

properties are determined by Mendelian particulate genes'' (*Epigenetics*, Academic Press, 1974, p. 395), as if there were no genetic models incorporating environmental variance, genotype-environment interactions, or maternal effects.

Bulmer's book partly bridges the gap between the two ways of approaching population genetics. The book is written in the quantitative genetics tradition, with appropriate coverage of the major topics. But there are several sections of interest to evolutionists, including a review of Bulmer's own work on selection theory, the balance of mutation and selection pressures, and population subdivision. Though there is not as much discussion of evolutionary topics as I would have liked, there is enough to provide a passage between the two parts of population genetics.

The book is written primarily for persons with a clear understanding of statistics, particularly the theory of regression and of the analysis of variance. It does not assume much knowledge of genetics and introduces the reader to the necessary genetic principles in the first few chapters. The first half of the book is on the statistical description of populations under panmixia and under various forms of inbreeding. The second half is on the effects of natural and artificial selection, including frequency-dependent selection and selection operating on correlated characters. An important feature of Bulmer's treatment of this material is his presentation of normal distribution theory, showing the great simplifications possible when normality can be assumed but also the difficulties encountered when it cannot.

For a person with the appropriate statistical background, Bulmer's book provides an excellent introduction to quantitative genetics. In using the condensed notation of mathematical statistics, he can efficiently introduce a variety of topics and develop them in some detail. There are numerous well-chosen examples that both illustrate the main points and introduce the reader to many of the classic studies in the subject. Although the mathematical development of the topics is not always easy to follow, a careful reading and working through of the examples would provide the reader with a sophisticated understanding of the material.

For a person without a strong statistical background, I think the book would be much more difficult. The meaning of the notation and terminology used in the mathematical sections is not always

transparent and cannot usually be understood from the context. It would probably be easier for such a reader to begin with a more elementary book like Falconer's *Quantitative Genetics*. Afterwards, Bulmer's book would provide more extensive information about the subject and at the same time greater understanding of the underlying statistical principles, which were after all first developed by quantitative geneticists.

Bulmer's book is an essential reference for anyone concerned with quantitative genetics and provides the only review available of the parts of quantitative genetics relevant to evolutionary theory. It would be a useful textbook for courses that could assume the necessary statistical background if it were not priced beyond the reach of most students.

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Books Received

- Adaptive Capabilities of the Nervous System.** P. S. McConnell, G. J. Boer, H. J. Romijn, N. E. van de Poll, and M. A. Corner, Eds. Elsevier/North-Holland, New York, 1980. xiv, 446 pp., illus. \$92.25. Progress in Brain Research, vol. 53.
- Addiction and Brain Damage.** Derek Richter, Ed. Croom Helm, London, and University Park Press, Baltimore, 1980. 306 pp., illus. \$39.50.
- Advances in Electronics and Electron Physics.** Vol. 54. L. Marton and C. Marton, Eds. Academic Press, New York, 1980. xii, 318 pp., illus. \$38.50.
- Advances in Veterinary Science and Comparative Medicine.** Vol. 24. C. A. Brandly and Charles E. Cornelius, Eds. Academic Press, New York, 1980. xviii, 326 pp., illus. \$39.50.
- Amateur Astronomer's Handbook.** J. B. Sidgwick. Revised by James Muirden. Enslow, Hillside, N.J., ed. 4, 1980. xx, 568 pp., illus. \$24.95.
- American Geological Literature, 1669 to 1850.** Robert M. Hazen and Margaret Hindle-Hazen. Dowden, Hutchinson and Ross, Stroudsburg, Pa., 1980 (distributor, Academic Press, New York). xiv, 432 pp. \$32.
- Analysis of Mechanisms and Robot Manipulators.** Joseph Duffy. Halsted (Wiley), New York, 1980. x, 420 pp., illus. \$114.95.
- Animal Behaviour. A Systems Approach.** Frederick M. Toates. Wiley, New York, 1980. xii, 300 pp., illus. \$50.
- Animal Diseases in Archaeology.** J. Baker and D. Brothwell. Academic Press, New York, 1980. x, 236 pp., illus. \$29.50.
- An Annotated Bibliography on Planning and Management for Urban-Suburban Wildlife.** Daniel L. Leedy. Fish and Wildlife Service, Washington, D.C., 1979. iv, 256 pp. Paper. FWS-OBS-79-25.
- Annual Review of Anthropology.** Vol. 9. Bernard J. Siegel, Alan R. Beals, and Stephen A. Tyler, Eds. Annual Reviews, Palo Alto, Calif., 1980. xii, 646 pp. \$20.
- Annual Review of Physical Chemistry.** Vol. 31. B. S. Rabinovitch, J. M. Schurr, and H. L. Strauss, Eds. Annual Reviews, Palo Alto, Calif., 1980. xii, 676 pp., illus. \$20.
- Aphasie et Neuropsychologie.** Approaches Thérapeutiques. Xavier Seron. Mardaga, Brussels, 1980. 216 pp. Paper, BF 390.
- Applications of Soil Physics.** Daniel Hillel. Academic Press, New York, 1980. xiv, 386 pp., illus. \$45.
- Applied Linear Regression.** Sanford Weisberg. Wiley, New York, 1980. xiv, 284 pp., illus. \$24.95.
- Applied Statistical Techniques.** K. D. C. Stoodley, T. Lewis, and C. L. S. Stainton. Horwood, Chichester, England, and Halsted (Wiley), New York, 1980.

310 pp., illus. \$56.95. Ellis Horwood Series in Mathematics and Its Applications.

Applied Stochastic Processes. Proceedings of a conference. Athens, Ga., May 1978. G. Adomian, Ed. Academic Press, New York, 1980. x, 302 pp. \$21.

Basalts and Phase Diagrams. An Introduction to the Quantitative Use of Phase Diagrams in Igneous Petrology. S. A. Morse. Springer-Verlag, New York, 1980. xvi, 494 pp., illus. \$29.80.

The Battered Child. C. Henry Kempe and Ray E. Helfer, Eds. University of Chicago Press, Chicago, ed. 3, 1980. xviii, 440 pp., illus. \$25.

The Battered Parent and How Not to Be One. James O. Palmer. Prentice-Hall, Englewood Cliffs, N.J., 1980. xii, 192 pp. \$8.95.

Behavioral and Psychosocial Issues in Diabetes. Beatrix A. Hamburg, Lois F. Lipsett, Gale E. Inoff, and Allan L. Drash, Eds. National Institutes of Health, Bethesda, Md., 1980 (available from the Superintendent of Documents, Washington, D.C.). xxx, 396 pp. Paper, \$7. NIH Publication No. 80-1993.

Belief in Science and in Christian Life. The Relevance of Michael Polanyi's Thought for Christian Faith and Life. Thomas F. Torrance, Ed. Handsel Press, Edinburgh, 1980 (U.S. distributor, Columbia University Press, New York). xviii, 150 pp. \$12.

The Biochemistry of Plants. A Comprehensive Treatise. P. K. Stumpf and E. E. Conn, Eds. Vol. 5. Amino Acids and Derivatives. B. J. Mifflin, Ed. Academic Press, New York, 1980. xvi, 670 pp., illus. \$65.

Bioelectrochemistry. Ions, Surface, Membranes. Martin Blank, Ed. American Chemical Society, Washington, D.C., 1980. xii, 528 pp., illus. \$58. Advances in Chemistry Series, 188.

Biogenesis and Function of Plant Lipids. P. Mazliak, P. Benveniste, C. Costes, and R. Douce, Eds. Elsevier/North-Holland, New York, 1980. xiv, 452 pp., illus. \$63.50. Developments in Plant Biology, vol. 6.

Biology and Breeding for Resistance to Arthropods and Pathogens in Agricultural Plants. M. K. Harris, Ed. Texas Agricultural Experiment Station, College Station, Tex., 1980. x, 606 pp., illus. Paper, \$10.

The Bipyridinium Herbicides. L. A. Summers. Academic Press, New York, 1980. x, 450 pp., illus. \$69.

The Brains of Men and Machines. Ernest W. Kent. Byte-McGraw Hill, Peterborough, N.H., 1980. x, 286 pp., illus. \$15.95.

A Calculus of Communicating Systems. Robin Milner. Springer-Verlag, New York, 1980. vi, 172 pp., illus. Paper, \$11.80. Lecture Notes in Computer Science, vol. 92.

The California Islands. Dennis M. Power, Ed. Santa Barbara Museum of Natural History, Santa Barbara, Calif., 1980. viii, 788 pp., illus. Paper, \$20.

Carbon-13 Nuclear Magnetic Resonance Spectroscopy. George C. Levy, Robert L. Lichter, and Gordon L. Nelson. Wiley-Interscience, New York, ed. 2, 1980. xiv, 338 pp., illus. \$14.50.

Celestial Lancets. A History and Rationale of Acupuncture and Moxa. Lu Gwei-Djen and Joseph Needham. Cambridge University Press, New York, 1980. xxii, 428 pp., illus. \$97.50.

Chemical and Biochemical Applications of Lasers. Vol. 5. C. Bradley Moore, Ed. Academic Press, New York, 1980. xii, 282 pp., illus. \$23.

Chromium in Nutrition and Disease. Günay Saner. Liss, New York, 1980. x, 136 pp., illus. \$16. Current Topics in Nutrition and Disease, vol. 2.

Climatic Constraints and Human Activities. Jesse Ausubel and Asit K. Biswas, Eds. Pergamon, New York, 1980. xii, 206 pp., illus. \$30. IASA Proceedings Series, vol. 10.

Clinical Studies in Infant Mental Health. The First Year of Life. Selma Fraiberg, Ed. Basic Books, New York, 1980. xii, 280 pp. \$17.50.

Coal Liquefaction Fundamentals. D. Duayne Whitehurst, Ed. American Chemical Society, Washington, D.C., 1980. x, 412 pp., illus. \$38. ACS Symposium Series, 139.

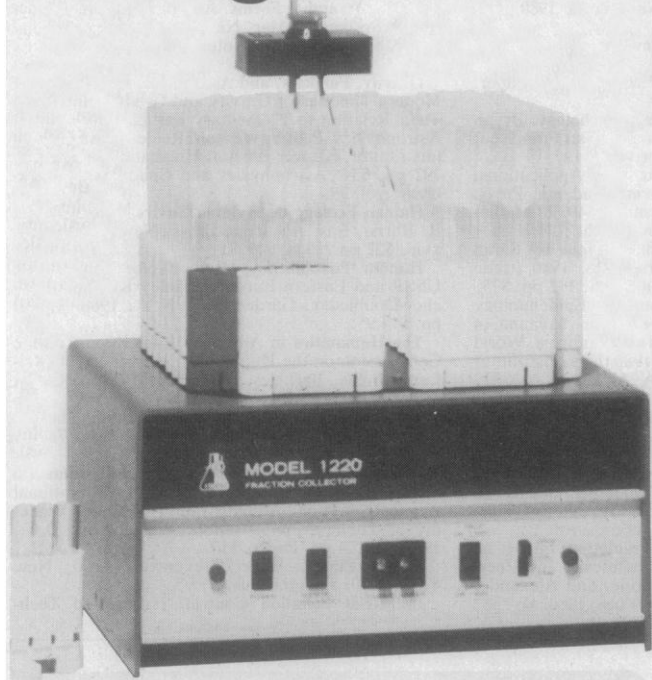
Discovering the Human Body. How Pioneers of Medicine Solved the Mysteries of the Body's Structure and Function. Bernard Knight. Lippincott and Crowell (Harper and Row), New York, 1980. 192 pp., illus. \$17.95.

Disease and Urbanization. E. J. Clegg and J. P. Garlick, Eds. Taylor and Francis, London, 1980 (U.S. distributor, Humanities Press, Atlantic Highlands, N.J.). x, 172 pp., illus. \$22.25. Symposia of the Society for the Study of Human Biology, vol. 20.

Drugs, Daydreaming, and Personality. A Study of College Youth. Bernard Segal, George J. Huba, and Jerome L. Singer. Erlbaum, Hillsdale, N.J., 1980. xiv, 254 pp. \$19.95.

Early Radio Wave Detectors. Vivian J. Phillips. Peregrinus, Stevenage, England, 1980 (U.S. distributor, IEEE Service Center, Piscataway, N.J.). xvi, (Continued on page 364)

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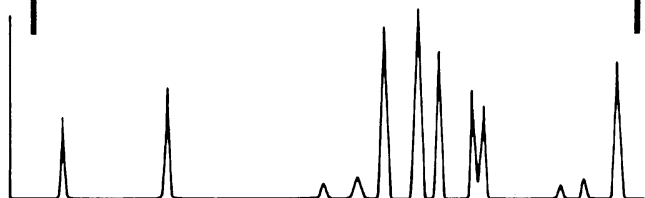
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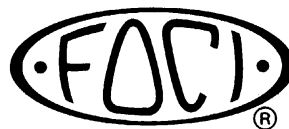
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BOOKS RECEIVED

(Continued from page 321)

224 pp., illus. \$42.75. History of Technology Series 2.

Ecology of the English Chalk. C. J. Smith. Academic Press, New York, 1980. xvi, 574 pp., illus. \$55.

Effects of Hormones, Drugs and Chemicals on Testicular Function. Vol. 1. A. G. Davies. Eden Press, St. Albans, Vt., 1980 (distributor, Pergamon, New York,). xii, 276 pp. \$32.

