

Agassiz. The proceedings of a 1966 conference on environmental studies of the glacial Lake Agassiz region tied the biological story of lake basin history to the geological story. This new volume provides the Quaternary story as it was known in 1982. It is an excellent book that will stand as the definitive reference for the Quaternary of the heart of North America for many years.

R. J. FULTON

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Elements of an Orogen

Regional Trends in the Geology of the Appalachian-Caledonian-Hercynian-Mauritanide Orogen. PAUL E. SCHENK, R. T. HAWORTH, J. D. KEPPIE, W. E. TRZCIENSKI, P. F. WILLIAMS, and G. KELLING, Eds. Reidel, Boston, 1983 (distributor, Kluwer Boston, Hingham, Mass.). xiv, 398 pp., illus. \$53.50. NATO ASI Series C, vol. 116. From an institute, Fredericton, N.B., Canada, Aug. 1982.

This book is a collection of papers presented at a meeting of geologists many of whom have worked together on the International Geological Correlation Programme Project 27 to compile geologic data from the Appalachian (eastern North America), Caledonian (British Isles and Scandinavia), Hercynian (France, Spain, and Portugal), and Mauritanide (West Africa) orogens and to combine these data to obtain a better understanding of the orogen as a whole. The book is divided into six sections. The first five are summaries concerning geophysics, stratigraphy and sedimentology, volcanism and plutonism, metamorphism, and deformation. Included in the sixth are studies of mineralization and tectonics in the Canadian Appalachians.

Several thought-provoking interpretations are made from maps of geophysical data (section 1). For example, in the U.S. Appalachians two bands of gravity highs apparent on residual Bouguer maps for wavelengths shorter than 250 kilometers are interpreted by Kane to represent rifting environments, which is consistent with the presence of bimodal volcanic rocks reported by Fyffe *et al.* along the Blue Ridge and Green Mountains (section 3). In contrast to several papers published previously, both Roy *et al.* and Seguin and Fyffe conclude that paleomagnetic data do not support extensive left-lateral faulting within the northern Appalachians during Carboniferous time. From gravity and magnetic data Lefort *et al.* identify structures be-

neath the U.S. Atlantic Coastal Plain that they interpret to be the same as those in the Mauritanide orogen and propose that a prong of the African plate has been left behind. Schenk (section 2) interprets the Meguma terrane in Canada as part of that plate.

Poole *et al.* (section 2) give an excellent overview of the stratigraphy of the orogen. Tables, schematic maps, and text speak to the distribution of rock type in the geologic record. Other papers in section 2 provide more details of the stratigraphy of Scandinavia, Morocco, Nova Scotia, and Avalonian terranes. An interesting suggestion made by Kennan and Kennedy (section 6) is that cotecules (manganese garnet quartzites) may be used for long-range correlation.

Succinct summaries of igneous rock type, age, intrusive morphology, distribution, and inferred tectonic setting are presented for the Appalachians, the Caledonides, and France (section 3). However, the lack of maps and, in several papers, references is frustrating. Metamorphic rocks from these areas are discussed in terms of metamorphic facies, grade, facies series, and age (section 4). Small-scale maps are extremely informative; Robinson nicely distinguishes each metamorphic event in southern New England on separate maps. Fisher suggests that a metamorphic facies series is correlated with the composition of magma formed during the same "event" and supports this hypothesis with data from New England. Tables and maps are used effectively in section 5 to summarize deformation type, plutonism, metamorphism, isotopic data, and fossil occurrences in time and space. Osberg suggests that plutonism continued beyond deformation in the Appalachians.

The book is an important reference for anyone interested in the bedrock geology along the margin of the North Atlantic Ocean. Though it lacks an integrated overview of the orogen as a whole, it does, as is stated by Schenk, emphasize the importance of a multidisciplinary study. It is the only reference I know of that brings together summaries of so many aspects of the geology of the orogen. Most of the papers are well referenced for those wishing to delve into further details. The authors are well versed in the subjects they address, and the data compilations they present will save the reader countless time wading through the literature.

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Books Received

The Applications of Computers to Research on Nucleic Acids II. D. Söll and R. J. Roberts, Eds. IRL Press, Washington, D.C., 1984. Two volumes. xvi, 856 pp., illus. Paper, \$60. Originally published as *Nucleic Acids Research*, vol. 12, No. 1.

Aquametry. A Treatise on Methods for the Determination of Water. Part 2, Electrical and Electronic Methods. Donald Milton Smith and John Mitchell, Jr. 2nd ed. Wiley-Interscience, New York, 1984. xiv, 1352 pp., illus. \$165. Chemical Analysis, vol. 5.

Aquatic Toxicology. Vol. 2. Lavern J. Weber, Ed. Raven, New York, 1984. x, 230 pp., illus. \$42.

Aspects of Vagueness. Heinz J. Skala, S. Termini, and E. Trillas, Eds. Reidel, Boston, 1984 (distributor, Kluwer Boston, Hingham, Mass.). viii, 304 pp., illus. \$39.50. Theory and Decision Library, vol. 39. From a conference, Canary Islands, June 1982.

Atlas for Marine Policy in Southeast Asian Seas. Joseph R. Morgan and Mark J. Valencia, Eds. University of California Press, Berkeley, 1984. 144 pp. \$125.

Atlas of the Ocular Fundus. H. Sautter *et al.* 3rd ed. Urban & Schwarzenberg, Baltimore, 1984. viii, 188 pp. \$124.50. Translated from the German edition (Munich, 1984) by F. C. Blodi.

Augustine's Laws and Major System Development Programs. Norman R. Augustine. 2nd ed. American Institute of Aeronautics and Astronautics, New York, 1984. x, 242 pp., illus. \$19.97.

The Aztecs. Brian M. Fagan. Freeman, New York, 1984. xiv, 322 pp., illus. \$27.95; paper, \$14.95.

Bacterial Infections of Humans. Epidemiology and Control. Alfred S. Evans and Harry A. Feldman, Eds. Plenum, New York, 1984. xlii, 702 pp., illus. Paper, \$27.50. Reprint, 1982 edition.

Bender Gestalt Screening for Brain Dysfunction. Patricia Lacks. Wiley-Interscience, New York, 1984. xxii, 223 pp., illus. \$29.95. Wiley Series on Personality Processes.

Biological Control of Pests by Mites. Marjorie A. Hoy, Gary L. Cunningham, and Lloyd Knutson, Eds. University of California Division of Agriculture and Natural Resources, Berkeley, 1983. vi, 185 pp., illus. Paper, \$15. From a conference, Berkeley, April 1982.

Biological Regulation and Development. Vol. 3B, Hormone Action. Robert F. Goldberger and Keith R. Yamamoto, Eds. Plenum, New York, 1984. xiv, 312 pp., illus. \$42.50.

The Biology and Evolution of Language. Philip Lieberman. Harvard University Press, Cambridge, Mass., 1984. xii, 379 pp., illus. \$27.50.

Biotechnology. A Textbook of Industrial Microbiology. Wulf Crueger and Anneliese Crueger. Thomas D. Brock, Ed. Sinauer, Sunderland, Mass., and Science Tech. Madison, Wis., 1984. xii, 308 pp., illus. \$28.95. Translated from the German edition (Wiesbaden, 1982).

Brave New People. Ethical Issues at the Commencement of Life. D. Gareth Jones. Inter-Varsity Press, Downers Grove, Ill., 1984. 221 pp. Paper, \$6.95.

Cerebrovascular Disorders. James F. Toole. 3rd ed. Raven, New York, 1984. x, 436 pp., illus. \$58.

The Changing Definition of Masculinity. Clyde W. Franklin, II. Plenum, New York, 1984. xii, 234 pp. \$29.50. Perspectives in Sexuality.

Changing Metal Cycles and Human Health. J. O. Nriagu, Ed. Springer-Verlag, New York, 1984. x, 446 pp., illus. \$21.50. Dahlem Workshop Reports. Life Sciences Research Report 28. From a workshop, Berlin, March 1983.

Chemical Instabilities. Applications in Chemistry, Engineering, Geology, and Materials Science. G. Nicolis and F. Baras, Eds. Reidel, Boston, 1984 (distributor, Kluwer Boston, Hingham, Mass.). xxvi, 420 pp., illus. \$58. NATO ASI Series, C, vol. 120. From a workshop, Austin, Tex., March 1983.

Chemical Reactor Theory. An Introduction. K. G. Denbigh and J. C. R. Turner. 3rd ed. Cambridge University Press, New York, 1984. x, 253 pp., illus. \$42.50; paper, \$14.95.

Chemistry and Biology of α_2 -Macroglobulin. Richard D. Feinman, Ed. New York Academy of Sciences, New York, 1983. x, 478 pp., illus. Paper, \$95. Annals of the New York Academy of Sciences, vol. 421. From a conference, New York, Jan. 1983.

Chemistry and Ecotoxicology of Pollution. Des W. Connell and Gregory J. Miller. Wiley-Interscience, New York, 1984. xiv, 444 pp., illus. \$40. Environmental Science and Technology.

Chemistry Made Simple. Fred C. Hess. Revised by Arthur L. Thomas. 2nd ed. Doubleday, Garden City, N.Y., 1984. xiv, 203 pp., illus. Paper, \$4.95. Made Simple Books.

Chemistry of Particles, Fogs and Rain. Jack L. Durham, Ed. Butterworths, Boston, 1984. xiv, 262 pp., illus. \$32.50. Acid Precipitation Series, vol. 2. An Ann Arbor Science Book. From a symposium, Las Vegas, March 1982.

Chemotherapy of Gynecologic Cancer. Gunter

Deppe, Ed. Liss, New York, 1984. xiv, 389 pp., illus. \$58.

Chronic Diarrhea in Children. Emanuel Leventhal, Ed. Nestlé Nutrition, Vevey, and Raven. New York, 1984. xx, 568 pp., illus. \$39.50. Nestlé Nutrition Workshop Series, vol. 6. From a workshop. Caracas, Venezuela, Jan. 1983.

Cities of the Mind. Images and Themes of the City in the Social Sciences. Lloyd Rodwin and Robert M. Hollister, Eds. Plenum, New York, 1984. xiv, 356 pp. \$35. Environment, Development, and Public Policy.

Clinical Atlas of Human Chromosomes. Jean de Grouchy and Catherine Turléau. 2nd ed. Wiley, New York, 1984. xx, 487 pp. \$59.50.

Clinical Interest of Steroid Hormone Receptors in Breast Cancer. G. Leclercq *et al.*, Eds. Springer-Verlag, New York, 1984. xiv, 351 pp., illus. \$56. Recent Results in Cancer Research, 91.

Cloud Dynamics. L. T. Matveev, Reidel, Boston, 1984 (distributor, Kluwer Boston, Hingham, Mass.). x, 341 pp., illus. \$71. Atmospheric Sciences Library. Translated from the Russian edition (1981).

Cognitive Strategies and Educational Performance. John R. Kirby, Ed. Academic Press, Orlando, Fla., 1984. xiv, 310 pp. \$35. Educational Psychology. From a conference, Newcastle, N.S.W., Australia, 1981.

Competitive Edge. The Semiconductor Industry in the U.S. and Japan. Daniel I. Okimoto, Takuo Sugano, and Franklin B. Weinstein, Eds. Stanford University Press, Stanford, Calif., 1984. xviii, 275 pp., illus. \$27.50. ISIS Studies in International Policy.

Computer Aid in Gastroenterology. P. Rozen and F. T. de Dombal, Eds. Karger, Basel, 1984. viii, 196 pp., illus. \$49.25. Frontiers of Gastrointestinal Research, vol. 7.

Constitutional Psychophysiology. Research in Review. Michael Myrtek. Academic Press, Orlando, Fla., 1984. xviii, 289 pp., illus. \$39.50. Translated from the German edition (1980) by Mark W. Greenlee.

Contractile Mechanisms in Muscle. Gerald H. Pollack and Haruo Sugi, Eds. Plenum, New York, 1984. xvi, 921 pp., illus. \$125. Advances in Experimental Medicine and Biology, vol. 170. From a symposium, Seattle, June 1982.

Control in Power Electronics and Electrical Drives. R. Zwick, Ed. Published for the International Federation of Automatic Control by Pergamon, New York, 1984. xiv, 814 pp., illus. \$175. IRAC Proceedings Series, 1984, No. 2. From a symposium, Lausanne, Switzerland, Sept. 1983.

Control of Food Quality and Food Analysis. G. G. Birch and K. J. Parker, Eds. Elsevier, New York, 1984. xii, 332 pp., illus. \$64.75. From a symposium, Reading, England, March 1983.

Corals and Coral Reefs of the Galápagos Islands. Peter Glynn and Gerard M. Wellington, with an annotated list by John W. Wells. University of California Press, Berkeley, 1984. xvi, 330 pp., illus. \$45.

Cosmic Discovery. The Search, Scope, and Heritage of Astronomy. Martin Harwit. MIT Press, Cambridge, Mass., 1984. xii, 334 pp., illus. Paper, \$9.95. Reprint, 1981 edition.

The Creation Controversy. Science or Scripture in the Schools. Dorothy Nelkin. Beacon, Boston, 1984. 242 pp. Paper, \$9.95. Reprint, 1982 edition.

Cultural Analysis. The Work of Peter L. Berger, Mary Douglas, Michel Foucault, and Jürgen Habermas. Robert Wuthnow *et al.* Routledge and Kegan Paul, Boston, 1984. viii, 273 pp. \$24.95.

Current Cardiovascular Drug Therapy. Gordon A. Ewy and Rubin Bressler, Eds. Raven, New York, 1984. xvi, 329 pp., illus. Paper, \$17.50. Reprinted from *Cardiovascular Drugs and the Management of Heart Disease* (1982).

Current Concepts of Diagnosis and Treatment of Bone and Soft Tissue Tumors. Hans K. Uthoff and Elvira Stahl, Eds. Springer-Verlag, New York, 1984. xviii, 436 pp., illus. \$53.50. From a symposium, Ottawa, Canada, May 1983.

Current Controversies in Breast Cancer. Frederick C. Ames, George R. Blumenschein, and Eleanor D. Montague, Eds. University of Texas Press, Austin, 1984. xiv, 657 pp., illus. \$65. From a conference, Houston, 1982.

The Day after World War III. Edward Zuckerman. Viking, New York, 1984. viii, 407 pp. \$18.95.

Deconvolution. Anton Ziolkowski. International Human Resources Development Corporation, Boston, 1984. xii, 175 pp., illus. \$36.

Defined Immunofluorescence and Related Cytochemical Methods. Ernst H. Beutner, Russell J. Nisengard, and Boris Albini, Eds. New York Academy of Sciences, New York, 1983. viii, 432 pp., illus. Paper, \$84. Annals of the New York Academy of Sciences, vol. 420. From a conference, Niagara Falls, N.Y., June 1982.

Developments in Food Colours—2. John Walford, Ed. Elsevier, New York, 1984. x, 257 pp., illus. \$52.

Diccionario del Petróleo Venezolano. Aníbal R. Martínez. Editorial Ateneo de Caracas, Caracas, 1984 (distributor, Edreca, Caracas). 157 pp., illus. Paper, \$15.

A Dictionary of Ecology, Evolution and Systematics. R. J. Lincoln, G. A. Boxshall, and P. F. Clark. Cambridge University Press, New York, 1984. viii, 298 pp., illus. Paper, \$19.95. Reprint, 1982 edition.

Differential Equations, Multiple Integrals, series, Theory of Functions of a Complex Variable. Ya. S. Bugrov and S. M. Nikolsky. Mir, Moscow, 1983 (U.S. distributor, Imported Publications, Chicago). 476 pp. \$9.95. Higher Mathematics. Translated from the Russian edition (Moscow, 1981) by Leonid Levant.

Diffusion in Liquids. A Theoretical and Experimental Study. H. J. V. Tyrrell and K. R. Harris. Butterworths, Boston, 1984. xvi, 448 pp., illus. \$75. Butterworths Monographs in Chemistry.

Direct and Indirect Effects of Acidic Deposition on Vegetation. Rick A. Linthurst, Ed. Butterworths, Boston, 1984. xvi, 117 pp., illus. \$32.50. Acid Precipitation Series, vol. 5. An Ann Arbor Science Book. From a symposium, Las Vegas, March 1982.

The Economic Consequences of a Nuclear Freeze. William D. Hartung *et al.* Alice Tepper Marlin and Paula Lippin, Eds. Council on Economic Priorities, New York, 1984. xiv, 120 pp. Paper, \$14.

The Economic Costs of Smoking and Benefits of Quitting. Gerry Oster, Graham A. Colditz, and Nancy L. Kelly. Lexington (Heath), Lexington, Mass., 1984. xx, 159 pp. \$20.

Edema. Norman C. Staub and Aubrey E. Taylor, Eds. Raven, New York, 1984. xii, 774 pp., illus. \$145.

Effects of Aging and Regulation of Cerebral Blood Flow and Metabolism. C. Fieschi, G. L. Lenzi, and C. W. Loeb, Eds. Karger, Basel, 1984. xiv, 258 pp., illus. \$98.25. Monographs in Neural Sciences, vol. 11. From a symposium, San Remo, Italy, June 1983.

Electrical Machines and Their Applications. J. Hindmarsh. 4th ed. Pergamon, New York, 1984. xxiv, 664 pp., illus. Paper, \$16. Applied Electricity and Electronics.

Electrogenic Transport. Fundamental Principles and Physiological Implications. Mordecai P. Blaustein and Melvyn Lieberman, Eds. Raven, New York, 1984. xvi, 404 pp., illus. \$59. Society of General Physiologists Series, vol. 38. From a symposium, 1982.

Electron-Hole Droplets in Semiconductors. C. D. Jeffries and L. V. Keldysh, Eds. North-Holland, Amsterdam, 1983 (U.S. distributor, Elsevier, New York). xxxviii, 656 pp., illus. \$180.75. Modern Problems in Condensed Matter Sciences, vol. 6.

Electrophotography Principles and Optimization. Merlin Scharfe. Research Studies Press, Letchworth, England, and Wiley, New York, 1984. xx, 200 pp., illus. \$49.95. Electrostatics and Electrostatic Applications Series, 3.

Eleventh Texas Symposium on Relativistic Astrophysics. (Austin, Tex., Dec. 1982.) David S. Evans, Ed. New York, Academy of Sciences, New York, 1984. xii, 396 pp., illus. Paper, \$79. Annals of the New York Academy of Sciences, vol. 422.

Energy and Development in Kenya. Opportunities and Constraints. Phil O'Keefe, Paul Raskin, and Steve Bernow, Eds. Beijer Institute, Stockholm, and Scandinavian Institute of African Studies, Uppsala, 1984. xii, 190 pp. SEK 75. Energy, Environment and Development in Africa, 1.

Energy Handbook. Robert L. Loftness. 2nd ed. Van Nostrand Reinhold, New York, 1984. xii, 763 pp., illus. \$72.50.

Environmental Policy in the 1980s. Reagan's New Agenda. Norman J. Vig and Michael E. Craft. CQ Press (Congressional Quarterly), Washington, D.C., 1984. xii, 377 pp. Paper, \$11.95.

Enzyme Regulation by Reversible Phosphorylation. Further Advances. Philip Cohen, Ed. Elsevier, New York, 1984. xx, 250 pp., illus. \$75. Molecular Aspects of Cellular Regulation, vol. 3.

Essays in Theoretical Physics. In Honour of Dirk ter Haar. W. E. Parry, Ed. Pergamon, New York, 1984. viii, 337 pp., illus. \$45.

Finite Group Algebras and Their Modules. P. Landrock. Cambridge University Press, New York, 1984. x, 274 pp. Paper, \$27.50. London Mathematical Society Lecture Note Series, 84.

Flora of Japan. Jisaburo Ohwi, Frederick G. Meyer, and Egbert H. Walker, Eds. Smithsonian Institution Press, Washington, D.C., 1984. x, 1067 pp. \$49.50. Translated from the Japanese. Reprint, 1965 edition.

Flows of Energy and Materials in Marine Ecosystems. Theory and Practice. M. J. R. Fasham, Ed. Plenum, New York, 1984. x, 733 pp., illus. \$110. NATO Conference Series IV, vol. 13. From an institute, Carcans, France, May 1982.

For Progress and Peace: Whither Tending. V. Webster Johnson. Published by the author, 1700 North Moore Street, Arlington, Va., 1983. xiv, 473 pp. Paper, \$10.

Geomagnetism of Baked Clays and Recent Sediments. K. M. Creer, P. Tucholka, and C. E. Barton, Eds. Elsevier, New York, 1983. xvi, 324 pp. \$53.25. From a symposium, Edinburgh, Aug. 1981.

Growing Wildflowers. A Gardener's Guide. Marie Sperka. Drawings by Charles Clare. Scribner, New York, 1984. x, 277 pp. Paper, \$9.95.

The Heirloom Gardener. Carolyn Jabs. Sierra Club Books, San Francisco, 1984 (trade distributor, Random, New York). x, 310 pp., illus. \$17.95; paper, \$9.95.

Marketing Health Behavior. Principles, Techniques, and Applications. Lee W. Frederiksen, Laura J. Solomon, and Kathleen A. Brehony, Eds. Plenum, New York, 1984. xvi, 200 pp., illus. \$24.50.

Marshes of the Ocean Shore. Development of an Ecological Ethic. Joseph V. Siry. Texas A&M University Press, College Station, 1984. x, 216 pp. + plates. \$22.50.

The Measurement of Visual Motion. Ellen Catherine Hildreth. MIT Press, Cambridge, Mass., 1984. xii, 241 pp., illus. \$27.50. ACM Distinguished Dissertations.

Mechanical Behaviour of Materials—IV. J. Carlsson and N. G. Ohlson, Eds. Pergamon, New York, 1984. Two volumes. xlii, 1252 pp., illus. \$225. International Series on the Strength and Fracture of Materials and Structures. From a conference, Stockholm, Aug. 1983.

