

(most of the information presented is available in previous reviews) the section is a good starting point for tracking down relevant literature, even for the "researcher or advanced student of nutritional science," the readership envisaged by the series editors, Alfin-Slater and Kritchevsky.

The other two sections provide more than a good starting point. Part 1 has concepts and part 3 methods. A paper on genetic and nutritional interactions (Garn *et al.*) in part 1 examines such strategies as relating the size of children to the size of their parents and the use of multiple births and adoption to unravel the relationships of nature and nurture. The paper is a useful preliminary to some of the papers in part 3. The ideal assessment of nutritional status is described by Garn. Practical field methods are discussed by Zervas, who includes a useful comparison of their cost and effectiveness. Habicht *et al.* describe the value of individual measurements as indicators of a need for nutritional intervention and make the distinction between "nutriture" (nutritional intake minus expenditure and losses) and nutritional status, a point often ignored—not all thin dwarfs are undernourished.

The outstanding paper in the third section and indeed in the whole book is Neumann's "Reference data." Neumann cautions that "reference data for growth are not necessarily optimal, normal, ideal, desirable, or to be considered a target," but she nevertheless sees "a great need for a single set of international reference data for growth . . . based on a well-nourished, but not overnourished, well-cared-for population." In my view an international standard, if taken as a standard of reference rather than as a standard of excellence (to use a phrase from Jelliffe and Jelliffe), is helpful. Neumann reviews principal reference data and classification systems for a number of anthropometric measurements. She concludes that the National Center for Health Statistics growth standards published in 1976 "carry great promise as serving the 'new improved' international standard, currently for weight, stature, and head circumference, and shortly for arm circumference and skin-folds as well."

This review has mentioned only 11 of the 21 papers, and, of course, there are other highlights, such as Gopalan and Rao's discussion of protein requirements and Robinow's brief review of growth failure in renal disease.

The book lacks a critical discussion of the critical period hypothesis as applied to growth, or indeed any detailed dis-

cussion of the prognosis of growth failure occurring at different times of life. I believe that the critical period concept is in danger of being applied uncritically to human nutrition and would have valued a deeper consideration of the subject than the passing references in the editors' introduction and the odd chapter. I have no doubt, however, that I shall consult the book, particularly the chapters on methods, a lot in the coming year.

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Books Received

Atmospheric Motion and Air Pollution. An Introduction for Students of Engineering and Science. Richard A. Dobbins. Wiley-Interscience, New York, 1979. xx, 324 pp., illus. \$25.95.

Atomic Energy Levels. Data for Parametric Calculations. Serafin Frage, K. M. S. Saxena, and Jacek Karwowski. Elsevier, New York, 1979. x, 482 pp., illus. \$95. Physical Sciences Data 4.

Atomic Gas Laser Transition Data. A Critical Evaluation. William Ralph Bennett, Jr. IFI/Plenum, New York, 1979. viii, 294 pp. \$75. IFI Data Base Library.

Attention and Cognitive Development. Gordon A. Hale and Michael Lewis, Eds. Plenum, New York, 1979. xvi, 366 pp., illus. \$29.50.

Axiomatic Models of Bargaining. Alvin E. Roth. Springer-Verlag, New York, 1979. vi, 122 pp., illus. Paper, \$9. Lecture Notes in Economics and Mathematical Systems, vol. 170.

Chemical Porphyria in Man. J. J. T. W. A. Strik and J. H. Koeman, Eds. Elsevier/North-Holland, New York, 1979. xiv, 236 pp., illus. \$41.50.

Chemistry and Agriculture. Proceedings of a symposium, Bristol, England, Apr. 1979. Chemical Society, London, 1979. xiv, 288 pp., illus. Paper, £7. Special Publication No. 36.

Child Abuse and Neglect as Related to Parental Drug Abuse and Other Antisocial Behavior. Judianne Densen-Gerber. Odyssey Institute, New York, 1978. viii, 122 pp. Paper, \$2.

Chlorofluorocarbons and Their Effect on Stratospheric Ozone. Second Report. Her Majesty's Stationery Office, London, 1979. xiv, 236 pp., illus. Paper, £4.75. Pollution Paper No. 15.

The Effects of Nuclear War. Office of Technology Assessment. Allanheld, Osmun, Montclair, N.J., 1980. viii, 152 pp., illus. \$9.95.

The Efficient Use of Energy Resources. William D. Nordhaus. Yale University Press, New Haven, Conn., 1979. xxii, 164 pp., illus. \$17.50. Cowles Foundation for Research in Economics at Yale University Monograph 26.

Elaboration et Justification des Modèles. Applications en Biologie. Papers from a colloquium, Paris, Oct. 1978. P. Delattre and M. Thellier, Eds. Maloine, Paris, 1979. Two volumes. xx, 748 pp., illus. Paper, 160 F. Recherches Interdisciplinaires.

Electronic Imaging. Papers from a symposium, London, Sept. 1978. T. P. McLean and P. Schagen, Eds. Academic Press, New York, 1979. xvi, 522 pp., illus. + plates. \$61.

Electronic Properties Research Literature Retrieval Guide, 1972-1976. J. F. Chaney and T. M. Putnam, Eds. IFI/Plenum, New York, 1979. Four volumes. Various pages. \$275.

Equational Compactness in Rings. With Applications to the Theory of Topological Rings. David K. Haley. Springer-Verlag, New York, 1979. iv, 168 pp. Paper, \$9.80. Lecture Notes in Mathematics, vol. 745.

Ergodic Theory. Proceedings of a meeting, Oberwolfach, Germany, June 1978. M. Denker and K. Jacobs, Eds. Springer-Verlag, New York, 1979. xii, 210 pp. Paper, \$12.50. Lecture Notes in Mathematics, vol. 729.

Essays in Medical Sociology. Journeys into the Field. Renée C. Fox. Wiley-Interscience, New York, 1979. x, 548 pp. \$19.95.

Essential Mathematics for Applied Fields. Richard M. Meyer. Springer-Verlag, New York, 1979. xvi, 556 pp. Paper, \$16.80. Universitext.

Ethics for Science Policy. Proceedings of a symposium, Södergarn, Sweden, Aug. 1978. Torgny Segerstedt and Elisabeth Ward, Eds. Published for the Royal Swedish Academy of Sciences by Pergamon, New York, 1979. xiv, 256 pp. Cloth, \$12.50; paper, \$10.

Ethics in Social and Behavioral Research. Edward Diener and Rick Crandall. University of Chicago Press, Chicago, 1979. x, 266 pp. Paper, \$4.50. Reprint of the 1978 edition.

Integral Representations. Irving Reiner and Klaus W. Roggenkamp. Springer-Verlag, New York, 1979. viii, 276 pp. Paper, \$14.30. Lecture Notes in Mathematics, vol. 744.

Integration of Analogue Electronic Circuits. J. Davids. Academic Press, New York, 1979. x, 276 pp., illus. \$39.50.

Intelligence Requirement for the 1980's. Elements of Intelligence. Roy Godson, Ed. National Strategy Information Center, Washington, D.C., 1979. vi, 92 pp. + appendix. Paper, \$4.95.

International Review of Cytology. Vol. 60. G. H. Bourne, J. F. Danielli, and K. W. Jeon, Eds. Academic Press, New York, 1979. x, 392 pp., illus. \$33.50.

International Review of Cytology. Vol. 61. G. H. Bourne, J. F. Danielli, and K. W. Jeon, Eds. Academic Press, New York, 1979. x, 356 pp., illus. \$33.

Introduction to Affine Group Schemes. William C. Waterhouse. Springer-Verlag, New York, 1979. xii, 164 pp. \$19.80. Graduate Texts in Mathematics, 66.

Introduction to Computing. Structured Problem Solving Using WATFIV-S. V. A. Dyck, J. D. Lawson, and J. A. Smith. Reston (Prentice-Hall), Englewood Cliffs, N.J., 1979. xx, 604 pp., illus. \$15.95.

An Introduction to Dynamic Meteorology. James R. Holton. Academic Press, New York, ed. 2, 1979. xiv, 394 pp., illus. \$22. International Geophysics Series, vol. 23.

Introduction to Exploration Geochemistry. A. A. Levinson. Applied Publishing Ltd., Wilmette, Ill., ed. 2, 1980. xiv, 924 pp., illus. \$35.

Introduction to Mathematics for Life Scientists. Edward Batschelet. Springer-Verlag, New York, ed. 3, 1979. xvi, 644 pp., illus. Paper, \$18.80. Springer Study Edition.

Introduction to Medical Mycology. Glenn S. Bulmer. Year Book Medical Publishers, Chicago, 1979. x, 196 pp., illus. Paper, \$17.95.

Introduction to Powder Surface Area. S.

Lowell. Wiley-Interscience, New York, 1979. xvi, 200 pp., illus. \$17.95.

Introduction to the Theory of Solid Surfaces. Federico García-Moliner and Fernando Flores. Cambridge University Press, New York, 1979. xiv, 438 pp., illus. \$59.50. Cambridge Monographs on Physics.

An Introduction to Viscous Flow. William F. Hughes. Hemisphere, Washington, D.C., and McGraw-Hill, New York, 1979. xii, 220 pp., illus. \$23.50. Series in Thermal and Fluids Engineering.

The Jet Age. Forty Years of Jet Aviation. Papers from a symposium, Oct. 1979. Walter J. Boyne and Donald S. Lopez, Eds. National Air and Space Museum, Washington, D.C., 1979 (distributor, Smithsonian Institution Press, Washington, D.C.). viii, 190 pp., illus. Cloth, \$17.50; paper, \$7.95.

Kinins—II. Systemic Proteases and Cellular Function. Proceedings of a symposium, Tokyo, Nov. 1978. Setsuro Fujii, Hiroshi Moriya, and Tomoji Suzuki, Eds. Plenum, New York, 1979. xiv, 720 pp., illus. \$69.50. Advances in Experimental Medicine and Biology, vol. 120A.

Knowledge and Wonder. The Natural World as Man Knows It. Victor F. Weisskopf. MIT Press, Cambridge, Mass., ed. 2, 1979. xiv, 290 pp., illus. Cloth, \$15; paper, \$5.95.

Laboratory Organization and Management. Fred Grover and Peter Wallace. Butterworths, Boston, 1979. xii, 242 pp., illus. \$17.95.

Large Engineering Systems 2. Proceedings of a symposium, Waterloo, Canada, May 1978. G. J. Savage and P. H. Roe, Eds. Sandford Educational Press, Waterloo, Canada, 1978 (distributor, Pergamon, New York). x, 578 pp., illus. \$80.

Laser Spectroscopy IV. Proceedings of a conference, Rottach-Egern, Germany, June 1979. H. Walther and K. W. Rothe, Eds. Springer-Verlag, New York, 1979. xiv, 654 pp., illus. \$44.50. Springer Series in Optical Sciences, 21.

Modern Differential Geometric Techniques in the Theory of Continuous Distributions of Dislocations. Frederick Bloom. Springer-Verlag, New York, 1979. xii, 206 pp. Paper, \$12.50. Lecture Notes in Mathematics, vol. 733.

Molecular Biology of Plants. Proceedings of a symposium, Minneapolis, Mar. 1976. Irwin Rubenstein, Ronald L. Phillips, Charles E. Green, and Burle G. Gengenbach, Eds. Academic Press, New York, 1979. xiv, 344 pp., illus. \$24.50.

Normal Varieties. Silvio Greco with the collaboration of A. Di Sante. Academic Press, New York, 1978. 73 pp., illus. Paper, \$18.50. Instituto Nazionale de Alta Matematica Institutiones Mathematicae, vol. 4.

North American Elk. Ecology, Behavior and Management. Papers from a symposium, Laramie, Wyo., Apr. 1978. Mark S. Boyce and Larry D. Hayden-Wing, Eds. University of Wyoming, Laramie, 1979 (available from the Department of Zoology, University of Wyoming, Laramie). vi, 294 pp., illus. \$8.