Electrical Principles for Technicians. Roger Hamilton. Oxford University Press, New York, 1980. xvi, 232 pp., illus. \$37.50.

Electronic Interpretation of Organic Chemistry. A Problems-Oriented Text. Fredric M. Menger and Leon Mandell. Plenum, New York, 1980. viii, 216 pp., illus. Cloth, \$27.50; paper, \$12.50.

Electrons at the Fermi Surface. M. Springford, Ed. Cambridge University Press, New York, 1980. xvi, 542 pp., illus. \$85.

Elementary Atomic Structure. G. K. Woodgate. Clarendon (Oxford University Press), New York, ed. 2, 1980. x, 228 pp. \$29.50.

Eleven Area Health Education Centers. The View from the Grass Roots. Charles E. Odegaard. Carnegie Council on Policy Studies in Higher Education, Berkeley, Calif., 1980 (distributor, University of Washington Press, Seattle). x, 798 pp. Paper, \$20.

Emergency Medical Services. Measures to Improve Care. John Z. Bowers and Elizabeth F. Purcell, Eds. Josiah Macy, Jr. Foundation, New York, 1980 (distributor, Independent Publishers Group, Port Washington, N.Y.). x, 314 pp. Paper, \$4.

Energy and Resource Development of Continental Margins. Teh Fu Yen and Don Walsh, Eds. Pergamon, New York, 1980. x, 238 pp., illus. \$30.

Energy Technology. Sources of Power. Anthony E. Schwaller. Davis, Worcester, Mass., 1980. xviii, 446 pp., illus. \$15.95.

English Special Languages. Principles and Practice in Science and Technology. Juan C. Sager, David Dungworth, and Peter F. McDonald, Brandstetter, Wiesbaden, Germany, 1980. xxiv, 368 pp. DM 45.

Entomology. Cedric Gillott. Plenum, New York, 1980. xviii, 730 pp., illus. \$49.50.

Environmental Impact Analysis. A New Dimension in Decision Making. R. K. Jain, L. V. Urban, and G. S. Stacey. Van Nostrand Reinhold, New York, ed. 2, 1980. xviii, 394 pp., illus. \$27.50.

Enzyme Inhibitors as Drugs. Merton Sandler, Ed. University Park Press, Baltimore, 1980. x, 286 pp., illus. \$49.50.

Epithelial Transport in the Lower Vertebrates. Transports Epithéiaux chez les Vertébrés Inférieurs. B. Lahlou, Ed. Cambridge University Press, New York, 1980. xiv, 366 pp., illus. \$55.

Finite Markov Processes and Their Applications. Marius Iosifescu. Editura Technică, Bucharest, and Wiley, New York, 1980. 296 pp. \$32.50.

Food Additives. R. J. Taylor. Wiley, New York, 1980. xvi, 126 pp., illus. \$30.

The Foraging Strategy of Howler Monkeys. A Study in Primate Economics. Katharine Milton. Columbia University Press, New York, 1980. xvi, 166 pp., illus. \$20.

Forms of Play of Native North Americans. Edward Norbeck and Claire R. Farrer, Eds. West Publishing Company, St. Paul, Minn., 1979. viii, 290 pp. Paper, \$12.95.

Fundamentals of Human Neuropsychology. Bryan Kolb and Ian Q. Whishaw. Freeman, San Francisco, 1980. x, 502 pp., illus. \$17.95.

Fuzzy Sets and Systems. Theory and Applications. Didier Dubois and Henri Prade. Academic Press, New York, 1980. xviii, 394 pp., illus. \$49.50. Mathematics in Science and Engineering, vol. 144.

Galaxies. Timothy Ferris. Illustrations by Sarah Landry. Sierra Club, San Francisco, 1980 (trade distributor, Scribner, New York). viii, 182 pp. \$75.

The Garki Project. Research on the Epidemiology and Control of Malaria in the Sudan Savanna of West Africa. L. Molineaux and G. Gramiccia. World Health Organization, Geneva, 1980 (U.S. distributor WHO Publications Centre USA, Albany, N.Y.). 312 pp., illus. Paper, \$19.80.

Gel Filtration Chromatography. L. Fischer. Elsevier/North-Holland, New York, ed. 2, 1980. x, 270 pp., illus. Paper, \$24.75.

Genetic Aspects and Anaphylactoid Reactions. P. Dukor, P. Kallós, H. D. Schlumberger, and G. B. West, Eds. Karger, Basel, 1980. xiv, 308 pp., illus. \$78. PAR: Pseudo-Allergic Reactions, vol. 1.

Genetic Engineering of Osmoregulation. Impact on Plant Productivity for Food, Chemicals, and Energy. D. W. Rains, R. C. Valentine, and Alexander Hollaender, Eds. Plenum, New York, 1980. xiv, 382

pp., illus. \$39.50. Basic Life Sciences, vol. 14. **Genetics and the Law II.** Aubrey Milunskey and George J. Annas, Eds. Plenum, New York, 1980. xx, 480 pp. \$29.50.

Geodesy. G. Bomford. Clarendon (Oxford University Press), New York, ed. 4, 1980. xii, 856 pp., illus. \$139.

Geysers and Geothermal Energy. John S. Rinehart. Springer-Verlag, New York, 1980. xvi, 224 pp., illus. \$19.80.

Glow Discharge Processes. Sputtering and Plasma Etching. Brian Chapman. Wiley-Interscience, New York, 1980. xviii, 406 pp., illus. \$31.50.

Graduate Medical Education. Present and Prospective. A Call for Action. Report of the Macy Study Group. Josiah Macy, Jr. Foundation, New York, 1980. viii, 228 pp. Paper.

Grammar and L Forms. An Introduction. Derick Wood. Springer-Verlag, New York, 1980. x, 314 pp. Paper, \$19.50. Lecture Notes in Computer Science, vol. 91.

Gravity, Particles, and Astrophysics. A Review of Modern Theories of Gravity and G-variability, and Their Relation to Elementary Particle Physics and Astrophysics. Paul S. Wesson. Reidel, Boston, 1980 (distributor, Kluwer Boston, Hingham, Mass.). viii, 192 pp. \$34. Astrophysics and Space Science Library, vol. 79.

Human Ecology in Savanna Environments. David R. Harris, Eds. Academic Press, New York, 1980. xviii, 522 pp., illus. \$49.50.

Human Possibilities. Mind Exploration in the USSR and Eastern Europe. Stanley Krippner. Anchor-Doubleday, Garden City, N.Y., 1980. x, 350 pp. \$14.95.

The Humanities in American Life. Report of the Commission on the Humanities. University of California Press, Berkeley, 1980. xiv, 192 pp. Cloth, \$12.50; paper, \$3.50.

Ideas, Individuals, Interaction. A Formal Theory. Dan Jonsson. Dialog, Lund, Sweden, 1980. 74 pp. Paper, Sw. Crs. 30.

Improving the Health and Nutrition Examination Survey. An Evaluation by a Panel of the National Academy of Public Administration. National Academy of Public Administration, Washington, D.C., 1980. vi, 124 pp. Paper, \$10.

Indoor Plants. Violet Stevenson. Arco, New York, 1980. 126 pp., illus. \$7.95.

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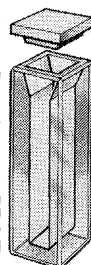
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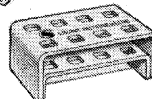
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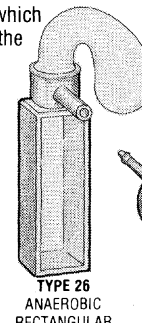
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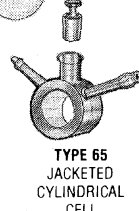
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niques. Nancy J. Sell. Van Nostrand Reinhold, New York, 1981. xx, 360 pp., illus. \$19.50.

Industrialised Embayments and Their Environmental Problems. A Case Study of Swansea Bay. M. B. Collins, F. T. Banner, P. A. Tyler, S. J. Wakefield, and A. E. James, Eds. Pergamon, New York, 1980. xvi, 616 pp., illus. \$75.

Infections of the Gastrointestinal Tract. Microbiology, Pathophysiology, and Clinical Features. Herbert L. DuPont and Larry K. Pickering. Plenum, New York, 1980. xvi, 274 pp., illus. \$24.50.

Insect Worlds. A Guide for Man on Making the Most of the Environment. Lorus J. Milne and Margery Milne. Scribner, New York, 1980. x, 274 pp., illus. \$12.95.

Integrated Medicine. Stacey B. Day, Ed. Van Nostrand Reinhold, New York, 1980. xii, 626 pp., illus. \$32.50. A Companion to the Life Sciences, vol. 2.

International Nomenclature of Diseases. Vol. 3, Diseases of the Lower Respiratory Tract. Council for International Organizations of Medical Sciences, Geneva, 1979 (U.S. distributor, WHO Publications

Centre USA, Albany, N.Y.). xii, 128 pp. Paper.

Intrauterine Devices Abstracts. A Guide to the Literature, 1976-1979. Helen K. Kolbe. IFI-Plenum, New York, 1980. x, 572 pp. \$75. Population Information Library, vol. 1.

Introducing Structures. A Textbook for Students of Civil and Structural Engineering, Building and Architecture. A. J. Francis. Pergamon, New York, 1980. viii, 294 pp., illus. Cloth, \$30; paper, \$11.50.

Introduction to Chemical Process Technology. P. J. van den Berg and W. A. de Jong. Delft University Press, Delft, The Netherlands, and Reidel, Boston, 1980 (distributor, Kluwer Boston, Hingham, Mass.). x, 310 pp., illus. \$26.

Introduction to Language Pathology. David Crystal. University Park Press, Baltimore, 1980. x, 214 pp., illus. Paper, \$15.95.

Introduction to Numerical Analysis. F. Stummel and K. Hainer. Translated from the German edition (1971) by E. R. Dawson. W. N. Everitt, Ed. Scottish Academic Press, Edinburgh, 1980 (U.S. distributor, Columbia University Press, New York). xiv, 282 pp., illus. Paper, \$22.

Introduction to Plant Nematology. Victor H. Dropkin. Wiley-Interscience, New York, 1980. xvi, 294 pp., illus. \$26.

Introduction to Protein Sequence Analysis. L. R. Croft. Wiley, New York, 1980. xii, 158 pp., illus. Paper, \$14.

ISAM 1979. Proceedings of the Third International Symposium on Ambulatory Monitoring. F. D. Stott, E. B. Raftery, and L. Goulding, Eds. Academic Press, New York, 1980. xviii, 576 pp., illus. \$49.50.

John von Neumann and Norbert Wiener. From Mathematics to the Technologies of Life and Death. Steve J. Heims. MIT Press, Cambridge, Mass., 1980. xx, 548 pp. \$19.95.

Knott's Handbook for Vegetable Growers. Oscar A. Lorenz and Donald N. Maynard. Wiley-Interscience, New York, ed. 2, 1980. x, 390 pp., illus. Spiral-bound, \$16.50.

Language and the Origins of Psychoanalysis. John Forrester. Columbia University Press, New York, 1980. xvi, 286 pp. \$22.50.

Left Handed. A Navajo Autobiography. Translated from the Navajo. Walter and Ruth Dyk. Columbia University Press, New York, 1980. xxviii, 578 pp. \$25.

Leo Szilard: His Version of the Facts. Selected Recollections and Correspondence. Spencer R. Weart and Gertrud Weiss Szilard, Eds. MIT Press, Cambridge, Mass., 1980. xxii, 244 pp., illus. Paper, \$7.50. Reprint of the 1978 edition.

Leonardo the Inventor. Ludwig H. Heydenreich, Bern Dibner, and Ladislao Reti. McGraw-Hill, New York, 1980. 192 pp., illus. \$9.95. Reprinted from *The Unknown Leonardo*.

Life Testing and Reliability Estimation. S. K. Sinha and B. K. Kale. Halsted (Wiley), New York, 1980. viii, 196 pp. \$16.95.

Lightning and Its Spectrum. An Atlas of Photographs. Leon E. Salanave. University of Arizona Press, Tucson, 1980. xviii, 136 pp. \$25.

Limits to Action. The Allocation of Individual Behavior. J. E. R. Staddon, Ed. Academic Press, New York, 1980. xx, 308 pp., illus. \$24.

Long House. Mesa Verde National Park, Colorado. George S. Cattanach, Jr., with contributions by Richard P. Wheeler, Carolyn M. Osborne, Charmion R. McKusick, and Paul S. Martin. National Park Service, Washington, D.C., 1980 (available from the Superintendent of Documents, Washington, D.C.). xviii, 432 pp., illus. Paper, \$9.50. Publications in Archeology 7H. Wetherill Mesa Studies.

Longman Dictionary of Scientific Usage. A. Godman and E. M. F. Payne. Longman, New York, 1979. xxxii, 684 pp., illus. Paper, \$13.50.

Lymphocyte Stimulation. Differential Sensitivity to Radiation, Biochemical and Immunological Processes. Amleto Castellani, Ed. Plenum, New York, 1980. viii, 188 pp., illus. \$27.50.

Magnesium and Man. Warren E. C. Wacker. Harvard University Press, Cambridge, Mass., 1980. xii, 172 pp. \$17.50.

