptors involved in the secretion of reproductive hormones. Extensive experience in LM and EM immunocytochemistry required. Advanced degree and strong background in neuroanatomy, reproductive endocrinology, and immunology preferred. Salary: \$20,800 to \$25,000, including benefits. Send curriculum vitae and names of three references to: **Dr. Paul C. Goldsmith, Department of Obstetrics, Gynecology and Reproductive Sciences, University of California School of Medicine, San Francisco, California 94143.** *An Equal Opportunity Employer.*

POSTDOCTORAL POSITION on a National Institutes of Health Training Grant in Cell and Molecular Dermatology is available on and after 1 July 1980. Three major areas of investigation available to the applicant are: regulation at the biochemical level, cell physiology, and immunology. The candidate should be a recent Ph.D. who is interested in investigating control mechanisms. Salary will be commensurate with years of training. Interested applicants should send their curriculum vitae to: **Department of Dermatology, University of Michigan Medical School, R6558 Kresge Medical Building, Ann Arbor, Michigan 48109.** *The University of Michigan is an Equal Opportunity Employer.*

CHAIRMAN

**DEPARTMENT OF LARGE ANIMAL
CLINICAL SCIENCES**
College of Veterinary Medicine
University of Minnesota

Applications and nominations are invited for the position of chairman of the Department of Large Animal Clinical Sciences, which encompasses epidemiology, food hygiene and public health; large animal medicine; large animal surgery; theriogenology; and veterinary medical continuing education and extension. A new building is under way which will provide expanded modern facilities for teaching and research. The appointee will be expected to provide leadership in developing professional, graduate, and continuing education, plus the department's research and extension programs. Qualifications should include: appropriate professional and research degrees; high achievement in teaching and research in one of the listed departmental areas, complemented by clinical experience; evidence of competence in leadership and administration, with a keen interest in adapting curriculum and research to meet the changing roles of the profession; and active participation in professional organizations. Letters of application should include current curriculum vitae, a brief statement of views on future needs in research and education, plus names and addresses of three persons who will provide letters of reference.

Applications and nominations with supporting material will be accepted until 30 September 1980, and should be sent to: **Dean R. H. Dunlop, College of Veterinary Medicine, University of Minnesota, St. Paul, Minnesota 55108.** A detailed outline of departmental faculty and activities is available on request.

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

POSTDOCTORAL RESEARCH POSITIONS

Division of Biological Sciences
University of Missouri
Columbia, Mo. 65211

TRANSFER RNA STRUCTURE AND FUNCTION—Paul F. Agris. Biochemical and biophysical studies of tRNA structure and its changes during interaction with proteins. One position available immediately; second position available May 1981.

RIBONUCLEOPROTEIN ANTIGENS OF AUTO-IMMUNE DISEASES—Paul F. Agris. Purification and biochemical characterization of autoimmune antigens, RNA-protein interaction and antibody recognition studies. One position available immediately.

DEVELOPMENTAL GENETICS/NEUROBIOLOGY—D. L. Riddle. Work will involve use of laser microsurgery to characterize neuroendocrine controls on development in the nematode, *C. elegans*. Experience in genetics, biochemistry, histochemistry, or electron microscopy would be useful. Available 1 September 1980, for a 1- to 3-year appointment.

MAIZE PHOTOSYNTHESIS—C. Donald Miles. To study the effects of ultraviolet irradiation on photosynthesis, growth, and development in maize.

PHOTOSYNTHESIS AND MOLECULAR GENETICS IN CYANOBACTERIA—Louis A. Sherman. Two positions: **Photosynthesis**—Research into the primary light reactions and membrane structure in photosynthetic membranes of a unicellular cyanobacteria. Available immediately. **Molecular Genetics**—Cloning of genes coding for photosynthetic functions. Research will include production of hybrid plasmids capable of replicating in both bacteria and cyanobacteria; cloning with this vector and production of the gene product. Previous experience utilizing recombinant DNA technology required. Available 1 October 1980.

