

Of the Europeans with whose influence he is concerned Moyer considers at length only Tyndall and William Thomson. A fuller examination of the diffusion in America of the views of Mach, Ostwald, Boltzmann, Lorentz, and Poincaré would have been useful, as would more attention to the journalistic activities of E. L. Youmans and Paul Carus in this regard. Conversely, the specifically American and more particularly local intellectual and cultural contexts are barely apparent, since Moyer scarcely begins to exploit the richness of recent historical work on late 19th-century American science and philosophy. Furthermore, though he makes the important point in the introduction that this period of conceptual transition coincides with the institutional and professional maturing of the American physics community, he neither explores the institutional context nor plumbs the depths of this "coincidence," simply inserting references to the work of others, especially *The Physicists* by Daniel Kevles. And his concentration on "physics" obscures the fact that much early interest in special relativity came from outside the physics community, from such physical chemists as G. N. Lewis and R. C. Tolman, authors of the first paper on relativity presented to the American Physical Society (1908), and from such mathematicians as R. D. Carmichael, author of the first treatise in English on special relativity (1913).

Since the youngest of Moyer's mechanists were about 50 in 1905, and his deviationists were older or already dead, one wishes that he had examined in as much detail the development of the views of a younger generation, a "generation of 1905," the one that was actually confronted with quantum theory and relativity. Moyer's younger generation consists only of the "progressive" members of the delegation of American physicists to the 1904 St. Louis Congress, and he treats their philosophical and methodological positions very briefly.

The task Moyer set himself was modest. The historical program of achieving a full understanding of the reception of such scientific innovations as quantum theory and relativity is an ambitious one, and its realization will continue to require the work of many hands. Moyer's study is an important component of the broader program. It enlarges our understanding of physics in the American context.

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Some Other Books of Interest

Chemical Ecology of Insects. WILLIAM J. BELL and RING T. CARDÉ, Eds. Sinauer, Sunderland, Mass., 1984. xvi, 524 pp., illus. \$45; paper, \$28.50.

The objective of the editors in compiling this volume was to "delineate the major concepts" of the discipline of insect chemical ecology. The opening section, Perceptual Mechanisms, consists of papers on contact chemoreception (E. Städler) and olfaction (H. Mustaparta). In the second section there are papers on odor dispersion (J. S. Elkinton and R. T. Cardé) and chemo-orientation in walking and flying insects (W. J. Bell; Cardé). Factors affecting choice of host plant (J. R. Miller and K. L. Strickler; J. M. Scriber) and parasitoid-host relationships (S. B. Vinson) are then discussed. The section Chemical Protection consists of papers on alarm pheromones in presocial insects (L. R. Nault and P. L. Phelan) and warning coloration and mimicry (J. E. Huheey). Under the heading Chemical-Mediated Spacing there are discussions of resource partitioning (R. J. Prokopy, B. D. Roitberg, and A. L. Averill), aggregation in bark beetles (M. C. Birch), and sexual communication (Cardé and T. C. Baker). The final group of papers is devoted to sociochemicals in bees (R. M. Duffield, J. W. Wheeler, and G. C. Eickwort), ants (J. W. S. Bradshaw and P. E. Howse), and termites (Howse). The volume has a brief subject index and a detailed table of contents.

—K.L.

The Ecology of Aquatic Insects. VINCENT H. RESH and DAVID M. ROSENBERG, Eds. Praeger, New York, 1984. xii, 625 pp. \$35.

The principal goals of this book are "to present a contemporary overview of aquatic insect ecology" and "to highlight research needs and avenues of investigation . . . that currently seem most promising." An attempt has been made to avoid duplication of topics covered in other reviews, briefly surveyed in the editors' introduction. Among the 18 other contributions are two each on life histories (M. G. Butler; B. W. Sweeney) and predator-prey relations (B. L. Peckarsky; M. Healey). Other papers deal with behavioral adaptations (M. J. Wiley and S. L. Kohler), nutrient cycling (R. W. Merritt *et al.*), feeding (G. A. Namberti and J. W. Moore), secondary productivity (A. C. Benke), colonization (A. L. Sheldon), and effects of various properties of the habitat. One paper (J. D.

Allan) discusses hypothesis testing in aquatic insect ecology, and several (T. Wiederholm; J. V. Ward; H. B. N. Hynes) are concerned with problems of pollution and habitat quality. The volume has author, taxonomic, and subject indexes. —K.L.

Periphyton of Freshwater Ecosystems. ROBERT G. WETZEL, Ed. Junk, The Hague, 1983 (U.S. distributor, Kluwer Boston, Hingham, Mass.). x, 346 pp., illus. \$87.50. Developments in Hydrobiology, 17. From a workshop, Växjö, Sweden, Sept. 1982.

The word "periphyton," in the definition deemed best by the editor of this volume, refers to "a complex community of microbiota (algae, bacteria, fungi, animals, inorganic and organic detritus) that is attached to substrata" that may be "inorganic or organic, living or dead." The papers in the volume, most of which are reports of their authors' own studies, are arranged under six headings: Dynamics of Periphytic Communities (nine papers); Parameters Influencing Growth of Periphyton (ten papers); Productivity and Utilization of Periphyton (six papers); Periphyton/Substrata Interactions (four papers); Methodology (seven papers); and Periphyton and Pollution (five papers). The majority of the contributors are European; others are from North America, South Africa, Japan, and Australia. The volume concludes with recommendations for future research.—K.L.