Majestic Lights. The Aurora in Science, History, and the Arts. Robert H. Eather. American Geophysical Union, Washington, D.C., 1980. x, 324 pp., illus. \$49.

The Making of Social Psychology. Discussions with Creative Contributors. Richard I. Evans. Gardner Press, New York, 1980 (distributor, Halsted [Wiley], New York). xx, 230 pp. \$24.95.

The Mosses of North America. Ronald J. Taylor, Alan E. Leviton, and Margaret Berson, Eds. Pacific Division of the American Association for the Advancement of Science, San Francisco, 1980. 170 pp., illus. Paper, \$11.95.

Multiprocessors. A Comparative Study. M. Sathyanarayanan. Prentice-Hall, Englewood Cliffs, N.J., 1980. vi, 202 pp., illus. \$21.50.

Mummies, Disease, and Ancient Cultures. Aidan and Eve Cockburn, Eds. Cambridge University Press, New York, 1980. x, 340 pp., illus. \$49.95.

Mysteries of the Deep. Joseph J. Thorndike, Jr., Ed. American Heritage, New York, 1980 (trade distributor, Scribner, New York). 352 pp., illus. \$34.95.

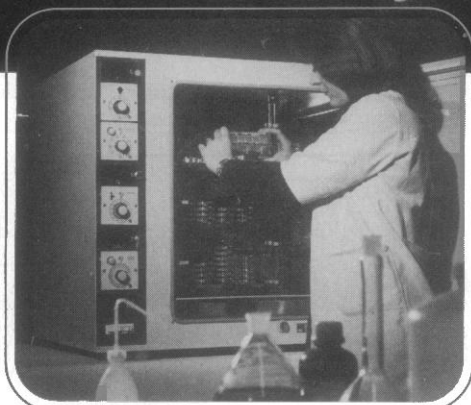
National Health Insurance. What Now, What Later, What Never? Papers from a conference, Washington, D.C., Mark V. Pauly, Ed. American Enterprise Institute for Public Policy Research, Washington, D.C., 1980. xvi, 394 pp. Paper, \$8.25. AEI Symposia 80C.

The Natural Environment and the Biogeochemical Cycles. P. J. Craig and 11 others. Springer-Verlag, New York, 1980. xvi, 258 pp., illus. \$37.90. The Handbook of Environmental Chemistry, vol. 1, part A.

New Advances in the Diagnosis and Treatment of Depressive Illness. J. Mendlewicz, Ed. Excerpta Medica, Amsterdam, 1980 (U.S. distributor, Elsevier/North-Holland, New York). viii, 166 pp., illus. \$39.

New Directions in Memory and Aging. Leonard W. Poon, James L. Fozard, Laird S. Cermak, David Arenberg, and Larry W. Thompson, Eds. Erlbaum, Hillsdale, N.J., 1980. xx, 572 pp. \$36.

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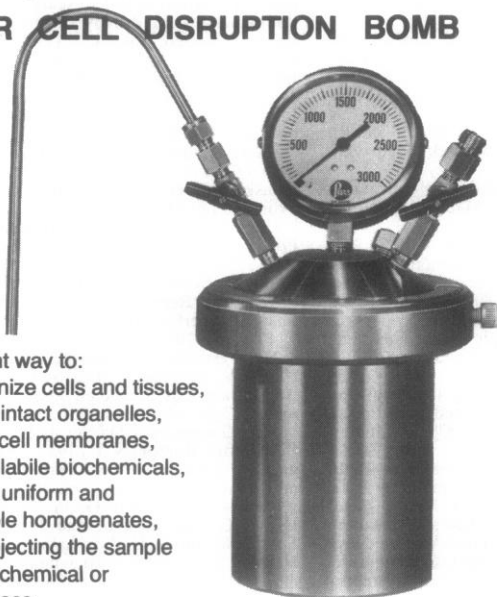
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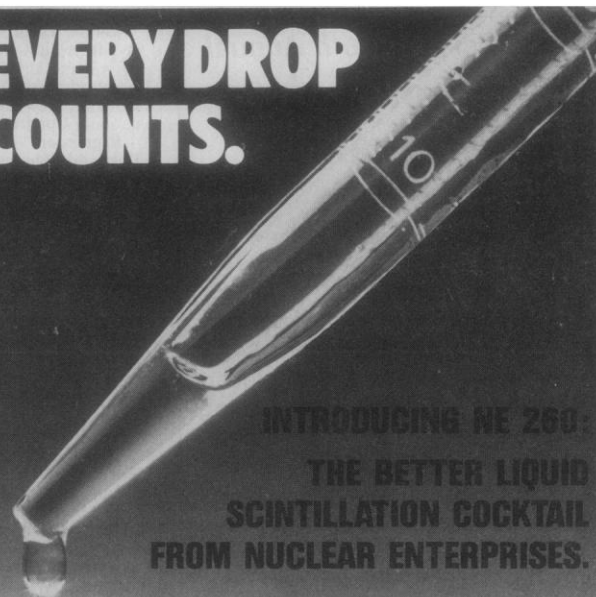
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Recent Progress in Diagnosis and Treatment of Hypothyroid Conditions. P. A. Bastenie, M. Bonnyns, and L. Vanhaelst, Eds. Excerpta Medica, Amsterdam, 1980 (U.S. distributor, Elsevier/North-Holland, New York). viii, 158 pp., illus. \$39. International Congress Series 529.

Regression Diagnostics. Identifying Influential Data and Sources of Collinearity. David A. Belsley, Edwin Kuh, and Roy E. Welsch. Wiley, New York, 1980. xvi, 292 pp. \$21.95.

Science and Social Structure. A Festschrift for Robert K. Merton. Thomas F. Gieryn, Ed. New York Academy of Sciences, New York, 1980. viii, 172 pp. Paper. \$15.

Science, Technology and the Future. Soviet Scientists' Analysis of the Problems of and Prospects for the Development of Science and Technology and Their Role in Society. E. P. Velikhov, J. M. Gvishiani, and S. R. Mikulinsky, Eds. Pergamon, New York, 1980. viii, 480 pp. \$34.

Scientific Basis for Nuclear Waste Management. Vol. 2. Clyde J. M. Northrup, Jr., Ed. Plenum, New York, 1980. xx, 936 pp., illus. \$65.

The Scientific Image. Bas C. van Fraassen. Clarendon (Oxford University Press), New York, 1980. xii, 236 pp. Cloth, \$45; paper, \$18.95.

The Search for Gravity Waves. P. C. W. Davies. Cambridge University Press, New York, 1980. viii, 144 pp., illus. \$19.95.

Seeds and Their Uses. C. M. Duffus and J. C. Slaughter. Wiley, New York, 1980. x, 154 pp., illus. \$34.

Silylated Surfaces. Donald E. Leyden and Ward T. Collins, Eds. Gordon and Breach, New York, 1980. viii, 380 pp., illus. \$63.50. Midland Macromolecular Monographs, vol. 7.

Simplified Truss Design. Michele Melaragno. Van Nostrand Reinhold, New York, 1980. xii, 404 pp., illus. \$27.50.

Six Korean Women. The Socialization of Shamans. Youngsook Kim Harvey. West Publishing Company, St. Paul, Minn., 1979. xii, 326 pp. \$19.95.

Sixth Report on the World Health Situation, 1973-1977. World Health Organization, Geneva, 1980 (U.S. distributor, WHO Publications Centre USA, Albany, N.Y.). Two volumes. Part 1, Global Analysis. viii, 290 pp., illus. Paper, \$12. Part 2, Review by Country and Area. vi, 414 pp. Paper, \$16.80.

Size Exclusion Chromatography (GPC). Theodore Provder, Ed. American Chemical Society, Washington, D.C., 1980. viii, 312 pp., illus. \$30.75. ACS Symposium Series, 138.

Skeletal Growth of Aquatic Organisms. Biological Records of Environmental Change. Donald C. Rhoads and Richard A. Lutz, Eds. Plenum, New York, 1980. xiv, 750 pp., illus. \$47.50. Topics in Geobiology, vol. 1.

Smoking for Two. Cigarettes and Pregnancy. Peter A. Fried and Harry Oxorn. Free Press (Macmillan), New York, and Collier Macmillan, London, 1980. xii, 146 pp. \$10.95.

The Social History of Disease and Medicine in Africa. John M. Janzen and Steven Feierman, Eds. Pergamon, New York, 1979. iv + pp. 239-356. Paper. Special issue of *Social Science and Medicine*, vol. 13B, No. 4.

Software Development Tools. W. E. Riddle and R. E. Fairley. Springer-Verlag, New York, 1980. viii, 280 pp. Paper, \$19.80.

Solar Energy Index. The Arizona State University Solar Energy Collection. George Machovec. Pergamon, New York, 1980. i xiv, 942 pp. \$135.

Solar Energy Technology Handbook. Part B, Applications, Systems Design, and Economics. William C. Dickinson and Paul N. Cheremisinoff, Eds. Dekker, New York, 1980. xii, 806 pp., illus. \$85. Energy, Power, and Environment, 6.

Sound Recording. John Eargle. Van Nostrand Reinhold, New York, ed. 2, 1980. xii, 356 pp., illus. \$21.95.

Space, Time, and Culture among the Iraqis of Tanzania. Robert J. Thornton. Academic Press, New York, 1980. xxiv, 278 pp., illus. \$29.50. Studies in Anthropology.

Species-Specific Potential of Invertebrates for Toxicological Research. Hans E. Kaiser. University Park Press, Baltimore, 1980. xii, 224 pp. \$29.50.

Stochastic Dynamic Properties of Linear Econometric Models. Jürgen Wolters. Springer-Verlag, New York, 1980. viii, 154 pp., illus. Paper, \$15. Lecture Notes in Economics and Mathematical Systems, vol. 182.

Straight Lines and Curves. N. B. Vasilyev and V. L. Gutenmacher. Translated from the Russian edition (1978) by Anjan Kundu. Mir Publishers, Moscow, 1980 (U.S. distributor, Imported Publications, Chicago). 198 pp., illus. \$4.

The Study of Heart-Rate Variability. R. I. Kitney and O. Rompelman, Eds. Clarendon (Oxford University Press), New York, 1980. xiv, 246 pp., illus. \$65.

A Summary of Research in Science Education—1978. Dorothy L. Gabel, Martin H. Kagan,

and Robert D. Sherwood. Interscience (Wiley), New York, 1980. iv + pp. 425-578. Paper, \$10. *Science Education*, vol. 64, No. 4.

The Suppression of Experimental Allergic Encephalomyelitis and Multiple Sclerosis. A. N. Davison and M. L. Cuzner, Eds. Academic Press, New York, 1980. xvi, 292 pp., illus. \$34.50.

Survival Models and Data Analysis. Regina C. Elandt-Johnson and Norman L. Johnson. Wiley, New York, 1980. xviii, 458 pp. \$34.95.

The Sweet Spot in Time. John Jerome. Summit (Simon and Schuster), New York, 1980. 350 pp. \$13.95.

Symposium on Pyrrolizidine (Senecio) Alkaloids. Toxicity, Metabolism, and Poisonous Plant Control Measures. P. R. Cheeke, Ed. Nutrition Research Institute, Oregon State University, Corvallis, 1979. iv, 170 pp. Paper, \$5.

Systems Analysis and Policy Sciences. Theory and Practice. Robert M. Krone. Wiley-Interscience, New York, 1980. xxx, 216 pp., illus. \$22.95.

Taphonomy and Archaeology in the Upper Pleistocene of the Northern Yukon Territory. A Glimpse of the Peopling of the New World. Richard E. Morlan. National Museum of Canada, Ottawa, 1980. xxvi, 398 pp., illus. Paper. National Museum of Man Mercury Series. Archaeological Survey of Canada Paper No. 94.

Taxonomy and Behavioral Science. Comparative Performance of Grouping Methods. Juan E. Mezrich and Herbert Solomon. Academic Press, New York, 1980. xiv, 180 pp. \$25.

Teams in Information Systems Development. Philip C. Sempervivo. Yourdon, New York, 1980. xii, 132 pp., illus. Paper, \$16.75.

Technological Risk. Its Perception and Handling in the European Community. Meinolf Dierkes, Sam Edwards, and Rob Coppock, Eds. Published for the Commission of the European Communities by Oelgeschlager, Gunn and Hain, Cambridge, Mass., and Verlag Anton Hain, Königstein/Ts., Germany, 1980. xii, 142 pp. \$20.

Technology. An Introduction. Paul W. DeVore. Davis, Worcester, Mass., 1980. xvi, 400 pp., illus. \$16.95.

The Techno-Peasant Survival Manual. Bantam, New York, 1980. vi, 314 pp., illus. Paper, \$8.95.

Thermoregulation. Evelyn Satinoff, Ed. Dowden, Hutchinson and Ross, Stroudsburg, Pa., 1980 (distributor, Academic Press, New York). xvi, 378 pp., illus. \$45. Benchmark Papers in Behavior, vol. 13.

Timber Supply, Land Allocation, and Economic Efficiency. William F. Hyde. Published for Resources for the Future by Johns Hopkins University Press, Baltimore, 1980. xviii, 226 pp., illus. \$19.

Traces of the Past. A Field Guide to Industrial Archaeology. David Weitzman. Scribner, New York, 1980. viii, 230 pp., illus. \$17.95.