Send résumé and names, addresses, and telephone numbers of three references to the specific investigator above at: **110 Tucker Hall.** *Women and members of minority groups are urged to apply. The University of Missouri is an Equal Opportunity Employer.*

Director

Division of Biological & Medical Research

Argonne National Laboratory

Applications and nominations are invited for the position of Director of the Division of Biological and Medical Research of Argonne National Laboratory. The Laboratory is operated by the University of Chicago under contract with the University of Chicago, the Argonne Universities Association, and the United States Department of Energy.

The research program of the Division includes a broad range of problems in fundamental cell biology, molecular anatomy, molecular structure and mutagenesis, studies in radiation toxicology, the toxicology of other energy effluents, health assessment and in mechanisms of carcinogenesis. A candidate should have a record of distinguished achievement in biological and medical research and the ability to give scientific and administrative leadership to a diverse scientific division. A broadly based Selection Advisory Committee will review all applications.

Applications or nominations should be submitted by August 8, 1980 to:

Mr. Ronald A. Johns, Manager, Employment & Placement, Box BIM 13301, for submission to Dr. W. K. Sinclair, Associate Laboratory Director for Biomedical & Environmental Research, Argonne National Laboratory, 9700 So. Cass Avenue, Argonne, IL 60439.

An Affirmative Action/Equal Opportunity Employer. Women, Minorities, the Handicapped and Veterans Urged to Apply.



POSITIONS OPEN

CARNEGIE-MELLON UNIVERSITY DEPARTMENT OF METALLURGY AND MATERIALS SCIENCE TENURE-TRACK FACULTY

Two junior (assistant or associate professor level) and one senior (associate professor or professor) openings for faculty beginning 1980-1981 academic year. One senior (associate professor or professor level) opening beginning 1981-1982. Applicants should have a Ph.D. degree in metallurgy and materials science or in related fields (for example, physics, chemistry) with a materials background. Duties include research and teaching on both the undergraduate and graduate levels. Preference will be given to the following research areas:

- Extractive and process metallurgy with emphasis on modeling, resources, and economics,
- Nonmetallic materials with emphasis on ceramics, glasses, and semiconductors for electronic and magnetic applications, and
- Physical metallurgy, especially materials characterization and modern analytical techniques.

Apply to:

Robert F. Sekerka, Professor and Head
Department of Metallurgy and Materials Science
Carnegie-Mellon University
Pittsburgh, Pennsylvania 15213
Equal Opportunity/Affirmative Action Employer

OBSERVATIONAL PLANETARY ASTRONOMER

The Lunar and Planetary Laboratory (LPL) anticipates an opening for a **research fellow** in the area of planetary astronomy. There is a particular desire for candidates with a substantial background in instrumentation and a strong interest in participating in a current LPL program involving a search for low-mass companions of solar-type stars. The position is intended for a researcher with a history of significant accomplishments in planetary science/astronomy/instrumentation. It carries faculty status but is generally not tenurable or fully state-funded. Applicants should submit résumés and names of three references by 1 October 1980 to: **W. B. Hubbard, Director, Lunar and Planetary Laboratory, University of Arizona, Tucson, Arizona 85721.** *The University is an Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL POSITION to study serological and genetic structure of rat immunoglobulins, using hybridoma antibodies and DNA cloning. Strong background in biochemistry and molecular immunology essential. Send curriculum vitae and three references to: **Dr. George Gutman, Department of Microbiology, University of California, Irvine, Calif. 92717.**

Affirmative Action Employer

POSTDOCTORAL (CELL BIOLOGY, ENDOCRINOLOGY) POSITION. Available 1 November 1980 for studying the endocrine regulation of growth and expression of differentiated function (gonadotropin receptors and responses) in cultured Leydig tumor cells. Experience in cell biology preferable but not necessary. Send curriculum vitae and two letters of reference to: **Dr. Mario Ascoli, Division of Endocrinology, Vanderbilt University Medical Center, Nashville, Tenn. 37232.**