Books Received

Antineoplastic, Immunogenic and Other Effects of the Tetrapeptide Tuftsin. A Natural Macrophage Activator. Victor A. Najjar and Mati Fridkin, Eds. New York Academy of Sciences, New York, 1983. viii, 273 pp., illus. Paper, \$55. Annals of the New York Academy of Sciences, vol. 419. From a conference, Feb. 1983.

Appearances of the Dead. A Cultural History of Ghosts. R. C. Finucane. Prometheus, Buffalo, N.Y., 1984. viii, 232 pp. + plates. \$18.95.

Arming the Heavens. The Hidden Military Agenda for Space, 1945–1995. Jack Manno. Dodd, Mead, New York, 1984. x, 245 pp. \$13.95; paper, \$7.95.

Aspects of Chemical Evolution. G. Nicolis, Ed. Interscience (Wiley), New York, 1984. xviii, 286 pp., illus. \$50. Advances in Chemical Physics, vol. 55. From a conference, Washington, D.C., April 1980.

Atlas of Continental Displacement. 200 Million Years to the Present. H. G. Owen. Cambridge University Press, New York, 1984. x, 159 pp. \$29.95. Cambridge Earth Science Series.

Atlas of Steroid Structure. Vol. 2. Jane F. Griffin, William L. Duax, and Charles M. Weeks, Eds. IFL/Plenum, New York, 1984. vi, 754 pp. \$140.

Atmospheric Turbulence. Models and Methods for Engineering Applications. Hans A. Panofsky and John A. Dutton. Wiley-Interscience, New York, 1984. xx, 397 pp., illus. \$49.95.

Automated Reasoning. Introduction and Applications. Larry Wos *et al.* Prentice-Hall, Englewood Cliffs, N.J., 1984. xiv, 482 pp., illus. \$28.95.

Avoiding Inadvertent War. Crisis Management. Hilliard Roderick and Ulla Magnusson, Eds. Lyn-

don B. Johnson School of Public Affairs, University of Texas, Austin, 1983. xviii, 184 pp., illus. Paper, \$9.95. From a conference, Austin, Tex., Feb. 1983.

Basic Concepts of Chemistry. Alan Sherman, Sharon Sherman, and Leonard Russkoff. 3rd ed. Houghton Mifflin, Boston, 1984. xviii, 548 pp., illus. \$28.95.

Basic Concepts of Neuronal Function. A Multilevel Self-Teaching Textbook. Don L. Jewett and Martin D. Rayner. Little, Brown, Boston, 1984. xii, 411 pp., illus. Paper, \$24.95.

BASIC Hydrology. James J. Sharp and Peter G. Sawden. Butterworths, Boston, 1984. x, 150 pp., illus. Paper, \$19.95. Butterworths BASIC Series.

BASIC Matrix Methods. Including Applications in Approximation and Data Fitting. J. C. Mason. Butterworths, Boston, 1984. xii, 160 pp. Paper, \$19.95. Butterworths BASIC Series.

Behavioral Intervention Techniques in Drug Abuse Treatment. John Grabowski, Maxine L. Stitzer, and Jack E. Henningfield, Eds. National Institute on Drug Abuse, Rockville, Md., 1984 (available from the National Clearinghouse for Drug Abuse Information, Rockville, Md.). viii, 163 pp., illus. Paper. NIDA Research Monograph 46.

Benzodiazepine Recognition Site Ligands. Biochemistry and Pharmacology. Giovanni Biggio and E. Costa, Eds. Raven, New York, 1983. xii, 260 pp., illus. \$31. Advances in Biochemical Psychopharmacology, vol. 38. From a conference, Villasilmius, Italy, June 1983.

Biochemical and Biophysical Studies of Proteins and Nucleic Acids. Tung-Bin Lo, Teh-Yung Liu, and Choh-Hao Li, Eds. Elsevier, New York, 1984. xiv, 438 pp., illus. \$75. From a symposium, Taipei, Taiwan, Aug. 1982.

Biochemical Basis of Chemical Carcinogenesis. Helmut Greim *et al.*, Eds. Raven, New York, 1984. xviii, 307 pp., illus. \$55. From a workshop, Grainau, Germany, Oct. 1982.

Biological Nitrogen Fixation. Ecology, Technology, and Physiology. Martin Alexander, Ed. Plenum, New York, 1984. x, 247 pp., illus. \$42.50. From a course, Caracas, Venezuela, Jan. 1982.

Biological Oxidations. H. Sund and V. Ullrich, Eds. Springer-Verlag, New York, 1983. x, 313 pp., illus. \$34.50. From a colloquium, Mosbach/Baden, Germany, April 1983.

Biological Responses in Cancer. Progress toward Potential Applications. Vol. 2. Enrico Mihich, Ed. Plenum, New York, 1984. xvi, 245 pp., illus. \$39.50.