Transuranic Elements in the Environment. A Summary of Environmental Research on Transuranium Radionuclides Funded by the U.S. Department of Energy through Calendar Year 1979. Wayne C. Hanson, Ed. U.S. Department of Energy Technical Information Center, Oak Ridge, Tenn., 1980 (available as DOE-TIC-22800 from the National Technical Information Service, Springfield, Va.). xviii, 728 pp., illus. \$18.50.

Understanding Piaget. An Introduction to Children's Cognitive Development. Mary Ann Spencer Pulaski. Harper and Row, New York, ed. 2, 1980. xviii, 250 pp. \$11.95.

Using Sophisticated Models in Resolution Theorem Proving. David M. Sandford. Springer-Verlag, New York, 1980. xii, 240 pp. Paper, \$14. Lecture Notes in Computer Science, vol. 90.

Venomous Reptiles. Sherman A. Minton, Jr., and Madge Rutherford Minton. Scribner, New York, ed. 2, 1980. xii, 308 pp. + plates. \$13.95.

The Versatility of Kinship. Essays Presented to Harry W. Basehart. Linda S. Cordelland Stephen Beckerman, Eds. Academic Press, New York, 1980. xviii, 382 pp. \$40.

Viral Oncogenes. Cold Spring Harbor Laboratory, Cold Spring Harbor, N.Y., 1980. 2 vols. xi, 1322 pp., illus. + index. \$130. Cold Spring Harbor Symposia on Quantitative Biology, vol. 44.

Viruses in Naturally Occurring Cancers. Myron Essex, George Todaro, and Harald zur Hausen, Eds. Cold Spring Harbor Laboratory, Cold Spring Harbor, N.Y., 1980. Two volumes. xiv, 1284 pp., illus. \$125. Cold Spring Harbor Conferences on Cell Proliferation, vol. 7.

Viscoelastic Properties of Polymers. John D. Ferry. Wiley, New York, ed. 3, 1980. xxvi, 642 pp., illus. \$48.

War Peace Film Guide. John Dowling. World Without War Publications, Chicago, ed. 3, 1980. iv, 188 pp. Paper, \$5.

Water Rights and Energy Development in the Yellowstone River Basin. An Integrated Analysis. Constance M. Boris and John V. Krutilla. Published for Resources for the Future by Johns Hopkins University Press, Baltimore, 1980. xvi, 278 pp. \$25.

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The Department of Cell Biology and Anatomy at the Johns Hopkins Medical School invites applications from qualified individuals for **ASSISTANT PROFESSOR**. Candidates must be internationally recognized leaders in the research field of electron microscopy and crystallography of biological macromolecules, including expertise in analog and digital image processing techniques. Teaching commitments will be in cell biology for medical students and optical methods in biology for graduate students. Submit applications to: Director, Department of Cell Biology and Anatomy, The Johns Hopkins University School of Medicine, 725 North Wolfe Street, Baltimore, Maryland 21205. Applicants will be considered without regard to race, religion, sex, or national origin. The Johns Hopkins University is an Equal Opportunity/Affirmative Action Employer.

ASSISTANT PROFESSOR BIOLOGICAL CHEMISTRY

The Department of Biological Chemistry and the Neurobiochemistry Division of the Mental Retardation Research Center, University of California, Los Angeles (UCLA), School of Medicine, invite applications for a tenure-track position at the assistant professor level. Candidates with research interests relating to proteins and peptides of the central nervous system, or to expression of their genes, or in the biochemistry of nervous system growth, differentiation, and function will be given preferential consideration. Genuine interest and excellence in teaching and ability to interact productively with members of the Neurochemistry Division are also required. Applicants should submit a short statement of research goals, curriculum vitae, and names of three references by 15 June to: Chairman, Neurochemistry Search Committee, Department of Biological Chemistry, UCLA School of Medicine, Los Angeles, Calif. 90024.

An Equal Opportunity Employer; applications from minority and women candidates are encouraged.

ASSISTANT PROFESSOR OF OPHTHALMOLOGY. Applicants should have a strong commitment to research and education in the subspecialty of pediatric ophthalmology, with expertise in ocular oncology. This academic position requires completion of an approved 3-year residency program in pediatric ophthalmology with additional training and experience in ocular oncology, research experience, teaching ability, and administrative abilities. Please send inquiries and curriculum vitae to: Stephen J. Ryan, M.D., Chairman, Department of Ophthalmology, University of Southern California School of Medicine, Doheny Eye Foundation Building, 1355 San Pablo Street, Los Angeles, Calif. 90033. The University of Southern California is an Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

ASSISTANT PROFESSOR. 9-month appointment, tenure-track. Available 15 August 1981. Responsibilities: Develop and teach courses in food science, nutritional evaluation of food, and methods in food research. Conduct research in nutrient evaluation, composition, or preservation of foods; product development or international food problems. Advise undergraduate and graduate students. Qualifications: Ph.D. in foods, nutrition, or related area; demonstrated ability in teaching and/or research; interest and/or experience in international food or nutrition problems strongly encouraged. Send letter of application, credentials, names of three references, and a brief outline of research interests to: **Dr. Eleanor Schlenker, Acting Chairperson, Department of Human Nutrition and Foods, University of Vermont, Burlington, Vermont 05405.** Application deadline: 15 May 1981 or until position is filled.

The University of Pittsburgh School of Medicine is seeking an **ASSISTANT PROFESSOR** in the Division of Clinical Pharmacology/Hypertension. Requirements: Board-certification/eligibility, ABIM; ability to initiate and execute original investigations in areas relevant to clinical pharmacology and/or hypertension; clinical teaching and administration of several out-patient clinic sessions per week as well as rotation on consult service may occupy up to 50 percent of time.

Direct inquiries to:

**Robert McDonald, M.D., Chief,
Division of Clinical Pharmacology/Hypertension
Department of Medicine
University of Pittsburgh
School of Medicine
448 Scaife Hall
Pittsburgh, Pa. 15261**

An Equal Opportunity/Affirmative Action Employer

The Division of Neurological Surgery, Department of Surgery, University of California, Irvine (UCI), invites applications for the position of **ASSISTANT PROFESSOR OF SURGERY (NEUROSURGERY) IN RESIDENCE.** A broad background in electrophysiology is required; experience with single unit and multiple unit recording with extracellular electrodes and a working knowledge of the use of chronic microelectrode implantation techniques and of intracellular techniques. Programming and systems experience with DEC computers is also required. Research facilities are available and the candidate will maintain an independent research program in addition to directing and coordinating other research laboratories with the division. The position involves teaching of undergraduate medical students and neurosurgical residents. Send curriculum vitae and letters of reference to: **John A. Kusske, M.D., Division of Neurological Surgery, UCI Medical Center, Mail Route 81, 101 City Drive South, Orange, California 92668,** by 30 May 1981. Telephone: 714-634-6705.

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

BELOWGROUND ECOSYSTEM SCIENTIST, assistant or associate professor level, nontenure-track position. Three years of research with a team on a systems approach to the revegetation of drastically disturbed ecosystems such as surface mined areas or overgrazed lands is planned. Expertise in microbiology, mycorrhizae, nutrient dynamics (particularly N), or a similar aspect of belowground ecosystem science required. Opportunities are available to develop an individual program in both research and teaching with an appropriate departmental affiliation.

Salary about \$25,000 per year. Closing date: 15 May 1981. Contact:

**George S. Innis
Ecology Center
UMC 52
Utah State University
Logan, Utah 84322**

SYSTEMS ANALYST to work in natural resource management areas. Ph.D. desirable but not required. Modeling succession, nutrient dynamics, and populations. Experience with mathematical modeling of complex systems and willingness to work in teams required.

Salary to \$20,000, depending on qualifications. Closing date: 15 May 1981. Contact:

**George S. Innis
Ecology Center
UMC 52
Utah State University
Logan, Utah 84322**

POSITIONS OPEN

ASSISTANT PROFESSOR/RESEARCH ASSOCIATE. Research and teaching experience in organization and management of science and technology and Ph.D. in appropriate area required. Position includes: teaching two graduate-level courses on management of science and technology and technology diffusion, research or related topics, and administration. Start September 1981. Possible joint appointment with academic department, Boston University. Send résumé to: **Science Recruitment Committee, Center for Applied Social Science, 197 Bay State Road, Boston, Mass. 02215.**

The Cal Space Institute, La Jolla campus, of Scripps Institution of Oceanography, has an immediate opening in the **ASSISTANT RESEARCH** series for a **physical or inorganic chemist or chemical engineer** (Ph.D. level) to participate in joint University of California, San Diego, and Rockwell International program with sufficient background for development of procedures and technologies for the industrial processing of lunar materials. Initial appointment for 1 year. Anticipate follow-on program leading to prototype demonstration processing plant. Salary range: \$21,600 to \$28,400, commensurate on qualifications. Send résumé and references to: **David Wirth, Cal Space Institute, A030, Scripps Institution of Oceanography, La Jolla, Calif. 92093,** by 31 May 1981. For additional information, contact: **Dr. David R. Criswell, telephone: 714-452-2047** or above address. *The University of California, San Diego, is an Affirmative Action/Equal Opportunity Employer.*

ASSOCIATE DIRECTOR, Research Institute of Pharmaceutical Sciences, School of Pharmacy, University of Mississippi. Requirements: doctorate in biomedical or physical sciences. Qualifications: experience in research management with demonstrated record of funded research and publications. Responsibility: to coordinate the execution of existing research and to further expand a dynamic basic and applied multidisciplinary research institute presently supported by state, federal, and private funds. Salary commensurate with qualifications. Contact: **Dr. Carlton E. Turner, Director, Research Institute of Pharmaceutical Sciences, School of Pharmacy, University of Mississippi, University, Miss. 38677.** *Equal Opportunity Employer.* Application deadline: 1 June 1981, to ensure consideration.

BIOLOGY, tenure-track position requiring ability to teach animal physiology/cell biology, nonmajors biology course, and an advanced course in your specialty, opportunity to develop undergraduate research. Ph.D. and some teaching experience required. Commitment to high-quality teaching essential; interdisciplinary interests desirable. Send curriculum vitae, transcripts, three letters of reference, and a brief statement of teaching philosophy to: **Dr. M. Naumann, Chairperson, Science Division, Simon's Rock of Bard College, Great Barrington, Mass. 01230.**

BIOLOGY TEACHING (POSTDOCTORAL)

Cornell University seeks a postdoctoral teaching fellow to participate in development and administration of introductory biology course. Introductory biology teaching experience required. One-year appointment with possible extension to 2-year maximum. Applications should include résumé, statement of past experience in and objectives for introductory biology, and three letters of reference (requested by the applicant). Send applications to: **Dr. Jon Glase, 310 Roberts Hall, Cornell University, Ithaca, N.Y. 14853.** Applications reviewed starting 15 May. *Cornell University is an Equal Opportunity/Affirmative Action Employer.*

CELL PHYSIOLOGY, toxicology, assistant/associate professor. Tenure-track position available fall 1981. Ph.D. required. Primary responsibilities to teach graduate courses in physiology and develop a viable research program. Send curriculum vitae, official transcripts, and three current letters of reference to: **Search Committee, Department of Biology, Atlanta University, Atlanta, Ga. 30314.**

MOLECULAR GENETICS/MICROBIOLOGY, recombinant DNA, assistant/associate professor. Tenure-track position available fall 1981. Ph.D. required. Primary responsibilities to teach graduate courses in molecular biology and area of specialization, and develop a viable research program. Send curriculum vitae, official transcripts, and three current letters of reference to: **Search Committee, Department of Biology, Atlanta University, Atlanta, Ga. 30314.**

POSITIONS OPEN

ASSOCIATE INSTITUTE DIRECTOR FOR POPULATION RESEARCH

Leader in the field of disease prevention is seeking a doctoral-level biomedical researcher to direct population research in the Mahoney Institute for Health Maintenance of the American Health Foundation. The Division includes population researchers in epidemiology, biostatistics, and occupational health.

We prefer an M.D. with epidemiological training and evidence of strong research background, that is, grants/contracts, publications. Position also requires research managerial as well as investigative skills. The American Health Foundation provides effective research environment including laboratory and management support.

Résumés, including references, should be mailed to:

**American Health Foundation
Search Committee
Personnel Director
320 East 43 Street
New York, New York 10017
*Equal Opportunity Employer, M/F/H***

CHAIRPERSON, BIOCHEMISTRY. The State University of New York (SUNY), Upstate Medical Center, is seeking qualified candidates for chairperson of the Department of Biochemistry in the College of Medicine. The department is responsible for courses in the College of Medicine and the School of Graduate Studies. Candidates for the position must have the Ph.D., M.D., or equivalent degree. Significant teaching and research achievement is required. Experience in administration is desirable. Qualified candidates may submit curriculum vitae and bibliography to:

**I. M. Weiner
Chairman of the Search Committee
Department of Pharmacology
SUNY-Upstate Medical Center
766 Irving Avenue
Syracuse, New York 13210**

The State University of New York is an Affirmative Action/Equal Opportunity Employer.