Nuclear Physics with Electromagnetic Interactions. Proceedings of a conference, Mainz, Germany, June 1979. H. Arenhövel and D. Drechsel, Eds. Springer-Verlag, New York, 1979. x, 510 pp., illus. Paper, \$23. Lecture Notes in Physics, vol. 108.

Numerical Methods for Partial Differential Equations. Proceedings of a seminar, Madison, Wis., Oct. 1978. Seymour V. Parter, Ed. Academic Press, New York, 1979. x, 332 pp., illus. \$14.50.

Observer's Handbook 1980. John R. Percy, Ed. Royal Astronomical Society of Canada, Toronto, 1979. 140 pp., illus. Paper, C\$4.

Ontogeny of Learning and Memory. Papers from a conference, Binghamton, N.Y., June 1977. Norman E. Spear and Byron A. Campbell, Eds. Erlbaum, Hillsdale, N.J., 1979 (distributor, Halsted [Wiley], New York). xii, 322 pp., illus. \$19.95.

Organic Photochemistry. Vol. 4. Albert Padwa, Ed. Dekker, New York, 1979. xiv, 344 pp., illus. \$39.50.

Outpatient Treatment of Alcoholism. A Review and Comparative Study. Jeffrey M. Brandsma in collaboration with Maxie C. Maultsby, Jr., and Richard J. Welsh. University Park Press, Baltimore, 1979. x, 214 pp., illus. Paper, \$16.95.

Parasitic Zoonoses. Report of a WHO Expert Committee with the Participation of FAO. World Health Organization, Geneva, 1979 (U.S. distributor, WHO Publications Centre USA, Albany, N.Y.). 108 pp. Paper, \$7.25. Technical Report Series 637.

Parents and Children in Autism. Marian K. DeMyer. Winston, Washington, D.C., and Halsted (Wiley), New York, 1979. xviii, 278 pp. \$17.95.

Pathophysiology. A. A. Buehlmann and E. R. Froesch, Eds. Translated from the German edition (Berlin) by Terry Telger. Springer-Verlag, New York, 1979. xii, 404 pp., illus. \$19.80.

Perception and the Senses. Evan L. Brown and Kenneth Deffenbacher. Oxford University Press, New York, 1979. xii, 520 pp., illus. \$16.95.

Personality and Hypnosis. A Study of Imaginative Involvement. Josephine R. Hilgard. University of Chicago Press, Chicago, ed. 2, 1979. xii, 310 pp. Paper, \$5.95.

Persons. A Comparative Account of the Six Possible Theories. F. F. Centore. Greenwood Press, Westport, Conn., 1979. xii, 330 pp. \$25. Contributions in Philosophy, No. 13.

Perspectives on Cross-Cultural Psychology. Anthony J. Marsella, Roland G. Tharp, and Thomas J. Ciborowski, Eds. Academic Press, New York, 1979. xviii, 414 pp. \$26.50.

Photoabsorption, Photoionization, and Photoelectron Spectroscopy. Joseph Berkowitz. Academic Press, New York, 1979. xx, 470 pp., illus. \$39.50.

Physical Acoustics. Principles and Methods. Vol. 14. Warren P. Mason and R. N. Thurston, Eds. Academic Press, New York, 1979. xiv, 562 pp., illus. \$55.

Physical Chemistry with Applications to the Life Sciences. David Eisenberg and Donald Crothers. Benjamin/Cummings, Menlo Park, Calif., 1979. xxvi, 868 pp., illus. \$21.95.

Physical Metallurgy of Platinum Metals. E. Savitsky, V. Polyakova, N. Gorina, and N. Roshan. Translated from the Russian edition (1975) by I. V. Savin. Mir Publishers, Moscow, 1978 (U.S. distributor, Pergamon, New York). 396 pp., illus. \$40.

Physics at High Energies. Proceedings of a symposium, Stockholm, Sept. 1978. G. Ek-spong and S. O. Holmgren, Eds. Royal Swedish Academy of Sciences, Stockholm, 1979. pp. 209–288, illus. Paper, 100 Sw.Kr. Reprinted from *Physica Scripta*, vol. 20.

The Physics of Selenium and Tellurium. Proceedings of a conference, Königstein, Germany, May 1979. E. Gerlach and P. Grosse, Eds. Springer-Verlag, New York, 1979. x, 282 pp., illus. \$29.70. Springer Series in Solid-State Sciences, vol. 13.

Physiological Genetics. John G. Scandalios, Ed. Academic Press, New York, 1979. xii,

280 pp., illus. \$24. Physiological Ecology.

Physiology of Movements. W. Haupt and M. E. Feinleib, Eds. Springer-Verlag, New York, 1979. xviii, 732 pp., illus. \$100. Encyclopedia of Plant Physiology, New Series, vol. 7.

Plant Disease. An Advanced Treatise. Vol. 4, How Pathogens Induce Disease. James G. Horsfall and Ellis B. Cowling, Eds. Academic Press, New York, 1979. xxii, 466 pp., illus. \$42.

Plant Organelles. Eric Reid, Ed. Ellis Horwood, Chichester, England, and Halsted (Wiley), New York, 1979. x, 232 pp., illus. \$55.95 Methodological Surveys (B), vol. 9.

Polymer-Polymer Miscibility. Olagoke Olabisi, Lloyd M. Robeson, and Montgomery T. Shaw. Academic Press, New York, 1979. xii, 370 pp., illus. \$42.50.

Polysaccharides in Food. Papers from a school, Nottingham, England, 1978. J. M. V. Blanshard and J. R. Mitchell, Eds. Butterworths, Boston, 1979. x, 368 pp., illus. \$55.95.

Primates in Nutritional Research. Proceedings of a workshop, Beaverton, Ore., Oct. 1978. K. C. Hayes, Ed. Academic Press, New York, 1979. x, 372 pp., illus. \$29.50.

Principles of Biological Autonomy. Francisco J. Varela. Elsevier/North-Holland, New York, 1979. xxii, 306 pp. \$35. The North-Holland Series in General Systems Research, vol. 2.

Problems in the Foundations of Physics. Proceedings of a school, Varenna on Lake Como, Italy, July 1977. North-Holland, Amsterdam, 1979 (U.S. distributor, Elsevier, New York). xiv, 500 pp. \$87.75.

Room and Situation. The Political Economy of Land-Use Policy. James C. Hite. Nelson-Hall, Chicago, 1979. x, 340 pp. Cloth, \$18.95; paper, \$9.95.

The Runner's Complete Medical Guide. Richard Mangi, Peter Jokl, and O. William Dayton. Summit Books, New York, 1979. 318 pp., illus. Cloth, \$14.95; paper, \$6.95.

The Sane Alternative. A Choice of Futures. James Robertson. River Basin Publishing Company, St. Paul, Minn., 1979. 152 pp., illus. Paper, \$4.95.

Science and Technology in Development. A Unesco Approach. Daniel Behrman. Unesco, Paris, 1979 (U.S. distributor, Unipub, New York). 104 pp. + plates. Paper, \$4.75.

Science and the Factors of Inequality. Lessons of the Past and Hopes for the Future. Charles Morazé with contributions by seven others. Unesco, Paris, 1979 (U.S. distributor, Unipub, New York). 274 pp. Paper, \$13.

Science, Politics, and Controversy. Civilian Nuclear Power in the United States, 1946–1974. Steven L. Del Sesto. Westview Press, Boulder, Colo., 1979. xviii, 260 pp. \$17. Westview Special Studies in Science, Technology, and Public Policy.

Semantic and Conceptual Development. An Ontological Perspective. Frank C. Keil. Harvard University Press, Cambridge, Mass., 1979. xviii, 214 pp., illus. \$16.50. Cognitive Science Series, 1.

Semantics from Different Points of View. Papers from a conference, Konstanz, Germany, Sept. 1978. R. Bäuerle, U. Egli, and A. van Stechow, Eds. Springer-Verlag, New York, 1979. viii, 422 pp., illus. \$26. Springer Series in Language and Communication, vol. 6.

A Source Book in Astronomy and Astrophysics, 1900–1975. Kenneth R. Lang and Owen Gingerich, Eds. Harvard University Press, Cambridge, Mass., 1979. xx, 922 pp., illus.

(Continued on page 1049)

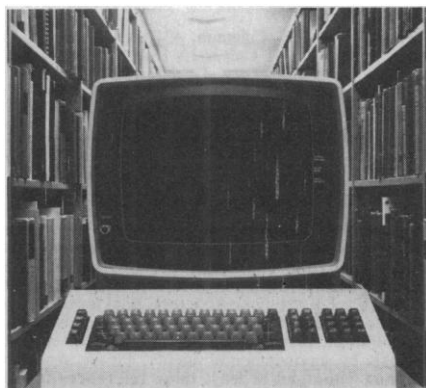
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BOOKS RECEIVED

(Continued from page 1013)

\$50. Source Books in the History of the Sciences.

Spin-Temperature and Nuclear-Spin Relaxation in Matter. Basic Principles and Applications. Dieter Wolf. Clarendon (Oxford University Press), New York, 1979. xviii, 462 pp. \$34.95. The International Series of Monographs on Physics.

The Standard Biphasic-Contrast Examination of the Stomach and Duodenum. Method, Results, and Radiological Atlas. J. Odo Op den Orth. Nijhoff, Boston, 1979. x, 182 pp. \$57.90. Series in Radiology.

Symmetry in Physics. J. P. Elliott and P. G. Dawber. Oxford University Press, New York, 1979. Two volumes, illus. Vol. 1, Principles and Simple Applications. xx + pp. 1-280 + index. \$28.50. Vol. 2, Further Applications. xviii + pp. 281-558 + index. \$28.50.

A Symplectic Framework for Field Theories. Jerzy Kijowski and Włodzimierz M. Tulczyjew. Springer-Verlag, New York, 1979. iv, 258 pp. Paper, \$14.30. Lecture Notes in Physics, vol. 107.

Synchronous Machines. Their Theory, Stability, and Excitation Systems. Mulukutla S. Sarma. Gordon and Breach, New York, 1979. xvi, 582 pp., illus. \$48.

System Methods for Socioeconomic and Environmental Impact Analysis. Glenn R. DeSouza. Lexington (Heath), Lexington, Mass., 1979. xii, 164 pp. \$18.95. An Arthur D. Little Book.

t-Rings and Wreath Product Representations. Peter Hoffman. Springer-Verlag, New York, 1979. vi, 148 pp. Paper, \$9.80. Lecture Notes in Mathematics, vol. 746.

Taking Care of Strangers. The Rule of Law in Doctor-Patient Relations. Robert A. Burt. Free Press (Macmillan), New York, and Collier Macmillan, London, 1979. viii, 200 pp. \$15.95.

Technological Innovation for a Dynamic Economy. Christopher T. Hill and James M. Utterback, Eds. Pergamon, New York, 1979. xiv, 346 pp., illus. Cloth, \$25; paper, \$10. Pergamon Policy Studies on Science and Technology, 50.

Teratogenic Mechanisms. T. V. N. Persaud, Ed. University Park Press, Baltimore, 1979. x, 240 pp., illus. \$29.95. Advances in the Study of Birth Defects, vol. 1.

Theoretical Advances in Behavior Genetics. Proceedings of a NATO Advanced Study Institute, Banff, Canada, Sept. 1978. Joseph R. Royce and Leendert P. Mos, Eds. Sijthoff & Noordhoff, Alphen aan den Rijn, The Netherlands, 1979. xvi, 708 pp., illus. \$75. NATO Advanced Study Institutes Series D, No. 2.

Theory and Practice of Early Reading. Vol. 1. Papers from conferences, Pittsburgh, 1976. Lauren B. Resnick and Phyllis A. Weaver, Eds. Erlbaum, Hillsdale, N.J., 1979. xiv, 394 pp. \$24.95.