Mechanisms of Gastrointestinal Inflammation. V. S. Chadwick, Ed. Smith Kline and French Laboratories, Welwyn Garden City, Herts, England, 1984. viii, 87 pp., illus. Paper. From a workshop, Stanstead Abbots, Herts, England, Sept. 1983.

Mechanisms of Inorganic and Organometallic Reactions. Vol. 2. M. V. Twigg, Ed. Plenum, New York, 1984. xviii, 453 pp., illus. \$59.50.

Memoirs of an Unrepentant Field Geologist. A Candid Profile of Some Geologists and Their Science, 1921–1981. F. J. Pettijohn. University of Chicago Press, Chicago, 1984. x, 260 pp., illus. \$25.

Memories That Shaped an Industry. Decisions Leading to IBM System/360. Emerson W. Pugh. MIT Press, Cambridge, Mass., 1984. xii, 323 pp., illus. \$25. The MIT Press Series in the History of Computing.

Memory, Learning, and Higher Function. A Cellular View. C. D. Woody. Springer-Verlag, New York, 1984. xiv, 483 pp., illus. Paper, \$28. Reprint, 1982 edition.

Mental Retardation and Developmental Disabilities. Vol. 13. Joseph Wortis, Ed. Plenum, New York, 1984. xx, 210 pp. \$29.50.

Metal Ions in Biological Systems. Vol. 17. Calcium and Its Role in Biology. Helmut Sigel, Ed. Dekker, New York, 1984. xxvi, 532 pp., illus. \$85.

Metal-Semiconductor Schottky Barrier Junctions and Their Applications. B. L. Sharma, Ed. Plenum, New York, 1984. xvi, 470 pp., illus. \$52.50.

Metamorphic Complexes of Asia. V. S. Sobolev, G. G. Lepezin, and N. L. Dobretsov, Eds. Nauka, Moscow, and Pergamon, New York, 1984. 322 pp., illus., + appendix. \$60. Translated from the Russian edition (Moscow, 1977) by D. A. Brown.

Metaphoric Process. The Creation of Scientific and Religious Understanding. Mary Gerhart and Allan Melvin Russell. Texas Christian University Press, Fort Worth, 1984. xviii, 217 pp., illus. \$16.95; paper, \$10.95.

Meteorological Aspects of Acid Rain. Chandrakant M. Bhumralkar, Ed. Butterworths, Boston, 1984. xiv, 243 pp., illus. \$32.50. Acid Precipitation Series, vol. 1. An Ann Arbor Science Book. From a symposium, Las Vegas, March 1982.

Methods in Enzymology. Sidney P. Colowick and Nathan O. Kaplan, Eds. Vol. 96. Biomembranes, Part J. Sidney Fleischer and Becca Fleischer, Eds. Academic Press, Orlando, Fla., 1983. lvi, 901 pp., illus. \$79.

Microcomputers and Laboratory Instrumentation. David J. Malcolm-Lawes. Plenum, New York, 1984. x, 246 pp., illus. \$35.

Modern Genetics. Francisco J. Ayala and John A. Kiger, Jr. 2nd ed. Benjamin/Cummings, Menlo Park, Calif., 1984. xx, 924 pp., illus., + appendixes. \$34.95. The Benjamin/Cummings Series in the Life Sciences.

Modern Inorganic Chemistry. William L. Jolly. McGraw-Hill, New York, 1984. xiv, 610 pp., illus. \$32.95. Revision of *The Principles of Inorganic Chemistry* (1976).

Molecular Beam Epitaxy of III-V Compounds. A Comprehensive Bibliography 1958–1983. K. Ploog and K. Graf. Springer-Verlag, New York, 1984. viii, 222 pp. Paper, \$18.

Molecular Biology and Pathogenesis of Coronaviruses. P. J. M. Rottier *et al.*, Eds. Plenum, New York, 1984. xiv, 409 pp., illus. \$57.50. Advances in Experimental Medicine and Biology, vol. 173. From a workshop, Utrecht, Netherlands, June 1983.

Molecular Neurobiology. Cold Spring Harbor Laboratory, Cold Spring Harbor, N.Y., 1983. xxii, 921 pp. (Continued on page 1057)

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INVITATION FOR PAPERS

2nd U.S. - Dutch International Symposium: Aerosols

May 19 - May 24, 1985*
Williamsburg Hilton Inn
Williamsburg, VA

As a part of cooperative activities in environmental protection under a Memorandum of Understanding between the United States and the Netherlands, an international symposium dealing with particulate matter air pollution is being organized. The first symposium in this series was conducted in Maastricht, The Netherlands in May 1982 addressing problems associated with nitrogen oxides pollution.

This second symposium will focus on issues related to air pollution by aerosols. The sub-topic areas to be discussed are:

- Physical and Chemical Characterization
- Sampling, Measurements and Monitoring
- Sources, Emissions and Environmental Levels
- Atmospheric Transport and Transformation
- Biological Disposition of Inhaled Aerosols
- Toxicological Studies
- Controlled Human Exposure Studies
- Epidemiologic Studies
- Identification of Population Groups at Risk
- Ecological Effects of Acidic and Other Deposition
- Welfare Effects Assessment (Vegetation, Soiling, Materials Damage, Visibility, and Climate)
- Control Technology
- Benefit Analysis
- Economic Impact
- Control Policies
- Policy Implementation
- Other Relevant Issues

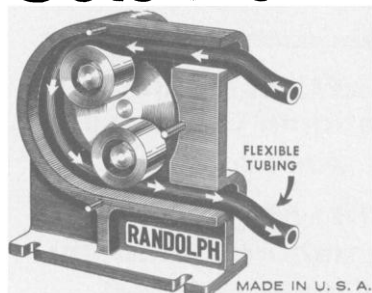
Abstracts: Persons wishing to make poster presentations should submit a two-hundred word abstract by October 1, 1984, to:

Dr. Si Duk Lee, U.S. Coordinator
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The Molecular Basis of Aging

Aging research has long been characterized by a plethora of hypotheses and a dearth of experimental data. Recent findings in molecular biology have augmented some long-standing theories of aging but challenged others. The purpose of the Symposium is to assimilate this data and to modify, if necessary, current theories of aging.

The Symposium will encourage a two-way flow of information, highlighting the potential of molecular studies to clinical problems and defining those aging problems most amenable to resolution by innovative techniques of molecular biology.

Sessions will cover:

- Wear and Tear Hypotheses
- Aging in Cellular Proteins
- Changes in DNA with Age
- Diseases Featuring Altered Rates of Aging

Poster presentations are invited.

Scholarships to cover registration fees and some travel expenses are available for recent M.D.s and postgraduate and graduate students.

Registration fee: \$250.00

(Non-refundable after September 15, 1984)

Includes dinners, accommodations and Symposium proceedings

For full information and registration forms, please contact:

H. Z. Kondratuk
Biology Department
Brookhaven National Laboratory
Upton, L.I., New York, 11973, USA
Telephone: (516) 282-3415

SCIENCE

Posters

The following posters of *Science* covers are available:

30 March 1979, Tropical flowering tree;

23 February 1983, Landsat photo of Detroit, Michigan;

29 July 1983, Cheetah;

2 December 1983, Snowshoe hare;

23 December 1983, Cathedral window/DNA molecule.

Combination of space covers in scroll format: 1 June 1979, 23 November 1979, 10 April 1981.

Price is \$5 each (prepaid).

Write to AAAS, Department POST, 1515 Massachusetts Avenue, NW, Washington, D.C. 20005.

New Editorial Policies

Proceedings of the Society for Experimental Biology and Medicine (PSEBM)

The PSEBM is a multidisciplinary international journal that has served the scientific community for eighty-one years. The Proceedings has a tradition of fostering communication between basic scientists and clinical investigators. The following changes in editorial policies are called to your attention:

Sponsorship No Longer Required

The PSEBM now allows submission of manuscripts without the requirement of a member sponsor. Manuscripts of any length are accepted. Manuscripts in all fields of experimental biology and medicine are invited. After peer review, published manuscripts are grouped in the "Table of Contents" in the following categories:

Biochemistry/Nutrition	Genetics/Molecular Biology
Cellular and Organ Physiology	Host-Parasite Interaction/
Development/Growth/Aging	Immunology/Microbiology/Virology
Endocrinology/Metabolism	Oncology/Pathology/Radiobiology
Experimental Medicine/	Pharmacology/Toxicology
Hematology	

No Manuscript Handling Fee

The requirement of a manuscript handling fee has been removed. There is a modest page charge of \$20, but payment of page charges is not a condition of publication.

Rapid Communications

The PSEBM now features a Rapid Communications section with the objective of rapid dissemination of timely, significant and novel data of special or general interest. Typed on special forms (available from the Editorial Office), the camera-ready manuscripts are reviewed by one reviewer, and if accepted, are published within two months of receipt.

Minireviews

The PSEBM now includes invited Minireviews on topics in the field of experimental biology or medicine in which there has been recent significant progress. Seventeen Minireviews written by prominent investigators have been published since June, 1982. Minireview manuscripts are usually published within three months after receipt.

Society for Experimental Biology and Medicine
630 West 168th Street, New York, NY 11032

SCIENCE

News Department Reprint Series

Catalysis

"There is no area in chemistry today more exciting than catalysis." [George Pimentel, chairman of the National Academy of Sciences/National Research Council Committee to Survey Opportunities in the Chemical Sciences]

This survey of the most active areas of catalysis conveys that excitement while explaining some of the unusual forces that have combined to drive studies of catalysis forward. Among the topics covered: Heterogeneous catalysis, cluster chemistry, activation of carbon-hydrogen bonds, asymmetric synthesis, photocatalytic production of fuels and electricity, modification of enzymes, and immobilization of enzymes.

This collection of recent articles from *Science* by Thomas Maugh II is now available for use by professionals, teachers, researchers, and anyone interested in this field.

Single copies \$2.00; twenty or more \$1.00 each.
Orders under \$10.00 must be prepaid.

Write to AAAS, Dept. CAT, 1515 Massachusetts Ave., N.W., Washington, D.C. 20005.

BOOKS RECEIVED

(Continued from page 1018)

pp., illus. Cloth (in two volumes), \$125; paper, \$68. Cold Spring Harbor Symposia on Quantitative Biology, vol. 48. From a symposium, Cold Spring Harbor, N.Y., June 1983.

Neurobiology of the Trace Amines. Analytical, Physiological, Pharmacological, Behavioral, and Clinical Aspects. A. A. Boulton *et al.*, Eds. Humana, Clifton, N.J., 1984. xx, 597 pp., illus. \$59.50. Experimental and Clinical Neuroscience.

The Neurohypophysis. Physiological and Clinical Aspects. Seymour Reichlin, Eds. Plenum, New York, 1984. xvi, 224 pp., illus. \$32.50.

Planets and Their Atmospheres. Origin and Evolution. John S. Lewis and Ronald G. Prinn. Academic Press, Orlando, Fla., 1984. x, 470 pp., illus. Paper, \$29.50. International Geophysics Series, vol. 33.

Plant Virus Epidemiology. The Spread and Control of Insect-Borne Viruses. R. T. Plumb and J. M. Thresh, Eds. Blackwell Scientific, Palo Alto, Calif., 1983. x, 377 pp., illus. \$48. From Meetings, Oxford, England, 1981.

The Point's Synthesis (The Sphere's Philosophy). Ion Vulcanescu. Published by the author, 759 Seneca Ave., Ridgewood, Queens, N.Y., 1984. x, 77 pp., illus. Paper, \$50.

Pollination Biology. Leslie Real, Ed. Academic Press, Orlando, Fla., 1983. xviii, 338 pp., illus. \$49.

Polymorphic Programming Languages. Design and Implementation. D. M. Harland. Horwood, Chichester, England, and Halsted (Wiley), New York, 1984. 251 pp., illus. \$49.95. Ellis Horwood Series in Computers and Their Applications.

Positron Scattering in Gases. John W. Humberston and M. R. C. McDowell, Eds. Plenum, New York, 1984. x, 230 pp., illus. \$42.50. NATO ASI Series B, vol. 107. From a workshop, Egham, Surrey, England, July 1983.

Posttranslational Covalent Modifications of Proteins. B. Connor Johnson, Ed. Academic Press, Orlando, Fla., 1983. xx, 424 pp., illus. \$37. From a conference, Oklahoma City, Nov. 1982.

Pounder's Marine Diesel Engines. C. T. Wilbur and D. A. Wight. 6th ed. Butterworths, Boston, 1984. x, 576 pp., illus. \$49.95. Marine Engineering Series.

Pre-Columbian Shell Engravings. From the Craig Mound of Spiro, Oklahoma. Part 2. Philip Phillips and James A. Brown, with the collaboration of Eliza McFadden *et al.* Peabody Museum Press (Harvard University), Cambridge, Mass., 1984 (distributor, Harvard University Press, Cambridge, Mass.). Various pages, illus. Paper, \$35.

Predictability of Fluid Motions. Greg Holloway and Bruce J. West, Eds. American Institute of Physics, New York, 1984. xvi, 616 pp., illus. \$48.25. AIP Conference Proceedings, No. 106. From a symposium, La Jolla, Calif., Feb. 1983.

Principles and Practice of Gynecologic Laser Surgery. Joseph H. Bellina and Gaetano Bandiera-monte. Plenum, New York, 1984. xxii, 286 pp., illus. \$39.50.

Proceedings of the European Dialysis and Transplant Association—European Renal Association. Vol. 20. (London, June 1983.) Alex M. Davison and Pierre J. Guillou, Eds. Pitman, London, 1983 (U.S. distributor, Urban & Schwarzenberg, Baltimore). xx, 777 pp., illus. \$75.

Short and Thin Mineral Fibres. Identification, Exposure and Health Effects. E. J. Chatfield *et al.* National Board of Occupational Safety and Health Research Department, Solna, Sweden, 1983. 180 pp., illus. Paper, \$20. From a symposium, Stockholm, Sept. 1982.

Sociological Human Ecology. Contemporary Issues and Applications. Michael Micklin and Harvey M. Choldin, Eds. Westview, Boulder, Colo., 1984. xiv, 456 pp. \$30; paper, \$11.50. From a conference, Seattle, 1977.

The Software Catalog: Science and Engineering. Elsevier, New York, 1984. xvi, 687 pp. Paper, \$29.

Sound Propagation in Stratified Fluids. Calvin H. Wilcox. Springer-Verlag, New York, 1984. x, 198 pp. Paper, \$19.80. Applied Mathematical Sciences, 50.

The Star Splitters. The High Energy Astronomy Observatories. Wallace H. Tucker. National Aeronautics and Space Administration, Washington, D.C., 1984 (available from the Superintendent of Documents, Washington, D.C.). x, 182 pp., illus. \$12. NASA SP-466.

Thermal Physiology. J. R. S. Hales, Ed. Raven, New York, 1984. xxx, 577 pp., illus. \$68. From a symposium.

Thermochemistry and Its Applications to Chemical and Biochemical Systems. Manuel A. V. Ribeiro da Silva, Ed. Reidel, Boston, 1984 (distributor, Kluwer Boston, Hingham, Mass.). x, 845 pp., illus. \$97. NATO ASI Series C, vol. 119. From an institute, Viano do Castelo, Portugal, July 1982.

Personnel Placement

SCIENCE publishes each Friday, except the last Friday of the year. Advertising is accepted only in writing; no abbreviations. Any deadline in ad must be at least 2 weeks after date of issue in which ad appears. Also, personnel advertising is accepted only with the understanding that the advertiser does not discriminate among applicants on the basis of race, sex, religion, age, color, national origin, handicap, or sexual preference.

LINE CLASSIFIED ADVERTISING DEADLINES:

28 September issue (mailed 21 September):
7 September
5 October issue (mailed 28 September): 14 September
12 October issue (mailed 5 October): 21 September
19 October issue (mailed 12 October): 28 September

POSITIONS WANTED: 40¢ per word, plus \$4 for use of box number, per week. \$10 minimum, per week. Prepayment required. This rate is available only to individuals seeking jobs.

LINE DISPLAY (POSITIONS OPEN, COURSES, FELLOWSHIPS, MARKETPLACE, and so forth): \$10.40 per millimeter; \$260 minimum, per week (minimum charge covers 25 millimeters on a single column; 25 millimeters equals 10 lines of 50 spaces per line). No charge for use of box number. No agency commission for ads less than 103 millimeters (4 inches). No cash discount. Prepayment required for all foreign ads. Purchase orders and billing address required for all other advertising.

Send copy for all **Positions Wanted** ads and **Line Display** ads less than 1/6 page in size (125 millimeters) to:

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Blind ad replies should be addressed as follows:

Box (give number)
SCIENCE
1515 Massachusetts Avenue, NW
Washington, D.C. 20005

POSITIONS WANTED

Cell Physiologist/Programmer/Instrumentation Specialist, Ph.D. 1979; 3 years of postdoctoral experience; 13 publications on physiology of circadian rhythms; 1½ years in computer industry as programmer; 5 years of experience in programming microcomputers in assembly and high level languages (6502 and Z80 assembly, FORTRAN, Pascal, some C). Familiar with Apple DOS, CP/M, Oasis, and UNIX operating systems. Experience in construction and programming of data acquisition systems for biological data collection using microcomputers. Seeks position in biotechnology or biomedical company as microcomputer programmer/instrumentation specialist. Box 202, SCIENCE. X

Editor, M.A. Textbook researcher, editor, writer, indexer. Publications. Seeks freelance assignments: biology/medicine/ecology/environment/energy. 8280 James Avenue, Suite 2A-1700, Woodridge, Illinois 60517. 9/7; 10/5

Recently graduated M.B.A. seeks position with biotechnology or life-sciences firm. Able to perform market research, new product introduction, financial analysis, operational improvements, strategic planning, and capital acquisitions. Products should be marketable now or within one year. My M.B.A. is from the University of Virginia, undergraduate degree from Massachusetts Institute of Technology. I have 4 years of work experience, 1 year independent and 3 with nuclear engineering industry. I can help bring your scientific idea to commercial fruition. All responses will be answered and kept completely confidential. Box 201, SCIENCE. X

Physiologist, Ph.D. expected January 1985. Cellular transport/metabolism, vesicle models, HPLC, radio-tracer techniques. Research experience and publications in cellular electrophysiology. Seeking cardiovascular postdoctoral position in industry or academics. Box 211, SCIENCE. X

POSITIONS WANTED

Environmentalist, Ph.D. in aerosol science, 1972. Seeks academic or private position in aerosol technology, industrial hygiene, atmospheric, indoor air pollution, combustion. Box 210, SCIENCE. 9/7, 14, 21

Plant Ecologist, Ph.D. Seeks position at 4-year college teaching biology, botany, ecology. Teaching experience. Research experience in arctic, alpine, forests, grasslands, and deserts. Available immediately. Box 212, SCIENCE. 9/7, 14

Reproductive Biologist. Ph.D. Endocrinology/genetics. Veterinarian. Publications. Experience with effects of drugs on reproduction. Seeks industrial position. Box 208, SCIENCE. X

Researcher: 9 years of experience. M.S. zoology. Published. Seeks position as writer. Reviews, summaries, articles, assignments. Freelance. Travel, relocation no problem. Box 209, SCIENCE. X

Veterinary Pathologist/Toxicologist. D.V.M., Ph.D., Diplomate: ACVP, 9 years of experience in government and pharmaceutical/chemical preclinical safety evaluations, and with regulatory agencies. Seeks position with managerial and scientific responsibility. Box 198, SCIENCE. X

Virologist/Microbiologist. Ph.D. 1971. Three postdoctoral positions. Virology and cell culture research experience including vaccine strain development, virus isolation, identification, purification, structural protein characterization and adaptation of cells for large-scale cultivation. Seeking industrial/research position. Box 192, SCIENCE. X

Writer, Ph.D., publications, teaching, research experience. Seeks free-lance work, books, articles. Biology. Box 185, SCIENCE. 9/7; 10/5; 11/2; 12/7

POSITIONS OPEN

ANALYTICAL CHEMIST

A large multi-disciplinary program in the Department of Psychiatry of the Mount Sinai School of Medicine requires a research-oriented analytical chemist. The program centers on the biological and biochemical correlates of neuropsychiatric diseases. The successful candidate will possess demonstrated theoretical and practical skills in mass spectrometry, particularly with regard to the implementation of brain and CSF neurotransmitters and their metabolites. Familiarity with the Finnigan 4021 GCMS and computer system extremely desirable.

The applicant must be able to communicate and collaborate with a large number of principal investigators and must be skilled in making oral and written presentations of their work. Supervision of a number of technicians, participation in site visits and in the preparation of grant applications will be required. The successful candidate will possess an advanced degree with relevant experience.

Please send a full curriculum vitae outlining professional goals along with the names of three references to: **Kenneth L. Davis, M.D., Chief, Psychiatry Service-116A, VA Medical Center, Bronx, N.Y. 10468.**

The Department of Biochemistry at Eastern Virginia Medical School has an opening beginning October 1984 for an **ASSISTANT** or an **ASSOCIATE PROFESSOR**. The applicant should be actively carrying out research in hybridoma technology, preferably with experience in molecular biology and membrane biochemistry. He or she will also participate in teaching of medical and graduate students. Send curriculum vitae and three letters of recommendation to:

Karl A. Schellenberg, M.D., Ph.D.
Department of Biochemistry
Eastern Virginia Medical School
P.O. Box 1980
Norfolk, Virginia 23501

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ASSISTANT PROFESSOR with expertise in myocardial function, adrenergic control, and calcium homeostasis; utilizing perfused hearts, isolated myocytes, and subcellular organelles. Ph.D. with at least 4 years of postdoctoral experience. Send curriculum vitae to: **John J. Spitzer, M.D., Professor and Head, Department of Physiology, Louisiana State University Medical Center (LSUMC), 1901 Perdido Street, New Orleans, La. 70112.**

LSUMC is an Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

ANATOMISTS: Gross anatomy or histology teaching. Research interest open. Rank and salary commensurate with experience. Reply with curriculum vitae and names of three references to: **Search Committee, Department of Anatomy, University of Puerto Rico, Medical Sciences Campus, G.P.O. Box 5067, San Juan, P.R. 00936.** An Affirmative Action/Equal Opportunity Employer.