CHEMICAL CARCINOGENESIS/TOXICOLOGY

The Assembly of Life Sciences (ALC) of the National Academy of Sciences is seeking a staff scientist to assist a study group in analyzing and evaluating scientific data concerning the health effects of nitrates, nitrite and N-nitroso compounds. A doctoral degree or equivalent in the biological sciences is required plus two or more years of broad experience in toxicology and chemical carcinogenesis including mechanisms of tumor induction, physiology, pathology, and carcinogenesis testing techniques. Applicants should also have demonstrated effective oral and written communication ability. Knowledge of foreign languages helpful. Please submit curriculum vitae to: **Dr. Sushma Palmer, ALC, National Academy of Sciences, 2101 Constitution Avenue, NW, Washington, D.C. 20418.** *An Equal Opportunity Employer.*

COORDINATOR OF CLINICAL RESEARCH—Experienced M.D. or pharmacologist to work as part of an international team developing and testing new contraceptive methods. Responsibilities will include coordinating international clinical tests, helping develop testing protocols, and contributing to regulatory agency filings. Facility with languages in addition to English helpful. Nonprofit research organization with broad activities in the population field and with well-established program of contraceptive development. **Box 88, SCIENCE.** *An Affirmative Action/Equal Opportunity Employer.*

DIRECTOR OF OPHTHALMOLOGICAL RESEARCH

Responsibilities include establishment of a research laboratory in the Department of Ophthalmology at the University of Cincinnati.

Qualifications include the Ph.D. degree; an established record of scientific productivity; an interest in teaching and collaboration with clinicians; credentials which would permit appointment as associate professor; and an interest in either vitreo-retinal physiology, neurophysiology of the visual system, or some aspect of the cornea.

Substantial start-up funds are available. Reply to: **Joel G. Sacks, M.D., Professor and Director, Department of Ophthalmology, University of Cincinnati Medical Center, 231 Bethesda Avenue, Room 6004, Cincinnati, Ohio 45267.** Telephone: 513-872-5151.

The University of Cincinnati is an Equal Opportunity/Affirmative Action Employer, M/F/H.

free university amsterdam

The **Department of Geology** invites applications for the temporary position (up to 3 years) of

sulfide mineralogist (Ph.D)

in the group Ore Geology-Petrology-Mineralogy.

Candidates should have a broad knowledge of and substantial research experience in physical chemistry, phase equilibria and geochemistry of ore minerals.

The appointee is expected to take part in ongoing investigations in the Proterozoic metallogenic province of Central Sweden. Research facilities include electron-micro-probes, XRD, XRF, ASS and fluid inclusion equipment.

Teaching duties will include lectures on the geochemical aspects of ore geology and assistance to M.Sc. students.

A contribution to the organizational duties of the group is expected. Research and teaching are carried out in cooperation with the corresponding group of the University of Amsterdam.

The salary range is between Dutch guilders 52.000 and 69.000/year (including holiday-allowance), depending on age and experience.

Applicants are requested to agree with the Christian charter of the Free University.

Additional information can be obtained from Prof.Dr. J.L.R. Touret, De Boelelaan 1085, P.O. Box 7161, 1007 MC Amsterdam, phone 020-548 24 42 or 548 24 52.

The applicant is requested to submit his application, with a curriculum vitae, a list of publications and the names of three referees, before May 15, 1981, to the Personnel Department, De Boelelaan 1105, P.O. Box 7161, 1007 MC Amsterdam, quoting reference-number 330-0481.



POSITIONS OPEN

BIOCHEMISTRY FACULTY POSITION

Indiana University School of Medicine, Department of Biochemistry, invites applications for the position of assistant professor of biochemistry, effective on or after 1 January 1982. Primary emphasis is directed at appointing an outstanding individual. Some preference, however, may be given to applicants with interests in rapidly developing areas of biochemistry, such as the study of membrane function or molecular biology. Applicants must have exceptional postdoctoral experience and/or publications demonstrating productivity and originality in research. The successful candidate will have the background, commitment, and ability both to excel in the teaching of professional and graduate students and to develop a vigorous, independent research program. Please submit curriculum vitae, bibliography, and a short statement of future research goals by 15 June 1981, and arrange for letters of recommendation from three referees to be sent to: **Dr. P. J. Roach, Chairman, Search Committee, Department of Biochemistry, Indiana University School of Medicine, Indianapolis, Indiana 46223.** *Indiana University is an Equal Opportunity/Affirmative Action Employer, M/F.*

ACADEMY OF NATURAL SCIENCES OF PHILADELPHIA

Director, Division of Limnology and Ecology

The Academy of Natural Sciences of Philadelphia seeks a director for its Division of Limnology and Ecology. The Division consists of approximately 100 ecologists, systematists, chemists, and statisticians committed to basic and applied research in aquatic biology.

The director is responsible for coordinating the development of new research programs, seeking new funding sources for basic and applied research programs, and for overseeing the management of these programs. Along with his or her staff, the director works with federal, state, and local government agencies, with private industry, and with watershed and ecological groups to solve environmental problems. Candidates must have a Ph.D., an established research reputation in aquatic biology, and experience in administration and management. Nominations are invited. Applications and names of three references should be sent to:

**Chairman, Search Committee
Division of Limnology and Ecology
Academy of Natural Sciences of Philadelphia
19th and the Parkway
Philadelphia, Pa. 19103**

Applications must be postmarked no later than 15 June 1981. *Equal Opportunity Employer.*

Faculty Position in Physiology/Toxicology

The Department of Physiological Sciences in the School of Veterinary Medicine at the University of California at Davis invites applications from qualified individuals for a position in toxicology. Appointment level depends on qualifications. **Qualifications:** An established scientist in the field of toxicology with a proven record of achievement in research. Interest in the actions of toxic substances and the mechanisms of toxic reactions in animals. Demonstrated competence for teaching. Documented administrative experience appropriate to develop and lead a toxicology program in the school. D.V.M. and an advanced degree (Ph.D.) in the field of toxicology. Diplomate in the American College of Veterinary Toxicologists preferred. **Teaching:** Professional—teach and develop courses and a sound academic program, basic and applied, in toxicology for professional students. Graduate—opportunity to develop courses and instruct graduate academic and clinical students in formal courses and in graduate seminars in veterinary toxicology. Direction of graduate students in independent study and in pursuit of graduate degrees. Lead in developing a graduate training program in veterinary toxicology in the School of Veterinary Medicine and with the Graduate Group in Comparative Pharmacology and Toxicology. **Research:** The development of a creative and productive research program is an indispensable requirement of the position. The candidate for this position should lead in the development and strengthening of a research program in veterinary toxicology in collaboration with toxicology programs in the school and on the campus. Send curriculum vitae, a list of publications, and names of three referees to: **Dr. Shri N. Giri, Search Committee Chair, Department of Physiological Sciences, School of Veterinary Medicine, University of California, Davis, Calif. 95616.** This position will remain open until filled. *University of California is an Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

ENVIRONMENTAL CHEMIST/LIMNOLOGIST

Full-time research staff position is currently available at University of Georgia's Savannah River Ecology Laboratory. Successful candidate will be expected to carry on vigorous research program in aquatic chemistry. Experience in analysis of trace metals and/or trace organics in different environmental matrices essential. Rank and salary negotiable. Experienced candidates with strong record of professional development and publication preferred. U.S. citizenship required. Send résumé and names and addresses of three references by 15 May to:

**Chairman, Aquatic Search Committee
Savannah River Ecology Laboratory
Drawer E
Aiken, S.C. 29801**

Equal Opportunity/Affirmative Action Institution

ENVIRONMENTAL MODELER AND STATISTICAL CONSULTANT

Two full-time research staff positions are currently available at the Savannah River Ecology Laboratory (SREL) of the University of Georgia. Modeler should be familiar with various ecological systems, modeling approaches, and computer techniques for implementing environmental models. Relevant research problems for the modeler include those associated with cycling of materials and their effects on natural populations and communities in terrestrial and aquatic habitats. Statistical consultant should have a thorough background in some area of ecology as well as expertise in experimental design and data analysis. Personal research will need to be integrated into funded SREL programs. Positions are open to U.S. citizens only. Rank and salary negotiable. Ph.D. and publications in the open literature required. Send letter of application, curriculum vitae, appropriate transcripts, and the names, addresses, and telephone numbers of four references by 15 May to: **Dr. Ken McLeod (Modeler) or Dr. I. L. Brisbin (Statistical Consultant), Savannah River Ecology Laboratory, Drawer E, Aiken, South Carolina 29801.**

Equal Opportunity/Affirmative Action Institution

Applications and nominations are invited for four tenure-track **FACULTY POSITIONS** in a research-oriented department with excellent facilities. We are seeking individuals who will develop active programs in the following areas:

**Animal Physiology
Microbiology
Cellular Physiology
Molecular Genetics**

Applicants especially interested in molecular aspects of regulation will be given preference for the microbiology and cellular physiology positions. Rank and salary are open for all four positions. Send curriculum vitae, selected publications, a brief description of research plans, and the names of three referees to: **Hiroshi Mizukami (Animal Physiology and Cellular Physiology), David Njus (Microbiology), or Albert Siegel (Molecular Genetics), Department of Biological Sciences, Wayne State University, Detroit, Michigan 48202.**

The Department of Biology of Hartwick College is seeking an **INVERTEBRATE BIOLOGIST** beginning 1 September 1981. This is a nontenure-track position and a Ph.D. is preferred. Rank and salary in accordance with qualifications and experience. Teaching duties include introductory laboratory in zoology service course in invertebrate zoology for nonscience majors, parasitology and invertebrate biology for majors. Send curriculum vitae and three letters of recommendation to: **M. Richard Segina, Chair, Department of Biology, Hartwick College, Oneonta, N.Y. 13820,** by 7 May 1981. *Hartwick College is an Equal Opportunity Employer.*

POSTDOCTORAL POSITION currently available at University of Georgia's Savannah River Ecology Laboratory to study fate and effects of organic trace contaminants in aquatic systems. Backgrounds in aquatic ecology, toxicology, physiology, and biochemistry will be considered. U.S. citizenship required. Salary: \$17,000 per year for 2-year position. Send names and addresses of three references by 15 May to:

**Dr. Gordon J. Leversee
Savannah River Ecology Laboratory
Drawer E
Aiken, S.C. 29801**

Equal Opportunity/Affirmative Action Institution

POSITIONS OPEN

FACULTY POSITIONS OPEN DEPARTMENT OF BIOLOGICAL STRUCTURE UNIVERSITY OF WASHINGTON

Applications are invited for assistant professorial tenure-track positions. Minimum requirements: M.D., Ph.D., or combined degrees; 2 years of postdoctoral research; and bibliography indicative of potential for obtaining competitive extramural research grants in immune or hemopoietic cell differentiation, tumor or cell biology, reproductive biology or neurobiology. Applicants must be competent to teach human gross or neuroanatomy and participate in an innovative teaching program in the medical, dental, and graduate curricula. Describe in some detail research and teaching interests and submit by 1 June curriculum vitae, bibliography, and four letters of recommendation to: **Cornelius Rosse, M.D., Ph.D., Chairman, Department of Biological Structure SM-20, University of Washington, School of Medicine, Seattle, Washington 98195.** *An Equal Opportunity/Affirmative Action Employer.*

FACULTY POSITIONS IN PHARMACOLOGY.

Faculty positions (three to five) in pharmacology are available on or before September 1981, at the research instructor and research assistant professor level. Applicants should have a strong background in biochemical techniques and extensive experience in investigation of mechanisms of regulation of cyclic AMP synthesis, including techniques for resolution, reconstitution, and purification of components of the hormone-sensitive adenylate cyclase complex. Interested persons should send their curriculum vitae by 15 May 1981 to: **Dr. Alfred G. Gilman, c/o Dr. James Stull, Department of Pharmacology, The University of Texas Health Science Center at Dallas, 5323 Harry Hines Boulevard, Dallas, Texas 75235.** *An Equal Opportunity/Affirmative Action Employer.*

ST. GEORGE'S UNIVERSITY SCHOOL OF MEDICINE GRENADA, WEST INDIES

The following faculty positions will become vacant at the end of the current semester and need to be filled by August 1981:

- 1) **Demonstrator in histology** to take charge of practical classes. This can be a permanent position or a person desiring experience would be considered for 6- or 12-month appointment.
- 2) **Professor of immunology.** Preference would be given to an applicant who also has qualifications in parasitology.
- 3) **Assistant professor of biochemistry.** Postdoctoral applicant most desirable.
- 4) **Associate professor of physiology.**
- 5) **One registrar in pathology** for Grenada Campus. **One registrar** for St. Vincent Campus.
- 6) **One senior clinical pathologist** for St. Vincent Campus, and one for Grenada Campus. Both these positions suitable for retired persons in good health.

These positions are primarily teaching positions. The senior pathologists will be expected also to supervise the clinical laboratory in the associated general hospital.

Applications, accompanied by curriculum vitae, should be submitted to: **Vice Chancellor, St. George's University, School of Medicine, Grenada, West Indies,** as soon as possible.