Whales. E. J. Slijper. Translated from the Dutch edition (Amsterdam, 1958) by A. J. Pomerans. Revised by Richard J. Harrison. Cornell University, Ithaca, N.Y., ed. 2, 1979. 512 pp., illus. \$29.50.

Why Big Fierce Animals Are Rare. An Ecologist's Perspective. Paul Colinvaux. Princeton University Press, Princeton, N.J., 1979. viii, 256 pp. Paper, \$4.95. Reprint of the 1978 edition.

The Wild Dogs in Life and Legend. Maxwell Riddle. Howell Book House, New York, 1979. 300 pp., illus. \$14.95.

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Send applications to: **John E. Swett, Ph.D., Professor and Chairman, Department of Anatomy, College of Medicine, University of California, Irvine, Calif. 92717.**

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ASSISTANT PROFESSOR OF ANATOMY

Two or more years of postdoctoral experience and strong research record required. Must be able to teach gross anatomy or neuroanatomy. Send curriculum vitae to: **Dr. R. G. Hibbs, Department of Anatomy, Louisiana State University School of Medicine, P.O. Box 33932, Shreveport, La. 71130. An Equal Opportunity Employer.**

AQUATIC ORGANIC CHEMIST. The U.S. Department of Commerce, National Oceanic and Atmospheric Administration (NOAA), Great Lakes Environmental Research Laboratory, Ann Arbor, Michigan, is seeking an organic biogeochemist to work within its program designed to advance the state of the art in numerically simulating the transport, cycling, and fate of toxic organic compounds in the aquatic ecosystem. Candidates should have proven research experience in some area of ecosystem chemical processes and interest in applying process information to numerical modeling. Candidates should be familiar with the fields of limnology/oceanography and ecology. This position is in the competitive Civil Service and may be filled at the GS-13 or GS-12 levels. Entrance level salaries are \$29,375 and \$24,703 per annum, respectively. **QUALIFICATIONS:** B.S. or higher degree in physical or life sciences or engineering. This course of study must have included 30 semester hours in chemistry consisting of lectures, recitations, and appropriate laboratory work which included quantitative analysis, inorganic, organic, and physical chemistry; at least 6 semester hours of physics; and mathematics through differential and integral calculus. Candidates must also show 3 years of professional experience directly related to the field of research chemistry. Advanced education may be substituted for the experience. Additional technical information may be obtained from: **Dr. Andrew Robertson, telephone: 313-668-2281 or FTS 378-2281. TO APPLY:** current or former federal employees should submit SF-171, CD-332 (Employee Appraisal), and a transcript. Form CD-332 may be obtained by telephoning: **303-497-6332 or FTS 320-6332.** Applicants not employed by the federal government should submit a complete application package for "Physical Science Positions-1300." These forms may be obtained from the nearest Office of Personnel Management. All applications should be submitted to: **NOAA/NTIA, Personnel Services Division (R566), attention: Linda Stoll, Boulder, Colorado 80303.** Reference vacancy number NOAA/ERL 80-294LS. Applications must be received no later than 19 September 1980 to receive consideration.

An Equal Opportunity Employer

POSITIONS OPEN

ANATOMIST SEARCH REOPENED

The Southern Illinois University, School of Medicine, Anatomy Unit, is seeking a qualified anatomist to teach gross anatomy. Necessary qualifications include an earned M.D. or Ph.D. and experience in teaching gross anatomy. The individual employed will be assigned gross anatomy teaching responsibilities in addition to the expectation that a high-quality research program will be conducted. This tenure-track position will be filled at the assistant, associate, or full professor rank. Rank and salary are dependent on experience and qualifications. Qualified, interested persons are invited to send letters of application to: **Office of the Associate Dean, Anatomy Search Committee, School of Medicine, Southern Illinois University, Carbondale, Illinois 62901.** Applications must be postmarked by 10 October 1980.

An Equal Opportunity/Affirmative Action Employer

Amherst College seeks an **ASSISTANT PROFESSOR** in the area of **ECOLOGICAL** to begin 1 July 1981. Areas of particular interest are community, physiological, or coevolutionary ecology. Doctorate required. Responsibilities during the first year include co-teaching a general ecology course and team-teaching an introductory biology course, both with laboratories. The candidate will develop an active research program including the supervision of student research. During the second year, responsibilities include an advanced undergraduate course in the candidate's specialty. Three-year renewable contract, with tenure decision during the sixth year. Send curriculum vitae, copies of publications, and three letters of reference to: **Professor William M. Hexter, Chairman, Biology Department, Amherst College, Amherst, Mass. 01002.** The deadline is 28 November 1980. *An Equal Opportunity/Affirmative Action Employer.*

ASSISTANT PROFESSOR, MARINE COMMUNITY ECOLOGY

The Department of Biology of the University of Pennsylvania seeks applicants for a tenure-track assistant professorship available 1 September 1981. Preference will be given to individuals conducting theoretical and experimental research on the dynamics of nearshore benthic marine communities. Applicants should be able to teach in advanced, theoretically oriented ecology courses and contribute to teaching in general biology at the undergraduate level. Send curriculum vitae and statement of research and teaching interests and have three letters of recommendation sent to: **Chairperson, Marine Ecologist Search Committee, Department of Biology, University of Pennsylvania, Philadelphia, Pa. 19104.** Applications will be accepted until 31 December 1980.

An Equal Opportunity/Affirmative Action Employer

ASSISTANT PROFESSOR, PLANT ECOLOGY

The Department of Biology of the University of Pennsylvania seeks applicants for a tenure-track assistant professorship available 1 September 1981. Preference will be given to individuals conducting experimental research on population processes or adaptations of plants in aquatic or terrestrial systems. Applicants should be able to teach a field-oriented plant ecology course using localities in the Philadelphia area and contribute to general biology and ecology courses at the undergraduate level. Send curriculum vitae, statement of research and teaching interests, and have three letters of recommendation sent to: **Chairperson, Plant Ecologist Search Committee, Department of Biology, University of Pennsylvania, Philadelphia, Pa. 19104.** Applications will be accepted until 31 December 1980.

An Equal Opportunity/Affirmative Action Employer

ASSISTANT PROFESSOR, POPULATION GENETICS/EVOLUTION

The Department of Biology at the University of Pennsylvania seeks applicants for a tenure-track assistant professorship available 1 September 1981. Preference will be given to individuals conducting research on theoretical and/or experimental problems in population genetics and evolution. Applicants must have quantitative and statistical expertise and be able to interact with a strong ecology and population biology group. Send curriculum vitae, statement of research and teaching interests, and have three letters of recommendation sent to: **Chairperson, Population Geneticist/Evolutionist Search Committee, Department of Biology, University of Pennsylvania, Philadelphia, Pa. 19104.** Applications will be accepted until 31 December 1980.

An Equal Opportunity/Affirmative Action Employer

POSITIONS OPEN

ASSISTANT CENTER DIRECTOR SCIENCE AND EDUCATION ADMINISTRATION HUMAN NUTRITION RESEARCH CENTER ON AGING AT TUFTS UNIVERSITY BOSTON, MASSACHUSETTS

\$29,375 to \$45,126 per annum

(commensurate with qualifications and experience)

Serves as assistant Center director with responsibility for the development and implementation of systems for planning, evaluating, and reviewing research programs proposed for the Center. Responsible for budget development for the Center. Responsible for the Center's project system and research information system. Position requires mastery in one of the fields of biological or physical sciences or nutrition. Knowledge of the federal budgeting process, grant and contract procedures, and experience with computerized information system is desirable. Career Civil Service position. Contact or mail application SF-171 to: **Dolores Kauffman, USDA-SEA-AOD, Personnel Branch, S1, Building 003, Room 318, BARC-West, Beltsville, Md. 20705. Telephone: 301-344-2768.**

An Equal Opportunity Employer

ASSISTANT RESEARCH BIOLOGIST

Grant-supported position available late 1980 (funding currently available for 2 years) to study distribution and activity of bioluminescent organisms. Ph.D. in marine biology, biochemistry, or related fields acceptable. Research experience in marine biology or marine biochemistry. Familiarity in electronics, engineering, and equipment fabrication. Salary: \$19,700. Send curriculum vitae, reprints, and three letters of recommendation to:

**Dr. Kenneth H. Nealson, A-002
Scripps Institution of Oceanography
University of California, San Diego
La Jolla, California 92093**

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

ASSISTANT RESEARCH BOTANIST. Should have proven experience in computer-assisted morphometric analysis of EM serial sections. Preference will be given to candidates having previous experience with mitotic ultrastructure of algal and/or tissue culture cells. Ph.D. and postdoctoral experience essential. Salary range: \$21,600 to \$22,500 per year. Send résumé and reprints to: **Dr. W. Z. Cande, Department of Botany, University of California, Berkeley, Calif. 94720.** Application deadline: 15 September 1980. *The University of California is an Affirmative Action Employer.*

UNIVERSITY OF CALIFORNIA ASSISTANT VICE PRESIDENT— AGRICULTURE AND UNIVERSITY SERVICES AND DIRECTOR—AGRICULTURAL EXPERIMENT STATION (AES) SYSTEMWIDE

University officer responsible for AES research program development, budgeting, coordination of units, and relations with university, government, and clientele. Research attainment to qualify for tenure-level appointment in appropriate field, demonstrated experience in university administration-policy formulation, public relations, and knowledge of AES system required. Salary commensurate with experience, in range of \$48,600 to \$65,300. Apply by 15 September 1980 to:

**E. Coleman, AVP-A
41 University Hall
University of California
Berkeley, Calif. 94720**

*An Equal Opportunity/
Affirmative Action Employer, H/F/M*

ASSOCIATE RESEARCH PROFESSOR ENVIRONMENTAL PATHOLOGY

A nontenured research series position for an individual interested in developing an environmental pathology program concerned with mutagenesis and carcinogenesis testing is available. The candidate should have a strong postdoctoral background in genetic toxicology research related to the mechanisms of initiation, promotion, and inhibition of carcinogenesis by environmental agents. Please send curriculum vitae and at least three references to: **Dr. David M. Goldenberg, MS 409 Medical Center, University of Kentucky, Lexington, Ky. 40536** by 15 September 1980. *Equal Opportunity/Affirmative Action Employer.*

**DEPUTY DIRECTOR FOR
ATMOSPHERIC PROGRAMS
ATLANTIC OCEANOGRAPHIC AND
METEOROLOGICAL LABORATORIES**

DEPUTY DIRECTOR FOR ATMOSPHERIC PROGRAMS—The National Oceanic and Atmospheric Administration (NOAA) of the U.S. Department of Commerce has announced the vacancy of Deputy Director of the Atlantic Oceanographic and Meteorological Laboratories (AOML) in Miami, Florida. The deputy director conceives, designs, directs, and evaluates broad theoretical and experimental research programs in hurricane dynamics, energetics, predictability, and modification; conducts personal research in dynamics, thermodynamics, and energetics of tropical weather systems; and shares in management of other meteorological and oceanographic research programs. The staff includes approximately 220 positions.

Qualifications—Experience in the conception, design, direction, and evaluation of research as described above; general competence in physical sciences, mathematics, and computer-modeling techniques to be able to understand tropical meteorology and oceanography; senior-level research capabilities; and management competence in broad areas of administration such as personnel management, procurement and contracting, budget management, development of organizational structure, program review, and so forth. Total experience must indicate ability to direct and manage a complex research organization.

Salary—This is an SES position with a salary range of \$47,889 to \$50,112, commensurate with experience, education, and scientific achievement.

Application—Interested persons should contact: NOAA/ERL Area Personnel Office, 15 Rickenbacker Causeway, Miami, Florida 33149 (Monday to Friday) or telephone: 305-361-4454. Application materials will be provided upon request. NOAA is an Equal Opportunity Employer M/F.