ASSISTANT IN NEUROSCIENCE. Develop and maintain hardware and software for auditory and somatosensory laboratories. Both laboratories configured around PDP-11 and Apple computers. Master's or equivalent with experience in assembly language programming and microprocessor development essential. Salary: \$10,000 to \$16,000 annually. Anticipated starting date is 26 November 1984. Send complete résumé to: **Dr. Charles J. Vierck, Jr., Department of Neuroscience, Box J-244 JHMC, University of Florida, Gainesville, Florida 32610,** by 25 September 1984. An Equal Opportunity/Affirmative Action Employer.

ASSISTANT PROFESSOR

Applications sought for assistant professor in surgery and biochemistry to prepare and deliver lectures to students. Successful candidate will also participate in a joint production laboratory research program in the biochemical aspects of diseases that lead to congenital and posttraumatic developmental disability. Candidate will apply expertise in the technologies of tissue culture, cell cloning, cell fusion, high-pressure chromatography, mass spectrometry fluorimetry, and glucolipid and glycoprotein enzymology. Position requires a Ph.D. in biological chemistry with 5 years of direct experience or 5 years of experience as a research associate in the field of neuroscience with emphasis on biochemistry of disease. Candidate must have published at least five articles in recognized national scientific journals in the United States. Salary: \$29,500, 12-month annual basis, 40 hours per week, 9 a.m. to 5 p.m., Monday to Friday. Send résumé along with three references to: **Illinois Job Service, 910 South Michigan Avenue, Room 333, Chicago, Illinois 60605.** Attention: **Joan Haight.** An Employer Paid Ad.

ASSISTANT PROFESSOR OF BIOCHEMISTRY—MOLECULAR BIOLOGY

The Department of Biochemistry at the Upstate Medical Center of the State University of New York (SUNY) is expanding its commitment to molecular biology and invites applications for a tenure-track position. Candidates should have experience with recombinant DNA techniques and be interested in applying these techniques to the study of fundamental biochemical problems. Applicants should have postdoctoral experience, demonstrated productivity in research, and a commitment to excellence in teaching medical and graduate students. Application deadline: 30 November 1984. Applicants should send curriculum vitae, a summary of research plans, and have three letters of reference forwarded to: **Dr. David C. Turner, Department of Biochemistry, SUNY Upstate Medical Center, Syracuse, New York 13210.** Telephone: 315-473-4725. An Affirmative Action/Equal Opportunity Employer.

University of California, Los Angeles (UCLA)—SCHOOL OF MEDICINE BIOLOGICAL CHEMISTRY

The Department of Biological Chemistry anticipates openings for several faculty members, most likely at the level of **ASSISTANT PROFESSOR.** Individuals with interests in modern aspects of molecular and cellular biochemistry or endocrinology are encouraged to submit a curriculum vitae, a one-page statement of research goals, and names of three references to:

**Dr. Elizabeth Neufeld, Chair
Department of Biological Chemistry
UCLA School of Medicine
Los Angeles, Calif. 90024**

The University of California is an Equal Opportunity Employer; applications from women and members of minority groups are encouraged.

POSTDOCTORAL POSITIONS available for molecular studies of lysosomal enzymes (protein structure, DNA cloning and gene expression, alterations in genetic disease). A strong background in biochemistry and/or molecular biology is essential. Send curriculum vitae and names of three references to: **Dr. Elizabeth F. Neufeld, Department of Biological Chemistry, University of California, Los Angeles School of Medicine, Los Angeles, Calif. 90024.**

POSITIONS OPEN

ASSISTANT/ASSOCIATE IN PEDIATRICS POSITION is available for a biochemist in the Division of Neonatology, University of Florida, for a postdoctoral research associate. A Ph.D. degree is required. This position involves a team investigating the biochemistry of developmental nutrition and gastroenterology. Background in HPLC (high-pressure liquid chromatography), open column liquid chromatography, enzyme assays, assay development, protein purification, and radioimmunoassay techniques is highly desirable. Application recruiting deadline: 30 September 1984. Anticipated starting date: 15 October 1984. The salary range is a minimum of \$20,000 to a negotiable maximum. Send curriculum vitae and names of three references to: **Dr. Josef Neu, Department of Pediatrics, University of Florida, Box J-296, JHMC, Gainesville, Fla. 32610.** Equal Employment Opportunity/Affirmative Action Employer.

ASSISTANT, ASSOCIATE, OR FULL PROFESSOR—GENERAL BACTERIOLOGIST. The Department of Bacteriology seeks candidates who have developed a research program in the area of general bacteriology. Excellent bacteriological, molecular biological, and biochemical facilities are available. Teaching would involve the responsibility for an undergraduate course in bacterial diversity, plus other teaching in bacteriology, including the development of a graduate level course in an area of general bacteriology. Send curriculum vitae, including a brief description of research experience, samples of refereed publications, a brief statement of proposed research, and names of three references to: **Chairman, Search Committee, Department of Bacteriology, University of California, Davis, California 95616.** Materials must be received by 30 September 1984. *The University of California is an Affirmative Action/Equal Opportunity Employer.*

ASSISTANT/ASSOCIATE PROFESSORS—The Department of Biochemistry at the University of Mississippi Medical Center invites applications for two tenure-track positions. The department is well-equipped and has strong research and graduate programs in developmental biology, protein synthesis, eukaryotic gene structure and organization, chromatin structure, biochemistry of the cytoskeleton, nucleic acid biophysics, enzymology, and protein chemistry. We seek innovative individuals to establish and/or maintain vigorous, independent, high-quality research programs. Special consideration will be given to those areas that complement current research programs here. Interested candidates should send curriculum vitae and three references by 15 November 1984 to: **Dr. J. D. Dignam, Department of Biochemistry, University of Mississippi Medical Center, Jackson, Miss. 39216.** Equal Opportunity Employer, M/F/H/V.

ASSISTANT PROFESSOR OF CHEMISTRY

Tenure-track faculty position in the Department of Chemistry at the University of Wisconsin-Parkside. Candidates must possess a doctoral degree in organic chemistry or biochemistry; subsequent postdoctoral experience is preferred. Applicants must be committed to excellence in research and teaching. Teaching responsibilities include primarily undergraduate level courses in organic chemistry and some involvement in the biochemistry and general chemistry curriculum. Areas of research complementary to our faculty, especially bio-organic and synthetic organic, would be most desirable. Applications will be reviewed on 15 October 1984. Please submit curriculum vitae, including a description of future research plans, and arrange to have three letters of recommendation sent to: **Professor Bruce Branchini, Department of Chemistry, University of Wisconsin-Parkside, Box No. 2000, Kenosha, Wisconsin 53141.** *The University of Wisconsin-Parkside is an Equal Opportunity/Affirmative Action Employer.*

ASSISTANT PROFESSOR OF ENTOMOLOGY EXTENSION

Tenure-track position located at The Pennsylvania State University, University Park, Pennsylvania. Develop Extension programs and conduct research for tree and small fruits. Cooperate with horticultural programs. Twelve-month tenure-track appointment. Extension, 80 percent; research, 20 percent. Ph.D. in entomology required.

Send curriculum vitae, statement of goals, transcripts, list of four references, including phone numbers to: **C. W. Pitts, Head, Department of Entomology, 106 Patterson Building, The Pennsylvania State University, University Park, Pa. 16802.** Closing date: 15 October 1984.

An Equal Opportunity/Affirmative Action Employer

POSITIONS OPEN

Harvard University ASSISTANT PROFESSOR CELLULAR AND DEVELOPMENTAL BIOLOGY (CDB)

The Department of Cellular and Developmental Biology intends to make an appointment at the assistant professor level effective in summer 1985. We are particularly interested in candidates with research experience and continuing interest in the molecular genetics or molecular developmental biology of plants. Applications should include curriculum vitae, reprints of publications, and a statement of research plans. Complete applications and three letters of recommendation solicited by the applicant should be received no later than 29 October 1984 by:

**Chairman, CDB Search Committee
The Biological Laboratories
Harvard University
16 Divinity Avenue
Cambridge, Mass. 02138**

Harvard is an Equal Opportunity Employer.

ASSISTANT PROFESSOR OF ENTOMOLOGY

Tenure-track position based at the Erie County Field Research Laboratory North East, Pennsylvania. Conduct research and develop management programs for grape pests. Twelve-month appointment: 84 percent research, 16 percent extension. Ph.D. in entomology required, plant pathology training desirable. Send curriculum vitae, statement of research goals, transcripts, list of four references including phone numbers to: **C. W. Pitts, Head, Department of Entomology, 106 Patterson Building, The Pennsylvania State University, University Park, Pa. 16802.** Closing Date: 15 October 1984.

An Equal Opportunity/Affirmative Action Employer

ASSISTANT PROFESSOR OF ENTOMOLOGY EXTENSION

Tenure-track position located at The Pennsylvania State University, University Park, Pennsylvania. Develop Extension programs and conduct research for agronomic crops. Cooperate with agronomic programs. Twelve-month tenure-track appointment. Extension, 80 percent; research, 20 percent. Ph.D. in entomology required.

Send curriculum vitae, statement of goals, transcripts, list of four references, including phone numbers to: **C. W. Pitts, Head, Department of Entomology, 106 Patterson Building, The Pennsylvania State University, University Park, Pa. 16802.** Closing date: 15 October 1984.

An Equal Opportunity/Affirmative Action Employer

ASSISTANT/ASSOCIATE PROFESSOR, MICROSCOPIST-GENETICIST. Tenure-track position available January 1985. Responsibilities include participation in the undergraduate and graduate biology curriculum, including electron microscopy, genetics, and genetic engineering. Research and supervision of M.S. students expected. Closing date: 15 October 1984 or until filled. Submit letter of application, résumé, official transcripts, and three letters of reference to: **Biology Search Committee, Division of Science and Mathematics, New Mexico Highlands University, Las Vegas, New Mexico 87701.** *New Mexico Highlands University is a small, state-supported university and is an Equal Opportunity/Affirmative Action Employer.*

DEPARTMENT OF PHARMACOLOGY AND TOXICOLOGY ALBANY MEDICAL COLLEGE

Applicants are invited to apply for a tenure-track position available on 1 January 1985. The position is expected to be filled at the **ASSISTANT OR ASSOCIATE PROFESSOR** level. Preference will be given to individuals with research interests in cardiovascular pharmacology although all areas of pharmacology and toxicology will be considered. The successful candidate will be expected to develop an active and funded research program and to participate in medical student and graduate student teaching. The Department of Pharmacology and Toxicology is newly reorganized and has begun a period of sustained growth. The Albany area offers major summer and winter recreational and cultural activities. Applicants should send curriculum vitae, a summary of research activities, and three letters of reference to: **Dr. Stanley D. Glick, Chairman, Department of Pharmacology and Toxicology, Albany Medical College, Albany, New York 12208.**

Albany Medical College is an Affirmative Action/Equal Opportunity Employer, M, F.

NATIONAL CANCER INSTITUTE
DIVISION OF CANCER TREATMENT
BIOLOGICAL RESPONSE MODIFIERS PROGRAM

Associate Director Biological Response Modifiers Program

Salary Range—\$58,938 to \$66,400 (Physicians may be eligible for a Physicians' Comparability Allowance up to \$10,000 per year)

Has overall responsibility for the planning, direction, evaluation and coordination of basic and applied research on interferons and other biological response modifiers. The incumbent establishes program priorities, allocates resources, and evaluates program effectiveness. Administers a \$20 million contract and grant program and a staff of approximately 103 scientific and support personnel.

Position information and qualifications requirements may be obtained by contacting:

Cynthia A. Kauff, PMS
National Cancer Institute
Bldg. 31, Room 3A08
Bethesda, Maryland 20205
Tel. (301) 496-6503

Applications (SF-171, C.V. and Bibliography) must be submitted to the above address and postmarked not later than September 30, 1984.

AN EQUAL OPPORTUNITY EMPLOYER

THE UNIVERSITY OF ADELAIDE

Invites applications from both men and women for the following position:

RESEARCH OFFICER (NH and NRC) Re-advertised

(Reference: X4049) in the Department of Pathology, University of Adelaide. Applicants are sought to join a team studying pathogenesis of hepatitis B infection in man in co-operation with the Division of Medical Virology in the South Australian Institute of Medical and Veterinary Science, under the direction of Professor B. P. Marmion and Dr. C. J. Burrell.

The general strategy includes characterisation of hepatitis B replication in various tissue by in situ hybridisation and immunofluorescence or immunoperoxidase reactions, interaction between hepatitis B virus and cells of the immune systems, and so forth.

The successful applicant should have recently completed a Ph.D. in biochemistry, virology, or immunopathology and be experienced in one or more of the areas of nucleic acid hybridisation, viral immunopathology, or tissue culture of viruses.

The position is funded by the National Health and Medical Research Council and is available for 1 year in the first instance with a possibility of annual renewals for a total of 3 years.

Further information concerning details of the position may be obtained from either: Professor B. P. Marmion or Dr. C. J. Burrell, South Australian Institute of Medical and Veterinary Science, Frome Road, Adelaide 5000, Australia; telephone: 618-228-7541 or 618-228-7378.

Further information about the general conditions of all appointments may be obtained from: The Senior Assistant Registrar (Personnel) at the University.

Salary per annum: A\$20,991 × 5 to \$24,047 (salaries under review).

Applications, in duplicate, quoting reference number and giving full personal particulars (including residential status), details of academic qualifications and names and addresses of three referees should reach: The Senior Assistant Registrar (Personnel), University of Adelaide, G.P.O. Box 498, Adelaide, South Australia 5001, Australia (Telex: UNIVAD AA 89141), not later than 5 October 1984.

The University reserves the right not to make an appointment or to appoint by invitation.

POST-DOCTORAL ASSIGNMENT

One-year Post-Doctoral position in the food industry available. The individual should hold a Ph.D. in Nutrition or a related discipline with interest and experience in the analysis of large scale population food and nutrient intake and nutritional and health status surveys. Must have understanding of the basic mechanisms regulating food selection and intake and nutrient metabolism, as well as the relationship of these variables to health status. The appropriate individual will have the experience and training to effectively handle and analyze secondary source dietary survey data in a state-of-the-art computing environment. A strong statistical base and a working knowledge of foods and dietetics are essential. This is an outstanding opportunity to do research work on key scientific issues related to food and nutrition in a vigorous scientific environment. Please send resume in confidence to:

BOX 206, SCIENCE

An Equal Opportunity Employer M/F/H

Laboratory of international renown
wishes to appoint the

Director

of one of its new research centres

Preferably a Doctor of Medicine, the ideal candidate will possess a sound knowledge of pharmacology with a particular interest in toxicology. He/she will lead a team of top class research scientists in the following specialist areas:

- Cellular and genetic biology,
- Biochemical hematology,
- Physiopathology,
- Pathological anatomy,
- Embryology,
- Statistics.

The Director will plan the studies undertaken in the centre and will coordinate the complete range of activities of the different laboratories.

With Overall Responsibility for budgetary matters, he/she will also determine the type and level of scientific investment appropriate to the development of the centre.

Applications will be treated in the strictest confidence. Candidates wishing to apply for this post, which will be based to the south of Paris, should forward a hand-written letter of application together with a C.V. and recent photograph under réf. 5196 (to be quoted on the application) to Media-System, 104 rue Réaumur 75081 Paris Cédex 02 - France.

POSITIONS OPEN

ASSISTANT PROFESSORS OF PHARMACOLOGY (TWO)

The Department of Pharmacology of the Ohio State University College of Medicine invites applications for two tenure-track faculty positions at the assistant professor level. Applicants should have at least 2 years of postdoctoral training and hold the Ph.D. and/or M.D. degree(s). They should have the potential for developing a strong independent research program and be willing to participate in medical and graduate student teaching. Opportunities will exist for collaborative research also.

Position 1: Candidate should have proven research experience in molecular biology (DNA and RNA isolation, cloning, sequencing, protein isolation and characterization) as applied to the understanding of transmitter-receptor function.

Position 2: Candidate should have proven research experience in cardiovascular research (vasoactive peptides, ionic fluxes, cellular electrophysiology) as applied to the understanding of drug and transmitter action at the cellular level.

Closing date: 30 November 1984.

Submit curriculum vitae, a statement of research interests, representative publications, and the names of three references to: **Norton H. Neff, Ph.D., Professor and Chairman, Department of Pharmacology, The Ohio State University College of Medicine, Columbus, Ohio 43210.**

An Equal Opportunity/Affirmative Action Employer

Tenure-track **ASSISTANT PROFESSOR** positions are available in the **Department of Pharmacology, University of Iowa, College of Medicine.** Applications are invited from individuals who possess the Ph.D. and/or M.D. degree, have completed postdoctoral training, and have identified an area suitable for development of a vigorous research program related to molecular and cellular pharmacology or more traditional pharmacological disciplines. *The University of Iowa is an Equal Opportunity/Affirmative Action Employer.* Submit curriculum vitae and names of three referees to:

**Search Committee
Department of Pharmacology
Bowen Science Building
University of Iowa
Iowa City, Iowa 52242**

ASSISTANT PROFESSOR OF PHYSIOLOGY AND BIOPHYSICS

Applications are invited from qualified men and women for the position of assistant professor in the Department of Physiology and Biophysics at Harvard Medical School. Responsibilities include basic research and teaching. Of particular interest is research in the field of cellular physiology, including control of biosynthetic processes, hormones, regulation of cell functions, cell-cell interactions, and related subjects. Send curriculum vitae to: **Search Committee, Department of Physiology and Biophysics, Harvard Medical School, 25 Shattuck Street, Boston, Mass. 02115.** *An Affirmative Action/Equal Opportunity Employer.*

ASSISTANT PROFESSOR OF ZOOLOGY. Tenure-track positions available for fall 1985. Cell biology, cell physiology, and immunology are preferred areas of expertise. Candidates must be qualified to teach graduate and undergraduate courses in their area of expertise. Teaching experience is highly desirable. Areas of teaching need are: General biology, cell biology, cell physiology, introductory physiology, histology, immunology, and protozoology. Candidates must have a Ph.D. and show evidence of research productivity. Preference will be given those candidates with postdoctoral research training in cell/tissue culture, TEM or SEM, immunocytochemistry, cellular neurobiology, or cellular endocrinology. Send curriculum vitae and the names of three professional references by 1 October 1984 to: **Dr. D. W. Martin, Chairman, Department of Zoology, University of Arkansas, Fayetteville, Ark. 72701.**

The University of Arkansas is an Equal Opportunity/Affirmative Action Institution.

BIOCHEMIST. Department of Chemistry, University of Southern Mississippi (USM). Tenure-track, assistant or associate professor. Ph.D. and postdoctoral experience required. Effective teaching and development of a research group with outside funding is expected. Biochemical engineering, biotechnology, or related area preferred. Send résumé, three recommendations, reprints, and outline of proposed research to: **Dr. Jeff Evans, USM Chemistry, S.S. Box 5043, Hattiesburg, Miss. 39406-5043.** *An Affirmative Action/Equal Opportunity Employer.*

POSITIONS OPEN

ASSISTANT PROFESSOR ZOOLOGY

The Department of Zoology of The Ohio State University invites applications for a tenure-track appointment at the assistant professor level (9-month), starting either autumn quarter 1984 or winter 1985. The successful applicant will be expected to establish an ongoing and externally funded research program in ultrastructure (primarily using TEM techniques), will direct a departmental TEM facility, and will teach an advanced undergraduate course in histology as well as participate in the general biology program. Preference will be given to applicants with postdoctoral experience. Please send curriculum vitae, copies of recent publications, and names of three references to: **Dr. John L. Crites, Chairman, Department of Zoology, 1735 Neil Avenue, The Ohio State University, Columbus, Ohio 43210.** Applications will be accepted until October 1984.

The Ohio State University is an Affirmative Action/Equal Opportunity Employer. Women and minorities are encouraged to apply.

ASSISTANT RESEARCH PHYSICIST

A position of assistant research physicist is available at the Space Sciences Laboratory of the University of California. Work will be on problems associated with the Ten Meter Telescope Project. This is a statewide university project to design and build a new optical/infrared telescope with a 10-meter diameter primary mirror. A major fraction of the effort will be to write and use computer programs for optical design, statistical data analysis, and structural analysis. Applicant should have a Ph.D. degree or equivalent in physical sciences or engineering or related field, and substantial experience with scientific/engineering computer programming (FORTRAN and preferable VAX experience). The position is available immediately with an initial appointment of 1 year with possible extension subject to availability of funds. Send curriculum vitae and three references to: **Professor Jerry Nelson, University of California, Lawrence Berkeley Laboratory, Building 50, Room 351, Berkeley, Calif. 94720.** Telephone: 415-486-5015. Applications should be received by 8 October 1984.

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

ASSOCIATE CLINICAL DIRECTOR Ph.D. in Pharmacology or Biochemistry

Clinical scientist for consumer product testing facility in the South. Industry experience preferred but not necessary. Strong communication skills, both oral and written, are a prerequisite.

You will be responsible for managing studies and developing protocols, and you will be afforded direct client contact. Position also allows you opportunity to "share in profits."