MASSACHUSETTS INSTITUTE OF TECHNOLOGY

Infectious Disease—Parasitology

The Massachusetts Institute of Technology (MIT) announces an opening for an assistant professor in the new Whitaker College of Health Sciences, Technology, and Management. Applicants should be experienced in the basic molecular and cellular biology of parasitic organisms and their interactions with hosts. Research interests could focus on human pathogens or suitable models. It is expected that a successful candidate will also receive a joint appointment in one of MIT's existing academic departments. Applicants should provide curriculum vitae, including a brief description of past research, a short statement of the proposed research program, and the names of at least three scientists willing to write letters of recommendation. Applications may be sent to either: **Dr. Harvey Lodish or Dr. Christopher Walsh, Infectious Disease Search Committee, Building 16-520, Massachusetts Institute of Technology, 77 Massachusetts Avenue, Cambridge, Mass. 02139.** *MIT is an Affirmative Action/Equal Opportunity Employer.*

MICROBIAL GENETICIST

Celanese Research Company, one of the world's leading Research & Development laboratories, has a challenging career opportunity.

This position requires a PhD with postdoctoral experience in bacterial genetics, preferable pseudomonas genetics. Experience of in vivo and in vitro genetic manipulation techniques will be helpful.

We offer an exceptional opportunity in a truly sophisticated research environment and a superior benefits and compensation package.

Send resume and salary requirements to: Kathleen A. Slavin, Employee Relations Supervisor, Celanese Research Company, 86 Morris Avenue, Summit, NJ 07901.



Research Company
An equal opportunity employer, m/f.

ORGANIC CHEMISTS

Peptide Synthesis

Schering-Plough's Research Center offers the following excellent career opportunities in the synthesis of novel therapeutic agents. While direct experience in peptide synthesis is highly desirable, it is not mandatory.

PH.D. SR. SCIENTIST

This position requires a Ph.D. in Organic Chemistry (or equivalent) and a minimum of 1 year related experience at the post-doctoral level. This individual will be responsible for the progress of the chemical research program for this therapeutic area of interest. Must have demonstrated creativity and leadership ability. JOB REFERENCE # DD-81-2.

BS/MS ASSOCIATE SCIENTIST

This position requires a B.S. in Organic Chemistry and 3 years of synthesis experience or an M.S. with 1 year of experience. Must have familiarity with synthesis methodology, separation and structural assignments. JOB REFERENCE # DD-81-10.

These positions offer attractive starting salary and comprehensive company benefits.

Qualified candidates should forward resume with salary history and requirements, INDICATING JOB REFERENCE #, to: Associate Personnel Manager, Schering-Plough Corporation, 60 Orange Street, Bloomfield, New Jersey 07003.



Schering-Plough

We Are An Equal Opportunity Employer M/F

POSTDOCTORAL RESEARCH FELLOW

Opportunity to do two years of basic research in biochemistry/cell biology. We are looking for a candidate with initiative and flexibility and a particular interest in working in a demanding interdisciplinary environment. A background in enzymology or considerable experience in enzyme assays is required. Also a candidate should have some experience in mammalian or protozoan or bacterial cell culture systems. Previous work with HPLC or amino acid analysis would be of considerable assistance to us. Our particular research interests are in ornithine decarboxylase biosynthesis, regulation, and inhibition.

Please send a detailed CURRICULUM VITAE and copies of publications or articles in press to:

Director of Administration
MERRELL RESEARCH CENTER
2110 E. Galbraith Road
Cincinnati, Ohio 45215

Merrell



Further information can be obtained by
telephoning (513) 948-7038

An Equal Opportunity Employer M/F

ASSOCIATE RESEARCH SCIENTIST

The Biotechnology Group of Miles Laboratories, Inc., has a need for an Associate Research Scientist in the Biosynthesis Research Laboratory.

The position requires an M.S. degree in Biochemistry, Microbiology, or Molecular Genetics. Several years of laboratory experience is necessary as well as a working knowledge of DNA and RNA isolation procedures, enzyme purification, and mutagen use. The successful candidate will be involved in the design and implementation of a microbial strain improvement program for the fermentation of enzymes and organic acids.

Miles Laboratories, Inc., is located in Elkhart, Indiana, a community of 50,000 population. We offer excellent recreational and educational facilities as well as convenient accessibility to the Chicago area. Excellent starting salary commensurate with experience plus a superior benefits program. Relocation expenses paid by the company. Please send complete resume, including salary requirements, in confidence to:

Curtis A. Brown
Senior Placement Representative
Department 982



MILES LABORATORIES, INC.

P.O. Box 40
Elkhart, Indiana 46515

An Equal Opportunity Employer
M/F/H

POSITIONS OPEN

Two **JUNIOR TENURE-TRACK POSITIONS** for September 1981.

Candidates are sought who can contribute to a program in behavioral medicine in an experimental psychology area. Promise for development of a strong research program is extremely important. Applicants for one slot need training in human information processing (for example, neuropsychology, pain perception, clinical psychophysics). Applicants for a second slot need research interests in either human (for example, coronary-prone behavior) or animal models (for example, cardiovascular problems, psychoneuroimmunology). Send curriculum vitae and three reference letters to: **Joseph Sturr or James Sutterer, Department of Psychology, Syracuse University, Syracuse, New York 13210**, by 1 May 1981. *An Affirmative Action/Equal Opportunity Employer.*

PRINCETON UNIVERSITY. The Department of Biology has an opening at the level of **LECTURER**, beginning in September 1981, to teach a laboratory course in experimental vertebrate biology which is complementary to an existing lecture course. Areas of interest covered by the course include vertebrate reproductive biology with emphasis on neuroendocrine mechanisms. Ample opportunity will be available to carry out individual research projects, preferably in the area of vertebrate reproductive biology, including neuroendocrinology. Ph.D. degree or equivalent required. Submit letter of application, curriculum vitae, and the names of three referees to: **Dr. R. D. Lisk, Department of Biology, Princeton University, Princeton, N.J. 08544**. Deadline for receipt of application material is 8 May.

Princeton University is an Equal Opportunity/Affirmative Action Employer.

MESSENGER RNA PROCESSING AND NUCLEAR STRUCTURE

NIH-funded postdoctoral positions are available in the laboratory of Dr. Thoru Pederson to participate in ongoing studies of mRNA processing and nuclear RNP complexes (hnRNP and snRNP) in a variety of eukaryotic systems. Candidates are sought with experience in DNA and RNA sequencing, nucleic acid enzymology, and antibody purification. The Cell Biology Group of the Worcester Foundation is a vigorous research department focusing on eukaryotic gene structure and expression, the cytoskeleton, membrane biology, and virology. There are excellent opportunities for intra- and inter-laboratory collaborations. The institute is situated on a wooded, semi-rural campus, 40 miles west of Boston. Applicants should send curriculum vitae and the names of three references to: **Dr. Thoru Pederson, c/o Personnel Office, Worcester Foundation for Experimental Biology, 222 Maple Avenue, Shrewsbury, Mass. 01545**.

An Equal Opportunity/Affirmative Action Employer

MICROBIOLOGIST

M.S. microbiologist—yeast geneticist with background in biochemistry to conduct studies in strain selection and modification. Applicant must be capable of establishing a mutation screening program and supervise technical staff needed to support the program. Broad range of fermentation equipment and instrumentation is available for product research. Familiarity with computer programming desirable. Modern research facility located in north suburban Chicago. Please send confidential résumé to:

Director of Personnel Administration



**Research & Development
801 Waukegan Road
Glenview, Illinois 60025**

An Equal Opportunity Employer, M/F

MICROBIOLOGY. Applications are invited from individuals with demonstrated excellence in microbial biochemistry or molecular biology for a tenure-track assistant professorship in the Department of Microbiology at The Medical College of Wisconsin. Applicants must have postdoctoral research training and be able to develop an independent research program, instruct graduate students, and assist in teaching bacteriology to medical students. Send résumé, summary of proposed research, and three letters of recommendation to: **Dr. Sidney E. Grossberg, Department of Microbiology, The Medical College of Wisconsin, P.O. Box 26509, Milwaukee, Wisconsin 53226**. *Affirmative Action/Equal Opportunity Employer.*

POSITIONS OPEN

MOLECULAR BIOLOGIST with interest in eukaryotic gene expression. Faculty position available September 1981. Rank and tenure open. Applicant should have demonstrated research ability. Submit curriculum vitae and letter describing research interests by 8 May 1981 to: **Ray K. Brown, Department of Biochemistry, Wayne State University School of Medicine, 540 East Canfield Avenue, Detroit, Mich. 48201**. *An Equal Opportunity/Affirmative Action Employer.*

MOLECULAR GENETICS

Postdoctoral or research associate position involving molecular genetic analysis of genes involved in neurotransmitter synthesis, with application to human disease states. Familiarity with recombinant DNA technology and/or molecular biology background is essential. Collaborative project between Dr. Lawrence Kedes, Department of Medicine, with Dr. Joachim Raese and Dr. Jack Barchas, Department of Psychiatry, Stanford University.

Contact: **Dr. Lawrence Kedes, Department of Medicine, Palo Alto VA Hospital, Miranda Avenue, Palo Alto, Calif. 94304**.

Stanford is an Equal Opportunity Employer.

NEUROCHEMIST OR NEUROBIOLOGIST. research position at postdoctoral level, available 1 July 1981, for purification and characterization of growth factors and related proteins from the brain in collaboration with Dr. Ramon Lim in a Division of Neurochemistry. Prefer background in protein chemistry, neurobiology, or cell biology. Send curriculum vitae, résumé, and names of three references to:

**Dr. M. W. Van Allen
Department of Neurology
University of Iowa College of Medicine
Iowa City, Iowa 52242**

The University of Iowa College of Medicine is an Equal Opportunity/Affirmative Action Employer.

PHYSICAL THERAPIST

One tenure-track teaching position available 1 September 1981 for a licensed physical therapist who holds a master's or doctoral degree in physical therapy, anatomy, physiology, psychology, or related field. One year of teaching experience at the college or university level required and 1 year of experience in a medical care setting. Salary and rank will be based on a combination of academic credentials, clinical and teaching experience, and research experience. The major affiliation is a 650-bed hospital located one block from program classrooms. Screening will begin 1 June 1981, but later applications will be considered until position is filled. If you are interested in a new position in a developing program, please contact: **Dr. James E. Griffin, Director, Physical Therapy Program, Ball State University, Muncie, Ind. 47306; telephone: 317-285-8353**.

Ball State University practices Equal Opportunity in Education and Employment.

POSTDOCTORAL ORGANIC OR MEDICAL CHEMIST. Join an active, broadly based biomedical program on synthetic metabolic or biometabolic research of toxic and chemotherapeutic agents. An excellent opportunity to gain experience with new research methods in the pharmaceutical area. Good academic and industrial placement potential. Send résumé to: **Robert J. Weinkam, Department of Medicinal Chemistry, Purdue University, West Lafayette, Ind. 47907**. *An Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL POSITIONS

Openings starting 1 May 1981 in either of two areas: (i) kinetic, physical, chemical, and regulatory studies on various enzymes; or (ii) evaluation of effects of dietary nucleotides on immune function and tumor growth. Previous experience in enzymology or immunology desirable but not required. Send curriculum vitae to: **Dr. Frederick B. Rudolph, Department of Biochemistry, Rice University, Houston, Texas 77001**. *An Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL POSITION available 1 July 1981 for recent Ph.D. trained and experienced in recombinant DNA research in eukaryotic gene regulation to study the molecular basis for expression of allospecific determinants on gene products of the major histocompatibility complex of man. Submit inquiries and curriculum vitae to: **R. A. Reisfeld, Ph.D., Department of Molecular Immunology, Scripps Clinic and Research Foundation, 10666 North Torrey Pines Road, La Jolla, California 92037**.

POSITIONS OPEN

PLANT MOLECULAR BIOLOGY

A postdoctoral position is available as part of a joint project between University of California, Los Angeles, and the U.S. Department of Agriculture, Agricultural Research Center, at Beltsville, Maryland. Background in nucleic acid techniques is essential, and experience with DNA cloning and sequencing is highly desirable. The project involves investigating the regulation of lectin gene expression in soybean. Send résumé, statement of present research interests, and names of references to: **Dr. Robert B. Goldberg, Department of Biology, University of California, Los Angeles, Los Angeles, Calif. 90024**.

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

POPULATION RESEARCHER IN NUTRITION

We are seeking a Ph.D. in nutrition with experience and/or training in population research to direct studies of nutritional causal factors in cancer and cardiovascular diseases.

Our research relates primarily to etiologic factors but includes nutritional intervention studies designed to reduce disease risk factors.

Interested candidates should send curriculum vitae and description of previous population/epidemiologic research.

Please send references and curriculum vitae to:

**N. Earl Barnwell
Personnel Director—Department PRN
American Health Foundation
320 East 43 Street
New York, New York 10017**

Equal Opportunity Employer, M/F/H

POSTDOCTORAL POSITIONS immediately available: (i) for study of mechanisms of immunosuppression in tumor-bearing hosts; and (ii) for identification and clarification of immunogens in *Candida albicans*. Candidates with proven experience in methods of cells separation, tissue culture, and biochemical procedures of purification and characterization of biologically active factors. Competitive salary. Send résumés to: **Dr. Havas, Professor, Department of Microbiology and Immunology, Temple University School of Medicine, 3400 North Broad Street, Philadelphia, Pa. 19140**. *An Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL POSITION in ongoing research on ENDOR and EPR of metalloproteins. Position to start June to September 1981 and funded through November 1984. Salary negotiable. Ph.D. in chemistry, physics, or biophysics is appropriate with experience in magnetic resonance. Send curriculum vitae and names of three references to: **Dr. C. P. Scholes, Department of Physics, State University of New York at Albany, Albany, N.Y. 12222**. *An Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL POSITION IN CELLULAR TOXICOLOGY AND DRUG METABOLISM available for 1 to 3 years, beginning summer or fall 1981. The candidate will develop and assess techniques to study the metabolism of toxic agents in primary cultures of rat hepatocytes. The candidate will assess the ability of isolated liver cells to metabolize xenobiotics and to detect the potential toxicity of the metabolites to the hepatocytes. Knowledge or experience in one or more of the following areas is required: pharmacology/toxicology, drug metabolism, analytical chemistry, tissue culture, and/or biochemistry. Send résumé and three letters of reference to: **Dr. Daniel Acosta, Department of Pharmacology, College of Pharmacy, University of Texas, Austin, Texas 78712**.