POSTDOCTORAL POSITION immediately available for 1 to 3 years of study of mechanisms of immunosuppression in tumor-bearing hosts. Experience desired in methods of cell separation, tissue culture, and biochemical procedures of purification and characterization of biologically active factors. Competitive salary. Send résumé to: **Dr. H. F. Havas, Professor, Department of Microbiology and Immunology, Temple University School of Medicine, 3400 North Broad Street, Philadelphia, Pa. 19140.** *An Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL POSITIONS IN BIOCHEMISTRY. Two positions available beginning between 1 November 1980 and 1 January 1981 for research related to: (i) structure-function relationships in microbial and higher plant RuBP carboxylase/oxygenase; and (ii) photosynthetic/photorespiratory carbon metabolism in C₃-C₄ intermediate species, \$12,000 to \$14,000 per year, for 2-year position. Send résumé and names of three references to: **Dr. R. Chollet, Department of Agricultural Biochemistry, The University of Nebraska-Lincoln, Lincoln, Nebraska 68583.** Telephone: 402-472-2936. *Affirmative Action/Equal Opportunity Employer.*

POSTDOCTORAL POSITION. Development of field-flow fractionation methodology for analytical separation of biological macromolecules, polymers, colloidal particles, and so forth. Experience in chromatography and/or biochemistry desirable. Write: **Dr. J. Calvin Giddings, Department of Chemistry, University of Utah, Salt Lake City, Utah 84112.** *Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

POSTDOCTORAL POSITION—Available immediately for studies of human aorta cells in tissue culture. This includes the synthesis and metabolism of lipids, protein and enzymatic responses in these cells. Experience required in enzymatic assays, macromolecular transport, and synthesis. Send letter of inquiry and curriculum vitae to: **Dr. Syed M. Naseem, Department of Pediatric Research, University of Maryland School of Medicine, Baltimore, Maryland 21201.** Telephone: 301-528-6911/6912.

POSTDOCTORAL POSITION available effective immediately. Ph.D. trained in cell biology, endocrinology, or biochemistry to join multidisciplinary research on mammary carcinoma. Fellowship is supported by a grant from the American Cancer Society. Send résumé with three references to: **Dr. Michael Tseng, Department of Anatomy, University of Louisville School of Medicine, Louisville, Kentucky 40292.** *The University of Louisville is an Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL POSITION. Biochemist, neurochemist, or neuroanatomist. Individual will work on molecular aspects of sensory neurotransmission in auditory and lateral-line systems. Knowledge in any of the following areas is helpful: separation chemistry, protein isolation, immunocytochemistry, neurotransmitters, receptors. Salary negotiable, depending on qualifications. Send curriculum vitae and names of three references to: **Dr. Dennis G. Drescher, Laboratory of Bio-otology, Wayne State University School of Medicine, 540 East Canfield Avenue, Detroit, Michigan 48201.**

POSTDOCTORAL POSITION in molecular endocrinology available immediately for 2 to 3 years to study thyroid stimulating hormone gene expression. Background should be in molecular biology, particularly recombinant DNA techniques, nucleotide sequencing, and nucleic acid hybridization. Send curriculum vitae and two letters of recommendation to: **Dr. Ione A. Kourides, Memorial Sloan-Kettering Cancer Center, 1275 York Avenue, New York, N.Y. 10021.**

POSTDOCTORAL POSITION. Experience in tissue culture techniques essential. Preference will be given to candidates with a background in hemostasis/blood coagulation and sound knowledge of biochemistry. Salary commensurate with experience. Contact: **S. F. Mohammad, Department of Pathology, University of Utah, Salt Lake City, Utah 84132.**

POSTDOCTORAL POSITION available 1 November 1980 for electrophysiologist to participate in studies of hippocampal formation. Ionophoretic experience desirable. Send résumé and names of three references to: **Dr. Jonathan Winson, Department of Neurophysiology, Rockefeller University, 1230 York Avenue, New York, N.Y. 10021.**