To apply, send your résumé or curriculum vitae, with salary history, to: **Box 205, SCIENCE.**

BIOLOGY/MICROBIOLOGY

Academic staff position starting 25 January 1985. Position requires a Ph.D. with experience in molecular genetics and medical microbiology. Candidate is expected to develop a course in biotechnology and to assist in teaching medical and general bacteriology. The position is 1 year only but renewable. Submit curriculum vitae, official transcripts, and three letters of reference by 10 October 1984 to: **M. A. Rouf, Ph.D., Chairman, Department of Biology and Microbiology, University of Wisconsin Oshkosh, Oshkosh, Wis. 54901.** *The University of Wisconsin Oshkosh is an Equal Opportunity/Affirmative Action Institution.*

COLLEGE OF THE VIRGIN ISLANDS POSITION OPEN-BIOLOGY

Visiting assistant or associate professor of biology (spring semester, 1985 only), beginning 15 January 1985. Candidates must have a doctorate and experience in teaching vertebrate and developmental biology. Position is most appropriate for established faculty member on leave. Experience in the tropics and research interests are desirable. Will teach vertebrate biology and developmental biology to biology majors. Aggregate compensation \$12,263 to \$17,013, plus liberal benefits. Address letter of application, résumé, and three letters of recommendation, by 31 October 1984, to: **Dr. LaVerne Ragster, Chairperson, Science and Mathematics Division, College of the Virgin Islands, Charlotte Amalie, St. Thomas, United States Virgin Islands 00802.**

Equal Opportunity/Affirmative Action Employer

POSITIONS OPEN

CARDIOVASCULAR PHYSIOLOGIST

The Physiology Department at the Armed Forces Radiobiology Research Institute (AFRRI) is currently seeking candidates for a position in cardiovascular physiology to conduct animal research on the mechanism of cardiovascular shock induced by ionizing radiation. The AFRRI is the principle radiobiology research laboratory for the Department of Defense. The physiology department is responsible for research on the effects of ionizing radiation on the physiological and biophysical mechanisms of radiation insult to cellular, organ, and whole animal systems. The physiology department is also interested in the interaction between chemical or pharmacological factors and the physiological response to radiation. The successful applicant will be responsible for developing a research program utilizing experimental animal models to investigate the mechanism underlying radiation induced cardiovascular shock. Qualifications include a Ph.D. in physiology or a closely related biological science and research experience in cardiovascular physiology. The candidate should have a strong publication record as well as independent research experience beyond the doctoral level. This position is available immediately and has a salary range from \$30,000 to \$40,000. To apply for this permanent civil service position, send application including SF-171, curriculum vitae, and reprints of representative published research to: **The Armed Forces Radiobiology Research Institute, Civilian Personnel Office, Bethesda, Maryland 20814,** by 1 October 1984. **Reference Announcement 64/84A.** Direct inquiries to: **David R. Livengood, Department Chairman,** or **Vince Ackermann, Personnel Specialist;** telephone: 202-295-1426. *The AFRRI is an Equal Opportunity Employer.*

CELLULAR IMMUNOLOGIST—Postdoctoral fellow or research associate wanted to study cytolytic and suppressor T cells in human melanoma, and assist in a related program on the effects of new biomodulators on human cell-mediated immunity. Strong background in either animal or human cellular immunology desirable. Send curriculum vitae and names of three references to: **Dr. Malcolm S. Mitchell, Departments of Medicine and Microbiology, University of Southern California Cancer Center, Los Angeles, California 90033.**

CHAIR IN REPRODUCTION Department of Clinical Studies New Bolton Center University of Pennsylvania School of Veterinary Medicine

Both nominations and applications are invited for a newly endowed chair, the Marion Dill and David George Jones Chair, in reproduction at the School of Veterinary Medicine, University of Pennsylvania. This initiative represents an intent on the part of the school to build upon its already strong program in reproduction. The successful applicant will be expected to develop an innovative program of research in an area which is discernably relevant to the reproductive biology of farm animals. The applicant should also have the experience and interest to develop a role in leadership of the Section of Reproductive Studies at New Bolton Center. A degree in veterinary medicine is desirable but not essential.

New Bolton Center is the rural campus of the School of Veterinary Medicine and is situated 30 miles west of Philadelphia.

Interested individuals should send curriculum vitae, references, and a summary of research interests to: **Dr. Alan M. Kelly, School of Veterinary Medicine, University of Pennsylvania, 3800 Spruce Street, Philadelphia, Pa. 19104.** Closing date for applications is 15 October 1984.

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

CHAIRMAN, DEPARTMENT OF DERMATOLOGY—Yale University School of Medicine and Yale-New Haven Hospital invite applications and nominations for the position of chairman and chief of the Department of Dermatology. Candidate must be qualified for faculty appointment at the rank of professor and must be a recognized leader in the field with proven ability as a scholar, clinician, teacher, and administrator. Appointment is to be effective July 1985 or as soon thereafter as possible. Applications should be submitted prior to 1 October 1984. *Qualified women and minority group members are encouraged to apply.* Curriculum vitae and bibliography should be sent to the Chairman of the Search Committee: **Dr. Richard H. Greenspan, Department of Diagnostic Radiology, Yale University School of Medicine, 333 Cedar Street, P.O. Box 3333, New Haven, Connecticut 06510.**

GENETIC TOXICOLOGIST

BURROUGHS WELLCOME CO., a progressive pharmaceutical company located in Research Triangle Park, N.C. and having close research contact with three major universities, has an immediate opening for a Cytogeneticist/Genetic Toxicologist.

Candidate must have a M.S. in the biological sciences or equivalent experience, and demonstrated abilities to independently perform, evaluate and report for regulatory and/or publication purposes on *in vitro* and *in vivo* cytogenetics, particularly breakage analysis. Experience in banded karyotype analysis is desirable but not required; however, candidate must be willing and able to learn this on the job. Candidate must also be willing to learn and perform cultured mammalian cell mutagenesis assays and do independent research on the relationship between specific locus mutations and chromosomal aberrations.

BURROUGHS WELLCOME CO. offers a comprehensive company-paid benefit package, a competitive salary and an excellent environment in which to apply your professional capabilities.

Qualified individuals should call (919) 248-4649 to request an application.

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Are Encouraged to Apply

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Wellcome

SENIOR ANALYTICAL CHEMISTS

THE LILLY RESEARCH LABORATORIES, an established leader in pharmaceutical and agricultural research, is seeking Organic and Biochemically oriented Analytical Chemists at the doctoral level. The Senior Scientists will become members of teams developing new therapeutic agents, rDNA products, monoclonal antibodies, drug delivery, and/or drug-targeting concepts.

Applicants for one position must have a Ph.D. in Analytical Chemistry with a background in Organic Chemistry. Experience with HPLC, GC, and TLC is essential.

Applicants for the other position must have a Ph.D. in Analytical Chemistry with experience or training in Biochemistry. This experience should include the characterization of proteins such as monoclonal antibodies and polypeptides using HPLC, gel electrophoresis, and immunoassay techniques.

Candidates for both positions should possess leadership qualities and a strong interest in problem-solving and analytical techniques. Responsibilities of these positions include development of analytical methods for determining the purity of new drug substances, methods for determining their stability, detection of trace foreign proteins or other impurities and related substances, etc. Ability to work in a multi-disciplinary team is essential, but applicants should be self-motivated and capable of working independently.

Qualified candidates should send their curriculum vitae to:



Mr. John W. Crooks (SAC)
Manager, College Relations
Eli Lilly and Company
307 East McCarty Street
Indianapolis, Indiana 46285

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POSITIONS OPEN

THE DEPARTMENT OF CHEMISTRY OF THE UNIVERSITY OF WISCONSIN-MADISON invites applications for one or more tenure-track **ASSISTANT PROFESSOR** positions, effective August 1985. The primary requirement is excellence in research and teaching. Research may be in any area of chemistry; preference will be given to candidates whose research interests are complementary to those of the present faculty. Teaching responsibilities may involve undergraduate courses, including general chemistry, and graduate courses. Interested persons should forward curriculum vitae, a summary of proposed research, an outline of teaching interests, and arrange to have three letters of recommendation sent to: **Professor Phillip R. Certain, Chairman, Department of Chemistry, University of Wisconsin, 1101 University Avenue, Madison, Wis. 53706.** To be assured of full consideration, candidates should have completed their applications by 1 November 1984. *The University of Wisconsin is an Equal Opportunity/Affirmative Action Employer; applications from qualified women and minority candidates are encouraged.*

DEAN, COOK COLLEGE AND DIRECTOR, NEW JERSEY AGRICULTURAL EXPERIMENT STATION

Rutgers, the State University of New Jersey, invites nominations and applications for the position of dean, Cook College, and director, New Jersey Agricultural Experiment Station. The mission of the college includes agriculture, the environment, life sciences, home economics, and multidisciplinary studies. The college and experiment station has 400 full-time faculty. The dean and director will provide leadership for teaching, research, and extension within this land-grant university. Candidates should be established scholars with administrative experience. Send applications and nominations by 1 October 1984 to: **Dr. Colin G. Scanes, Chair, Search Committee, care of Office of the Vice President for University Personnel, RUTGERS, THE STATE UNIVERSITY, New Brunswick, New Jersey 08903.** *An Affirmative Action/Equal Opportunity Employer.*

DIRECTOR MAGNETIC RESONANCE IMAGING UNIT

Rochester has been selected as one of 13 sites in the state of New York for a demonstration project in magnetic resonance imaging. The project is under the direction of a community-based committee on emerging technology from Strong Memorial Hospital, Genesee, and Rochester General Hospitals, and is expected to be in operation by the end of 1984. A director with academic qualifications suitable for appointment to the full-time faculty of the Department of Radiology at the University of Rochester is sought to lead this project. Preference in the selection process will be given to applicants with experience in magnetic resonance imaging, a background in neuroradiology, and experience with computer tomography. Interested persons are invited to send curriculum vitae and any other relevant information to: **Professor Robert J. Joynt, M.D., Ph.D., Acting Dean, P.O. Box 706, University of Rochester School of Medicine and Dentistry, 601 Elmwood Avenue, Rochester, N.Y. 14642.**

Equal Opportunity Employer, M/F

FACULTY POSITION Biochemistry, University of Nebraska-Lincoln

The Department of Agricultural Biochemistry, in the Institute of Agriculture and Natural Resources at the University of Nebraska-Lincoln (UNL), invites applications or nominations for a tenure-track faculty position. Will be expected to establish a creative and independent research program in basic biochemistry. Candidates from all areas of animal biochemistry will be considered, including, but not restricted to, mechanisms of genetic expression, cell differentiation, mechanisms of action of hormones and second messengers, influence of nutrients on metabolic processes, membrane structure and function, and enzyme mechanisms. Unique opportunities exist for interdisciplinary cooperative research through various UNL departments. The salary and rank of this 12-month position will be commensurate with training and experience. Requires Ph.D. Postdoctoral experience desirable. Teaching undergraduate and graduate courses is a part of the duties, but the instructional load is light: 80 percent research, 20 percent teaching. Submit résumé and names and addresses of three references by 1 November to: **Dr. Fred W. Wagner, Department of Agricultural Biochemistry, University of Nebraska-Lincoln, Lincoln, Nebraska 68583-0718.** *An Affirmative Action/Equal Opportunity Employer.*

POSITIONS OPEN



DEAN OF THE FACULTY TRINITY COLLEGE Hartford, Connecticut

Applications and nominations are invited for the position of dean of the faculty; appointment to begin on or before 1 July 1985. The dean is the chief academic officer of the college and is responsible for overseeing and developing its academic programs and its faculty.

Qualifications: Ph.D. or equivalent; scholarly achievement in the liberal arts or sciences; experience in academic administration; ability as a teacher.

The dean, the senior officer responsible for the instructional budget, reports directly to the president, supervises department and program chairpersons in their recruitment and review of faculty, and directs the offices of the associate academic dean and the associate administrative dean.

The salary will be commensurate with the candidate's experience and qualifications. A decision on the appointment is expected by 15 January 1985. All applications will be acknowledged.

Applications with the names of five references should be sent by 1 October 1984 to:

**Office of the President
Trinity College
Hartford, Conn. 06106**

An Equal Opportunity/Affirmative Action Employer

Search Extended

DIRECTOR OF SPONSORED RESEARCH

Vanderbilt University School of Medicine invites nominations and applications for the position of director of sponsored research. The director reports to the associate dean for biomedical sciences and is responsible for a wide variety of matters pertaining to sponsored research, program development, and program management. Qualifications should include an earned doctorate in a biomedical sciences discipline and experience in grants management and development. NIH experience is preferred. The position is available immediately and salary is dependent upon qualifications. Send application with curriculum vitae to: **John H. Hash, Associate Dean for Biomedical Sciences, Vanderbilt University School of Medicine, Nashville, Tenn. 37232.**

Equal Opportunity/Affirmative Action Employer

FACULTY POSITION THE JOHNS HOPKINS UNIVERSITY

The Division of Environmental Chemistry of the School of Hygiene and Public Health invites applications for a tenure-track position at the assistant professor level. Candidates must have a strong background in chemistry and primary postdoctoral research interests in the molecular mechanisms of damage to cellular macromolecules. Evaluation will be based on research potential. Teaching responsibilities will be limited to minor participation in an NIEHS graduate student training grant. Curriculum vitae, reprints, and names of three referees should be sent to: **Dr. H. H. Seliger, Director, Division of Environmental Chemistry, The Johns Hopkins University, COEH, 3100 Wyman Park Drive, Building 6, Baltimore, Md. 21211.** *An Equal Opportunity Employer.*

FACULTY POSITIONS

The Department of Chemistry, University of Minnesota, Minneapolis, Minnesota, seeks to add two faculty members at the assistant professor level. Applications from especially highly qualified candidates at the tenured levels will also be considered. Both openings are for **EXPERIMENTAL PHYSICAL CHEMISTS**, at least one of whom should have **BIOPHYSICAL** research interests. Curriculum vitae (including a list of publications), a detailed description of research interests, three letters of recommendation, and copies of undergraduate and graduate transcripts should be sent to: **Professor Donald G. Truhlar, Chairman, Faculty Search Committee, Department of Chemistry, University of Minnesota, Minneapolis, Minnesota 55455.** The final deadline for applications is 7 December 1984, but applicants are urged to apply earlier because reviewing of applications and interviewing will begin in the fall. *The University of Minnesota is an Equal Opportunity Educator and Employer and specifically invites and encourages applications from women and minorities.*

POSITIONS OPEN

U.S. Environmental Protection Agency (EPA), Office of Research and Development, seeks applicants for an **EPIDEMIOLOGIST** position, to coordinate the development and implementation of an intramural and extramural research program in epidemiology. Salary range: GS-11: \$25,489 to \$33,139; GS-12: \$30,549 to \$39,711; GS-13: \$36,327 to \$47,226.

Qualifications Required: Experience/degree to Ph.D. level in epidemiology. Demonstrated technical proficiency and professional status through publication of research results in the area of epidemiology. Demonstrated ability to plan and conduct research, assess program needs, coordinate a research program, and effectively communicate with the public and private sectors. In addition to mastery of basic concepts in biological, environmental, and medical sciences, applicant must have specific experience in chronic disease or environmental epidemiology.

To Apply: Submit Personal Qualifications Statement (SF-171) and course listing, available at Federal Job Information Centers and Federal Agency Personnel Offices, by 5 October 1984, to: **Stacy Browne, PM-212, EPA, 401 M Street, SW, Washington, D.C. 20460.** United States citizenship is required for federal employment. (Résumés unaccompanied by Personal Qualifications Statement, SF-171, will not be accepted.) Inquiries: **Stacy Browne, telephone: 202-382-2986.** *An Equal Opportunity Employer.*

The University of Michigan Medical School, Department of Radiology, has on occasion open **FACULTY POSITIONS** within the department and its affiliated hospitals. Physicians filling these positions will take part in the programs of patient care, teaching, and research in the Department of Radiology. They will supervise the activities of house officers and aid in the teaching of house officers and medical students. Qualified applicants must be American Board of Radiology-certified or Board-eligible. Previous training or work experience in an academic institution as well as demonstration of previous academic research and teaching experience are desirable. Academic rank will depend on qualifications and experience. Interested applicants should contact: **William Martel, M.D., Chairman, Department of Radiology, The University of Michigan Medical School, Ann Arbor, Michigan 48109.** *A nondiscriminatory, Affirmative Action Employer.*

FACULTY POSITION IN PLANT MOLECULAR GENETICS, DEPARTMENT OF BIOLOGICAL SCIENCES, UNIVERSITY OF CALIFORNIA, SANTA BARBARA. Tenure-track faculty opening in biochemistry/molecular biology with research interests in the molecular biology of vascular plants, emphasizing modern studies of gene organization and expression. Ph.D., postdoctoral experience, potential for excellence in research, and strong commitment to teaching required. Duties will include undergraduate teaching of eukaryotic genetics, recombinant DNA techniques (shared), and graduate instruction in area of research specialization. Appointment at assistant professor level preferred, although applications from more senior individuals will also be considered. Appointment effective 1 July 1985. Salary and rank dependent on qualifications.

Submit curriculum vitae, brief summaries of previous and projected research, and names of at least three referees to: **The Chairman, Department of Biological Sciences, University of California, Santa Barbara, Calif. 93106** by 1 November 1984.

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Travenol-Genentech Diagnostics, a rapidly growing company in the manufacture of diagnostic products, has the following challenging opportunities available in its Research & Development group.

Immunologist-PhD to develop monoclonal antibodies.

Virologist-PhD with industrial experience preferably in the diagnostic field to direct a field doing large scale cultures. Managerial experience is preferred.

Microbiologist to do QC Sterility testing.

Immunologist/Biochemist-PhD to develop products for enzyme immunoassay.

Send resumes to:

**Personnel Department
Travenol-Genentech Diagnostics
620 Memorial Drive
Cambridge, MA 02139**

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CELL BIOLOGY

YALE UNIVERSITY DEPARTMENT OF BIOLOGY

Yale University's Department of Biology is renewing its call for applicants for an assistant or associate (non-tenured) professorship in Cell Biology. Candidates' areas of interest should include chromosome structure and/or molecular biology of gene expression although applicants studying other aspects of cell structure and function will also be considered.

Duties associated with these positions include teaching of graduate and undergraduate students and management of a strong research program. Send C.V., resume of past and present research, and the names of at least three referees to **Executive Secretary, Department of Biology, Yale University, P.O. Box 6666, New Haven, CT 06511-8112**. Deadline: Dec. 1, 1984. Yale University is an equal opportunity affirmative action employer.



Yale University

ECOLOGY/ EVOLUTION/ BEHAVIOR

Yale University Department of Biology

Yale University's Department of Biology seeks applicants for an assistant professorship in ecology, evolution or behavior.

Candidates with research interests which span more than one of the areas mentioned above are especially desirable. Duties associated with this position include teaching of graduate and undergraduate students and management of a strong research program. Send curriculum vitae, summary of past and present research, and the names of at least three referees to: **Executive Secretary, Ecology/Evolution/Behavior Search Committee, Department of Biology, Yale University, P.O. Box 6666, New Haven, CT 06511**. Deadline for acceptance of applications is December 15, 1984. Yale University is an Equal Opportunity/Affirmative Action Employer.



Yale University

MOLECULAR EVOLUTION/ SYSTEMATICS

Yale University Department of Biology

Yale University's Department of Biology seeks applicants for an assistant professorship in molecular evolution and/or molecular systematics.

Candidate's expertise should include both the use of modern DNA technology to investigate either eucaryotic or procaryotic systems and a knowledge of the theory and analytical methods directed toward the study of evolution. Duties associated with this position include teaching of graduate and undergraduate students and management of a strong research program. The appointment will take effect no sooner than July 1, 1985.

Send curriculum vitae, summary of past and present research, and the names of at least three referees to: **Executive Secretary, Molecular Evolution Search Committee, Department of Biology, Yale University, P.O. Box 6666, New Haven, CT 06511**. Deadline for acceptance of applications is December 15, 1984. Yale University is an Equal Opportunity/Affirmative Action Employer.



Yale University

Post-Doctoral Research Fellow Opportunities

The Medical Research Division of American Cyanamid Company in Pearl River, New York, has post-doctoral opportunities in the following areas:

Inflammation and Immunology Research

Candidates selected for these positions will:

- Investigate cloning of T cells in rats with collagen and adjuvant-induced arthritis and experimental allergic encephalomyelitis and/or investigate pathogenic mechanisms related to streptococcal cell wall arthritis.
- Explore the effects of interleukin-1 upon connective tissue.
- Examine the role of leukotrienes and other novel metabolites of arachidonate in the inflammatory response.
- Study immunological tolerance or lymphocyte differentiation/activation.

Biotechnology Research in Infectious and Neoplastic Diseases

The successful applicant for this fellowship will have attained a Ph.D. in Biochemistry, Genetics or Molecular Biology and will have training in RNA isolation, Northern hybridizations, S1 nuclease mapping, and DNA sequencing. This position, involving detailed characterization of antibiotic production genes from *STREPTOMYCES*, is immediately available.

The Medical Research Division is conveniently located at Lederle Laboratories, 30 miles Northwest of New York City. Full insurance benefits are offered, as well as competitive salaries and a challenging research environment.

Please submit resume, in confidence, to Mrs. N. Levine, Professional Employment Coordinator, American Cyanamid Company, Medical Research Division, Lederle Laboratories, Pearl River, NY 10965.

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American Cyanamid Company
Medical Research Division
Lederle Laboratories

POSITIONS OPEN

FACULTY POSITIONS IN MICROBIOLOGY

The Department of Microbiology and Immunology of Louisiana State University (LSU) Medical Center invites applications for tenure-track faculty positions to be filled in 1984 and 1985 at the level of assistant or associate professor. Applicants should have solid training and research experience in

MOLECULAR VIROLOGY, MOLECULAR BIOLOGY, MOLECULAR GENETICS OR IMMUNOLOGY

and will be expected to develop and maintain a research program of high quality. Teaching responsibilities are limited and include participation in courses for graduate and medical students. Applicants should send curriculum vitae, names of three references, and a summary of research interests and on-going projects to:

Dr. Dennis J. O'Callaghan
Professor and Chairman
Department of Microbiology and Immunology
LSU Medical Center
1501 Kings Highway
Shreveport, La. 71130

An Equal Opportunity Employer

FACULTY POSITIONS

The Department of Biochemistry and Molecular Biology at the University of Texas System Cancer Center, M. D. Anderson Hospital and Tumor Institute, invites applications for tenure-track positions at the assistant, associate, and full professor levels. Applicants should have a Ph.D. or M.D. and a proven record of accomplishments as a postdoctoral student or faculty member. Strong preference will be given to molecular biologists with interests in regulation of gene expression in a developmental system. Applicants should send a letter outlining their research interests, their résumé and three letters of reference from individuals familiar with their work to: **Dr. William J. Lennarz, Department of Biochemistry and Molecular Biology (Box 117), The University of Texas System Cancer Center, M. D. Anderson Hospital and Tumor Institute, 6723 Bertner Avenue, Houston, Tex. 77030.** Deadline for all application materials is 15 October 1984.