PROGRAM DIRECTOR OF OCCUPATIONAL HEALTH

Leader in the field of disease prevention is seeking a doctoral-level biomedical researcher to direct population and clinical research projects in occupational health. Position permits wide latitude in research topics, and broad support from current institutional resources, including laboratory, epidemiology, statistics, and management.

Medical degree preferred; training/experience in occupational health is essential.

Interested candidates send curriculum vitae and references to:

**N. Earl Barnwell
Personnel Director—Department PDOH
American Health Foundation
320 East 43 Street
New York, New York 10017**

Equal Opportunity Employer, M/F/H

THE NEW YORK ACADEMY OF SCIENCES
CONFERENCE ON
IMMUNOLOGICAL TOLERANCE TO SELF
AND NON-SELF

The Roosevelt Hotel, New York City
19 to 21 October 1981

The conference is co-chaired by Jack R. Battisto (Cleveland Clinic Foundation), Henry N. Claman (University of Colorado Medical School), and David W. Scott (Duke University Medical Center).

Immunological tolerance, as an area of research, has held the attention of investigators for many years because of the imperative need to induce antigen-specific unresponsiveness in the medically important conditions of transplantation, hypersensitivity, and autoimmunity.

Investigators foremost in this field will be brought together at the conference to focus upon ways by which humoral and cell mediated immunities can be regulated by tolerance effected by modified self-moieties as well as by self-idiotypes. In this way the generated information may clarify the functions as well as the mechanisms that induce and maintain the condition of immunological unresponsiveness. The conference will feature invited lectures and a limited number of poster presentations. Preference in selection of poster sessions will be given to young investigators and to novel and rigorous studies. The deadline for submission of abstracts is 1 August 1981. The abstracts should include the name of the author(s), institution, and 100- to 200-word summary of the work to be presented in the poster. Send one copy of the abstract to each of the following:

Dr. Jack R. Battisto, Department of Immunology, Cleveland Clinic Foundation, Cleveland, Ohio 44106.

Dr. Henry N. Claman, Department of Clinical Immunology, University of Colorado Medical School, Denver, Colo. 80220.

Dr. David W. Scott, Division of Immunology, Duke University Medical Center, Durham, N.C. 27706.

Address inquiries about details of the program and registration to:

Conference Director
The New York Academy of Sciences
2 East 63 Street
New York, N.Y. 10021

CNS Section Head

Medicinal Chemistry

G. D. Searle, a worldwide leader in Pharmaceutical Research, has an outstanding opportunity within the Research & Development Division. The Department of Medicinal Chemistry is currently recruiting candidates for the position of Section Head, to direct our research efforts in the Central Nervous System section.

This position is responsible for supervising a full technical staff of Chemists through the Ph.D. level in the design of programs aimed at the synthesis of new CNS agents. Additional responsibilities include the planning of research programs in the CNS area in close collaboration with pharmacological counterparts.

We require a minimum of 10 years postdoctoral industrial experience with a strong CNS background and a Ph.D. in Organic or Medicinal Chemistry or equivalent.

We offer an environment of growth and challenge, a salary commensurate with experience and expertise, and a highly competitive benefit package including relocation assistance. Please send detailed curriculum vitae listing publications and patents to:

R. Rook

Req. # 8145-0312

Searle Research & Development

Division of G. D. Searle & Co.

Box 5110 Chicago, IL 60680

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MOLECULAR GENETICS Ph.D.'s

THE INTERNATIONAL PLANT RESEARCH INSTITUTE (IPRI) invites applicants for its rapidly expanding programs in advanced molecular genetics. Applicants with significant records of frontier achievements are invited to join a strong team of innovative scientific leaders in the pleasant San Francisco area.

Send résumé with recent publications to:

DIVISION OF MOLECULAR GENETICS, IPRI, 853 Industrial Road, San Carlos, Calif. 94070.

Equal Opportunity Employer, M/F

SENIOR SCIENTIST/ DRUG METABOLISM

We are a national leader in the manufacture of prescription pharmaceuticals with an outstanding career opportunity available in our Drug Metabolism Research Department. Qualifications include a Ph.D. with 2 to 3 years of experience and training in analytical chemistry. A state-of-the-art knowledge of GC and HPLC methodologies with experience and training in method development and analysis of biological samples for drug and metabolites is also necessary. Knowledge of GC/MS and RIA methodology is an added advantage, and some exposure to pharmacokinetics and computer programming is preferred but not an absolute requirement.

You will be responsible for the supervision of analysis of biological samples, analytical method development, general laboratory supervision, preparation of protocols for clinical bioavailability studies and data analysis, and report writing. You will also supervise two research assistants.

We are a Johnson & Johnson Company with our modern headquarters conveniently located in a pleasant country setting just outside Philadelphia, Pa. A competitive salary, a comprehensive benefits package, and potential for continued professional growth are also provided. For immediate consideration, forward your résumé, including salary history and requirements, to: J. E. Foley

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POSITIONS OPEN

POSTDOCTORAL POSITION available. Junior faculty position in the Departments of Anatomy and Orthopedic Surgery. This position is open to individuals with an interest in bone biology and remodeling to study problems related to the ingrowth of bone in porous materials. The position is available as of 1 July 1981. Inquiries and copy of curriculum vitae should be directed to:

George O. Galante, M.D.
Chairman, Department of Orthopedic Surgery
Rush-Presbyterian-St. Luke's Medical Center
1753 West Congress Parkway
Chicago, Ill. 60612

Equal Opportunity/Affirmative Action Employer

POSTDOCTORAL POSITION in ocean acoustics available August 1981. Position involves developing analytic and numerical techniques for use in analyzing long-range acoustic probes of ocean processes on all scales, including the analysis of some experimental data. Background at Ph.D. level in physics, applied mathematics, computer techniques, wave propagation in random media, and fluid dynamics are all relevant to this position. Training in geophysical fluid dynamics will be highly weighted. Send curriculum vitae and names of three referees to: **Professor Stanley M. Flatté, Physics, University of California, Santa Cruz, Calif. 95064.**

POSTDOCTORAL RESEARCH ASSOCIATE position available immediately in the Molecular Biology Institute at University of California, Los Angeles (UCLA). Work with broad-based team of collaborating scientists on the molecular biology and cellular genetics of human and rat arginase. Includes cloning and characterizing the gene and the control of its expression in tissue culture systems. Previous cloning experience desirable but not mandatory. Salary competitive. Send curriculum vitae and names of three references to:

Dr. Stephen Cederbaum
Mental Retardation Research Center
760 Westwood Plaza
Los Angeles, California 90024

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SUMMER TERM TEACHING POSITIONS IN BOTANY AT OREGON STATE UNIVERSITY

The following teaching positions are available for summer term 1981:

Position 1
Bot 201-202, General Botany
23 June to 17 July; 20 July to 14 August

Lecture and laboratory on: phylogenetic survey of the plant kingdom, morphology; structure and physiology of seed plants. This position could be divided, each person having responsibility for only one course, if necessary.

Position 2
Bot 451, Plant Disease Diagnosis
23 June to 14 August

Field trips and laboratory on plant disease identification and control. For advanced undergraduate and graduate students.

Position 3
Bot 521T, Taxonomy and Field Botany
23 June to 14 August

Identification of flowering plants of the Pacific Slope. Lecture, laboratory, and field trips to the coast and Cascade Mountains. For high school teachers.

Qualifications include: For Position 1, completion (or near completion) of the Ph.D. degree; for Positions 2 and 3, Ph.D. degree or equivalent. Prior college-level teaching experience in equivalent course(s); and, in the cases of Bot 451 and 521T, detailed familiarity with plant diseases and flora, respectively, of the Pacific Northwest and local region. Salaries are negotiable. Rank in each case will be commensurate with qualifications.

Address inquiries and applications, including curriculum vitae and two letters of recommendation, by 1 May to:

Dr. Thomas C. Moore, Chairman
Department of Botany and Plant Pathology
Oregon State University
Corvallis, Oregon 97331

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

POSITIONS OPEN

POSTDOCTORAL POSITION, glycoprotein biosynthesis. Available June 1981 to study regulation of protein glycosylation and metabolism of dolichol derivatives during chick oviduct differentiation. Background in lipid intermediates, carbohydrate chemistry, or polyprene biosynthesis desirable. Send curriculum vitae and names of three references to: **Dr. John J. Lucas, Department of Biochemistry, State University of New York, Upstate Medical Center, Syracuse, N.Y. 13210.** *An Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL RESEARCH ASSOCIATE position. Available immediately or July 1981 to study structure interaction and reconstitution of hormone-sensitive adenylate cyclase components. Strong background in protein purification helpful but not required. Send résumé to: **Dr. S. N. Nayfeh, Department of Biochemistry, School of Medicine, University of North Carolina, Chapel Hill, N.C. 27514.** *Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL RESEARCH ASSOCIATES are being sought for participation in a program to investigate the properties of glial cells. There will be opportunity to work with any of five participating investigators in a coordinated study of cultured astrocytes and oligodendrocytes. Specific projects will focus on: (i) electrophysiologic characteristics of glia; (ii) glial-neuronal interactions; (iii) cyclic nucleotide metabolism; and (iv) identification and characterization of receptors for neuroactive substances. Successful applicants may begin immediately. Send curriculum vitae and three letters of reference to: **Dr. John Perkins, Chairman, Department of Pharmacology, University of North Carolina, Chapel Hill, North Carolina 27514.** *The University of North Carolina is an Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL RESEARCH ASSOCIATE position available in a group investigating the linkages between plant secondary chemistry, herbivorous arthropods, and avian predation and foraging behavior in shrub deserts. Requirements include: (i) a recent Ph.D. in an appropriate discipline; (ii) established expertise in modeling and analysis of ecological systems; and (iii) previous research in arthropod ecology, plant-herbivore interactions, or optimal foraging. Available immediately for a period of 2 to 3 years. Send curriculum vitae, statement of research experience, and three letters of recommendation to: **John A. Wiens, Department of Biology, University of New Mexico, Albuquerque, N.M. 87131.** Application deadline: 1 May 1981. *An Equal Opportunity/Affirmative Action Employer.*

SCIENCE/ENGINEERING PROGRAM ADMINISTRATOR

The National Research Council (NRC) seeks a staff officer with a Ph.D. in science or engineering and a minimum of 3 to 5 years of postdoctoral experience in an academic or research institution, governmental laboratory, or industry, to serve as a program administrator to the NRC research associateship programs. Primary responsibilities include the administration of associateship programs at assigned participating laboratories, including regular contact with laboratory personnel, regular contact with associates on tenure, periodic staff visits and site visits, and editing of booklets and announcements. Applicants should have demonstrated communication skills. Salary: \$32,000 to \$35,000, commensurate with experience. Please send curriculum vitae and references to: **J. Chester McKee, Director, Associateship Office, NRC, 2101 Constitution Avenue, NW, Washington, D.C. 20418.** *An Equal Opportunity Employer*

RESEARCH ASSOCIATE OR SENIOR RESEARCH ASSOCIATE—A research position is available in an established research program of the Biomedical Engineering Laboratory of Rice University (in cooperation with personnel of the Texas Medical Center). Qualifications include a Ph.D. in engineering (with a biological orientation), biophysics, physiology, or equivalent training and experience. The research involves studies of the response of human blood platelets to various stimuli including shear stress applied in vitro under controlled conditions. The appointment will be for a 1-year term with the possibility of reappointment. The stipend is negotiable depending on experience and training. Send a brief résumé and three references to: **J. D. Hellums, Ph.D., Dean, George R. Brown School of Engineering, Rice University, Houston, Texas 77001.** *Rice University is an Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

QUALITY ASSURANCE OFFICER

The Life Sciences Division of Gulf South Research Institute (GSRI) in New Iberia, Louisiana, has an immediate opening for a quality assurance officer with experience in implementation of FDA and EPA good laboratory practices and in monitoring toxicology laboratory operations for GLP compliance. A B.S. or M.S. degree in biology, chemistry, or related science is required.