POSTDOCTORAL POSITION. Available for research in early mammalian development studied in teratocarcinoma cell culture model systems. Applicants should have a background in developmental biology, genetics, cell biology, or biochemistry and should be American citizens or hold permanent resident visas. For further information, send résumé to: **Dr. John W. Littlefield or Dr. Jeanette S. Felix, Department of Pediatrics, Johns Hopkins Hospital, Baltimore, Maryland 21205.** *An Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

POSTDOCTORAL POSITION for research on receptors for PHORBOL ESTER TUMOR PROMOTERS. Strong background in biochemistry or chemistry required. Send curriculum vitae and names, addresses, and telephone numbers of three references to: **Dr. Peter M. Blumberg, Department of Pharmacology, Harvard Medical School, 250 Longwood Avenue, Boston, Mass. 02115.** *An Equal Opportunity/Affirmative Action Employer*

POSTDOCTORAL POSITION for research on auditory brain mechanisms in animals. Work involves behavioral testing, electrical stimulation through implanted electrodes, and evoked response averaging. Position is available 1 September 1980 or thereafter. Starting salary: \$14,000. Send curriculum vitae (indication of sex and ethnicity for Affirmative Action statistical purpose is requested, but not required) and three letters of reference by 1 September 1980 to:

Dr. G. M. Gerken
Callier Center for Communication Disorders
University of Texas at Dallas
1966 Inwood Road
Dallas, Texas 75235

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

POSTDOCTORAL POSITION. Available immediately for recent Ph.D. in immunochemistry/biochemistry to work in isolation, characterization, and quantitation of cytoskeletal proteins in normal and pathological systems. Training or experience in non-isotopic immunoassays and electron microscopy highly desirable. Appointment renewable up to 3 years. Salary range: \$13,000 to \$16,000, depending on qualifications. Interested individuals should send résumé and names of three references by 30 August 1980 to: **Dr. Harold Tinberg, Alcohol Research Program, VA Hospital, 11201 Benton Street, Loma Linda, California 92357, or telephone 714-825-7084, extension 2839.**

POSTDOCTORAL RESEARCH ASSOCIATE position available for an individual interested in steroid hormone receptor biochemistry. Existing studies include isolation and characterization of the estrogen receptor, receptor-nuclear interactions, and receptor-hormone binding properties. Stipends: \$13,500 to \$15,000 per annum, depending upon qualifications. Send curriculum vitae and names of three references to: **Dr. A. C. Notides, Department of Radiation Biology and Biophysics, University of Rochester School of Medicine and Dentistry, 601 Elmwood Avenue, Rochester, N.Y. 14642.**

POSTDOCTORAL RESEARCH FELLOW IN GEOPHYSICS

The Division of Geological and Planetary Sciences at the California Institute of Technology expects to offer a research fellow appointment in the area of solid-state high-pressure geophysics and/or descriptions of the high-pressure phenomena associated with impact cratering on planetary surfaces.

Research fellowships in geology, general geophysics, geochemistry, geobiology, and planetary science are also available from time to time. Interested persons are asked to contact: **Dr. Barclay Kamb, Chairman, Division of Geological and Planetary Sciences, California Institute of Technology, Pasadena, California 91125.** *An Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL RESEARCH POSITION. Postdoctoral position available for Ph.D. or M.D. to study biochemical and genetic aspects of human heme biosynthesis. Experience in enzymology, humoral immunology and/or somatic cell genetics preferred. NIH stipend commensurate with experience. Applicants should send résumé and two letters of recommendation to: **Dr. R. J. Desnick, Chief, Division of Medical Genetics, Mount Sinai School of Medicine, Fifth Avenue and 100th Street, New York, N.Y. 10029.**

POSTDOCTORAL RESEARCH POSITIONS. Two openings to investigate the immunobiological and chemical properties of mitogenic bacterial outer membrane proteins. Areas of interest include: (i) lymphocyte activation, (ii) macrophage activation, (iii) immunoadjuvancy, and (iv) immunodeficiency. Positions for 2 to 3 years available immediately. Competitive stipend. Send curriculum vitae and references to: **Dr. B. M. Sultz, Department of Microbiology and Immunology, State University of New York, Downstate Medical Center, 450 Clarkson Avenue, Brooklyn, New York 11229.** *An Equal Opportunity/Affirmative Action Employer.*