HUMAN CYTOGENETIC TECHNOLOGIST

To join three others in high volume laboratory using most modern cytogenetic techniques. Applicants must be familiar with lymphocyte, bone marrow, skin fibroblasts, and amniotic fluid cell culture. Excellent salary and fringe benefits. Send résumé to:

Dr. Ram S. Verma,
Chief, Division
of Cytogenetics

**JEWISH HOSPITAL
AND
MEDICAL CENTER**

555 Prospect Place
Brooklyn, N.Y. 11238

Equal Opportunity
Employer, M/F

RECOMBINANT DNA TECHNOLOGY

ARMOS CORPORATION, a young and growing high-technology company, is seeking outstanding scientific staff to develop commercial applications for recombinant DNA technology in new areas. Qualified candidates will have the opportunity to play an important role in the growth of the firm while doing research in this exciting field.

Scientists with a Ph.D. or equivalent and research experience in either nucleic acid synthesis, the expression of polypeptides in bacteria or yeast, virology, or plant genetics are particularly desired.

ARMOS offers an outstanding salary and benefits package plus an attractive equity participation program. *Female and minority applicants are encouraged to apply.*

Please send curriculum vitae, reprints of pertinent publications, and references to: **ARMOS CORPORATION, 729 El Camino, Suite 207, Burlingame, California 94010.**

ALBERTA HERITAGE FOUNDATION FOR MEDICAL RESEARCH

Established by an act of the Alberta Legislature, the Foundation is responsible for the administration of the income from a three hundred million dollar endowment in support of medical research. The Foundation seeks a

PRESIDENT

who will be responsible to the Trustees of the Foundation and will serve as Principal Officer.

This challenging assignment provides a unique opportunity for the successful applicant to help shape the development of research programs.

The President would:

- advise the Trustees on appropriate research development strategies,
- develop terms of reference for, and ensure the effective operation of, the Scientific Advisory Council,
- develop procedures for the review of applications for awards and grants,
- maintain effective communication with Alberta universities and the research community in Alberta,
- publicize and stimulate public awareness of the work of the Foundation.

Salary and conditions of employment for this senior position to be negotiated.

Applications and/or nominations should be accompanied by a curriculum vitae and the names of three references; please send to:

E.A. Geddes, Chairman
Alberta Heritage Foundation for Medical Research
1200 Oxford Tower, Edmonton Centre
10235 - 101 Street
Edmonton, Alberta T5J 3G1

Closing date for applications: October 31, 1980.

UNIVERSITY OF MASSACHUSETTS AMHERST CAMPUS REMOTE SENSING CENTER

As a result of new initiatives in the area of remote sensing, the University anticipates the following openings during fall 1980.

Director, VISUAL DISCRIMINATION LABORATORY. Ph.D. in experimental psychology with research specialization in visual attention and modification of stimulus overselectivity using severely retarded populations. Applicant must also have experience in development and implementation of behavior management programs using stimulus control procedures. A minimum of 2 years of supervised postdoctoral training and publications in both areas. University teaching experience is desirable.

SYSTEMS MANAGER, IMAGE PROCESSING LABORATORY. Applicants should have a minimum of 3 years of experience as a systems analyst with specialization in image processing systems development. At least 3 years of supervisory and managerial experience, preferably in a multidisciplinary academic setting.

ASSISTANT DIRECTOR, REMOTE SENSING CENTER. Ph.D. and a minimum of 2 years of digital image processing experience. A good working knowledge of current and planned U.S. and international remote sensing programs must be evident. The applicant should also have the ability to communicate effectively with representatives of state and federal governments and private industry for program development.

DIRECTOR, REMOTE SENSING ARCHIVE. Formal training in the cartographic and image library sciences and a good working knowledge of current data archiving techniques. A minimum of 3 years of managerial and supervisory experience in a data archive or library setting.

SYSTEMS ENGINEER, DATA RECEPTION FACILITY. A systems engineer with specialization in data reception and decoding from sun-synchronous satellites is needed for development and operational management of a remote data reception facility. A minimum of 2 years of experience in systems development; operational site management experience is highly desirable.

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

Résumés and three letters of recommendation should be sent to:

S. F. Conti
Dean of Graduate Studies and Research
University of Massachusetts
Amherst, Mass. 01003

POSITIONS OPEN

ASSISTANT SCIENCE ADMINISTRATOR SCIENCE AND EDUCATION ADMINISTRATION HUMAN NUTRITION WASHINGTON, D.C.

\$29,375 to \$45,126 per annum
(commensurate with qualifications and experience)

Serves as assistant to the nutrition scientist administrator responsible for program review and analyses. Develops and administers these programs using outside advisers and established boards of scientific consultants, functioning as a resource person for these groups. Develops and administers a system of research reporting for all human nutrition research in the agency, and a system of information storage and retrieval for monitoring the scientific and administrative progress of human nutrition programs. Participates in the budget development process. Position requires mastery in one of the fields of biological or physical sciences, or nutrition. Knowledge of the federal budget process, grant and contracting procedures, and experience with computerized information system is desirable. Career Civil Service position. Contact or mail application SF-171 to: **Dolores Kauffman, USDA-SEA-AOD, Personnel Branch, S1, Building 003, Room 318, BARC-West, Beltsville, Md. 20705. Telephone: 301-344-2768.**

An Equal Opportunity Employer

BIOCHEMICAL GENETICS POSTDOCTORAL POSITION available immediately for 2-year duration. Biochemist for research program involving in vitro DNA repair studies in mutagen-sensitive mutants of *Drosophila*. Experiments include analysis of DNA damage and repair by alkylating agents using sucrose gradients, biochemical assays, and autoradiographic measurements. Salary based on previous experience. Send curriculum vitae and the names of three references to: **Dr. R. L. Dusenbery, Department of Biology, Emory University, Atlanta, Ga. 30322** by 15 October 1980.

BIOCHEMISTRY FACULTY POSITION at the assistant professor level (tenure-track) in Department of Chemistry, University of North Carolina at Chapel Hill. Available 1 July 1981. The department is looking for a candidate with outstanding potential for research in biochemistry, who will also be an effective teacher in the Department of Chemistry at both the graduate and undergraduate levels. Applicants should provide a detailed résumé and a brief summary of future research plans and arrange to have three letters of recommendation sent to: **Dr. John H. Harrison, Department of Chemistry, University of North Carolina, Chapel Hill, North Carolina 27514** by 15 November 1980. *The University of North Carolina at Chapel Hill is an Affirmative Action/Equal Opportunity Institution.*

CHAIRMAN DEPARTMENT OF INFECTIOUS AND PARASITIC DISEASES THE JOHNS HOPKINS UNIVERSITY SCHOOL OF HYGIENE AND PUBLIC HEALTH BALTIMORE, MARYLAND 21205

Nominations and applications are invited for chairman of the Department of Infectious and Parasitic Diseases, The Johns Hopkins University School of Hygiene and Public Health, Baltimore, Maryland. Applicants for the position should be eminent scholars in a relevant laboratory science area with graduate teaching experience.

Nominations, applications, and inquiries should be directed, before 1 October 1980, to:

Abraham M. Lilienfeld, M.D., M.P.H.
Chairman, Pathobiology Search Committee
The Johns Hopkins University
School of Hygiene and Public Health
615 North Wolfe Street
Baltimore, Maryland 21205

The Johns Hopkins University is an Equal Opportunity/Affirmative Action Employer.

CHAIRMAN OF SURGERY

The University of Maryland School of Medicine seeks qualified candidates for appointment as chairman of the Department of Surgery. Successful candidates will assume the leadership and the administration of the department's patient care, teaching, and research activities. Applicants should be suitably qualified. Letters expressing interest, accompanied by curriculum vitae, should be sent to: **Dr. Stephen Schimpff, Baltimore Cancer Research Program, University of Maryland Hospital, 22 South Greene Street, Baltimore, Maryland 21201.**

An Equal Opportunity/Affirmative Action Employer

POSITIONS OPEN

CELL BIOLOGIST/Ph.D.

Damon Corporation, a leader in the health care field, is currently seeking an ambitious and talented cell biologist to add to our expanding research and development team.

Qualified individual will have a strong background in biochemistry. Previous experience should be in the area of tissue culture cell growth or the induction of specific macromolecular syntheses in cultured cells. Required techniques include tissue culture and animal virology. Additional experience with biological membranes or the production of monoclonal antibodies is helpful.

We offer an excellent compensation program including a comprehensive benefits package. Interested applicants should forward their résumés, including salary requirements, to: Damon Employment Office, 115 Fourth Avenue, Needham Heights, Mass. 02194. We are an Equal Opportunity Employer.

The **DEPARTMENT OF CHEMISTRY** at Purdue University solicits applications for an assistant professor-level tenure-track position in any area of **ORGANIC CHEMISTRY**, effective August 1981. Applicants for an associate professor-level position also will be considered. Minimum requirements include a Ph.D. in chemistry and exceptional promise in research and teaching at the undergraduate and graduate levels. Applicants for a more senior rank must have demonstrated significant research and teaching accomplishments. Curriculum vitae, including undergraduate and graduate transcripts, a summary of planned research, and three letters of recommendation should be sent by 1 November 1980 to: **Professor D. W. Margerum, Head, Department of Chemistry, Purdue University, West Lafayette, Ind. 47907.** *Purdue is an Equal Opportunity/Affirmative Action Employer.*

The **DEPARTMENT OF CHEMISTRY** at Purdue University solicits applications for two faculty positions in any area of **INORGANIC CHEMISTRY**, effective August 1981. Applicants will be considered at any professorial rank but at least one of the positions will be filled at the assistant professor level. Minimum requirements include a Ph.D. in chemistry and exceptional promise in research and teaching at the undergraduate and graduate levels. Applicants for more senior ranks must have demonstrated distinguished research and teaching abilities. Curriculum vitae, including undergraduate and graduate transcripts for applicants at the assistant professor level, a summary of planned research, and three letters of recommendation should be sent by 1 November 1980 to: **Professor D. W. Margerum, Head, Department of Chemistry, Purdue University, West Lafayette, Ind. 47907.** *Purdue is an Equal Opportunity/Affirmative Action Employer.*

UNIVERSITY OF BRITISH COLUMBIA (UBC) FACULTY OF MEDICINE DEPARTMENT OF PHYSIOLOGY

Applications are invited for a tenure-track faculty position at the assistant or associate professor level. Duties include the teaching of physiology to undergraduate students in science and medicine and to graduate students. It is expected that the individual appointed will develop an active research program with the potential for external funding. Applicants should have a Ph.D. or M.D. degree and have postdoctoral research experience.

Applications will be accepted until 1 November 1980. Send curriculum vitae and the names of three referees to: **Dr. J. R. Ledson, Professor and Head, Department of Physiology, Faculty of Medicine, University of British Columbia, Vancouver, British Columbia, Canada V6T 1W5.**

UBC offers Equal Opportunity to male and female candidates.

FIELD DIRECTOR. Study of leprosy epidemiology and immunobiology, Chiang Mai, Thailand. Seeking candidate with interest in directing NIAID funded study. Collaborative long-term studies of leprosy to be done in northern Thailand by investigators in three U.S. institutions and the faculty of Chiang Mai University. Looking for physician with laboratory experience in immunology and interest in leprosy and epidemiology. Reply to: **Box 208, SCIENCE.**

POSITIONS OPEN

Texas A & M University, a land-grant and sea-grant institution, invites letters of application and nomination for the position of **DEAN OF THE COLLEGE OF GEOSCIENCES**. The position will become open on or before 31 August 1981. Texas A & M is a state-supported university with a full-time enrollment of 31,000 students. The College of Geosciences currently has 90 faculty, 480 undergraduate, and 320 graduate students in the Departments of Geography, Geology, Geophysics, Meteorology, and Oceanography. The Earth Resources Institute of the College coordinates interdisciplinary research efforts of the departments through the Centers for Tectonophysics and Sedimentology and the programs in Geodynamics, Engineering Geosciences, and Mineral Resources. The total annual research budget for the College is about \$3.5 million.