An Affirmative Action/Equal Opportunity Employer

FACULTY POSITIONS IN NEUROBIOLOGY

Positions are open for tenure-track or tenured faculty appointments at the University of Southern California. Candidates must have a doctoral degree and at least 2 years of postdoctoral training. Particular attention will be given to those working in neuroendocrinology and neuropharmacology, but applicants in any area of neurobiology are encouraged to apply. Cellular and molecular approaches are preferred. Candidates will be expected to establish an independent research program of their choice. Please send curriculum vitae, bibliography, names and phone numbers of four references, and a brief description of career goals and research objectives by 30 October 1984 to:

Chairman, Search Committee
Section of Neurobiology
Department of Biological Sciences
University of Southern California
Los Angeles, California 90089-0371

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

FACULTY POSITION IN PHYSICAL CHEMISTRY

The University of Pittsburgh invites applications from outstanding physical chemists for an expected tenure-track faculty position at the assistant professor level. More senior-level applicants will be considered. Candidates with research interests in theory and/or experiment are encouraged to apply. Send résumé, research plans, and three references to: **Professor D. M. Hercules, Chairman, Department of Chemistry, University of Pittsburgh, Pittsburgh, Pa. 15260** by 15 October 1984. *The University of Pittsburgh is an Equal Opportunity/Affirmative Action Employer.*

FISHERIES MANAGEMENT SCIENTIST. Tenure-track faculty position; rank and salary commensurate with experience. Teach fisheries science; conduct research in freshwater fisheries management. Twelve-month appointment. Selection will not be made prior to 1 October 1984. Résumé, letter of application, and three reference letters should be sent to: **Wallace G. Klusmann, Head, Department of Wildlife and Fisheries Sciences, Texas A&M University, College Station, Tex. 77843-2258.** *An Equal Opportunity Employer.*

POSITIONS OPEN

FACULTY POSITIONS IN PHYSICS: Portland State University seeks applicants for two non-tenure track, fixed-term positions for a duration of 2 years beginning 1 January 1985. (i) Assistant or associate professor, minimum qualifications: Ph.D. in physics or related field and proven ability to teach at the graduate level and to perform and direct research in support of our master's and Ph.D. programs. Rank and salary commensurate with experience. (ii) Assistant professor, minimum qualifications: Ph.D. in physics and demonstrated capability and interest in quality teaching at primarily the undergraduate level. Salary range: \$17,000 to \$19,000, commensurate with experience. Additional details upon request. Send résumé including relevant reprints, names of three references, and brief statement of research and/or teaching interest to: **R. W. Sommerfeldt, Head, Department of Physics, Portland State University, P.O. Box 751, Portland, Oregon 97207**, by 25 October 1984. *Portland State University is an Equal Opportunity/Affirmative Action Employer. Qualified minorities, women, and members of other protected groups are encouraged to apply.*

FACULTY POSITIONS. As a part of a major development program, The University of Pennsylvania, Department of Chemistry, expects to add one or two faculty members at the assistant professor (tenure probationary) level beginning September 1985. Candidates at a more senior level may also be considered. The general areas of research interest are **organic and inorganic chemistry.** Candidates in the areas of bio-organic, physical organic, and organometallic chemistry would most complement the current faculty. Applicants should send curriculum vitae, list of publications, a brief statement of research interests, and in addition have a minimum of three letters of recommendation sent to: **J. Kent Blasie, Chairman, Department of Chemistry/D5, University of Pennsylvania, Philadelphia, Pa. 19104**, by 15 October 1984. *The University of Pennsylvania is an Affirmative Action/Equal Opportunity Employer.*

The Department of Anatomy of the F. Edward Hebert School of Medicine, Uniformed Services University, invites applications for **TWO FACULTY POSITIONS.** Applicants must have either an M.D. or Ph.D. degree in the biological sciences. Teaching assignments involve gross anatomy and/or neuroanatomy and it is expected that applicants will have research experience and/or postdoctoral training. Preference will be given to candidates with research interests in cell biology, endocrinology, or various aspects of neuroscience. Applications should be received by 1 October 1984. Send curriculum vitae, bibliography, statement of teaching and research experience, and three letters of recommendation to: **Malcolm B. Carpenter, M.D., c/o Civilian Personnel, Uniformed Services University of the Health Sciences, 4301 Jones Bridge Road, Bethesda, Maryland 20814-4799.** *Equal Opportunity/Affirmative Action Employer.*

UNIVERSITY OF HONG KONG LECTURESHIP IN DENTAL MATERIALS SCIENCE. Applications are invited for this post in the Dental Materials Science Unit, Faculty of Dentistry. Applicants would ideally but not necessarily be dentally qualified, with a higher degree and teaching/research experience in a related scientific discipline. Annual salary (superannuable) is on an 11-point scale: HK\$148,080 to HK\$247,560 (U.S.\$1 = HK\$7.80 on 27 July 1984). Starting salary will depend on qualifications and experience. At current rates, salaries tax will not exceed 17 percent of gross income. Housing benefits at a rental of 7½ percent of salary, children's education allowances, leave, and medical benefits are provided. Further particulars and application forms available from: **The Secretary General, Association of Commonwealth Universities (Appointments), 36 Gordon Square, London WC1H 0PF, England**, or from: **The Appointments Unit, Secretary's Office, University of Hong Kong.** Closing date: 30 November 1984.

NMR SPECTROSCOPIST

Hahnemann University's NMR facility has an immediate opening for an NMR spectroscopist. The facility includes a Bruker AM 360 MHz wide bore spectrometer with multinuclear capability. The position involves the daily operation and maintenance of the facility under the supervision of the NMR facility director. Proven expertise in NMR spectroscopy is required. Please send résumé and salary requirements to: **Senior Personnel Representative, HAHNEMANN UNIVERSITY, Broad and Vine, Philadelphia, Pa. 19102-1192.** *Affirmative Action Employer.*

POSITIONS OPEN

FACULTY POSITIONS

The Department of Biochemistry at The University of Texas Health Science Center at San Antonio invites applications for two tenure-track faculty positions (rank and salary open). Candidates with demonstrated research experience in applying molecular biological approaches to important biochemical problems will receive primary consideration. Interested applicants should send curriculum vitae, copies of selected recent publications, a brief statement of research interests, and names of three references to:

Faculty Search Committee
Department of Biochemistry
The University of Texas
Health Science Center
7703 Floyd Curl Drive
San Antonio, Texas 78284

Deadline for applications is 15 November 1984. *Affirmative Action/Equal Opportunity Employer*

DEPARTMENT HEAD OF PLANT SCIENCES. The College of Agriculture, University of Nevada Reno (UNR), is seeking applicants for this 12-month tenure-track position. The department has 19 faculty and conducts teaching, research, and extension programs in the areas of agronomy, horticulture, and integrated pest management. A Ph.D. in a plant science-related discipline and evidence of administrative and leadership abilities are required. Closing date for applications is 15 October 1984. The position is available 1 January 1985. Contact: **Dr. Elwood Miller, Chairman, College of Agriculture, UNR, Reno, Nevada 89557-0004; telephone: 702-784-6611.** *The University of Nevada Reno is an Equal Opportunity Employer.*

LABORATORY TECHNICIAN II, \$1161.33 per month, Department of Entomology. Knowledge of animal tissue culture, analytical, biochemical, and plant hormone physiology, and B.S. or M.S. is desirable. For a complete description of the duties, required qualifications, and application packet, contact: **Montana State University (MSU) Personnel Services, Room 9, Montana Hall, Bozeman, Montana 59717; telephone: 406-994-3583.** Application materials must be received by 28 September 1984 or postmarked no later than 26 September 1984. *MSU is an Affirmative Action/Equal Opportunity Employer.*

MOLECULAR BIOLOGIST, associate member, Ph.D. degree with research experience in molecular biology with specific relevance to cancer. Areas of research may include eukaryotic molecular and cytogenetics, recombinant DNA, oncogenes, DNA synthesis or repair, RNA processing, protein biosynthesis, gene expression, and so forth. Salary is negotiable and competitive. Selection will be based upon research experience (at least 3 years beyond postdoctoral training), proven ability to develop an independent research program as evidenced by grant support, and the willingness to interact with established programs in cell biology, carcinogenesis, and/or experimental therapeutics. Start-up support and ongoing financial assistance will be committed. Submit curriculum vitae and summary of future research plans to: **Dr. Gloria Heppner, Michigan Cancer Foundation, 110 East Warren, Detroit, Michigan 48201.** *Affirmative Action/Equal Opportunity Employer.*

The Division of Biological Sciences of the University of Kansas invites applications for the following two tenure-track positions to begin 1 January 1985 or 16 August 1985:

- 1) **MOLECULAR BIOLOGIST,** assistant or associate professor. Salary \$24,000 to \$35,000 per 9 months, depending on experience.
- 2) **PLANT MOLECULAR BIOLOGIST,** assistant professor. Salary \$24,000 to \$28,000 per 9 months, depending on experience.

We seek scientists who will develop active research programs in either molecular biology or plant gene structure and function and participate in teaching graduate and undergraduate courses. Candidates must have a Ph.D. in an appropriate field, postdoctoral experience, and must show evidence of the ability to carry out independent research and to communicate ideas effectively. Send a statement of current research pursuits and professional goals, curriculum vitae, reprints, and have three letters of recommendation sent independently by 15 October 1984 for Plant Molecular Biologist or 1 November 1984 for Molecular Biologist to: **Dr. Robert F. Weaver, Chairman, Department of Biochemistry, University of Kansas, Lawrence, Kans. 66045.** *An Equal Opportunity/Affirmative Action Employer.*

MANAGING DIRECTOR HARBOR BRANCH FOUNDATION

Applications are invited for the position of Managing Director of the Harbor Branch Foundation. Reporting to the President and CEO, the Managing Director is the Chief Operational Officer. He or she is responsible for day-to-day activities at the Ft. Pierce, Florida, facilities as well as for creating and maintaining a supportive environment for the Foundation's research in the marine sciences and for the development of tools and systems for underwater oceanographic research. An earned doctorate in marine science is preferred. Qualifications should include first-hand experience with marine operations, familiarity with ships and manned submersibles and extensive high-level administrative experience in a complex not-for-profit organization.

Interested candidates should submit resumes by September 30, 1984 to:

Carl W. Schafer
Chairman Search Committee
Princeton University
One Nassau Hall
Princeton, NJ 08544

Harbor Branch is an Equal Opportunity Employer.

Stanford University

Plasma Physics, EM Waves, Space Physics

We are seeking a senior person who has demonstrated scientific, managerial, and leadership qualifications in one or more of the following disciplines: Space Plasma Physics, electromagnetic waves, and solar-terrestrial physics. We expect the successful candidate to have established an outstanding reputation documentable through professional writings or other evidence of personal technical creativity, letters of reference from recognized research leaders in the disciplines mentioned above, and/or awards and other recognition from appropriate professional societies.

It is expected that this individual will develop a research program in one of the disciplines given above working in coordination with ongoing programs within the STAR Laboratory and, possibly, with other activities within the Stanford Center for Space Science and Astrophysics. It is expected that this individual will have a strong background in experimental techniques, either in the laboratory or in the field, including the environment of space; experimental activities in either laboratory or space plasma physics would be regarded as good qualifications. However, close association with theoretical developments in plasma physics and/or electromagnetic theory will clearly be desired. It is also expected that the individual will have a demonstrated capability for securing federal or other research grant support, or be deemed by the selection committee of being capable of securing such funds.

It is anticipated that the person chosen will devote the major part of his or her time to research activities. However, there is an opportunity for participation in academic responsibilities of the Electrical Engineering Department, including, when time permits, teaching graduate and undergraduate classes, serving on various committees of the department, School of Engineering, and the university. It is expected that the person chosen will participate actively in the training of graduate students.

The Chairman of the selection committee for this position is **Professor Robert A. Helliwell, Professor of Electrical Engineering, Space, Telecommunications, and Radioscience Laboratory, Stanford University, Stanford, California 94305**. Other members of the selection committee include Professor P. M. Banks, Professor R. N. Bracewell, Professor L. R. O. Storey, and Professor L. Tyler.

SCIENTISTS

BioTechnica International, Inc., an innovative biotechnology company located in Cambridge, Massachusetts, has openings for highly motivated scientists at the Ph.D. level in the areas of:

- **DNA Sequencing:** to establish a centralized DNA sequencing facility.
- **Molecular Biology:** to work on protein secretion in bacteria or to work on the cloning of *Streptomyces* genes.
- **Microbial Genetics:** to work on genetics in *Streptomyces*.
- **Protein Chemistry:** to work on the purification and amino acid sequencing of a variety of proteins.

BTI offers excellent compensation, a full benefits program, and opportunities for professional growth. Please send a letter of application, curriculum vitae, and names of three references by **October 1, 1984** to: **Director of Administrative Services**.

BioTechnica International, Inc.
85 Bolton Street
Cambridge, MA 02140



Chairperson Department of Cellular & Developmental Biology

The State University of New York at Stony Brook is initiating a Department of Cellular and Developmental Biology. The Chairperson will be responsible for the design and development of research and educational programs, both at graduate and undergraduate levels, in this broad area. A major activity will be the construction of a vigorous investigative program that will coordinate with similar strong efforts in the other life sciences on both the Core and adjacent Medical Campuses. The Chairperson will be expected to recruit a strong faculty to carry out the formulation. Candidates are expected to have Ph.D. degree or equivalent and demonstrable research accomplishment and academic recognition. Selection will be based on criteria emphasizing the latter two attributes.

Send applications to Frederick Miller, M.D., Chairman, Department of Pathology, SUNY Stony Brook, Stony Brook, NY 11794.

SUNY Stony Brook is an affirmative action/equal opportunity educator and employer. AK#175A.



State University of New York
Stony Brook

POSITIONS OPEN

FACULTY POSITIONS IN MICROBIOLOGY AND IMMUNOLOGY

The Department of Microbiology and Immunology, University of Health Sciences/The Chicago Medical School, invites applications for tenure-track faculty positions at the rank of ASSISTANT, ASSOCIATE, or FULL PROFESSOR. Applicants must have a Ph.D. and/or M.D. degree with solid training, research experiences, and interests in molecular biology, immunochemistry, molecular virology, medical virology, or immunogenetics. The successful candidate will be expected to develop and maintain a strong independent research program and to participate in teaching medical and graduate students. The salary will be commensurate with qualifications, and a negotiable starting date. Applicants should send curriculum vitae, a summary of research interests and ongoing projects, and the names of three references to:

Yoon Berm Kim, M.D., Ph.D.
Professor and Chairman
Department of Microbiology and Immunology
University of Health Sciences
The Chicago Medical School
3333 Green Bay Road
North Chicago, Ill. 60064

An Affirmative Action/Equal Opportunity Employer

LIPID BIOCHEMIST. Research position for Ph.D. with experience in lipid biochemistry for studies of the regulation of lipases/phospholipases. Postdoctoral experience desirable. Must be United States citizen. Salary commensurate with GS 11/12 level, \$25,489 to \$30,549. Send curriculum vitae and three letters of recommendation to: **Dr. Karl Y. Hostetler, Department of Medicine (V111G), VA Medical Center, 3350 La Jolla Village Drive, La Jolla, Calif. 92161.** *An Equal Opportunity Employer.*

LIPID BIOCHEMIST: Highly motivated Ph.D. with postdoctoral experience and strong background HPLC, GLC, TLC techniques and analytical chemistry for a nontenured research assistant professor position in a Department of Anesthesiology and Critical Care Medicine (CCM). The successful applicant is expected to develop an independent research program while assisting other clinical and nonclinical faculty with their projects. Major ongoing research projects include studies on: (i) The mechanisms of action of anesthetics, (ii) the pathogenesis and therapy of ischemic brain damage; (iii) regulation of cerebral circulation, and (iv) organ preservation for transplantation. *Affirmative Action/Equal Opportunity Employer.* Send curriculum vitae and three letters of recommendation to: **Edwin M. Nemoto, Ph.D., Anesthesia and CCM Research Laboratories, 1081 Scaife Hall, University of Pittsburgh School of Medicine, Pittsburgh, Pa. 15261.**

MICROBIOLOGISTS

The American University of the Caribbean, School of Medicine (AUC) located in Montserrat, West Indies, seeks a microbiologist to provide instruction to second-year medical students. Excellent salary and benefits. Send résumés to: **Selection Committee, Medical Education Information Office (S), 100 NW 37 Avenue, Miami, Fla. 33125.**

PALEOBIOLOGIST

The Department of Paleobiology, National Museum of Natural History, seeks candidates for PALEONTOLOGIST position, GS-11/12 (starting at \$25,489 to \$30,549 per annum), to perform curatorial functions and collections-oriented research on invertebrate, vertebrate, or plant fossils. Open to all qualified candidates with a Ph.D. or equivalent in appropriate science. Candidates will be evaluated according to the quality, breadth, progressiveness, and recency of research accomplishments (publications) and academic study; museum curatorial and field experience, if any; relation of candidate's research to present department collections and research strengths and needs; and potential for research interaction with other National Museum of Natural History staff. Submit, by 30 September 1984, SF-171 (Personnel Qualifications Statement), curriculum vitae, copies of publications, and statement of long-term research goals to: **Office of Personnel Administration, 900 Jefferson Drive, SW, Room 1410, Washington, D.C. 20560; attention: MPA-84-315-F.** *An Equal Opportunity Employer.*

POSITIONS OPEN

SHIPPENSBURG UNIVERSITY SHIPPENSBURG, PENNSYLVANIA

MICROBIOLOGIST: Tenure-track appointment in the Department of Biology available for Semester I 1985-1986. Primary responsibilities include teaching undergraduate and graduate courses in microbiology, immunology, and virology to medical technology and biology students. Successful candidate will be expected to initiate/continue research program in specialty. Ph.D. and demonstrated teaching competency required. Application deadline: 31 December 1984. Rank and salary are negotiable. Submit curriculum vitae, supporting documents, statement of research plans, and names of three references to: **Dr. William J. Morrison, Chairman of Search Committee, Department of Biology, Shippensburg University, Shippensburg, Pa. 17257.** *Shippensburg University is an Equal Opportunity/Affirmative Action Employer.*

DEPARTMENT OF PATHOLOGY UNIVERSITY OF ARIZONA COLLEGE OF MEDICINE

Applications are solicited for a tenure-track faculty position in the following area: **assistant professor, anatomical and clinical pathology**, with a major commitment to immunopathology and/or with interest in immunogenetics, flow cytometry and hematopathology. Minimum requirements are M.D. degree; American Board of Pathology certification in anatomic and clinical pathology; special qualifications in immunopathology or hematopathology desirable; and teaching experience. The position will require medical student and house officer contact. Applicants should send curriculum vitae to: **Jack M. Layton, M.D., Head, Department of Pathology, University of Arizona College of Medicine, Tucson, Arizona 85724.** *An Equal Opportunity/Affirmative Action/Title IX/Section 504 Employer.*

DEPARTMENT OF PATHOLOGY UNIVERSITY OF ARIZONA COLLEGE OF MEDICINE

Applications are solicited for a tenure-track faculty position in the Department of Pathology at the Veterans Administration Medical Center in the following area: **assistant professor, anatomical and clinical pathology**, with a major commitment to anatomical pathology and interest in immunopathology. Minimum requirements are M.D. degree; American Board of Pathology certification in clinical and anatomical pathology with some research and teaching experience. The position will require medical student and house officer contact. Applicants should send curriculum vitae to: **Jack M. Layton, M.D., Head, Department of Pathology, University of Arizona College of Medicine, Tucson, Arizona 85724.** *An Equal Opportunity/Affirmative Action/Title IX/Section 504 Employer.*

PHYSICIAN-GENETICIST to develop a molecular genetic laboratory at Children's Hospital Medical Center in Oakland, California. The successful candidate will join the existing program of the Medical Genetics Unit under the direction of Sanford Sherman, M.D. In addition to pursuing his/her own research interests, there will be opportunity for clinical activity. This position is fully funded. The proximity to the University of California, Berkeley, the already established ties with the University of California, San Francisco, as well as private genetic facilities in the Bay Area, make this a very attractive position. Applicants should have a strong laboratory background with publications of appropriate nature. Send curriculum vitae and references to: **Ruth Robinson, Human Resources, Children's Hospital Medical Center, 51st and Grove Streets, Oakland, Calif. 94609.** *An Equal Opportunity Employer, M/F.*

PLANT MOLECULAR BIOLOGIST. Tenure-track, 12-month assistant professor. Major responsibility, as an affiliate of a new Center for Biomolecular Research in the Agricultural and Environmental Sciences, is to develop a strong research program and attract external funds in the molecular biology of resistance to plant pathogens, plant or animal pests, or to nutritional and environmental stress; or the means for transferring such resistance to crop plants. Participation in undergraduate and graduate teaching. Postdoctoral experience required. Send by 15 October: curriculum vitae, a statement of research interest, and three letters of reference to: **B. Zilinskas, Department of Biochemistry and Microbiology, Cook College, Rutgers University, New Brunswick, N.J. 08903.** *An Affirmative Action/Equal Opportunity Employer.*

POSITIONS OPEN

PEPTIDE CHEMIST

Will perform measurement of hypothalamic peptide, pituitary thyroid, and adrenal hormones in human and animal plasma and cerebrospinal fluid. Develop radioimmunoassay methods and develop HPLC methods using clinical and animal samples from research protocols for investigation of the pathophysiology of depressive disorders. Manage research laboratory including supervision and training of technicians and postdoctoral fellows. Demonstrated experience required in developing and validating RIA and HPLC measurements in neurohormones. Salary range: \$2027 to \$2444 per month. Apply by 21 September 1984 to: **University of California, San Diego, Staff Personnel Office Q-016, 501 Warren Campus, La Jolla, California 92093.** (Job Number 17507-S.) *An Equal Opportunity/Affirmative Action Employer.*

PHARMACOLOGIST/TOXICOLOGIST. Applications are invited for a group leader position in the Health Effects Research Laboratory, United States Environmental Protection Agency, in Cincinnati, Ohio. This is a permanent full-time federal civil service position with a salary range of \$30,549 to \$42,382 depending upon experience.