Open to both
men and women

 **Public Service Commission**
Canada **Fonction publique**
Canada

RADIOCHEMICAL LIMNOLOGIST

Salary: \$17,660 – \$36,428 per annum.
Ref. No.: 80-PSC/DFO-OC-B-071

Fisheries & Oceans
Limnology Section
Winnipeg, Manitoba

Duties

The incumbent will develop and implement research programs on Canadian and international aquatic environmental problems with special expertise in physical and chemical limnology, geochemistry and radiochemistry.

Qualifications

Graduation with an acceptable doctoral degree from a recognized university in geochemistry or biogeochemistry, or equivalency. Experience in planning and execution of whole lake experiments in aquatic ecological research using alpha, beta and gamma emitting radionuclides.

Language requirements

Knowledge of English is essential.

Clearance No.: (510-134-036)

The incumbent must be willing to live and work at the Experimental Lakes Area Camp, near Kenora, Ontario, for six months or more during each year.

Further information may be obtained by contacting
Dr. D.W. Schindler, Area Code 204--269-7379.

How to apply

Send your application and/or résumé to:

R.M. Norrie, Staffing Officer
Public Service Commission of Canada
500-286 Smith Street
Winnipeg, Manitoba R3C 0K6

Please quote the applicable reference number at all times.

MASS SPECTROMETRY ASSISTANT

The Upjohn Company, Kalamazoo, Michigan, a worldwide producer of pharmaceuticals, health care products, chemicals and agricultural products, has an opening in its Physical and Analytical Chemistry unit for a Mass Spectrometry Assistant. This position will be responsible for running service samples on a computerized high and low resolution mass spectrometer, interpreting and reporting the generated data, and for the maintenance and performance of the instruments.

The successful applicant will possess a BS/MS degree in Chemistry with emphasis in organic chemistry and several years mass spectrometry experience. Ability to communicate with other professional specialists is essential.

Kalamazoo is a medium-sized Southwestern Michigan community with immediate access to a mix of excellent cultural, educational, and recreational pursuits, including numerous lakes and a four-season climate.

Upjohn offers an excellent salary, commensurate with experience and an outstanding benefits program.

Qualified candidates should send a resume and salary requirements to:

Ronald E. Thompson
Employment Unit

**The
Upjohn
Company**

7000 Portage Road
Kalamazoo, MI. 49001

An Equal Opportunity Employer M/F

Upjohn

TOXICOLOGIST AND PATHOLOGIST

Ayerst Laboratories, a major ethical pharmaceutical firm has two outstanding career opportunities for a Toxicologist and a Pathologist.

TOXICOLOGIST

Responsibilities will include the design and supervision of drug safety evaluation studies, supervision of the preparation of draft toxicology reports, preparation of final reports and assisting and conducting, reviewing, and reporting special toxicity reproductive or mutagenicity studies. Ph.D. in toxicology, pharmacology, or related area required.

PATHOLOGIST

A D.V.M., M.D. or Ph.D. is required and board certification is desirable. Responsibility will include experimental design, histological sections, providing histological service for research as well as preparing reports for submission to Government regulatory agencies.

Our facility is located in the scenic Adirondack Mountains-Lake Champlain region of New York State, a friendly, lower cost of living area within a short drive to Lake Placid, Montreal and the Vermont ski centers.

We offer a competitive starting salary with a full line of benefits including dental and prescription plans and fully paid relocation and interview expenses.