Qualifications for the position include demonstrated academic and research leadership and administrative ability. Nominations, applications, and support materials will be accepted until 1 October 1980 and should be sent to:

Dr. Clinton A. Phillips
Dean of Faculties
Texas A & M University
College Station, Texas 77843

Texas A & M University is an Equal Opportunity/Affirmative Action Employer.

DEPUTY DIRECTOR OF RESEARCH. Position immediately open as deputy director, Holcomb Research Institute, Butler University, Indianapolis, Indiana. Responsible for planning, developing, and managing a research program in the environmental sciences and for directing an active and diverse group engaged in interdisciplinary and inter-institutional research and policy analysis. Ph.D. degree in natural sciences, publications in peer-reviewed journals, and 5 to 10 years of experience in research program development and management or equivalent is required. Evidence of skill in written and oral communications is necessary. Salary commensurate with ability and experience. Applications will be accepted until 1 October 1980, or until a suitable applicant is found. Résumés should be submitted along with the names and telephone numbers of three references to: **Dr. Thomas F. Malone, Director, Holcomb Research Institute, Butler University, Indianapolis, Indiana 46208.** *Butler University is an Equal Opportunity/Affirmative Action Employer, M/F/H, and strongly urges all qualified and interested applicants to apply.*

DIRECTOR, Michigan State University (MSU) Health Services is seeking a physician with M.D. or D.O. degree and administrative background to direct ambulatory care facility including student and employee health services and mental health. Responsible for all aspects of management of the Olin Health Center including supervision of approximately eight full-time equivalent physician staff. Must be experienced in administration of health care delivery and capable of communicating effectively with student and employee representatives, medical and nonmedical personnel, high level university administrators, faculty, and staff. The director reports to the Vice President for Health Services and Facilities. Contact: **Michigan State University, Room 110 Nisbet Building, East Lansing, Mich. 48824. Telephone: 517-353-3720.** Salary open. Refer to position Number A0153. *Michigan State University is an Affirmative Action/Equal Opportunity Institution.*

FACULTY POSITIONS

The Department of Microbiology, Cell Biology, Biochemistry and Biophysics of The Pennsylvania State University invites applications for one or more tenure-track positions available at any rank. Candidates should have postdoctoral experience and be capable of developing an independent research program in molecular and cell biology with emphasis on gene structure and function, or in microbial genetics and microbial physiology. Individuals with expertise in recombinant DNA techniques are of particular interest. We provide excellent physical facilities, competitive salary and benefits, and a stimulating research environment. Applications should consist of curriculum vitae, copies of recent publications, a brief but detailed description of research goals, and the names of four references from whom we may request letters. Applications will be received until 15 October 1980, or until the positions are filled thereafter. Send to: **Dr. R. W. Bernlohr, Department of Microbiology, Cell Biology, Biochemistry and Biophysics, The Pennsylvania State University, 108 Alt-house Laboratory, University Park, Pennsylvania 16802.**

An Affirmative Action/Equal Opportunity Employer

DEAN School of Nursing

The University of Michigan is seeking nominations and applications for the Deanship in the School of Nursing. The Dean is the chief academic and administrative officer of the School and reports directly to the Academic Vice President. The School's activities include instruction at the undergraduate, masters, and doctoral levels and an active research program. The Dean provides leadership in program planning, development, and evaluation; in budget preparation and personnel administration; and in representing the school. Qualifications include an earned doctorate, a distinguished research record appropriate for a tenured appointment in the School, proven administrative ability, and understanding of budgeting processes in a complex research university. Nominations and applications should be sent to:



The University of Michigan
Dr. Susan B. Steckel
M3105 School of Nursing
Ann Arbor, MI 48109

Closing date: October 15, 1980. A non-discriminatory, affirmative action employer.

DIRECTOR BIOLOGICAL SCIENCES DIVISION

THE OFFICE OF NAVAL RESEARCH is seeking an individual to serve in this Senior Executive Service (SES) position.

The Biological Sciences research program is directed toward better understanding of the structure, composition, functions, and responses of biological systems and toward increased knowledge in medical and dental sciences with the ultimate objective of improving the effectiveness of Navy and Marine Corps operations.

The Director of the Biological Sciences Division plans, directs, coordinates and manages the contract research program devoted to the biological and medical science activities of the Office of Naval Research. The individual serves as biomedical technology project manager and assumes responsibility for technical management of all biomedical technology funds and the Naval Biosciences Laboratory.

Candidates must have Ph.D., M.D. or equivalent experience in fields related to the biomedical sciences experience in research or development efforts and management.

Salary is dependent upon qualifications.

Interested persons should send a Standard Form SF-171, Personal Qualifications Statement (available at Federal Job Information Offices) by 18 September 1980 to:

Office of Naval Research
Personnel Services Division
Code 720 S
800 North Quincy Street
Arlington, Virginia 22217
Announcement #80-50

An Equal Opportunity Employer

U.S. Citizenship Required

Candidates who fail to submit the required form will not be considered.

SUPERVISOR MICROBIOLOGY

A Ph.D. Microbiologist with 5-10 years of experience is needed to supervise a group of professionals in conducting microbiological research. Some knowledge of immunology would be useful. The position will entail the use of existing techniques plus the development of new ones. The candidate should have the ability to generate new ideas and to organize and administer aggressive research programs. The objective of the work will be to develop marketable antimicrobial drugs.

For Consideration
Please Send Resume To:

JOHN W PINKERTON

Wyeth



**WYETH
LABORATORIES**
P.O. Box 8299
Philadelphia, PA 19101

Equal Opportunity
Employer M/F/H

Scientific Consultant

The Research and Development Division of G. D. Searle & Co. currently has an expansionary position open for a Bio-medical/Legal Scientific Consultant. This position involves in-house counseling to our Marketing, Medical, Regulatory Affairs, and Legal Departments, on bio-medical issues and on labeling warnings, as they relate to products liability.

Responsibilities include in-depth periodical research on our product categories, education of lawyers and physicians, and includes the possibility of testimony if appropriate.

Qualified candidates will possess a minimum of a Ph.D. and 10 to 15 years experience in the pharmaceutical industry, preferably with some portion in laboratory research and additional strong interface with Regulatory Affairs. Familiarity with animal toxicology, clinical research, statistics and a reading comprehension of French and German would be expected. The position involves travel, primarily domestic.

We offer a competitive salary and benefits program consistent with your experience and qualifications. Applicants are encouraged to send curriculum vitae and bibliography to:

Robert Rook

Research & Development Division

G. D. Searle & Co.

P.O. Box 5110
Chicago, IL 60680

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



POSITIONS OPEN

DIRECTOR AND CHIEF EXECUTIVE OFFICER for regional museum of anthropology, natural history, and art with international reputation. Administrative and executive experience with nongovernmental organizations is important. Must have positive interest in developing broad community relations and ability to work with other institutions. Must be informed in fields of Southwestern culture and have interests in regional scientific research.

Detailed job description will be forwarded to applicants who respond. *The Museum of Northern Arizona is an Equal Opportunity Employer.* Address curriculum vitae and references to: **Search Committee, Museum of Northern Arizona, Route 4, Box 720, Flagstaff, Ariz. 86001.**

ANTICIPATED ELECTRON MICROSCOPY TECHNICIAN

A scanning electron microscope technician II position is available at the University of South Florida. The career service position involves the coordination of the daily activities of the faculty, maintaining and operating the SEM and major laboratory equipment, assisting with specimen preparation and analysis, and training investigators. Applicants should be fully experienced in SEM, energy dispersive x-ray analyses, and darkroom techniques. Annual salary ranges from \$13,400 to \$17,900, depending upon background and qualifications.

Send résumé and list of three references to:

Dr. John C. Steinmetz
Department of Marine Science
University of South Florida
830 First Street, South
St. Petersburg, Florida 33701

Applications will be accepted through 15 September 1980. Starting date should be 15 October 1980.

Multiple Mirror Telescope Observatory. EXPERIMENTAL PHYSICIST/ENGINEER wanted to refine the telescope-coalignment system of the Multiple Mirror Telescope. M.S.-level training in engineering and/or experimental physics is required. Position could be filled as a postdoctoral associate. This task involves computer hardware and software control of optical systems. Familiarity with digital control, digital software and/or optics is therefore essential. Send résumé, including the names and telephone numbers of three references, to: **Dr. B. L. Ulich, Multiple Mirror Telescope Observatory, University of Arizona, Tucson, Ariz. 85721.** *An Equal Opportunity/Affirmative Action Employer.*

The University of Missouri-Columbia, Chemistry Department, is consolidating its NMR instrumentation into a facility which will include 60, 90, and 300 MHz capabilities. The Department is now recruiting a **SENIOR LEVEL FACULTY MEMBER** in conjunction with this facility. In addition to maintaining an active research program using NMR, the candidate is expected (in lieu of substantial teaching duties) to supervise the maintenance and periodic upgrading of the facility and to offer technical advice to other faculty members who contemplate the use of NMR to solve problems in chemistry, biochemistry, and biology. Candidates should supply a graduate transcript, curriculum vitae, résumé of future research plans, and have three letters of recommendation sent to: **Dr. Pierre Crabbe, Chairman, Department of Chemistry, University of Missouri, Columbia, Mo. 65211.** *An Affirmative Action/Equal Opportunity Employer.*

HEAD DEPARTMENT OF BIOLOGICAL SCIENCES

The Department of Biological Sciences, Purdue University, is seeking an established scholar with broad interests to serve as head for the department beginning on or after 1 January 1981. The department has more than 65 faculty members and extensive teaching, research, and service responsibilities appropriate to a publicly supported university. Candidates should have a record of outstanding scientific achievement as evidenced by publications, research grants, awards, and other recognitions of national and international repute. Administrative experience is desirable. Applications and nominations, including curriculum vitae, bibliography, and a list of individuals familiar with the candidate's qualifications, should be sent to: **Search Committee Chairman, Department of Biological Sciences, Purdue University, West Lafayette, Indiana 47907.** Screening of applications will commence 1 October 1980. *Purdue University is an Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

Applications are now invited for a **FACULTY POSITION** at the University of California at San Francisco. We are seeking a person with research interests in theoretical aspects of **structural biology at the molecular level.** The successful candidate will have demonstrated research and teaching skills in this general area. Salary is negotiable.

Send curriculum vitae and direct three letters of reference to: **Robert J. Fletcher, Professor of Biochemistry and Biophysics, Department of Biochemistry and Biophysics, University of California School of Medicine, San Francisco, California 94143.** *We are an Equal Opportunity Employer.*

GENERAL BIOLOGY, LECTURER. Nontenure-track position to begin 8 January 1981. Primary responsibility: supervision of laboratories for freshman biology majors. Ph.D. required. Broad biology training and experience in teaching general biology is desired. Application deadline: 1 October 1980. Send curriculum vitae and references to: **Personnel Search Director, c/o Dr. Frederick Gehlbach, Department of Biology, Baylor University, Waco, Texas 76703.** *An Equal Opportunity Employer.*

Princeton University, Department of Geological and Geophysical Sciences, has an opening available for a postdoctoral research position for **GEOCHEMIST, CHEMIST, or CHEMICAL ENGINEER.**

Participate in and direct chemical aspects of interdepartmental program on solution mining of shallow and deep mineral resources. Entails design and operation of mineral teaching experiments including hydrothermal equipment; derivation of kinetic rate laws and mineral dissolution mechanisms; interaction with team of engineers and geochemists in numerically simulating solution mining processes. Ph.D. plus strong background in chemical kinetics/thermodynamics and laboratory expertise required; geochemical experience highly desirable.