The successful candidate will be expected to (i) develop a research program in the area of interactive toxicology, (ii) perform the administrative duties of a group leader, and (iii) closely collaborate with other scientists of the Toxicology and Microbiology Division.

The research area of most interest is the development of a predictive basis for assessing risks of complex mixtures from knowledge of the mechanisms of action of individual components. Of most current interest are interactions in the hepatotoxicity of low molecular weight chlorinated hydrocarbons, however, it would be up to the incumbent to provide the basis for expanding these interests into other target organs and chemical classes.

The candidate should (i) possess a Ph.D. in pharmacology, toxicology, biochemistry, or a closely related field, (ii) have postdoctoral research experience, and (iii) have demonstrated research ability as demonstrated by publications in peer-reviewed journals.

Further information including detailed qualification requirements may be obtained from: **Nancy A. Foster, Personnel Management Division, United States Environmental Protection Agency, 26 West St. Clair Street, Cincinnati, Ohio 45268; telephone: 513-684-7804.** Applications (SF-171, Personal Qualifications Statement), accompanied by current curriculum vitae and bibliography, must be submitted to Nancy A. Foster prior to 1 October 1984. *An Equal Opportunity Employer.*

PHYSICAL SCIENTIST

The Great Lakes Environmental Research Laboratory of National Oceanic and Atmospheric Administration in Ann Arbor, Michigan, solicits applications for a physical scientist position, GM-14 or -13 (entrance salaries \$42,928 or \$36,327), directly responsible to the laboratory director, to provide staff support on programs, plans, and advisory service and to undertake research on environmental systems and applications. Applicant should have demonstrated ability, research experience, and understanding in one or more of the following Great Lakes or coastal oceans related sciences: water resources, oceanography, limnology, water chemistry, environmental sciences, and systems engineering, and should have demonstrated skills to communicate scientific information to the public. **Telephone: Eugene J. Aubert, 313-668-2245** for additional technical information.

Submit Form 171 and detailed résumé including bibliography of relevant publications, research experience, references, and education to: **Central Area Support Center—Personnel, 1747 Federal Building, 601 East 12th Street, Kansas City, Mo. 64106.** Applications must be postmarked no later than 28 September 1984 to receive consideration. *An Equal Opportunity Employer.*

POSTDOCTORAL FELLOW IN BIOTECHNOLOGY. Opportunity to combine your expertise in immunology and/or cell biology with mine in polymer and separation science for research and applications in biotechnology processes and diagnostics. *Equal Opportunity for U.S. citizens and landed immigrants.* Stipend up to \$20,000, depending on experience. Send résumé to: **Professor Allan S. Hoffman, Bioengineering FL-20, University of Washington, Seattle, Wash. 98195.**

**NATIONAL INSTITUTE OF CHILD HEALTH
AND HUMAN DEVELOPMENT
CENTER FOR POPULATION RESEARCH
DIRECTOR
CENTER FOR POPULATION RESEARCH**

The Director of this Center provides leadership and oversight for a population research grant and contract program involving basic research in the reproductive sciences, contraceptive development, contraceptive evaluation and behavioral science studies relevant to population issues; and coordinates an international program to stimulate and encourage improved and expanded activities in population research and training. Candidates must have an M.D. or equivalent degree with certification by the American Board of Obstetrics and Gynecology or its equivalent, experience in research and research administration, and interest in population sciences.

Salary Range—\$59,223 to \$66,400 per annum (May be eligible for up to \$10,000 additional physician's comparability allowance)

Position information and qualifications requirements may be obtained by contacting:

Ms. Linda Frew
National Institute of Child Health
and Human Development
National Institutes of Health
9000 Rockville Pike
Building 31, Room 2A25
Bethesda, Maryland 20205

Applications (SF-171, CV and Bibliography) must be submitted to the above address and postmarked not later than **September 30, 1984**.

ALL QUALIFIED CANDIDATES WILL RECEIVE CONSIDERATION WITHOUT REGARD TO RACE, RELIGION, COLOR, SEX, AGE, NATIONAL ORIGIN, LAWFUL POLITICAL AFFILIATION, MARITAL STATUS, UNION MEMBERSHIP, OR ANY NONDISQUALIFYING PHYSICAL OR MENTAL HANDICAP.

NIH IS AN EQUAL EMPLOYMENT OPPORTUNITY EMPLOYER.

**DIRECTOR,
INTRAMURAL RESEARCH PROGRAM**
National Institutes of Health
Public Health Service
Department of Health and Human Services

The National Institutes of Health invites nominations and applications for the position of Director, Intramural Research Program, NATIONAL INSTITUTE OF DENTAL RESEARCH (NIDR). This is a Civil Service position in the Senior Executive Service with a salary range of \$59,223 to \$66,400 per annum. Should the person selected hold a M.D., D.D.S., or D.M.D. degree, he/she may be eligible for Physician's Comparability Pay up to \$10,000 per year. A one-year probationary period must be served if the individual selected is not currently in the Senior Executive Service.

The Director, Intramural Research Program, directs a program of laboratory and clinical research through eight laboratories and branches, approximately 250 personnel and an annual budget of approximately 16.2 million dollars. He/she serves as principal advisor to the Director, NIDR, on scientific affairs involving Institute direct research programs; develops and recommends policies for the execution of research programs; determines effectiveness of current programs; and recommends and develops new and revised programs to meet national oral and dental health needs.

Further information about the position and qualification requirements may be obtained by contacting Mrs. Bonnie R. Kalberer at 301-496-6971. Applications (SF-171, Personnel Qualifications Statement) accompanied by a current curriculum vitae and bibliography should be submitted to Mrs. Kalberer at: NIDR Personnel Office, Building 31, Room 2C-23, National Institutes of Health, 9000 Rockville Pike, Bethesda, Maryland 20205.

Applications must be postmarked not later than October 15, 1984. (The SF-171 form is available at all Federal Personnel Offices and Job Information Centers.) Applications from women and minority group candidates are solicited.

An Equal Opportunity Employer

Senior Scientists Research & Development

Geometric Data has immediate opportunities for two talented Senior Scientists to join the Research & Development team which made HEMATRAK the world's leading automated Blood Cell Differential Counter.

IMAGE PROCESSING SCIENTIST - GROUP LEADER

We are seeking an Image Processing Scientist experienced in automated microscopy and cell analysis who will be responsible for establishing a general purpose Image Processing Laboratory. As the techniques and specifications for the next generation of cell analyzers will be developed in this laboratory, it is essential that you have the ability to transfer this technology from a laboratory to production. Computing resources available are VAX 11/780, HP 1000, VICOM Image Processor, and high resolution color graphics devices.

To qualify you should possess a PhD in Engineering, Computer Science or Life Sciences, and a minimum of 3 years experience in an industrial or academic image processing facility. Thorough knowledge and experience in electro-optics and cell image analysis is desirable.

Geometric Data is located in a quiet suburban area near Valley Forge, Pennsylvania, approximately 20 miles northwest of Philadelphia. We offer an attractive compensation and company paid benefits package and an environment which fosters personal and professional growth. Interested applicants are urged to forward resume stating salary requirements in confidence to: Manager Personnel Relations, GEOMETRIC DATA, 999 West Valley Road, Wayne, PA 19087. Equal Opportunity Employer, M/F/H/V.

PATTERN RECOGNITION SCIENTIST

The desire to apply your expertise in statistical pattern recognition to cell and tissue analysis is the essential requirement for this position. As a member of a team developing clinical tests for present and future cell-based image analysis and classification systems, your responsibilities will include developing classification algorithms, developing models to simulate new applications and new instruments, and providing statistical analysis resources. The SAS statistical software package, as well as an automated tree-structured classification module are resource tools available on a VAX 11/780.

To qualify, you should possess a PhD in Mathematics, Computer Science or a related discipline, and at least 3 years experience in statistical pattern recognition. Experience with cell or tissue classification desirable.



GEOMETRIC DATA
a SmithKline Beckman company

POSITIONS OPEN

PHYSICS DIRECTOR

The Department of Radiation Therapy at The University of Texas Medical Branch, Galveston, Texas, has an immediate opening for director, Physics Division. Academic rank will be commensurate with experience.

The successful candidate will be responsible for the activities of the Physics Division, three linear accelerators, a Siemens TEM simulator, a Phillips orthovoltage unit, and an intraoperative radiation therapy unit. The successful candidate will also be required to supervise interfacing a VAX-11/780 computer with treatment machines for dynamic radiation therapy. Candidates must have at least 3 years of experience in medical physics in radiation therapy.

All inquiries should be sent to:

James A. Belli, M.D.
Professor and Chairman
The University of Texas Medical Branch
Department of Radiation Therapy
Room 197 McCullough, Route G11
Galveston, Tex. 77550

The University of Texas Medical Branch is an Equal Opportunity Employer.

PHYSIOLOGY. The Department of Physiology of Creighton University is in immediate need of an assistant professor capable of teaching either respiratory or nervous system physiology to medical students. Contact: **D. F. Magee, M.D., Ph.D., Chairman, Department of Physiology, Creighton University, School of Medicine, 2500 California Street, Omaha, Nebr. 68178.** An Equal Opportunity Employer.

POSTDOCTORAL POSITION in cloning of genes of fish viruses for vaccines. Area of study includes gene cloning, DNA sequencing, protein purification and characterization. Send curriculum vitae and names of references to: **J. C. Leong, Department of Microbiology, Oregon State University, Corvallis, Oregon 97331-3804.** Oregon State University is an Affirmative Action/Equal Opportunity Employer and complies with Section 504 of the Rehabilitation Act of 1973. Closing date: 15 October 1984.

POSITIONS OPEN

The Department of Biology at Rensselaer Polytechnic Institute (RPI) is seeking a **PLANT MOLECULAR BIOLOGIST**. Postdoctoral experience is desirable and preference will be given to persons working with nuclear genes or plant-bacterial interactions. Development and maintenance of a strong research program is expected. The applicant will teach Ph.D. students and participate in the education of undergraduates in his/her area of expertise. The Biology Department currently has established plant research programs in chloroplast biogenesis, plant development, and photosynthesis. Affiliation with RPI's Biochemistry Program and the Capital District Plant Sciences Group is possible. It is anticipated that this tenure-track appointment will be made beginning September 1985 at the assistant or associate professor level, depending upon experience. Send curriculum vitae, statement of research interests, and goals and a list of three possible references to: **Professor Carl N. McDaniel, Department of Biology, Rensselaer Polytechnic Institute, Troy, N.Y. 12180.** RPI is an Equal Opportunity/Affirmative Action Employer. Closing date: 7 November 1984.

POSTDOCTORAL POSITION (1 to 2 years): Opportunity to collaborate with a productive, multifaceted research team with interests in cardiovascular disease risk factors. Participate in ongoing NHLBI research projects which include twin/family studies of blood pressure and biobehavioral studies of cardiovascular reactivity. If interested, send curriculum vitae to: **Judy Z. Miller, Ph.D., Assistant Professor of Medicine, Indiana University Medical Center, Hypertension Research Center, 541 Clinical Drive, Indianapolis, Ind. 46223.** Indiana University is an Equal Opportunity Employer.

POSTDOCTORAL POSITION. Postdoctoral research position available immediately to study commitment to terminal cell differentiation, regulation of histone gene expression, and nucleosome metabolism. Send curriculum vitae, summary of research experience, and names of three references to: **Dr. Alfred Zweidler, c/o Personnel Department, The Institute for Cancer Research, Fox Chase Cancer Center, 7701 Burholme Avenue, Philadelphia, Pa. 19111.** Equal Opportunity Employer.

POSITIONS OPEN

Tenure-track position in POPULATION GENETICS, University of California, Santa Barbara.

Applicants should have a thorough knowledge of both the mathematical and molecular bases of population genetics. We are especially interested in individuals who are using modern techniques to gather empirical data in the framework of testing current theories.

Excellence in research and teaching is required, and preference will be given to applicants with postdoctoral experience. Assistant professor level preferred although applications from more senior individuals will be considered. Appointment effective 1 July 1985. Salary and rank dependent on qualifications.

Submit curriculum vitae, a statement of research interests, accomplishments and goals, and have at least three letters of reference sent to: **The Chairman, Department of Biological Sciences, University of California, Santa Barbara, California 93106.** Applications must be postmarked no later than 4 January 1985. The University of California is an Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL POSITIONS available immediately to study control of collagen gene expression during development, with particular emphasis on RNA processing and translational control. Experience in molecular biology desirable. Send curriculum vitae and names, addresses, and telephone numbers of three references to: **Dr. Sherrill L. Adams, University of Pennsylvania, Medical School, Human Genetic Department, Richards Building, Philadelphia, Pa. 19104.** Equal Opportunity/Affirmative Action Employer.

A **POSTDOCTORAL POSITION** available immediately to work on immunochemical characterization of human tumor-associated antigens. Expertise in immunological and biochemical technique required. Submit curriculum vitae and three references to: **Donald L. Morton, M.D., Chief, Division of Oncology, Department of Surgery, University of California, Los Angeles, School of Medicine, Room 9-267 Factor, Los Angeles, Calif. 90024.** An Equal Opportunity/Affirmative Action Employer.

AMERICAN MUSEUM OF NATURAL HISTORY

The Department of Mineral Sciences is seeking to fill a tenure-track position for **ASSISTANT CURATOR** beginning July 1985. This is mainly a research position, but some time is needed for collections management and departmental activities. High-quality sample-oriented research and publication is the prime responsibility. The field of specialization is mineralogy, broadly defined, and may include and combine aspects of petrologic mineralogy, ore mineralogy, mineral geochemistry, crystal and thermochemistry, mineral physics, x-ray crystallography, ultrastructure analysis, crystal growth, spectroscopy, or gemology. Major research facilities include a fully automated ARL-SEMO electron microprobe, x-ray laboratory, minicomputer, and vast mineral and other collections. The opportunity exists for research and/or teaching collaboration with nearby institutions such as Columbia (Lamont-Doherty Geological Observatory).

Requirements are a Ph.D. in hand by the time of appointment and an ability to carry out a research program. It is expected that some research support will be sought outside the museum. Applications should include: (i) curriculum vitae, (ii) names of three persons familiar with your work, and (iii) a statement of research interests and specific projects to be carried out within the next 5 years.

These must be submitted by 15 November 1984 to:

Martin Prinz
Chairman, Search Committee
Department of Mineral Sciences
American Museum of Natural History
New York, N.Y. 10024
An Equal Opportunity/Affirmative Action Employer, M/F/H.

Technion-Israel Institute of Technology

Department of Biology

Haifa, Israel

The Department of Biology is accepting applications for tenure-track positions. Biologists with a background in plant or animal cell biology or molecular biology are especially encouraged to apply. Responsibilities will include development of an independent program of research and participation in the teaching program. The applications should include curriculum vitae, list of publications and summary of research plans as well as three names of referees and be sent to

Dr. B. D. Eytan
Department of Biology
Technion-Institute of Technology
Haifa, 32000, Israel



McGill University

Vice-Principal (Macdonald College) and Dean of the Faculty of Agriculture

Nominations and applications are invited for the position of Vice-Principal (Macdonald College) and Dean of the Faculty of Agriculture of McGill University. The appointment, effective 1 June 1985, is normally for a five-year term and may be renewed.

The Vice-Principal (Macdonald College) has overall responsibility for the Ste Anne de Bellevue Campus, located about 40 kilometres from the downtown campus. There are approximately 850 undergraduate and diploma students and 260 graduate students, as well as 75 faculty members and 245 non-academic staff members at Macdonald College.

The Dean of Agriculture is responsible for the supervision and administration of the academic programs, budgets, and all activities of the Faculty. Candidates should have appropriate scholarly and administrative experience; facility in both English and French is desirable.

In accordance with Canadian immigration requirements, this advertisement is directed to Canadian citizens and permanent residents.

Nominations and applications will be most useful if accompanied by a detailed curriculum vitae and the names of three referees, and should be submitted by October 15, 1984, to:

David L. Johnston
Principal and Vice-Chancellor
McGill University
845 Sherbrooke Street West
Montreal, Quebec
H3A 2T7

DEAN College of Marine Studies UNIVERSITY OF DELAWARE

Applications and nominations are invited for the position of Dean of the College of Marine Studies of the University of Delaware. The preferred starting date is February 1, 1985, however, this is negotiable.

The College of Marine Studies has programs in four interdisciplinary areas: Marine Policy, Marine Biology and Biochemistry, Applied Ocean Science and Oceanography. The College offers the degrees of Master of Science, Master of Arts, Master of Marine Policy and Doctor of Philosophy.

Minimum qualifications for the position include: an earned doctorate in any of the areas represented in the College and broad experience in Marine Studies; significant administrative experience, such as, but not limited to, department chairperson or dean; a record of scholarly publications in Marine research, teaching and public service; and demonstration of outstanding leadership capabilities with a broad vision for the continued improvement of the College's research, educational and service activities.

Nominations or a letter of interest and resume should be sent by October 30, 1984, to: **Dr. U. Carl Toensmeyer, Chairperson, Search Committee, Department of Agricultural and Food Economics, UNIVERSITY OF DELAWARE, Newark, DE 19717-1303.**

The University of Delaware is an Equal Opportunity Employer which encourages applications from qualified minority groups and women.

Senior Scientist

Neurophysiology of Vision

Alcon Laboratories is a multi-national pharmaceutical company headquartered in Fort Worth, Texas, and is a recognized industry leader in ophthalmic research. Currently, we are expanding our capability to generate new innovative drug products for the eye. As a part of this effort, we have an immediate need for a Senior Scientist to develop models for evaluating degeneration of the visual system due to glaucoma, retinopathies and other diseases and the assessment of new drug therapies.

Minimum requirements include:

- ☐ Ph.D. in Neurophysiology or related area
- ☐ 0-3 years post doctoral experience in Neurophysiology or in Psychophysical testing of visual function
- ☐ Excellent oral/written communication skills

Alcon is a high technology corporation planning for the future and offers a supportive "state-of-the-art" research environment for the science professional. If you are interested in significant responsibility, challenge and opportunity, give us serious consideration.

Alcon offers a highly competitive starting salary, plus comprehensive benefits including profit sharing trust, group medical and dental insurance. In addition, our desirable Fort Worth location offers recreational, cultural and economic advantages indigenous to the Sunbelt alone. To indicate your interest in exploring this key position on a confidential basis, please send your detailed C.V. to:

Sherry H. Rightmer - Senior Employment Administrator



Alcon Laboratories, Inc.
P.O. Box 1959
Fort Worth, Texas 76101

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Principals Only, Please!*



is seeking for its Centre for Toxicology and Biosciences a

PATHOLOGIST

The major responsibilities of the successful candidate will include the initiation, monitoring and evaluation of toxicological studies.

The candidate will work within a multidisciplinary team of scientists and will be expected to participate in the development of new research lines. Personal research interests will be encouraged.

Particular assets for this position include certification by the American Board of Veterinary Pathology, experience in contract or industrial research, and knowledge of the French language.

Please address application, including curriculum vitae, photograph and salary requirements to the **Personnel Manager, BATTELLE, 7, route de Drize, CH-1227 Carouge/Geneva—Switzerland.**

POSITIONS OPEN

POSITRON EMISSION TOMOGRAPHY (PET): A postdoctoral or junior faculty position in radiochemistry is available beginning 1 October 1984. The successful applicant will synthesize and label novel organic radiopharmaceuticals with short half-life positron emitters (for example, ^{11}C , ^{18}F , ^{13}N) for PET studies of regional cerebral metabolism and physiology. Though helpful, a background in radiochemistry is not a prerequisite for this position; however, experience in organic synthesis and preparation techniques (HPLC, GC) is required. Salary commensurate with talent and experience. Send curriculum vitae, bibliography, and references to: **James Z. Ginos, Ph.D., Department of Neurology, Memorial Sloan-Kettering Cancer Center, 1275 York Avenue, New York, N.Y. 10021.**

POSTDOCTORAL FELLOW POSITION. The Department of Physiology at the University of Massachusetts Medical School invites applications from candidates having a Ph.D. in cell biology, endocrinology, or biochemistry for a position as a postdoctoral fellow. This position involves ongoing research into mechanisms of the cellular actions of peptide hormones. Please send curriculum vitae and names of three references to: **Dr. H. Maurice Goodman, Professor and Chairman, Department of Physiology, University of Massachusetts Medical Center, 55 Lake Avenue North, Worcester, Mass. 01605. The University of Massachusetts Medical Center is an Affirmative Action/Equal Opportunity Employer. Applications from women and minorities are especially encouraged.**

POSTDOCTORAL OPPORTUNITIES

The Biochemistry Department at the State University of New York (SUNY) at Buffalo has postdoctoral research opportunities in the laboratories listed below. Send curriculum vitae, reprints, and preprints and have three letters of recommendation sent to one of the following principal investigators at: **102 Cary Hall, SUNY, Buffalo, N.Y. 14214.**

Alexander C. Brownie, Regulation of adrenal steroidogenesis.

Richard C. Condit, Vaccinia virus molecular genetics.

Daniel J. Kosman, Copper oxidase mechanism; cellular copper metabolism.

Edward G. Niles, *T. pyriformis* rDNA transcription.

David Rekosh, Adenovirus DNA replication; molecular biology of schistosomes.

Joseph Spence, Regulation of glucokinase gene expression.

Mary L. Taub, Kidney cell culture; hormonally defined medium.

Phillip L. Yeagle, Membrane structure and function; cholesterol behavior.