Resume MUST include salary history and requirements

Send to:

Mr. Richard K. Mallard
Director of Personnel

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POSITIONS OPEN

POSTDOCTORAL RESEARCH POSITION in biochemistry. To study mechanism of transformation in gonococci. Experience in membrane biochemistry or immunology helpful; 2-year appointment, renewable; starting date: fall 1980. Send curriculum vitae and three letters of reference to: **Dr. John J. Scoeca, Department of Biochemistry, The Johns Hopkins University, School of Hygiene and Public Health, 615 North Wolfe Street, Baltimore, Md. 21205.** *The Johns Hopkins University is an Equal Opportunity Employer.*

HARVARD UNIVERSITY SCHOOL OF PUBLIC HEALTH

A search is being conducted for individuals with a broad outlook and perception of the field of tropical public health to fill the John LaPorte Given Professorship in the Department of Tropical Public Health. We will consider either candidates who are active in or familiar with modern biological approaches to tropical diseases, or individuals with broad public health-oriented interests and epidemiological or ecological training who also possess an appreciation of the more molecular approaches to tropical diseases. The person selected is expected to serve a term as chairman of the department either from the time of appointment or during a period and a term to be negotiated.

Harvard University is an Equal Opportunity Employer committed to an Affirmative Action Program. Send résumé and three references to:

Dr. Konrad Bloch
Chairman, Search Committee
Department of Nutrition
Harvard School of Public Health
665 Huntington Avenue
Boston, Massachusetts 02115

NATIONAL SCIENCE FOUNDATION PROGRAM MANAGER U.S.-PEOPLE'S REPUBLIC OF CHINA

The National Science Foundation, Division of International Programs, U.S.-People's Republic of China Program, is seeking qualified applicants for a senior program manager position. This position is excepted from the competitive service, EC-14 or EP-15 (equivalent to GS-14/15; salary range of \$34,713 to \$50,112 per annum), and will be filled on a permanent basis. Responsibilities consist of directing the management of the U.S.-China Program which includes the coordination, planning, implementation, and monitoring of program support. Applicants should have an advanced degree in science or engineering or equivalent experience; experience in the management of international exchanges and knowledge of the scientific infrastructure in the People's Republic of China. Chinese language capability is highly desirable. Send résumé or SF-171, Personnel Qualifications Statement, to: **National Science Foundation, 1800 G Street, NW, Washington, D.C. 20550, attention: Odessa G. White.** Closing date: 15 August 1980. For further information, telephone: 202-357-7840. *The National Science Foundation is an Equal Opportunity Employer.*

RESEARCH ASSOCIATE—To study the effects of chemical carcinogenesis and tumor promoters on gene expression. Background in molecular biology and chemical carcinogenesis desired. Salary: \$18,000 to \$22,000. Please send résumé and letters of reference to: **Dr. Thomas Slaga, Oak Ridge—University of Tennessee Graduate School of Biomedical Sciences, P.O. Box Y, Oak Ridge, Tenn. 37830.** *An Equal Opportunity/Affirmative Action Employer.*

RESEARCH ASSOCIATE IN IMMUNOLOGY

A 2- to 3-year appointment beginning September 1980. Ph.D. or M.D. with at least 2 years of postdoctoral experience in basic immunology to join a vigorous research program on the isolation and identification of unusual slow viral-like agents. An accomplished record in immunological research and experience with the production of monoclonal antibodies using hybridomas are essential. Candidate will have major responsibility for continuing development of immunoassays for the slow viral-like agent causing scrapie as well as antibody affinity isolation of this agent. The work will be performed in a multidisciplinary unit with molecular biologists, immunologists, neuropathologists, and virologists. Salary range: \$19,000 to \$22,000. Send curriculum vitae and three letters of reference to:

Dr. Daniel P. Stites
Department of Laboratory Medicine
Clinical Laboratories
University of California
San Francisco, Calif. 94143

POSITIONS OPEN

RESEARCH ASSOCIATES. Ph.D. in biochemistry, cell or molecular biology; are available for at least 3 years. Positions in metabolic regulation involves studies of the role of cyclic AMP-dependent phosphorylation in the hormonal regulation of gluconeogenesis and transport processes in kidney. These systems will be examined with isolated enzymes and with epithelial cells in culture.