Send résumés to: **D. A. Crerar, Department of Geological and Geophysical Sciences, Princeton University, Princeton, N.J. 08544.** *Princeton University is an Equal Opportunity/Affirmative Action Employer.*

INSECT ECOLOGIST, Ph.D., to participate immediately in laboratory and field population studies in Pakistan on mosquitoes, malaria, and genetic control for approximately 18 months. Travel, housing, and American education for grade and high school dependents provided. Salary commensurate with training and experience. Send résumé and names of three references to: **Dr. Richard H. Baker, International Health Program, University of Maryland School of Medicine, 10 South Pine Street, Baltimore, Md. 21201.**

INSECT PHYSIOLOGY, ASSISTANT PROFESSOR. Available January 1981; 45 percent teaching, 55 percent research. Requires Ph.D., insect physiology. Prefer teaching experience, strong background in genetics, reproductive physiology, or physiological ecology. Closing date: 15 October 1980. Send curriculum vitae and references to: **Dr. M. A. Brusven, Entomology Department, University of Idaho, Moscow, Idaho 83843.** *Affirmative Action/Equal Opportunity Employer.*

MICROBIOLOGY/GENETICS. Tenure-track opening at assistant professor level available 13 January 1981. Teaching responsibilities will include basic microbiology, general genetics, and other courses in microbiology and genetics determined by departmental needs and individual's training and interests. Ph.D. related to areas listed above is required. Effective teaching and development of an active research program in area of interest expected. Application deadline: open, but may be closed any time after 1 October 1980. Send curriculum vitae, transcripts, and minimum of three letters of reference to: **Dr. Michael D. McCracken, Department of Biology, Texas Christian University, Fort Worth, Texas 76129.** *An Equal Opportunity/Affirmative Action Employer.*

ORGANIC CHEMIST. We have a postdoctoral position available 1 October 1980 for a recently graduated organic chemist with a strong interest in a career in neurochemistry or pharmacology. Experience in syntheses of peptides and microchemical techniques is highly desirable. Salary is \$17,000. Position is for a minimum of 1 year with a possibility of extension to 2 years. Send résumé and names of three references to: **Dr. V. E. Shashoua, Mailman Research Center, McLEAN HOSPITAL, Affiliate of Harvard Medical School, 115 Mill Street, Belmont, Mass. 02178.** *An Equal Opportunity Employer.*

POSITIONS OPEN

MEDICINAL CHEMISTRY-ASSISTANT PROFESSOR. The Department of Pharmaceutical Chemistry, University of California, has a tenure-track vacancy in the area of medicinal chemistry. Candidates must have a solid chemistry background, postdoctoral experience, a strong commitment to research and to undergraduate and graduate education, and demonstrated excellence in their fields. Research interests may be in any aspect of medicinal chemistry or in areas of pharmacology or biochemistry relevant to modern medicinal chemistry. Interest and competence in the teaching of medicinal chemistry is essential. The salary is \$25,000 to \$27,500 for an 11-month appointment. Candidates should request letters from three referees and send curriculum vitae, a list of publications, a brief summary of research accomplishments, and a brief outline of proposed research to: **Professor M. E. Wolff, Chairman, Department of Pharmaceutical Chemistry, School of Pharmacy, 926-S, University of California, San Francisco, Calif. 94143.** Applications will be accepted until 1 January 1981 for a 1 July starting date. *The University of California is an Affirmative Action/Equal Opportunity Employer. Women and minorities are encouraged to apply.*

MEMBRANE MOLECULAR IMMUNOLOGIST

Academic appointment in tenure-track is available for investigator with leadership potential within broad area of molecular biology and immunology of lymphoid or other cell membranes. Educational opportunities with graduate and medical students and postdoctoral fellows.

Assistant professor sought or position commensurate with qualifications.

Curriculum vitae, references, and description of professional interests should be sent to:

Dr. John L. Fahey, Chairman
Department of Microbiology and Immunology
University of California, Los Angeles,
School of Medicine
Los Angeles, Calif. 90024

An Equal Opportunity/Affirmative Action Employer

SIMON FRASER UNIVERSITY BURNABY, BRITISH COLUMBIA, CANADA DEPARTMENT OF BIOLOGICAL SCIENCES MOLECULAR BIOLOGIST

Applications are invited for a tenure-track position as **assistant professor in molecular biology** with research interests in eukaryotic gene regulation. The successful candidate will be expected to develop a strong research program and to participate in the teaching program at both the undergraduate and graduate levels. Candidates must have a Ph.D. degree with postdoctoral experience in recombinant DNA technology. The applicants should have extensive experience with plasmid and/or phage vectors.

The position is available from 1 September 1981, subject to budgetary approval. The current salary base for the assistant professor rank is \$21,376 per annum, subject to ratification.

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

Dr. M. Mackauer, Chairman
Department of Biological Sciences
Simon Fraser University

Burnaby, British Columbia, Canada V5A 1S6

Deadline for receipt of applications is 31 October 1980.

NEUROPSYCHOPHARMACOLOGIST. Research associate position with Professors B. G. Hoebel and B. Jacobs, Department of Psychology, Princeton University. Applicant must be Ph.D. with publications and experience in opiate peptide research. Write: **B. Hoebel, Department of Psychology, Princeton University, Princeton, N.J. 08544.** *Princeton University is an Equal Opportunity Employer.*

POSTDOCTORAL POSITION available 1 December 1980 for a recent Ph.D. to study regulation of HMG CoA reductase. Background in RNA and/or protein biosynthesis preferred. Send curriculum vitae to: **Dr. Michael Sinensky, Senior Fellow, Division of Cell Membrane Studies, Eleanor Roosevelt Institute for Cancer Research, 4200 East Ninth Avenue, Box B 129, Denver, Colo. 80262.** *An Equal Opportunity/Affirmative Action Employer.*



National Research Council Canada
Conseil national de recherches Canada

1981 RESEARCH ASSOCIATESHIPS

for research in science and engineering in the following laboratories of the

NATIONAL RESEARCH COUNCIL OF CANADA:

ATLANTIC RESEARCH LABORATORY

DIVISION OF BIOLOGICAL SCIENCES

PRAIRIE REGIONAL LABORATORY

DIVISION OF BUILDING RESEARCH

DIVISION OF ELECTRICAL ENGINEERING

INDUSTRIAL MATERIALS RESEARCH

INSTITUTE

DIVISION OF MECHANICAL ENGINEERING

NATIONAL AERONAUTICAL ESTABLISHMENT

DIVISION OF CHEMISTRY

HERZBERG INSTITUTE OF ASTROPHYSICS

PHYSICS

DIVISION OF PHYSICS

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

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

Research Associates will be offered appointments to the staff of the National Research Council on a term basis and will be offered salaries and benefits currently available to members of the continuing staff.

The initial appointment will normally be for a two-year term and may be renewed, subject to the Associate's performance and subject to the requirements of the Division. Renewals are considered annually. The term as a Research Associate will vary by Division but will not exceed five years.

An allowance will be provided towards the cost of travel.

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

Closing date: 15 December 1980

BIOMEDICAL RESEARCH

The Medical and Health Sciences Division of Oak Ridge Associated Universities, a non profit educational and research association of 50 universities, announces the availability of interdisciplinary, 2-year postdoctoral fellowships in Biomedical Research. Applications are requested for the following projects:

- Synthesis and testing of Carbon 11 radiopharmaceuticals or positron imaging of pulmonary function. Must have a PhD in Medicinal Chemistry, Organic Chemistry, or Bio-Organic Chemistry and a strong background in Biochemistry.
- Cytogenetic studies of mutagen sensitivity in a primate species that develops spontaneous colon cancer. Applicants should have a PhD with a strong background in cytogenetics and experience with tissue culture methodology.
- Assessment of the effect of dietary fat on tumorigenesis, membrane properties, and immune function. Requires a PhD in Biochemistry or Immunology.

Stipend: \$17,000 per year. Interested persons should send curriculum vitae, academic transcripts, publication lists, and three letters of reference from scientists familiar with the applicants previous experience to:

Dr. John Hicks
Employment Officer

OAK RIDGE ASSOCIATED UNIVERSITIES

P.O. Box 117

Oak Ridge, TN 37830

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CHAIRMAN (M.D. or Ph.D.) DEPARTMENT OF RESEARCH

Unique post, outstanding East Coast Medical Center. Will direct well-funded basic science and clinical research programs ... cardiovascular and metabolic areas ... staff of over 100 ... separate research building ... faculty opportunity, leading medical school.

Candidates should have both basic and clinical cardiovascular research achievements; administrative, communicative and inter-personal skills; ability to interface well with scientists, clinicians, trustees, philanthropies, drug companies and Federal agencies; ability to develop new research-grant fundings.

Medical Center is in ideal suburban area, near large city. Moderate climate, reasonable realty, good schools, fine recreation. Outstanding compensation package. All fees/relocation expenses paid by our client.

Telephone collect or send c.v. with biblio. (including minimum income requirement) in confidence, to Martin C. Sampson, M.D. or Walter K. Wilkins:



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QUALITY ASSURANCE

Stauffer Chemical Company, an international industry leader, is seeking a qualified Scientist to administer the quality assurance program at its new environmental health center in Farmington, Ct. The incumbent will monitor, review, and audit toxicology studies in order to determine that they are conducted in compliance with Good Laboratory Practices.

This position offers excellent growth opportunities. Applicants should possess an MS or PhD in toxicology or a closely related field. 2 or more years experience in toxicology or regulatory affairs, and a thorough understanding of the requirements defined under Good Laboratory Practice regulations.

Stauffer offers an excellent salary and an attractive package of paid company benefits. For immediate consideration, please send your salary requirements and qualifications to:

Mrs. Pat Frutchey

Stauffer Chemical Company

**400 Farmington Avenue
Farmington, CT 06032**

No Agency referrals At This Time



An Equal Opportunity Employer M/F

POSITIONS OPEN

NEUROPSYCHOLOGIST. Applications are invited for the position of associate professor, starting September 1981. Principal responsibility will be to doctoral training in the area of clinical neuropsychology. A physiological background and demonstrated research productivity are mandatory. Applicant should be prepared to teach courses in clinical neuropsychology and neuropsychological assessment. Salary: \$22,000 to \$33,000, commensurate with experience. Submit curriculum vitae to: **Dr. Doreen Berman, Department of Psychology, Queens College, 65-30 Kissena Boulevard, Flushing, N.Y. 11367. Queens College of The City University of New York is an Equal Opportunity/Affirmative Action Employer.**

PATHOLOGIST—ACADEMIC POSITION. The Department of Pathology, University of South Carolina School of Medicine, invites application for appointment at the level of assistant professor. Applicants must have M.D. degree and Board-qualification or -certification is desirable. The position involves teaching medical students and establishing an active research program. Send replies and curriculum vitae to: **Dr. J. B. Caulfield, Chairman, Department of Pathology, University of South Carolina, Columbia, S.C. 29208. An Affirmative Action/Equal Opportunity Employer.**

PHARMACOLOGIST

Applications are invited for a senior faculty position available at the associate professor or professor level. Priority will be given individuals working in the area of cardiovascular, biochemical, or central nervous system pharmacology. Applicants should have a doctoral degree, postdoctoral experience, evidence of success in obtaining extramural funding to support an active research program, and an interest in graduate and undergraduate medical education. Adequate laboratory space, excellent core resource facilities, a competitive salary, and a stimulating environment providing opportunities for collaborative research will be provided for the successful candidate by the Department of Pharmacology. The University of South Alabama College of Medicine is an established institution dedicated to excellence in education and research. The Department of Pharmacology currently consists of eight full-time faculty members engaged in a broad spectrum of biomedical investigation. Submit curriculum vitae, bibliography, names of three references, and a brief statement of research plans no later than 15 September 1980 to: **Dr. Thomas M. Glenn, Chairman, Department of Pharmacology, University of South Alabama, College of Medicine, Mobile, Alabama 36688.**

An Equal Opportunity/Affirmative Action Employer

BERKELEY PHYSICS

The Department of Physics of the University of California, Berkeley, expects during the next 2 years to be making one or two appointments at the assistant professor level. Preferred areas of experimental and theoretical research are astrophysics, atomic and plasma physics, condensed matter physics, nuclear physics, and particle physics. For exceptional candidates there is a possibility of a research fellowship for 1 or 2 years preceding the assumption of the regular duties of an assistant professor.