An Affirmative Action/Equal Opportunity Employer

POSTDOCTORAL POSITION available immediately to study *Rhizobia* indigenous to South American soils and their survival on pre-inoculated seeds. Experience with *Rhizobia* and legumes preferred. Send curriculum vitae and a list of three references to: **Dr. A. R. J. Eaglesham, Boyce Thompson Institute, Tower Road, Ithaca, N.Y. 14853.**

POSTDOCTORAL POSITION. To study the mechanism of action for hepatotoxic peptides produced by freshwater cyanobacteria. Need experience in one or more of the following: histopathology/electron microscopy of the liver; cell cytotoxicity; liver enzymology; toxicology. Salary: \$18,000 to \$20,000 per year; 2-year appointment. Submit letter of interest, curriculum vitae, and names of references by 31 October 1984 to: **Dr. Wayne Carmichael, Wright State University, Department of Biological Sciences, Dayton, Ohio 45435. Affirmative Action/Equal Opportunity Employer.**

POSTDOCTORAL POSITIONS available: one immediately and one summer 1985. Projects: (i) the biochemistry, genetics, and regulation of bacterial active transport and (ii) bacterial chromosome structure. Research involves purification and biochemistry of transport proteins; liposome and membrane vesicles reconstitution; recombinant DNA, in vitro mutagenesis; in vitro transcription and translation; nucleoid analysis; DNA-binding proteins. Experience with protein purification, bacterial genetics, or recombinant DNA technology preferred but not essential. Send résumé and names of three references to: **Dr. Giovanna Ferro-Luzzi Ames, Department of Biochemistry, University of California, Berkeley, California 94720.**

POSITIONS OPEN

Several **POSTDOCTORAL POSITIONS** are available in **MULTIDISCIPLINARY-MULTIDEPARTMENTAL RESEARCH PROGRAM ON CYSTIC FIBROSIS.**

Positions are available immediately. The specific areas of interest are:

- 1) **HUMAN MOLECULAR GENETICS.** Gene cloning and mapping of inherited diseases with emphasis on cystic fibrosis. Recombinant DNA experience required (attention: **Dr. K. Klinger, Molecular Biology and Microbiology**).
- 2) **GLYCOPROTEIN** research, with focus on carbohydrate structures of tracheobronchial mucins. Other areas of interest include the protein chemistry and physical properties of mucins. Previous experience in carbohydrate chemistry preferred, but not essential (attention: **Dr. N. Jentoft, Biochemistry and Pediatrics**).
- 3) **CELL CULTURE** of isolated **AIRWAY EPITHELIAL** cells. Receptor functions as related to regulation of electrolyte transport in isolated and cultured cells. Experience in tissue culture preferred (attention: **Dr. C. Liedtke, Developmental Genetics and Pediatrics**).
- 4) **MEMBRANE TRANSPORT** of electrolytes, with emphasis on mechanisms and regulation of epithelial transport in the intestine and in zymogen granules. Experience in either membrane biochemical techniques or kinetics and modeling preferred (attention: **Dr. U. Hopfer, Developmental Genetics**).

Please send résumé, statement of research interest, and names of three references to: **Dr. D. Dearborn, Department of Pediatrics, Case Western Reserve University, School of Medicine, Cleveland, Ohio 44106. An Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL POSITIONS IN IMMUNOLOGY available for Ph.D., M.D., or holders of equivalent degrees. Areas under study include the role of eosinophils in hypersensitivity reactions and in host defense against helminths with particular emphasis on the biochemistry and molecular genetics of toxic cationic proteins, control of eosinophilopoiesis, T cell-mediated control of IgE antibody production, mechanisms of hypersensitivity reactions due to antigens, and characterization and measurement of allergens. Studies involve the use of monoclonal antibodies and recombinant DNA. Applicants must be U.S. citizens or hold an immigrant visa. Contact: **Dr. Gerald J. Gleich, Chairman, Department of Immunology, Mayo Foundation, Rochester, Minn. 55905. Telephone: 507-284-2511. An Equal Opportunity/Affirmative Action Institution.**

POSTDOCTORAL POSITION in aging and genetic diseases. Protein structural analysis and enzymology background essential. Experience in protein sequencing and microsequencing highly desirable. Advancement to research assistant professor possible. Send curriculum vitae and names of three references to: **Dr. R. W. Gracy, Department of Biochemistry, North Texas State University/Texas College of Osteopathic Medicine, Camp Bowie at Montgomery, Fort Worth, Texas 76107. An Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL POSITION available immediately to study DNA-related activities in mammalian cells. We are particularly interested in DNA repair and differentiation. Salary: \$18,900. Send curriculum vitae and names and addresses of three references to: **Dr. K. Ebisuzaki, Cancer Research Laboratory, University of Western Ontario, London, Ontario, Canada N6A 5B7.**

POSTDOCTORAL POSITIONS available immediately to study role of viruses (retroviruses) and interferon in AIDS as well as herpes simplex virus infections in experimental animal models. Require solid and appropriate background; work with Dr. Alvin E. Friedman-Kien, Microbiology Department (Position A).

RECENT Ph.D. in biochemistry or cell biology with strong background/interest in molecular biology/genetics (Position B).

ASSISTANT RESEARCH SCIENTIST with background in immunocytochemistry to participate in project in nerve membrane structure. Ph.D. preferred (Position C).

Send résumés and three references, indicating position of interest, to: **Joan Harmon, Personnel Department, New York University Medical Center, 560 First Avenue, New York, N.Y. 10016. An Affirmative Action/Equal Opportunity Employer, M/F.**

POSITIONS OPEN

POSTDOCTORAL POSITION available 1 January 1985 to study the molecular biology of gene coding for chloroplast enzymes involved in NH_3 assimilation. Research involves recombinant DNA technology and a wide variety of biochemical, immunochemical, and cell synchronization procedures to study gene/mRNA structure and expression. Ph.D. in biochemistry, plant or microbial molecular biology, or related area. Salary: \$18,000 per year. **Dr. Robert R. Schmidt, Department of Microbiology and Cell Science, 1059 McCarty Hall, University of Florida, Gainesville, Florida 32611. Affirmative Action/Equal Opportunity Employer.**

POSTDOCTORAL POSITION (1 to 2 years) in biochemical toxicology/pharmacology available immediately for research on inhibitory and inductive interactions of selected xenobiotics with cytochrome P-450. Candidates should have strong technical skills and be capable of independent, original research. Send letter of interest, curriculum vitae, and names of three references to: **Dr. C. F. Wilkinson, Institute for Comparative and Environmental Toxicology, N202, MYR, Cornell University, Ithaca, N.Y. 14853. An Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL/RESEARCH ASSOCIATES

Two positions available immediately for a doctorate experienced in molecular and cellular immunology. Projects concern immunologic aspects of collagen-induced autoimmunity. Please send résumé and names of three references to: **Dr. T. J. Yoo, Allergy/Immunology Division, Department of Medicine, University of Tennessee Center for Health Sciences, 956 Court Avenue, Memphis, Tennessee 38163; telephone: 901-528-6663.**

POSTDOCTORAL RESEARCH ASSOCIATE for studies of the catalytic mechanism and cellular function of carbonic anhydrase using spectroscopic and kinetic methods. Salary commensurate with experience. Send résumé and names of three references to: **Dr. D. N. Silverman, J-267 J. H. Miller Health Center, University of Florida, Gainesville, Fla. 32610.**

POSTDOCTORAL RESEARCH ASSOCIATE to investigate light-initiated alterations in cell membrane biochemistry. Mechanisms for acute modification of membrane lipid and protein will be studied in keratinocytes and mast cells using chromatographic, spectroscopic, and biochemical assays. Send curriculum vitae and names of three references to: **Irene E. Kochevar, Ph.D., Department of Dermatology, Harvard Medical School, Massachusetts General Hospital, Boston, Mass. 02114. An Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL RESEARCH ASSOCIATE IN CHEMISTRY. Research in synthesis of peptide nucleosides. Ph.D. in chemistry required with major in organic synthesis. Must have conducted research in peptide synthesis. Experience in chromatographic methods of separation and isolation of peptides (MPLC) required; 40 hours per week. Salary: \$17,000 per year. Reply and send résumé to: **Job Service Service, 1550 North 200 West, P.O. Box 1339, Provo, Utah 84603. Telephone: 801-373-7500. Job order number 24567.**

POSTDOCTORAL RESEARCH ASSOCIATE IN NEUROCHEMISTRY. Isolation of synaptic membrane glutamate receptor, reconstitution into liposomes, and topographic localization of the protein in membranes. Person appointed will conduct studies, prepare manuscripts and progress reports. Applicants must have background in biochemistry, preferably in membrane biochemistry and biophysics. Appointment will begin 1 November and will be for a maximum of 2 years under current grant. Salary: \$16,000 to \$19,000. Send curriculum vitae and references to: **Dr. Elias Michaelis, Department of Human Development, University of Kansas, Lawrence, Kans. 66045, by 1 October 1984. We are an Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL SCIENTIST

Two- to three-year postdoctoral position available immediately for carbohydrate chemist or biochemist to investigate compositional and activity relationships of human HMG-CoA reductase and correlation with human cholesterol metabolism. Must also have strong background in protein chemistry and immunology. Salary commensurate with experience. Apply with curriculum vitae and letters of recommendation to: **Peter W. Staepoole, Ph.D., M.D., Division of Endocrinology and Metabolism, University of Florida, College of Medicine, Box J-226, Gainesville, Fla. 32610.**

BIOCHEMISTRY RESEARCH SCIENTIST

The Life Sciences Division of the Laboratory is seeking a team member to perform neuronal and photoreceptor biochemistry research in support of a National Institute of Health program.

Responsibilities include:

- Providing solutions to complex photoreceptor and hormone receptor problems.
- Carrying out both routine and developmental projects in the area of high level biochemistry using standard and novel techniques.
- Must be actively involved in biophysics.
- Requires sophisticated state-of-the-art dark room biochemistry with photosensitive macromolecule advanced protein separation purification and characterization.

Qualifications include:

- Ph.D. in biochemistry or related field.
- Extensive background in photoreceptor science and biochemistry with demonstrated record of technical achievements.
- Proven record of publications.
- Minimum three years postdoctoral experience in biochemistry.

The Laboratory, one of the nation's foremost scientific research and development organizations, is operated by the University of California for the United States Department of Energy. Our location in the mountains of northern New Mexico offers a pleasing life style, a pollution-free environment and ample recreational activities.

To apply, please send your resume in confidence to:

Sandra Harding, DIV 84-DC
Personnel Administration Division
Los Alamos National Laboratory
Los Alamos, New Mexico 87545

Application deadline: September 21, 1984.

University
of California

LOS ALAMOS

U.S. Citizenship required

An Affirmative Action/Equal Opportunity Employer

J. ROBERT OPPENHEIMER RESEARCH FELLOWSHIPS LOS ALAMOS NATIONAL LABORATORY

Los Alamos National Laboratory announces the competition for the J. Robert Oppenheimer Postdoctoral Fellowships. The appointments are designed to foster continuing contacts between the Laboratory and recent recipients of doctoral degrees who show clear and definite promise of becoming outstanding leaders in scientific research areas.

Appointments are considered in many areas of experimental and theoretical physics, chemistry, mathematics, computer science, biology, materials science, environmental health, medical research, geoscience, and engineering.

Candidates may be persons completing their doctoral work or finishing a current post doctoral appointment, as well as junior faculty members seeking support for a period of concentrated research.

Appointments are for two years, with the possibility of renewal for a third year. We provide a stipend of \$41,820 per year (12 months). Fringe benefits are also provided including incoming travel and moving expenses.

Applications submitted for this fellowship are referred to appropriate technical groups for review. Particularly outstanding candidates are selected for sponsorship by Laboratory Staff Members. A detailed research proposal reflecting the candidates creativity, interest, and abilities is developed in consultation with the sponsor. Final selection is determined in a Laboratory-wide competition based on the proposed research project, in addition to previous academic and research excellence.

To insure timely consideration, a resume or employment application (usually available from Placement Office), graduate and undergraduate transcripts, and a statement of research interest and goals should be submitted by mid-December to:

University
of California

LOS ALAMOS

An Affirmative Action/Equal Opportunity Employer

Madeline Lucas, DIV 84-CL-JRO
Personnel Administration Division, MS P280
Los Alamos National Laboratory
Los Alamos, New Mexico 87545

AAAS Report IX Research & Development FY 1985

Intersociety Working Group

This timely document analyzes major budget and policy issues relating to R&D in the FY 1985 budget, presents data on federal agency and industry support for R&D, and discusses trends in R&D funding in light of current policy issues.

284 pp.

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 - ☐ \$158 air-surface delivery via Holland

- ☐ Payment enclosed ☐ Bill me later

Name Please print

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State

Zip

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POSITIONS OPEN

POSTDOCTORAL RESEARCH ASSOCIATE in the area of membrane physical biochemistry. We are systematically investigating the effects of perturbants such as alcohol and anesthetics on the physical properties of individual membrane components including lipids and proteins using a multiparameter approach. Methods include NMR, fluorescence, and UV-Vis spectrophotometry. The successful candidate should have a Ph.D. in chemistry or biochemistry. Send curriculum vitae and names of three references to: **Elizabeth S. Rowe, Ph.D., Veterans Administration Medical Center, Research Service (151), 4801 Linwood Boulevard, Kansas City, Mo. 64128; telephone: 816-861-4700, extension 541.** (Affiliated with the Biochemistry Department of the University of Kansas Medical Center.)

An Equal Opportunity/Affirmative Action Employer

John F. Kennedy School of Government Harvard University Center for Health Policy and Management

The Kennedy School of Government invites applications for the position of **PROFESSOR AND DIRECTOR** of its Center for Health Policy and Management. The person appointed will be responsible for teaching, research, and administration in the area of health policy and will be expected to provide leadership in the development of health policy programs.

Candidates must have done significant scholarly work in health policy or a related area and must possess a sophisticated commitment to the interdisciplinary nature of the University's health policy programs, while demonstrating organizational and administrative abilities as well.

Send application, including curriculum vitae and list of publications, to: **E. M. Stokey, JFK School of Government, 79 John F. Kennedy Street, Cambridge, Massachusetts 02138.**

Harvard University is an Affirmative Action/Equal Opportunity Employer.

PSYCHOBIOLOGIST

The Department of Psychology at the University of Michigan invites applications for a tenure-track assistant professor position in its psychobiology area. The exact research area is open, but the candidate should be pursuing an experimental program in brain-behavior relations in animals or humans, with an emphasis on integrating biological and behavioral approaches. Postdoctoral experience is desirable. Send curriculum vitae, some recent reprints, list of courses qualified to teach, and letters of recommendation to: **Professor Elliot S. Valenstein, Chair, Psychobiology Search, The University of Michigan, Neuroscience Laboratory Building, 1103 East Huron Street, Ann Arbor, Mich. 48104-1687.** *The University of Michigan is an Affirmative Action/Equal Opportunity Employer.*

RESEARCH ASSISTANT to do extensive work with surgically removed cataractous lenses; extraction and purification of fucose- and N-acetylglucosamine-containing glycosphingolipids from human cataracts; perform lipid enzymology work using radioisotopic techniques and prepare samples for analysis using gas-liquid chromatographic and mass nuclear Overhauser effect spectroscopy and homonuclear two-dimensional spin-echo J-correlated spectroscopy. Complete knowledge of lipid analysis, gas-liquid chromatography and thin-layer chromatography, radioisotopes and HPLC necessary. Applicants must have M.S. degree with a major in chemical biology or biochemistry. Two years of experience as industrial biochemist needed. Working hours are 9 to 5, with a 40-hour week; no overtime payments. Salary is \$21,793 per annum. To apply, please send résumé to: **ILLINOIS JOB SERVICE, 910 South Michigan Avenue, Room 400, Chicago, Illinois 60605, attention: Mary Clinch, reference number 3451-C.** An Employer-Paid Ad.

RESEARCH ASSOCIATE to study effects of air pollutants on chemical carcinogenesis. Applicants should have a Ph.D. in toxicology with at least 1 year of postdoctoral experience in chemical carcinogenesis and inhalation toxicology. Experience in pharmacokinetics, enzymology, and cell culture techniques is desirable. Salary: \$18,000 per year. Send curriculum vitae and names of three references to: **Dr. D. B. Menzel, Department of Pharmacology, Box 3813, Duke University Medical Center, Durham, N.C. 27710.** *Affirmative Action/Equal Opportunity Employer.*

POSITIONS OPEN

POSTDOCTORAL POSITION to study biochemical basis of motility in the cytoskeleton. Work involves study of the structure and dynamics of assembly of intermediate filaments and interactions between microtubules and intermediate filaments in vitro. Strong background in biochemistry required; experience in techniques of physical biochemistry desirable. Position available immediately. Send curriculum vitae and names, addresses, and telephone numbers of three persons who may be contacted for references to: **Dr. Robley C. Williams, Jr., Department of Molecular Biology, Vanderbilt University, Nashville, Tenn. 37235.**

POSTDOCTORAL RESEARCH POSITION for study of salivary gland protein secretion. Areas of study include phosphorylation mechanisms, calcium binding, and membrane interactions. Excellent laboratory space, equipment, and support personnel. Requires Ph.D. in pharmacology or related discipline with appropriate experience in biochemical pharmacology. Available now. Send curriculum vitae to: **Frank J. Dowd, D.D.S., Ph.D., Chairman, Department of Pharmacology, Creighton University, Medical School, Omaha, Neb. 68178.**

PROFESSOR AND CHAIRPERSON

Department of Biology
Lehigh University

Applications are invited from senior scientists having established records of scholarship and leadership who are interested in directing and facilitating the professional activities of a faculty of 13 that expects growth in the near future. The department is committed to undergraduate education and is increasing its emphasis on graduate education and research in molecular, environmental, and organismal biology. Submit résumé and statement of professional goals to: **Professor Steven Krawiec, Chairperson Search Committee, Department of Biology (Number 31), Lehigh University, Bethlehem, Pa. 18105.** Applications received after 28 September 1984 cannot be assured consideration.

Lehigh University is an Equal Opportunity/Affirmative Action Employer.

RADIATION THERAPIST CLINICIAN (M.D.)

The Department of Radiation Therapy at The University of Texas Medical Branch, Galveston, Texas, has an opening (available 1 September 1984) for a Board-certified radiation therapist. The department currently has a Varian Clinac 6/100, Clinac 18, a Siemens TEM simulator, a Phillips orthovoltage unit, and a VAX-11/780 which we are interfacing with the treatment machines for use in dynamic treatment with radiation therapy. We are in the process of installing a Varian Clinac 4/100 and an intraoperative radiation therapy facility. Preference will be given candidates with demonstrated experience with clinical and/or nonclinical research.

Academic appointment and salary will be commensurate with experience. The successful candidates may also be appointed clinical director for the department.

Please send all inquiries to:

**James A. Belli, M.D.
Professor and Chairman
The University of Texas Medical Branch
Department of Radiation Therapy
Room 197 McCullough, Route G11
Galveston, Texas 77550**

The University of Texas Medical Branch is an Equal Opportunity Employer.

TWO RESEARCH ASSOCIATE POSITIONS are available 1 September 1984 to participate in a program of research aimed at the development and use of methods for the chronic implantation of multiple microelectrodes for study of the activity of many neurons in the cerebral cortices of waking, behaving monkeys. The programs of research include studies of the frontal, motor, and parietal cortical areas in motor control (Dr. A. P. Georgopoulos) and of the role of somatic sensory, posterior parietal, and prefrontal cortical areas in sensation, perception, and certain higher functions of the brain (Dr. V. B. Mountcastle). Candidates should have an M.D. or Ph.D. degree and postdoctoral experience in neurophysiology. Applicants should send curriculum vitae and the names and addresses of three references to: **V. B. Mountcastle, Director, The Philip Bard Laboratories of Neurophysiology, Department of Neuroscience, The Johns Hopkins University School of Medicine, 725 North Wolfe Street, Baltimore, Maryland 21205.**

POSITIONS OPEN

RESEARCH ASSISTANT PROFESSOR OF PATHOLOGY

Opening for individual to work in collaborative studies on host-parasite interactions in inflammatory disorders such as periodontal diseases. Strong background in pharmacology, immunology, or pathology desired, with experience in ligand-receptor binding, membrane biology, or leukocyte functions. Appointment at assistant professor level (nontenure track). Salary negotiable. Send curriculum vitae and three references to: **Dr. N. S. Taichman, Department of Pathology, School of Dental Medicine, University of Pennsylvania, 4001 Spruce Street, Philadelphia, Pa. 19104.** *Equal Opportunity/Affirmative Action Employer.*

RESEARCH ASSOCIATE. Position available immediately for a biochemical pharmacologist with a Ph.D. degree. Research involves biochemical mechanism of antineoplastic agents, particularly in the area of nucleoside analogs. Applicants with a strong background in molecular biology and with experience in tissue culture or HPLC are encouraged to apply. Salary commensurate with background and experience. U.S. citizenship or permanent resident status required. Send curriculum vitae and three references to: **Dr. T. C. Chou, Laboratory of Pharmacology, Sloan-Kettering Institute for Cancer Research, New York, N.Y. 10021.**

RESEARCH ASSOCIATE, POSTDOCTORAL—CHEMIST to conduct research work in organic chemistry, manipulate and maintain Varian XL-200 superconducting NMR, Perkin-Elmer 1550 FTIR spectrometers. Ph.D. in organic chemistry required. Must have manipulative knowledge of handling super acids. Job site: Los Angeles, California. Salary: \$1420 per month. Send this ad and your résumé to: **Job Number 4240, Box 865, Sacramento, Calif. 95804,** not later than 22 September 1984. If offered employment, you must show you have the legal right to work.