Other positions are available to study the biosynthesis and secretion of cell surface antigens in tumor cells and acidic mucin glycoproteins in respiratory tissue. Salary range from \$13,500 to \$16,000. Send résumé and references to: **Dr. Joseph Mendicino, Department of Biochemistry, University of Georgia, Athens, Ga. 30602.**

At the University of Toronto a **RESEARCH ASSOCIATESHIP** is available. Experience in nucleic acid chemistry, protein biosynthesis, and microbial genetics preferred. A Ph.D., 2 years of postdoctoral experience, and three letters of reference are required. Write:

Professor M. C. Ganoza
Banting and Best Department of Medical Research
112 College Street
Toronto, Ontario, Canada M5G 1L6

RESEARCH ASSOCIATE

A permanent position as section head within a clinical-immunochemical research group for work on detailed characterization of human cancer-associated glycoconjugates. Doctorate in biochemistry, molecular biology, or chemistry with extensive recent laboratory work experience in preparative and structural carbohydrate research required. Excellent salary and benefits. Send résumé to: **Dr. Georg F. Springer, Professor of Surgery and Microbiology-Immunology (Northwestern University Medical School), Director, Immunochemistry Research, Evanston Hospital, 2650 Ridge Avenue, Evanston, Illinois 60201.** *An Equal Opportunity Employer.*

RESEARCH FELLOW—Ph.D. position available immediately for secular immunologists with background in cell culture, virology, fluorescent microscopy, and autoradiographic techniques. Salary commensurate with experience and qualifications. Send curriculum vitae to: **Dr. A. R. Neurath, Lindsley S. Kimball Research Institute, THE NEW YORK BLOOD CENTER, 310 East 67th Street, New York, N.Y. 10021.** *An Equal Opportunity Employer.*

SPECIFIC HOST RECOGNITION. Research associate to investigate the isolation, structure determination, and biology of specific substances involved in plant-host recognition. Experience in isolation techniques and spectroscopic methods desirable. Send résumé and references. For information, contact: **David Lynn, Department of Chemistry (telephone: 804-924-3100), or James Riopel, Department of Biology, University of Virginia, Charlottesville, Va. 22903.**

STRESS PHYSIOLOGY

The Department of Anatomy and Physiology, College of Veterinary Medicine, invites applications for an assistant professor, tenure-track position from individuals with a background in physiological and biochemical responses to stress and an interest in research on cattle. Participation in teaching systemic physiology to veterinary and graduate students as well as the establishment of a productive research program relating to bovine respiratory disease will be required.

Candidates must have a Ph.D. degree, D.V.M.—Ph.D. degree, or equivalent. Résumés and list of three references must be submitted by 15 August 1980 to: **Dr. Roger Fedde, Department of Anatomy and Physiology, College of Veterinary Medicine, Kansas State University, Manhattan, Kansas 66506.** *An Affirmative Action/Equal Opportunity Employer.*

VETERINARY ENTOMOLOGIST CORNELL UNIVERSITY

Tenure-track position; preferably assistant professor level. Ph.D. with postdoctoral or similar experience desirable. Research (65 percent); focused on ecology of arthropods associated with domestic animals; extension (35 percent): implementing pest-management programs for livestock and poultry industries in the state; no formal teaching responsibility. Send résumé and names of five references to: **Professor E. H. Smith, Department of Entomology, Cornell University, Ithaca, N.Y. 14853.** Application deadline: 1 September 1980. *Cornell is an Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

SENSORY RESEARCH. Two full-time, senior research positions are available immediately in the Institut fuer Arbeitsphysiologie, University of Dortmund (Professor C. R. Cavonius), for psychophysical or neurophysiological research in vision and audition. Salaries depend upon age and experience, and lie in the range of DM 52,000 to DM 72,000 per year. Reasonable moving expenses can be reimbursed. Appropriate equipment and technical support are available. Fluency in German is advantageous, but not required. Those interested should send curriculum vitae, list of publications, and names of potential references to: **Dr. Adam Reeves, Institut fuer Arbeitsphysiologie, Postfach 15 08, D-4600, Dortmund 1, West Germany.**