Located 20 miles from one of the nation's ten fastest growing small cities (Lafayette), GSRI was established in 1964 as a private, not-for-profit, nonendowed contract research organization which offers a tax-sheltered retirement program, generous vacation leave, group life, long-term disability, hospital and major medical insurance, an equitable sick leave policy, educational encouragement and assistance, and liberal household and personal relocation allowances. Salary negotiable. Send résumé to:

Personnel Office
GULF SOUTH RESEARCH INSTITUTE
P.O. Box 14787
Baton Rouge, La. 70898
An Equal Opportunity Employer, M/F

REPRODUCTIVE BIOLOGISTS. Available immediately: (i) postdoctoral position, and (ii) position for experienced B.S./M.S. Background in mammalian reproductive biology (endocrinology, pharmacology, teratology, or physiology) required. Send résumé and names of three references to: **Dr. Ralf Rahwan, Lloyd M. Parks Hall, Ohio State University, 500 West 12 Avenue, Columbus, Ohio 43210.**

RESEARCH ASSOCIATE for the study of the genetic and dietary control of the pentose shunt in *Drosophila*. Training and experience in biochemistry and genetics necessary. Please send curriculum vitae and names of three references to: **B. W. Geer, Department of Biology, Knox College, Galesburg, Illinois 61401.**

An Equal Opportunity Employer

RESEARCH ASSOCIATE, Ph.D., biochemistry, biology, endocrinology, or related background. Position involves the study of factors regulating bone formation in vitro and the purification of newly discovered growth factors. Salary competitive. Send curriculum vitae to: **Dr. E. Canalis, Endocrinology, Saint Francis Hospital and Medical Center, 114 Woodland Street, Hartford, Connecticut 06105.**

SENIOR ENVIRONMENTAL SCIENTIST

MacLaren Plansearch provides consulting services in environmental, social and economic research, and urban and regional planning to government and industry across Canada and overseas.

Our recently established Calgary operation requires a senior scientist to lead the environmental division. Candidates should have extensive experience, preferably in western or northern Canada, and possess a Ph.D. in wildlife biology, aquatic biology, terrestrial ecology, arctic sciences, or a related renewable resource discipline. Experience with the applied aspects of science and consulting would be desirable.

The successful candidate will supervise and participate in projects requiring his/her expertise, will manage projects and people in other environmental disciplines, and will make the necessary contacts with clients and the general public.

The company offers attractive salaries, a full range of benefits, and opportunities for career advancement.

Qualified applicants can forward detailed résumés and references in confidence to:

A. Pick
MacLaren Plansearch
Lavalin Centre
909 5th Avenue, SW
Calgary, Alberta, Canada T2P 0N8

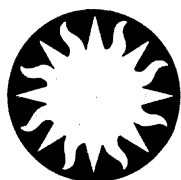
DIRECTOR, COMPUTATIONS FACILITY

The Smithsonian Astrophysical Observatory needs a unique person who combines high level scientific or technical skills with strong managerial background to direct its Computer Center. Applicants must have a bachelor's degree in mathematics, physical science or computer science or equivalent experience, plus at least three years of progressively responsible administrative or managerial experience in a scientific research or technical environment. The following are minimum requirements: experience in the management of scientific or technical personnel and/or activities; experience in the use of computer systems for scientific and technical problem solving; broad knowledge of current computer technology and the ability to use it to expand current computational capabilities; the ability to translate scientific problems into the language and logic of the computer; proficiency in writing and communication; the ability to interact with a wide variety of people; and the ability to plan and prepare budgets.

A PhD in astronomy/astrophysics, physics, applied mathematics or computer science would be a strong asset as would the ability to analyze hardware elements to determine optimum systems configurations, to negotiate with vendors and to guide management in the selection, acquisition, and implementation of word processing and management information systems. The ideal person would maintain an active role in academic or professional societies to keep abreast of technological developments in computing and computers.

Salary will be commensurate with experience and ability (minimum \$36,000 per year). We have an outstanding comprehensive fringe benefits package.

Submit resume, in confidence, to Putnam S. Borden.



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Pharmaceutical Microbiologist Q.C. R & D

Because of our continued expansion we seek a Ph.D Microbiologist with 0-3 years experience in pharmaceutical microbiological control. Well developed technical writing skills are required. Knowledge of experimental design, FDA/GMP regulations, environmental monitoring, statistical evaluation of data and computerized data management desirable.

The successful applicant will direct a small laboratory staff and manage microbiological programs for environmental monitoring, preservation testing of developmental products, and control of documents.

We offer excellent salary and benefits plus growth potential in our new modern R&D facilities in the Albany, N.Y. area.

Please send resume including salary requirements in confidence to Personnel Administrator



**Sterling-Winthrop
Research Institute**

Division of Sterling Drug Inc.
Columbia Turnpike
Rensselaer, New York 12144

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Marine Biomass Energy R&D

PROJECT MANAGER: Marine Biomass Research

A position is available in our Supply Division for an individual with a strong technical background in ocean energy systems (PhD/MS in marine biology, ocean engineering or biological oceanography) plus 2-3 years of project management experience. Experience with macroalgal growth and/or ocean structures would be particularly desirable.

GRI, as an energy research organization, finances, plans, and manages research and development programs related to the natural gas industry in a broad spectrum of energy areas including the development of marine biomass as a future source of methane.

GRI's Marine Biomass Programs include the development of the open-ocean energy farming of the California Giant Kelp and other macroalgal species found in the Northeastern and Southeastern United States. The individual selected for this position will have responsibility for the technical management and coordination of biomass production studies associated with these programs.

If you seek an opportunity to contribute to energy research and to the development of innovative solutions to critical technology issues, forward your resume and salary specifics to:

J.R. Quillinan



gas research institute

GAS RESEARCH INSTITUTE
8600 West Bryn Mawr Avenue
Dept. S-105
Chicago, IL 60631

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POSITIONS OPEN

POSTGRADUATE RESEARCH POSITION. Available 1 June 1981. Metabolic studies of free-ranging animals using doubly labeled water (HTO-18). Applicants should have Ph.D. and must have experience with open-circuit respirometry. Send abstract of dissertation, curriculum vitae, and names of three references to: **Dr. W. W. Weathers, Department of Avian Sciences, University of California, Davis, Calif. 95616.** The University of California is an Affirmative Action/Equal Opportunity Employer.

RESEARCH ASSISTANTS (three): M.S. degree or equivalent experience. Ecological research in tall-grass prairie (Konza Prairie Research Natural Area). Applicants should have skills in at least one of the following areas: plant ecology, invertebrate ecology, meteorological instrumentation and maintenance, and/or vertebrate ecology. Positions start 1 October 1981. Send résumé and names of three references by 15 May 1981 to:

G. R. Marzolf
Division of Biology
Kansas State University
Manhattan, Kans. 66506

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

RESEARCH ASSOCIATE IN PHARMACOLOGY

Applications are invited for a research associate position. Applicants must have a Ph.D. degree in pharmacology and background in receptor binding assays, radioimmunoassay, and behavioral and biochemical pharmacology. Independent research encouraged. Application deadline: 15 May 1981.

Applicants may submit a résumé and names of three references to: **Dr. Hemendra N. Bhargava, Department of Pharmacognosy and Pharmacology, University of Illinois at the Medical Center, 833 South Wood Street, Chicago, Illinois 60612.** An Affirmative Action/Equal Opportunity Employer.

VETERINARY PARASITOLOGIST. A tenure-track position (80 percent research) for an individual with a D.V.M. and/or Ph.D. or equivalent degrees and research experience in protozoan parasitic diseases; available 1 November 1981. Primary responsibilities include developing an independent research program in the field of protozoan parasitic disease and formulating a course in veterinary protozoology. The primary mission of the department is in the area of food animal health and disease research. Participation in related research projects and teaching and advising M.S. and Ph.D. students in veterinary science are encouraged. Salary and rank negotiable. Send curriculum vitae and names of three references before 1 August 1981 to: **Dr. David M. Young, Department of Veterinary Science, Veterinary Research Laboratory, Montana State University, Bozeman, Montana 59717.** An Equal Opportunity/Affirmative Action Employer.

THREE VETERINARY POSITIONS OPEN ANIMAL RESOURCES TOXICOLOGIST PATHOLOGIST

The Life Sciences Division of Gulf South Research Institute (GSRI) in New Iberia, Louisiana, is seeking research management talent in the above disciplines. Must be Board-certified or -eligible. The successful candidates must be experienced and capable of managing programs, designing projects, interfacing with other disciplines, and training personnel.

Located 20 miles from one of the nation's ten fastest growing small cities (Lafayette), GSRI was established in 1964 as a private, not-for-profit, nonendowed contract research organization which offers a tax-sheltered retirement program, generous vacation leave, group life, long-term disability, hospital and major medical insurance, an equitable sick leave policy, educational encouragement and assistance, and a liberal household and personal relocation allowances. Salary negotiable. Send résumé to:

Personnel Office
GULF SOUTH RESEARCH INSTITUTE
P.O. Box 14787
Baton Rouge, La. 70898
An Equal Opportunity Employer, M/F

POSITIONS OPEN

The University of Utah Medical Center is seeking a Ph.D. at the **RESEARCH INSTRUCTOR OR RESEARCH ASSISTANT PROFESSOR** rank with extensive background in tumor immunology to coordinate laboratory and clinical investigation in the Division of Gynecologic Oncology in the Department of Obstetrics and Gynecology. The University is an Equal Opportunity Employer. Interested persons should send curriculum vitae and names of three references to: **James R. Scott, M.D., Chairman, Department of Obstetrics and Gynecology, University of Utah Medical Center, Salt Lake City, Utah 84132.** Deadline for applications: 1 July 1981.

ZOOLOGY INVERTEBRATE/LIMNOLOGIST. Assistant professor, 9-month, tenure-track. Beginning 1 September 1981. Teach invertebrate portion of general zoology, limnology, and develop advanced invertebrate courses (exclusive of entomology and parasitology). Participate in the department's graduate program. Applicants must have an earned doctorate. Send curriculum vitae, transcripts, and three recommendations to: **John J. Peterka, Zoology Department, North Dakota State University, Fargo, N.D. 58105,** by 1 May 1981. An Equal Opportunity Institution.

SEMINARS

ELECTRON MICROSCOPY SEMINARS

Introduction to SEM, 18 to 22 May and 20 to 24 July
SEM of Materials, 1 to 5 June and 27 to 30 July
Introduction to TEM, 13 to 17 July
Microscopy of Particles, 3 to 7 August

Introductory level seminars designed for professionals will be conducted at Elmhurst College. For more information, contact: **B. L. Gabriel, Department of Physics, Elmhurst College, Elmhurst, Illinois 60126,** or telephone: 312-279-4100.

TRAINEESHIPS

PRE- AND POSTDOCTORAL EPIDEMIOLOGY TRAINEESHIPS. University of Pennsylvania, Graduate Group in Epidemiology. Applications are being accepted for pre- and postdoctoral training in environmental, occupational, and clinical epidemiology. Eligible persons include: (i) predoctoral candidates with a background in biological sciences, epidemiology, or biostatistics, or (ii) postdoctoral candidates with a D.D.S., D.M.D., M.D., D.V.M., or Ph.D. degree. Contact: **Larry L. Laster, Ph.D., Acting Chairman, Graduate Group in Epidemiology, University of Pennsylvania, 316 Nursing Education Building, 420 Service Drive/S2, Philadelphia, Pa. 19104.** Telephone: 215-243-4890.

POSTDOCTORAL TRAINEESHIPS. Postdoctoral position in basic pathobiology available 1 July 1981. Initial appointment is for 1 to 2 years, with opportunities for renewal for a subsequent year. Emphasis will be on research training in cell differentiation related to pathobiology. Applicants having an M.D., a Ph.D., or both degrees will be considered. In the case of those with a Ph.D., trainees focusing on disease mechanisms will be favored. Applicants should send curriculum vitae, a brief description of current research, and three letters of recommendation to: **Dr. Godfrey S. Getz, The University of Chicago, Department of Pathology, Box 414, 950 East 59 Street, Chicago, Ill. 60637.**

ASSISTANTSHIPS

GRADUATE RESEARCH ASSISTANTSHIP: Ph.D. research related to bait attractancy and developmental rates of pharaoh ants, *Monomorium pharaonis* (L.).

Qualifications: Biological sciences degrees with minimum of 1½ years of post-M.S. experience. Acceptance by Texas A&M University Graduate School and Department Admissions Committee. Available 1 July 1981; deadline: 30 May 1981.

Send curriculum vitae, transcripts, GRE scores, and three letters of recommendation to:

Dr. T. A. Granovsky
Urban Entomology Research
Department of Entomology
Texas A&M University
College Station, Texas 77843

FELLOWSHIPS

The University of California, Irvine, College of Medicine, offers a **POSTDOCTORAL FELLOWSHIP IN NEUROPHYSIOLOGY** to work on neuronal mechanisms of alcohol in the CNS. The research primarily involves using single unit recording techniques and a background in electrophysiology is required. Interested persons please send curriculum vitae and request three letters of reference to be sent to: **Nai-Shin Chu, M.D., Ph.D., Department of Neurology, College of Medicine, University of California, Irvine, Calif. 92717.** Salary range: \$1243 to \$1561 per month. Position available summer 1981. Affirmative Action Employer.

POSTDOCTORAL FELLOWSHIP. Available July 1981 for 2-year research training in viral immunology, immunology of autoimmune phenomena in the eye, and cellular immunity in the ocular immune response. Applicant should have Ph.D. or M.D. and be a U.S. citizen or permanent resident. Salary commensurate with training. Send curriculum vitae and names of three references to: **Dr. Roberta Meyers-Elliott, Jules Stein Eye Institute, University of California, Los Angeles, School of Medicine, Los Angeles, California 90024.** The University of California is an Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL FELLOWSHIPS

The University of Texas Health Science Center at San Antonio (UTHSCSA)


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