RESEARCH ASSOCIATE, POSTDOCTORAL—CHEMIST to perform research in the field of organofluorine and synthetic organic chemistry. Ph.D. in organic chemistry. Must be knowledgeable in operation of FT-NMR, FT-IR, GC, and high-pressure reaction vessels. Must be proficient in the use of advanced NMR pulse sequence and computer spin simulation technique; \$1420 per month; job site: Los Angeles. Send this ad and your résumé to: **University of Southern California, LHI, University Park, MC-1661, Los Angeles, Calif. 90089-1661.**

RESEARCH CHEMIST

Career Federal Service—The U.S. Department of Agriculture (USDA) Western Human Nutrition Research Center, San Francisco, California, is seeking an independent scientist to conduct research on new biochemical tests for assessing human nutritional status. Specific areas of investigation include vitamin B₆ and vitamin A and niacin metabolism, and leukocyte analysis. Must be U.S. citizen. Salary based on qualifications and experience; GS 11/12, \$25,489/\$30,549. Send résumé and list of publications to: **Rita Millard, USDA, ARS, PD, Building 003, Room 107, BARC-WEST, Beltsville, Maryland 20705,** or telephone 301-344-3138. *An Equal Opportunity Employer.*

SABBATICAL REPLACEMENT for spring semester, 15 January to 17 May 1985. Instruction of comparative anatomy for majors. Ph.D. and experience in collegiate instruction required. Salary range from \$8,000 to \$10,000. Send curriculum vitae and names of three references to: **Dr. Russell G. Rhodes, Department of Biology, Southwest Missouri State University, Springfield, Mo. 65804-0095.** *An Equal Opportunity/Affirmative Action Employer.* Application deadline: 12 October 1984.

SENIOR FACULTY, multi-year contract positions available for Ph.D., D.O., or M.D.:

CARDIOVASCULAR PHYSIOLOGIST ENDOCRINE PHYSIOLOGIST MICROBIOLOGIST

Responsibilities include teaching medical students and RESEARCH.

Interested candidates should send curriculum vitae and all supportive evidence (teaching experience and current grant support information and grant track record) to: **Search Committee, Dr. Arnold L. Nagler, Associate Dean, Preclinical Medical Education, New York College of Osteopathic Medicine, Old Westbury, Long Island, New York 11568.**

SUPERVISOR OF NEUROCHEMISTRY

Wyeth Laboratories, a leading pharmaceutical firm, is seeking an outstanding individual to fill a key research and development vacancy. The Supervisor of Neurochemistry will direct the research of three biologists performing preliminary screens and follow up evaluations, as well as on-going investigations into the mechanisms of action of psychotherapeutic agents.

The successful candidate must possess a Ph.D. in biochemistry, in pharmacology, or in a neurochemistry-related field and must have some post-doctoral research experience in neurochemistry. Supervisory experience is highly desirable. The position reports to an accomplished scientist/manager and is located in Wyeth's modern suburban Philadelphia research facility at Radnor.

Submit resumes **with salary history** in strict confidence to Position #72,

Wyeth Laboratories, Inc.



Personnel Director
P.O. Box 8299
Philadelphia, PA 19101

Equal Opportunity Employer, M/F/H

SYNTRO CORPORATION

SYNTRO IS CONCERNED WITH THE CHALLENGE OF TODAY'S AGRICULTURAL PROBLEMS AND IS PREPARED TO MEET THAT CHALLENGE WITH A COMMITMENT TO EXCELLENCE IN SCIENTIFIC RESEARCH. We have developed an outstanding research facility, designed and equipped under the direction of Syntro's laboratory personnel. Located in the heart of Southern California's scientific community, Syntro offers a unique opportunity for professional growth.

Syntro's bacterial products group has an opening at the PhD level for an expert in fermentation scale-up. We seek an individual with 3-5 years experience in 100-1000 liter pilot plant operations. The successful candidate will assume a major role in Syntro's Fermentation department. He/she will oversee the design, construction and operation of Syntro's pilot plant facility.

Syntro offers a competitive compensation package in an outstanding research environment. If you would like to join in our growth and development as a successful biotechnology company please send a resume with a list of references to:

Personnel Director
SYNTRO CORPORATION
10655 Sorrento Valley Road
San Diego, CA 92121

an equal opportunity employer

BIOTECHNOLOGY

DIRECTOR, BIOPRODUCTS TECHNOLOGIES (Protein Biochemist)

Smith Kline & French Laboratories, a leader in pharmaceutical research is seeking an outstanding scientist to develop and direct a new department of Bioproducts Technologies as part of an ongoing expansion in the development of biopharmaceutical products. The post offers excellent opportunities for establishing an innovative program and for the recruitment and supervision of a substantial number of talented scientists. Fully equipped research facilities will be available at our research center in suburban Philadelphia.

SmithKline is committed to scientific excellence and we encourage staff to publish, to hold adjunct academic posts, and to interact fully with the scientific community.

The successful candidate is expected to have:

- a doctoral degree (Ph.D.; M.D.; D.V.M.) and ten years post-doctoral experience in biochemistry, chemistry or related disciplines.
- experience in protein isolation and purification.
- experience in product development desirable.
- excellent administrative and communication skills.
- a demonstrated record of excellence in research in either academia or industry.
- demonstrated supervisory abilities and capacity to motivate a multi-disciplinary research team.
- a significant bibliography of publications.

We offer excellent compensation and benefits, an attractive relocation policy and a work environment that offers considerable opportunity for personal and professional advancement. For confidential consideration, send CV, salary expectations and names of three references to: Walter B. Flagg, Senior Employment Consultant, **SmithKline Beckman Corporation**, 1572 Spring Garden Street, Philadelphia, PA 19101.

We are an Equal Opportunity Employer,
M/F/H/V.

SK&F
A SmithKline Beckman Company

POSITIONS OPEN

SENIOR HEALTH SCIENTIST—For position in New York office of major national environmental organization. Must have Ph.D. or Dr.P.H. in public health, toxicology, biochemistry, or related health science. Public policy experience and familiarity with major environmental laws and regulatory agencies desirable. Position involves analysis of health and environmental effects data, development of policy for control of toxic substances, scientific support for legal actions, and so forth. Salary: \$35,000. Submit résumé by 30 September 1984 to: **Jacqueline M. Warren, Natural Resources Defense Council, 122 East 42nd Street, New York, N.Y. 10168.**

STRESS PHYSIOLOGY OF PHOTOSYNTHESIS

Career position with U.S. Department of Agriculture (USDA) in multidisciplinary photosynthesis research group on the University of Illinois campus at Urbana, Illinois. Individual conducts basic research on the regulation of whole plant photosynthesis by plant water status. Position requires research experience in photosynthetic gas exchange techniques, in quantitating water potentials and growth rates in root and shoot tissue, and in the biochemistry of photosynthesis. Salary range: \$25,489 to \$39,711, depending on qualifications. For applications and additional information, contact, by 21 September 1984: **Dr. W. L. Ogren, USDA/ARS-Agronomy, University of Illinois, 1102 South Goodwin Avenue, Urbana, Ill. 61801; telephone: 217-333-4370.** Candidates must be U.S. citizens. *Equal Opportunity Employer.*

SAFETY AND HEALTH MANAGEMENT DIVISION CHIEF ENVIRONMENTAL HEALTH AND SAFETY

The Environmental Health and Safety Division of Georgia Tech's Engineering Experiment Station is accepting applications for the position of division chief. The person selected will be responsible for the development and management of current and new services, technical assistance, and research for both state and national organizations and governments.

M.S. and preferably a Ph.D. in industrial hygiene, public health, safety, or environmental sciences/engineering is required. A minimum of 15 years of relevant experience with industry, consulting firm, and/or government. Strong technical management/administration experience is also required.

Competitive salary and excellent benefits package available, including 21 days vacation first year and 10 paid holidays. Send résumé, including salary history and requirements, to:

**Patrick J. O'Hare, Code SC-1
Engineering Experiment Station
Georgia Institute of Technology
Atlanta, Georgia 30332
Telephone: 404-894-3430**

TOXICOLOGIST, California Veterinary Diagnostic Laboratory System, School of Veterinary Medicine, University of California (UC), Davis. Applications are invited from toxicologists with experience in veterinary toxicology. Candidate should have Ph.D. in toxicology or a closely related discipline and have particular interest in food animal diagnostic toxicology. D.V.M. is desirable, although not essential. Principal responsibility is the provision of service in diagnostic toxicology. Candidate will be expected to conduct research in veterinary toxicology and will have limited teaching commitment. Newly established laboratory is adjacent to Veterinary Medical Teaching Hospital at UC Davis. Position will require interaction with veterinarians and livestock producers throughout the state of California.

Appointment will be made at a level commensurate with qualifications and experience. Send curriculum vitae and names and addresses of three referees to: **Dr. J. Desmond Baggot, Veterinary Pharmacology and Toxicology, University of California, Davis, Calif. 95616.**

Closing date for receipt of applications is 15 October 1984 or until filled.

ZOOLOGIST/MALACOLOGIST

Xytronyx, Inc., a new biotechnology company, has an immediate opening for a malacologist. Very competitive salary and benefit package. Candidates should have Ph.D.; some experience in protein chemistry helpful. Please send résumés and names of three references to: **Director of Personnel, Xytronyx, Inc., 645 North Michigan Avenue, Suite 645, Chicago, Illinois 60611.**

POSITIONS OPEN

VETERINARY PATHOLOGISTS

Two tenure-track faculty positions for veterinary pathologists with Ph.D. and demonstrated research capabilities. ACVP Board-certification is preferred, but outstanding Board-eligible individuals will be considered. Departmental research strengths are in areas of immunopathology, viral immunology, membrane pathophysiology, bone and joint pathobiology, and the inflammatory response. Duties: develop an independent research program and participate in departmental teaching and diagnostic programs. Reply with curriculum vitae and names of three references to: **Faculty Search and Screen Committee, Department of Comparative and Experimental Pathology, Box J-145, JHMH, University of Florida (UF), Gainesville, Fla. 32610.** Closing deadline is 7 December 1984. *UF is an Equal Opportunity/Affirmative Action Employer.*

SYMPOSIUM

SYMPOSIUM ON ANEUPLOIDY: ETIOLOGY AND MECHANISMS

25 to 29 March 1985

To be held at the Auditorium, 1530 P Street, NW, Washington, D.C.

Topics include:

**Human Aspects
Mechanisms Underlying Chromosome
Disjunction/Nondisjunction
Evaluation of Data Concerning
The Chemical Induction of Aneuploidy**

Deadline for camera-ready poster abstracts: 1 February 1985.

For more details and application, contact:

**Claire M. Wilson
Council for Research Planning
in Biological Sciences
1717 Massachusetts Avenue, NW, Suite 600
Washington, D.C. 20036-2077
Telephone: 202-462-4475**

Cosponsored by the U.S. Environmental Protection Agency, the National Institute of Environmental Health Sciences, and the Council for Research Planning.

PROGRAMS

JOINT INSTITUTE FOR LABORATORY ASTROPHYSICS (JILA)

JILA (operated jointly by the U.S. National Bureau of Standards and the University of Colorado) is devoted to research, study, and teaching in atomic and molecular physics, laser physics, astrophysics, precision measurements, geophysical measurement, and related areas. Applications are invited for three programs:

- 1) **Research Associateships**, for advanced research by recent Ph.D.'s. Applications are accepted and considered anytime throughout the year.
- 2) **Research Fellowship for Teachers**; for U.S. teachers who have an active role in the instruction and counseling of minority and women students. Deadline for completed applications is 11 January 1985.
- 3) **Visiting Fellowships**, for advanced research by senior scientists. Deadline for completed applications is 11 January 1985.

Further information can be obtained from: **The Secretary, Visiting Scientists Program, JILA, Box 440, University of Colorado, Boulder, Colo. 80309.**

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

ASSISTANTSHIPS

TWO POSTDOCTORAL RESEARCH ASSISTANTSHIPS available immediately and likely to continue for up to 3 years. Send résumé with names of references to: (i) **Dr. Vimal Kishore**—To study copper deficiency and inflammation; \$16,000 plus benefits, and (ii) **Dr. Burde Kamath**—To study age-dependent pharmacokinetics of drugs; \$17,500 plus benefits, to: **College of Pharmacy, Xavier University of Louisiana, New Orleans, La. 70125.**

ASSISTANTSHIPS

ASSISTANTSHIPS

MEDICAL SCIENTIST TRAINING PROGRAM offers assistantships for a select number of individuals for an integrated program in basic and clinical medical science leading to a combined M.D./Ph.D. degree in 6 to 7 years. Contact: **Director, Medical Scientist Training Program, College of Graduate Studies, Medical University of South Carolina, Charleston, South Carolina 29425.**

GRADUATE STUDY

DOCTORAL PROGRAM IN MOLECULAR AND CELLULAR BIOLOGY AND PATHOBIOLOGY. Interdisciplinary program leading to Ph.D. degree seeks qualified candidates interested in fundamental molecular and cellular biology and its application to disease states in man. Stipends are available on a competitive basis. Contact: **Director, MCBP Program, College of Graduate Studies, Medical University of South Carolina, Charleston, South Carolina 29425.**

FELLOWSHIPS

THE HEISER PROGRAM FOR RESEARCH IN LEPROSY

Beginning postdoctoral research fellowships, research grants, and visiting research awards available in amounts up to \$18,000 per year, plus other allowances. Applicants should have M.D., Ph.D., or equivalent degree. Applications by 1 February 1985 for awards to be activated June to December 1985. For information, write: **The Heiser Program, 450 East 63 Street, New York, N.Y. 10021.**

POSTDOCTORAL FELLOWSHIPS available immediately for research in the areas of environmental and biochemical toxicology under the auspices of any of seven faculty members (E. Eisenstadt, P. Ofner, R. Rice, L. Samson, A. Schonbrunn, A. Tashjian, Jr., and W. Toscano, Jr.). Research areas include receptor mediated toxicity, chemical carcinogenesis and tumor promotion, molecular mechanisms of mutagenesis and DNA repair, mechanisms of dioxin action and toxicity, prostatic steroid biochemistry, and development and use of animal and human cell culture models. Ph.D. or M.D. required. Expression of interest is particularly invited from qualified women and minority candidates. Send curriculum vitae, publications, and names of three references to: **Dr. Armen H. Tashjian, Jr., Laboratory of Toxicology, Harvard School of Public Health, 665 Huntington Avenue, Boston, Mass. 02115.**

A POSTDOCTORAL FELLOWSHIP IN PSYCHOBIOLOGY

The Israel Institute for Psychobiology—Charles E. Smith Family Foundation, offers a fellowship in the area of psychobiology to a nontenured Israeli scientist who has obtained a doctoral-level degree. Available for 1 to 3 years, starting 1985. Candidates can only be proposed by an Israeli academic institute or a university hospital, which can offer the adequate research facilities and commitments. Candidates must be Israeli citizens or permanent residents. Application deadline is 15 November 1984. For further information, contact: **Professor Moshe Abeles, Director, Israel Institute for Psychobiology, Hebrew University Hadassah Medical School, P.O. Box 1172, Jerusalem, 91010, Israel.**

GRADUATE STUDENT STIPENDS are available in water resources and environmental engineering. Applications are solicited from candidates with superior academic records with undergraduate degrees in engineering or science. Candidates should provide evidence of their undergraduate record. Other supporting information regarding relevant experience or GRE scores will be considered. Contact: **Dr. Leland L. Harms, Department of Civil Engineering, South Dakota School of Mines and Technology, Rapid City, S.D. 57701-3995.**

POSTDOCTORAL FELLOWSHIP available July 1985 to study expression and activation of liver specific genes in cultured cell lines and cell hybrids. Background in molecular biology preferred. Send curriculum vitae and the names of three references to: **Dr. Gretchen Darlington, Department of Pathology, Baylor College of Medicine, Houston, Texas 77030.** *Equal Opportunity/Affirmative Action Employer.*



INTERNATIONAL CENTER FOR MEDICAL RESEARCH FRANCEVILLE - GABON

with objective of improving fecundity (sterility, newborn and infant mortality, mother-child relationships, developmental problems)

RECRUITS FOR ITS DEPARTMENT OF REPRODUCTIVE BIOLOGY

—A CHIEF OF DEPARTMENT: MD SPECIALIST IN ENDOCRINOLOGY with at least 5 years post doctoral experience in basic and clinical research.

—A TECHNICIAN highly qualified in Hormones assay (RIA, HPLC).

SUBJECTS OF RESEARCHES:

- Hormonal factors of human sterility,
- regulatory processes of adrenarche and puberty in human and chimpanzees, with special interest for DHA-S,
- factors altering menstrual cycle parameters in macaques.

The C.I.R.M.F., created in 1979, employs 165 people of 7 nationalities. It includes Departments of Immunology, Reproductive Biology, Microbiology, Anatomic-Pathology and Parasitology. It has a Clinical Laboratory (17,000 samples/year) and Gynecological Clinical facilities (30 beds) at the General Hospital. It possesses the most modern investigation equipment and harbours a Primatology Centre with 225 monkeys and apes of 6 species.

CONDITIONS:

- Two-year contract, renewable by mutual agreement commencing October 1984. Attractive salary, negotiable, depending on qualifications and experience, plus expatriation allowance. Knowledge of French an advantage.
- Sixty day annual leave including family transportation, free housing in a complex with tennis and swimming pool.

For further information or application, send C.V., list of publications, list of 3 references, present salary to:

The Director of C.I.R.M.F., 128 bd Haussmann, 75008 PARIS (France).

POSTDOCTORAL RESEARCH APPOINTMENTS IN SCIENCE AND ENGINEERING LOS ALAMOS NATIONAL LABORATORY

The Los Alamos National Laboratory is seeking candidates for our Postdoctoral Research Program. Appointments are considered in many areas of theoretical and experimental physics, chemistry, engineering, biology, materials science, environmental health, medical research, mathematics, and geoscience.

Applicants should have received their doctoral degree within the past three years. The appointments are for one year, renewable for a second year. The annual stipend range is \$26,220 — \$27,600 per year; employee benefits and moving expenses are provided.

Postdoctoral appointments are awarded in a Laboratory-wide competition. The Selection Committee meets four times a year in December, February, May, and August. Applications are accepted any time during the year.

Send resume or employment application (usually available from your placement office), graduate and undergraduate transcripts, and a statement of research interest and goals to:

Madeline Lucas, DIV 84—CK-PD
Personnel Administration Division, MS P280
Los Alamos National Laboratory
Los Alamos, New Mexico 87545

University
of California



An Affirmative Action/Equal Opportunity Employer

NATIONAL INSTITUTE ON AGING NATIONAL INSTITUTES OF HEALTH PUBLIC HEALTH SERVICE DEPARTMENT OF HEALTH AND HUMAN SERVICES

ASSOCIATE SCIENTIFIC DIRECTOR FOR THE BALTIMORE LONGITUDINAL STUDY OF AGING

The National Institute on Aging (NIA) invites nominations and applications for the position of Associate Scientific Director for the Baltimore Longitudinal Study of Aging (BLSA) in NIA's Intramural Research Program. This position is located at the Institute's Gerontology Research Center in Baltimore, Maryland.

This is a Civil Service position with a salary range of \$42,928 to \$50,495 per annum depending upon qualifications. Candidates may be eligible for Physicians' Comparability Allowance up to \$10,000 per year. Alternatively, candidates may be eligible for appointment in the Commissioned Corps of the U.S. Public Health Service.

The BLSA is a major intramural research program which was initiated in 1958 to permit repeated observations of the same subjects over a long period of time in order to quantify true age changes and elucidate the mechanisms underlying these changes. The active study population is a group of about 900 Community-dwelling volunteers who return every two years for re-evaluation and are enrolled for their lifetimes. The Associate Scientific Director is responsible for the management and operation of the BLSA and for furthering the scientific Objectives of the study.

Applicants may be either an M.D. or Ph.D. or equivalent

with a record of outstanding scientific accomplishment in a field relevant to BLSA research objectives. In addition, applicants should possess qualifications that demonstrate competence in (1) executive level management and leadership ability; (2) large-scale clinical research (expertise in longitudinal methodology is highly desirable); and (3) the application of computer systems to the management of complex data bases with expertise in multivariate and epidemiological statistics.

Further information may be obtained by contacting Ms. Delores Davenport at 301-955-1733. A Personal Qualifications Statement (SF-171) with a current curriculum vitae and bibliography should be submitted to: Personnel, Gerontology Research Center, National Institute on Aging, 4940 Eastern Avenue, Baltimore, Maryland 21224.

APPLICATIONS MUST BE POSTMARKED NO LATER THAN
OCTOBER 1, 1984.

ALL QUALIFIED CANDIDATES WILL RECEIVE CONSIDERATION WITHOUT REGARD TO RACE, RELIGION, COLOR, SEX, AGE, NATIONAL ORIGIN, LAWFUL POLITICAL AFFILIATION, MARITAL STATUS, UNION MEMBERSHIP, OR ANY NONDISQUALIFYING PHYSICAL OR MENTAL HANDICAP.

NIH IS AN EQUAL EMPLOYMENT OPPORTUNITY EMPLOYER.

EIGHTH ANNUAL BRISTOL-MYERS AWARD FOR DISTINGUISHED ACHIEVEMENT IN CANCER RESEARCH



The Bristol-Myers Company presents an annual award to a scientist making an outstanding contribution in cancer research. The candidates for the award are to be nominated by medical schools, free-standing hospitals and cancer research centers.

AWARD: \$50,000 U.S.

DEADLINE FOR RECEIPT OF NOMINATIONS

December 1, 1984

ANNOUNCEMENT OF AWARD RECIPIENT

Spring 1985

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Albert H. Owens, Jr., M.D., Selection Committee Chairman
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Ontario Cancer Institute/
Princess Margaret Hospital

Gianni Bonadonna, M.D.
Istituto Nazionale per lo Studio
e la Cura dei Tumori, Milan

Harris Busch, M.D., Ph.D.
Baylor College of Medicine

Emil Frei, III, M.D.
Harvard Medical School/
Dana-Farber Cancer Center

Ken R. Harrap, Ph.D., D.Sc.
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Saul A. Rosenberg, M.D.
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Haruo Sugano, M.D.
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for Cancer Research

E. Donnall Thomas, M.D.
Fred Hutchinson Cancer Research Center

John E. Ultmann, M.D.
The University of Chicago
School of Medicine

Paul V. Woolley, III, M.D.
Georgetown University
School of Medicine

Rules and official nomination forms are available from: Secretary, Award Committee,
345 Park Avenue, Room 43-38, New York, New York 10154, or (212) 546-4339.