SYMPOSIUM

First Dallas Conference on Muscle and Nonmuscle Motility: 19 to 21 November 1980, Dallas, Texas. Abstracts invited for poster presentations. Papers and abstracts will be published. To bridge communication between researchers in muscle and nonmuscle contractile systems by bringing together distinguished researchers in these fields. Role of cytoskeleton in processes emphasized. Contact: **B. L. Chancellor, Roberts Center, Baylor Medical Center, 3500 Gaston Avenue, Dallas, Texas 75246.**

FELLOWSHIPS

POSTDOCTORAL FELLOWSHIP (M.D. or Ph.D.) available starting 1 September 1980 in the Joslin Research Laboratory of Harvard Medical School for studies on hormone/fuel metabolism in cultured muscle cells. Research will utilize continuous lines, primary cultures, and reversibly transformed lines to study hormonal and substrate control of protein turnover and intermediary metabolism. The project interfaces with other ongoing metabolism research in animals and humans. Send résumé and names of three references to: **Personnel Director, Joslin Diabetes Foundation, One Joslin Place, Boston, Mass. 02215.** *An Equal Opportunity Employer*

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Senior Toxicologist

Mead Johnson currently has a position available for a Senior Toxicologist. The individual we seek would, as Study Director or Supervisor of Study Director, in accord with GLP regulations of the FDA, plan, schedule, conduct, and evaluate acute, subacute, and chronic toxicity studies on new pharmaceutical agents. A staff of toxicologists and technicians will report to you.

Requirements for the position include a D.V.M. with training in toxicology or a Ph.D. in Pharmacology or Toxicology and a minimum of five years' experience in either industry or a contract testing lab. Experience must include: serving as a Study Director, supervision of other toxicologists, and long term animal studies.

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**Manager, Executive Employment,
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GEOLOGICAL RESEARCH

Petro-Canada requires qualified research personnel to join a dynamic team of professionals within the Geological Research and Services Group located in the Company's new Calgary Research Centre. The Research Group will provide specialized geological support for the Company's active Frontier and Western Canada Exploration and Development program, and for heavy oil and tar sand development projects.

SENIOR RESEARCH GEOLOGIST - CLASTIC PETROLOGY

The successful applicant will effectively carry out technical service and research projects in clastic petrology and sedimentology. This expertise will be applied to the Canadian Offshore East Coast areas, and/or Western Canada conventional and tar sands areas. Some experience in carbonate petrology and sedimentology is considered to be an advantage. Applicants should possess a Ph.D. or M.Sc. with full pertinent specialization and a minimum of one year applicable postgraduate experience, or a suitable combination of postgraduate work and relevant industry experience.

RESEARCH GEOLOGIST - MICROPALAEONTOLOGIST

This position will require the research-oriented professional to have a good working knowledge of Mesozoic and Tertiary planktic and benthic foraminifera, to be applied initially to the Canadian Offshore East Coast areas. The candidate can anticipate working in other basins, or parts of the geological column as the need arises. Some experience in computer and statistical techniques is

considered an advantage. Applicants will have a Ph.D. in a relevant field of study, or a suitable combination of postgraduate work and relevant industry experience.

PETROLEUM GEOCHEMIST/CLAY MINERALOGIST

The career professional can anticipate active participation in the co-ordination of an XRD - clay mineralogy laboratory providing technical support to explorationists and exploitation geologists. Applicants will be highly-qualified research specialists with a Ph.D. or be an experienced M.Sc. in Geology and Geochemistry. A strong analytical background in clay mineralogy and/or organic geochemistry is also required.

PALYNOLOGY TECHNOLOGIST

Working within the palynology research laboratory, the applicant will utilize necessary skills in the preparation of palynological slides from rock samples, processing of samples together with preliminary observation, analysis and interpretation of the processed material. This position requires the applicant to have pertinent education and experience within the appropriate science.

These positions will provide the highly-developed technical specialists with an attractive compensation and benefits plan in conjunction with the opportunity to participate within an active and innovative environment.

Confidential resumes can be directed to:

Mr. Keith A. Garries
Employment Co-ordinator
PETRO-CANADA
P.O. Box 2844
Calgary, Alberta
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