Applicants should write, as soon as possible, and definitely before 15 October 1980, to: **Chairman, Department of Physics, University of California, Berkeley, Calif. 94720**, giving curriculum vitae, publication list, and references. *The University of California is an Affirmative Action Employer.*

POSTDOCTORAL RESEARCH ASSOCIATE. Electrochemical mechanism of immobilized enzyme sensor; project aimed at developing an *in vivo* glucose sensor for diabetics [see *J. Biomed. Mater. Res.* 13, 921 (1979)]. Candidate must have Ph.D., with good background in experimental electrochemistry; working knowledge of enzymes desirable. Position available immediately for 1 year with renewal possible for second or third years. Salary: \$12,500 to \$14,500 plus fringe benefits. Send curriculum vitae and names of three references to: **Dr. Lemuel B. Wingard, Jr., Department of Pharmacology, School of Medicine, University of Pittsburgh, Pittsburgh, Pa. 15261. Equal Opportunity/Affirmative Action Employer.**

POSITIONS OPEN

POSITIONS IN PHYSIOLOGY AND BIOPHYSICS. The University of Mississippi Medical Center, Department of Physiology and Biophysics, has faculty positions open for persons who will develop a research and graduate program in the fields of central motor neurophysiology, and/or integrative control system physiology and participate in departmental teaching. Candidates should have strong backgrounds in mathematics, physics, biophysics, and/or chemistry. Salary and academic rank will be commensurate with education and experience. Contact: **Dr. Arthur C. Guyton, Chairman, Department of Physiology and Biophysics, University of Mississippi Medical Center, 2500 North State Street, Jackson, Mississippi 39216.**

Equal Opportunity Employer, M/F

POSTDOCTORAL POSITION now available in **MOLECULAR BIOLOGY.** Research programs in three areas: electron microscopy of nucleic acid secondary structure and ribosome binding sites, DNA replication, and delivery systems for incorporation of recombinant DNA in eukaryotic cells. Experience in molecular biology desirable, but not essential. Participate in new and expanding medical school. Sunbelt climate in College Station, Texas, located near Houston and Austin. Send curriculum vitae and names of references to: **Dr. G. Ihler, Head, Department of Medical Biochemistry, College of Medicine, Texas A & M University, College Station, Texas 77843.**

Equal Opportunity through Affirmative Action

POSTDOCTORAL POSITION. This position is available to study the neurophysiology of postural and movement disorders. A Ph.D. in a neurosciences-related discipline with experience in neurophysiological recording techniques is required; experience with chronic single unit recordings is desirable. The position is for 1 year, renewable. Send curriculum vitae and the names of three references to: **Dr. George W. Dauth, Department of Neurology, Neuroscience Laboratory Building, The University of Michigan, 1103 East Huron Street, Ann Arbor, Michigan 48109. An Equal Opportunity/Affirmative Action Employer.**

A 1-year **postdoctoral position** (renewable) to study progesterone receptors using novel fluorescent probes is available now at the Mayo Foundation. The appointment requires physical biochemistry and chemical background. Planned studies include synthesis of probes and receptor studies. Send curriculum vitae, graduate transcript, and three letters of recommendation to: **Dr. G. L. Carlson, GI Unit, Mayo Foundation, Rochester, Minn. 55901. An Equal Opportunity/Affirmative Action Institution.**

POSTDOCTORAL POSITION available immediately for study of sex hormone mechanisms of action and effects on the secretory immune system of the female genital tract and other related tissues. Please send curriculum vitae and names of three references to:

**Dr. Charles R. Wira
Department of Physiology
Dartmouth Medical School
Hanover, N.H. 03755**

An Equal Opportunity/Affirmative Action Employer, M/F

POSTDOCTORAL RESEARCH POSITION

Applications are invited for a molecular biologist to investigate genetic control of aerobic and anaerobic branches of metabolic pathways in bacteria. Experience with microbial genetics and DNA technology is highly desirable. The appointment will be for 1 to 3 years with a starting date of 1 July 1981, or by arrangement. Salary will be commensurate with experience. Applications to and further details from: **E. C. C. Lin, Department of Microbiology and Molecular Genetics, Harvard Medical School, 25 Shattuck Street, Boston, Mass. 02115.**

TRUDEAU INSTITUTE, INC.

A POSTDOCTORAL RESEARCH POSITION IN MICROBIOLOGY is available to study the cellular mechanisms of acquired antimicrobial immunity. The successful candidate will participate in studies into the role of suppressor cells in the modulation of delayed hypersensitivity and cell-mediated immunity in chronically infected mice. Experience in tissue culture techniques would be useful. The salary will be \$13,500 per annum and on-campus housing is available.

Send résumé and names of references to: **Dr. Frank M. Collins, P.O. Box 59, Saranac Lake, N.Y. 12983.**

POSITIONS OPEN

POSTDOCTORAL POSITION

Available immediately for research involving mammalian collagenase and proteinase inhibitors. Please reply to:

**Anthony Herp
Department of Biochemistry
New York Medical College
Valhalla, New York 10595
or telephone: 914-347-5618.**

POSTDOCTORAL RESEARCH ASSISTANT position available September 1980. Ph.D. to do neuronal recording in adult and developing mammalian CNS. Individual with experience in recordings from single neurons preferred. Send curriculum vitae and names of references to: **N. A. Buchwald, Director, Mental Retardation Research Center, 760 Westwood Plaza, Los Angeles, Calif. 90024.**

University of California, Los Angeles, is an Affirmative Action Employer, M/F/H.

POSTDOCTORAL RESEARCH BIOCHEMIST

Position for Ph.D. available immediately for the study of enzymes of cholesterol biosynthesis and their regulation. Experience in enzymology and lipoproteins an advantage. Send applications to: **Dr. G. Popjak, Department of Biological Chemistry, University of California, Los Angeles, School of Medicine, Los Angeles, Calif. 90024. An Equal Opportunity Employer.**

UNIVERSITY OF BRITISH COLUMBIA DEPARTMENT OF PSYCHIATRY

A position has been developed for a senior academic research clinician in the Department of Psychiatry, University of British Columbia. This position offers excellent research opportunities in association with the distinguished Division of Neurological Sciences of the department, and with clinical researchers in other departments and faculties.

Applicants should have a proven record in psychiatric research, and should be experienced teachers in undergraduate and postgraduate programs. Rank and salary according to qualifications and experience. The effective date of the appointment will be 1 January 1981. Applications with curriculum vitae and requests for further information should be sent to:

**Neil Yorkston, M.D.
Head, Department of Psychiatry
2255 Wesbrook Mall
Vancouver, British Columbia, Canada V6T 2A1**

RESEARCH ASSOCIATE—CANCER RESEARCH. Ph.D. or equivalent to work on research related to studies of growth and proliferation of human melanoma. Applicant should have demonstrated skill in liquid or semi-solid tissue culture and growth factors; experience in membrane receptors or retinoids desirable. Salary: \$14,000 to \$18,000. Position available immediately. Send résumés to: **Frank L. Meyskens, Jr., M.D., Cancer Center, University of Arizona, Tucson, Arizona 85724. An Equal Opportunity/Affirmative Action Employer.**

RESEARCH ASSOCIATE. Minimum of 5 years of postdoctoral research experience and proven ability to conduct independent research program required. Experience in field of chemical structure and metabolism of human tumor glycoprotein markers required; role of the liver in their clearance from the circulation. Knowledge of immunohistochemical techniques required. Collaborations with group of clinicians, oncologists, and pathologists essential. Send résumé to: **Box 206, SCIENCE. Equal Opportunity Employer.**

RESEARCH ASSOCIATE. Biomedical engineer with computer science, electrical engineering, or equivalent. Must have 3 years of experience in electrocardiographic research, a good understanding of RT11 and/or RSX11 operating systems, and interest in developing own research. Position available 1 September 1980. Send résumé and reply to: **Dr. Robert Lux, Cardiology Division, Building 100, University of Utah, Salt Lake City, Utah 84132. Affirmative Action/Equal Opportunity Employer.**

Chicago. **RESEARCH ASSOCIATE.** Available now. M.S. or Ph.D. in medical chemistry/pharmacology with good organic synthesis experience to work with group on neurochemical effects of biogenic amine condensation products in alcoholism. Approximately \$13,000 per year. Résumé and three references to: **Dr. M. A. Collins, Biochemistry Department, Loyola University Medical School, Maywood, Ill. 60153. An Equal Opportunity Employer.**

ENVIRONMENTAL PROTECTION

LABORATORY DIRECTOR
ENVIRONMENTAL MONITORING AND SUPPORT LABORATORY
CINCINNATI, OHIO

OFFICE OF RESEARCH AND DEVELOPMENT

The U.S. Environmental Protection Agency (EPA) is seeking a director for its Cincinnati laboratory to direct in-house and extramural research in developing and applying analytical techniques and monitoring procedures to identify and measure major pollutants in fresh and marine ambient waters, municipal and industrial effluents, and municipal wastes, and provide quality assurance guidelines, reference materials, quality control samples, and performance audit samples for evaluating and maintaining the quality of monitoring data provided by EPA, state, municipal, and industrial laboratories.

Grade: this is a Senior Executive Service (SES) position. The person selected for this position must join the SES. Salary range: \$47,889 to \$50,112.50.

Qualifications required: applicants must meet Office of Personnel Management Qualification Requirements for either the General Biological Science, General Engineering, or General Physical Science series; have substantive professional experience related to the position; have experience demonstrating the ability to perform in an SES position; and meet the following mandatory requirements: (i) demonstrate experience managing programs devoted to research on pollutants in wastewater and drinking water; (ii) experience in working with the environmental science research community; (iii) experience in identifying, establishing and prioritizing research goals, allocating resources, and reviewing programs; and (iv) demonstrate experience directing research programs to develop monitoring methods and systems and associated quality assurance procedures.

Inquiries: Edna Morse, telephone: 202-755-2625.

Applications: all applicants must submit a completed Standard Form 171 (résumés cannot be accepted except in conjunction with a SF 171), which is available in federal Job Information Centers and federal agency personnel offices, to: **Edna Morse, Waterside Mall, 401 M Street, SW, Washington, D.C. 20460.** Applications must be postmarked by the closing date of 3 October 1980.



United States
Environmental Protection
Agency

An Equal Opportunity Employer

Announcing The First International Congress For INTERFERON RESEARCH

WASHINGTON, DC, 9-12 NOVEMBER, 1980

The CONGRESS will be chaired by William E. Stewart II, of the Sloan Kettering Institute For Cancer Research, and organized jointly by Scherago Associates and the **Journal of Interferon Research**.

Approximately fifty (50) papers will be presented by recognized authorities from North America, Europe, the Middle East, and Japan. There will also be numerous poster presentations dealing with all aspects of interferon research.

For more information, please write to:

Mr. Edward Ruffing
International Congress For
Interferon Research (ICIR)
c/o Scherago Associates
1515 Broadway, New York, NY 10036
(212) 730-1050

KATHOLIEKE UNIVERSITEIT NIJMEGEN

professorship in medical physics

Applications are invited for a Professorship in Medical Physics. The following qualities are considered to be requisite:

- Allround physicist with ample teaching experience.
- Able to conduct high quality research, preferably in the direction of clinical research.
- Capable of inspiring and stimulating others in matters of teaching and research.

Inquiries are awarted by Prof.Dr. J.F.G. Slegers, Chairman Search Committee, Geert Grooteplein Noord 21, 6535 EZ Nijmegen, The Netherlands.

faculty of

medicine and
dentistry

Biochemists, Microbiologists, and Molecular Biologists interested in a rewarding career with a leader in Molecular Biology are invited to apply for the following positions:

SENIOR SCIENTIST/SECTION HEAD & SENIOR TECHNICIAN, M.S. or Equivalent Eukaryotic Molecular Biology; RNA isolation, in vitro translation, synthesis of gene specific probes, solution hybridization, biochemical aspects of cloning. *Ref. #101*

SCIENTIST/SENIOR TECHNICIANS/TECHNICIANS RNA-Enzymology-purification and characterization of new enzymatic activities, in vitro transcription. *Ref. #102*

SENIOR SCIENTIST Microbial physiologist-experienced with phage infected systems. Some background in large scale fermentation, cloning and analytical microbiology would be advantageous. *Ref. #103*

SENIOR SCIENTISTS OR SCIENTISTS Nucleic Acid Enzymology-purification and characterization of new DNA and RNA modifying enzymes and restriction enzymes. *Ref. #104*

RESEARCH SCIENTISTS M.S./Ph.D.-Enzymology Quality Assurance-R & D on Nucleic Acids Enzymes, improve Q.C. Assays and optimize enzyme use techniques. Strong biochemistry background required. *Ref. #105*

PRODUCT MANAGER M.S./Ph.D.-Nucleic Acids Enzymes. Background in biochemistry with business experience. Key position requires effective working relationships with Sales, Production, R & D, Finance & Communications. *Ref. #106*

SALES REPRESENTATIVE-MOLECULAR BIOLOGY PRODUCTS

An energetic, outgoing person is sought as a sales representative for a fast growing company in molecular biological research. Must have an M.S. or Ph.D. in biochemistry/genetics/microbiology. No sales experience necessary. Good base salary with commission and company car. *Ref. #107*

Applications should be made with reference to the position reference number as given above and be addressed to:

Ms. Miriam Frank, Personnel
Bethesda Research Laboratories
8705 Grovemont Circle
Gaithersburg, Maryland 20760

POSITIONS OPEN

POSTDOCTORAL TRAINING

Recent Ph.D. in biophysics or related fields, interested in areas of oncology or radiation biology. Research areas include: cell kinetic and cytogenetic effects of hyperthermia, drugs and radiation on leukemic and normal cells in vivo. Position available immediately. Send complete curriculum vitae and references to: **Dr. Sallie S. Boggs, Department of Radiology, University of Pittsburgh, School of Medicine, RC-510 Scaife Hall, Pittsburgh, Pa. 15261. Affirmative Action/Equal Opportunity Employer.**

POULTRY SCIENTIST

Faculty opening in new Poultry Technology and Management Program at university located in heart of Delmarva poultry industry. Doctorate in poultry science or related field required. Responsibilities include program coordination, teaching, and research. Level and salary commensurate with qualifications. Submit résumé and three references by 15 September 1980 to: **Dr. Harrell Smith, University of Maryland Eastern Shore, Princess Anne, Maryland 21853. Equal Opportunity Employer.**

PRESIDENT, MELLON INSTITUTE CARNEGIE/MELLON UNIVERSITY (CMU)

Carnegie-Mellon University invites nominations and applications for the position of president of Mellon Institute.

Mellon Institute is one of the largest university-affiliated research institutes in the nation with internationally recognized programs in materials technology, energy productivity, and environmental activities, for example.

The president is responsible to the president of the university and is the chief executive officer of the Institute. The successful candidate will show promise of guiding the Institute in a period of rapid growth and of expansion into the areas of the social, behavioral, and policy sciences.

Salary: Negotiable depending on qualifications.

Deadline: Position is presently open and applications or nominations will be accepted until 1 October 1980.

Correspondence (to include a complete résumé of educational and professional qualifications) should be addressed to:

**Dean Daniel Berg, Head
Search Committee
Mellon College of Science
Carnegie-Mellon University
Schenley Park
Pittsburgh, Pa. 15213**

CMU is an Affirmative Action/Equal Opportunity Employer.

VICE PRESIDENT FOR RESEARCH AND DEAN OF GRADUATE STUDIES SEARCH REOPENED UNIVERSITY OF CENTRAL FLORIDA (UCF)

Nominations and applications are invited for the position of Vice President for Research and Dean of Graduate Studies. This 12-month position is responsible for the continued development, coordination, and administration of the University's research and graduate programs.

Minimum qualifications include a doctoral degree in a discipline appropriate for consideration by a university academic department for a concurrent tenure-earning faculty appointment; recognized administrative ability and competence with documented evidence of successful and extensive related professional experience in research and graduate education.

The University of Central Florida is a 4-year general purpose institution in the nine-campus State University System of Florida. Current enrollment exceeds 12,000 students. UCF serves approximately 1.5 million Floridians in the growing, dynamic Central Florida region.

Salary is commensurate with qualifications and experience. Anticipated starting date is not later than 1 July 1981 (January preferred).

Applications must be postmarked by 12 September 1980.

Send nominations to:

**Vice President for Research and
Dean of Graduate Studies Search Committee
University of Central Florida
Orlando, Florida 32816**

An Equal Opportunity/Affirmative Action Employer

POSITIONS OPEN

PROFESSOR OF COMPUTER GRAPHICS. The Massachusetts Institute of Technology (MIT), Department of Architecture, seeks assistant/associate professor of computer graphics to teach and do research in Arts and Media Technology Program. Position includes 50 percent research to be developed in candidate's area of interest and expertise. Teaching responsibility entails introductory graduate subject in computer graphics; graduate seminar in 3-D computer graphics and animation, or seminar in candidate's area of interest; and/or Ph.D. and M.S. thesis supervision. Prerequisites include Ph.D. in computer science or equivalent; professional experience in computer graphics; teaching experience at the university level; and demonstrated ability in research. Appointment effective 1 September 1981. Candidates should submit résumés and additional information by 1 November 1980 to: **Professor N. John Habraken, Department of Architecture, MIT, 77 Massachusetts Avenue, Cambridge, Mass. 02139. MIT is an Equal Opportunity/Affirmative Action Employer.**

RESEARCH ASSOCIATE—AIR POLLUTION

Postdoctoral position in urban aerosol mass apportionment by application of statistical techniques. Background in ambient aerosol characterization and/or applied statistical methods. Available 1 October 1980 for up to 3 years with salary of \$17,000 to \$19,000. Send résumé and three letters of recommendation to: **Dr. Philip K. Hopke, Institute for Environmental Studies, University of Illinois, 408 South Goodwin Street, Urbana, Illinois 61801. An Affirmative Action/Equal Opportunity Employer.**

RESEARCH TOXICOLOGIST

Southern Research Institute, with a staff of 600, has positions available in toxicology research for Ph.D.'s in pharmacology, toxicology, or pathology with training in anatomy or physiology. Good oral and written communication skills are required. Current research includes preclinical toxicology studies in treatment of cancer and central nervous system disorders. Opportunity exists for eventual development of new research programs in areas of individual interest. Send résumé in confidence to: **R. R. Dyess, Personnel Office, Southern Research Institute, 2000 Ninth Avenue South, Birmingham, Ala. 35255. An Equal Opportunity/Affirmative Action Employer.**

SYMPOSIUM

FIRST DALLAS CONFERENCE ON MUSCLE AND NONMUSCLE MOTILITY: 19 to 21 November 1980, Dallas, Texas. Abstracts are 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. Contact: **B. L. Chancellor, Roberts Center, Baylor Medical Center, 3500 Gaston, Dallas, Texas 75246; telephone: 214-820-2317.**

FELLOWSHIPS

OPHTHALMIC PATHOLOGY FELLOWSHIP

Department of Ophthalmology, University of Pennsylvania, Schele Eye Institute, Presbyterian-University of Pennsylvania Medical Center. Applications are invited for a National Eye Institute training fellowship in experimental ophthalmic pathology. Designed to prepare physicians for careers in academic ophthalmology, the 2-year program emphasizes the acquisition of specialized research skills while fostering a broad understanding of ophthalmic pathology. Candidates must be permanent residents or citizens of the United States and preferably should be M.D.'s. An NIH payback agreement is required. Those interested should direct inquiries, including up-to-date curriculum vitae and bibliography, to:

**Myron Yanoff, M.D.
Director, Schele Eye Institute
51 North 39 Street
Philadelphia, Pa. 19104**

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FELLOWSHIPS

POSTDOCTORAL FELLOWSHIP available September 1980. Two years (American Heart). Experience in cardiovascular/cardiopulmonary/respiratory physiology. Acid-base/hypoxia effects, on myocardial and whole body oxygen uptake. Send curriculum vitae, your letter stating career goals, and letters directly from three references to: **Dr. S. F. Sullivan, University of California, Los Angeles, School of Medicine, Los Angeles, Calif. 90024. Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL FELLOWSHIPS IN NEUROBIOLOGY

Open to holders of Ph.D., M.D., D.Sc. Stipends (depending on experience): \$14,000 to \$18,000. Available preceptors: Drs. Wayne Albers, Gilbert Ashwell, Roscoe Brady, Harold Gainer, Helen Hess, William B. Jakoby, Phillip Nelson, Marshall Nirenberg, Thomas Reese, and Henry DeF. Webster. Send curriculum vitae, undergraduate and graduate school transcripts, and three letters of recommendation to: **Dr. Sean O'Reilly, George Washington University Medical Center, 2150 Pennsylvania Avenue, NW, Washington, D.C. 20037.**

FELLOWSHIPS AND GRANTS

OPPORTUNITIES FOR STUDY AND RESEARCH IN CHINA

The Committee on Scholarly Communication with the People's Republic of China (CSCPRC) announces three programs of scholarly exchange in the natural sciences, engineering, social sciences, and humanities between the United States and China for 1981-1982. The **NATIONAL PROGRAM FOR ADVANCED STUDY AND RESEARCH IN CHINA** offers opportunities for graduate students and postdoctoral scholars to carry out long-term study (10 to 12 months) or research (3 to 12 months) in affiliation with Chinese universities and research institutes. **Application deadline is 7 November 1980.** The **DISTINGUISHED SCHOLAR EXCHANGE PROGRAM** provides opportunities for American and Chinese senior scholars to spend 1 to 3 months in the host country engaging in a combination of research and lecturing. **Application deadline is 6 October 1980.** The **CONFERENCES PROGRAM** solicits proposals for conferences in the United States or China. **Application deadline is 1 December 1980.** Inquiries should be addressed to: **CSCPRC, National Academy of Sciences, 2101 Constitution Avenue, NW, Washington, D.C. 20418.**

TRAINEESHIPS

Postdoctoral Training Program CELLULAR AND MOLECULAR ENDOCRINOLOGY

Postdoctoral traineeships are available immediately and for 1981 in a new NIH-supported program. Trainees with a Ph.D. or M.D. degree will participate in a research program of one of 14 faculty from the Biochemistry Department and the Program in Biomedical Sciences on the campus of the University of California, Riverside. The purpose of the program is to provide for research training at the postdoctoral level in the following four major areas of focus.

- 1) Cell culture model systems for hormone action;
- 2) Intracellular events in control of cell growth and metabolism;
- 3) Endocrinology of vitamin D, calcium, and phosphorus metabolism; and
- 4) Structure and properties of hormones and their receptor.

For detailed information and application forms write to:

**Dr. Anthony W. Norman,
Program Director
Department of Biochemistry
University of California
Riverside, California 92521
Telephone: 714-787-4227
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- serving as ONR's representative at scientific conferences, panels, and meetings with full authority to commit the Navy to a course of action; and
- sharing the responsibility for overall supervision of the Office.

The position requires progressive responsible experience (preferably with professional education at the doctoral level) in research and development in one or more fields of marine-oriented sciences such as oceanography, geophysics, underwater acoustics and/or ocean technology. Candidates should possess outstanding capabilities in creative research, leadership and management combined with established stature and reputation in the scientific community.

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Interested persons should send a Standard Form SF-171, Personal Qualifications Statement (available at Federal Job Information Offices) by 18 September 1980 to:

OFFICE OF NAVAL RESEARCH
Personnel Services Division
800 North Quincy Street, Room 823
Arlington, Virginia 22217
Announcement #80-26 S
(202) 696-4705

Candidates who fail to submit the required forms will not be considered.

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