Biologizing the Universe. Conceiving Universe as Biologically Activated, Gives Meaning to Our Origin, Evolution and Performance. B. B. Stoller. Prospero, Santa Cruz, Calif., 1984. xvi, 410 pp. \$20; paper, \$14.50.

Biology. An Introduction. Kenneth D. Johnson, David L. Rayle, and Hale L. Wedberg, Benjamin/Cummings, Menlo Park, Calif., 1984. xxviii, 615 pp., illus., + appendices. \$27.95. The Benjamin/Cummings Series in the Life Sciences.

The Biology and Chemistry of Active Oxygen. J. V. Bannister and W. H. Bannister, Eds. Elsevier, New York, 1984. xiv, 262 pp., illus. \$55. Developments in Biochemistry, vol. 26.

Biology of Microorganisms. Thomas D. Brock, David W. Smith, and Michael T. Madigan. 4th ed. Prentice-Hall, Englewood Cliffs, N.J., 1984. xvi, 847 pp., illus. \$34.95.

The Biology of the Mycobacteria. Vol. 2, Immunological and Environmental Aspects. Colin Ratledge and John Stanford, Eds. Academic Press, New York, 1983. xii, 554 pp., illus. \$99.

Biomedical Applications of Microencapsulation. Franklin Lim, Ed. CRC Press, Boca Raton, Fla., 1984. viii, 160 pp., illus. \$50.

Biotechnology and Genetic Engineering Reviews. Vol. 1. Gordon E. Russell, Ed. Intercept, Newcastle upon Tyne, U.K., 1984. x, 438 pp., illus. \$79.

Birth Defects and Speech-Language Disorders. Shirley N. Sparks. College-Hill, San Diego, Calif., 1984. xx, 190 pp., illus. Paper, \$19.50.

Distant Water. The Fate of the North Atlantic Fisherman. William W. Warner. Penguin, New York, 1984. xiv, 338 pp. Paper, \$7.95. Reprint, 1983 edition.

The Dynamics of Host Defence. John A. Bailey and B. J. Deverall, Eds. Academic Press, New York, 1983. x, 233 pp., illus. \$27.50. From a symposium, Melbourne, 1983.

Early Detection of Breast Cancer. S. Brünner, B. Langfeldt, and P. E. Andersen, Eds. Springer-Verlag, New York, 1984. xii, 216 pp., illus. \$44. Recent Results in Cancer Research, 90. From a symposium, Copenhagen.

Early Mammalian Development. Parthenogenetic Studies. Matthew H. Kaufman. Cambridge University Press, New York, 1984. xii, 276 pp., illus. \$64.50. Developmental and Cell Biology Series.

Ecology of Barnegat Bay, New Jersey. Michael J. Kennish and Richard A. Lutz, Eds. Springer-Verlag, New York, 1984. xiv, 396 pp., illus. Paper, \$34.

Lecture Notes on Coastal and Estuarine Studies, 6.

The Ecology of Neotropical Savannas. Guillermo Sarmiento. Harvard University Press, Cambridge, Mass., 1984. xiv, 235 pp., illus. \$22.50. Translated from the Spanish edition by Otto Solbrig.

Electro-optical and Magneto-optical Properties of Liquid Crystals. Lev Mikhaïlovich Blinov. Wiley-Interscience, New York, 1984. xxii, 341 pp., illus. \$74.95. Translated from the Russian edition.

Eleventh Symposium on Nucleic Acids Chemistry. (Tokyo, Nov. 1983.) Angela E. Pritchard, Ed. IRL Press, Washington, D.C., 1983. vi, 224 pp., illus. Paper, \$28. Nucleic Acids Symposium Series, No. 12.

The Enchanted Ring. The Untold Story of Penicillin. John C. Sheehan. MIT Press, Cambridge, Mass., 1984. xvi, 224 pp. Paper, \$6.95. Reprint, 1982 edition.

Energy Conservation Measures. J. D. Parker, Ed. Pergamon, New York, 1984. viii, 322 pp., illus. \$65. KFAS Proceedings Series, vol. 1. From a symposium, Kuwait, Feb. 1983.

Engineering Risk. Report of the President's Task Committee on Professional Practice and Risk. Institution of Professional Engineers, New Zealand, Wellington, 1984. x, 95 pp. Paper, \$NZ8.80.

Immune-Deficient Animals. B. Sordat, Ed. Karger, Basel, 1984. xiv, 445 pp., illus. \$117. From a workshop, Chexbres, Switzerland, Oct. 1982.

Immunoassays in Coagulation Testing. Zaheer Parvez. Springer-Verlag, New York, 1984. xvi, 173 pp., illus. \$37.50.

Immunology of Clinical and Experimental Diabetes. Sudhir Gupta, Ed. Plenum, New York, 1984. xx, 426 pp., illus. \$50.

In the Land of Nyx. Night and Its Inhabitants. John Bowers. Anchor/Doubleday, Garden City, N.Y., 1984. x, 180 pp. \$13.95.

Industrial Hygiene Aspects of Plant Operations. Vol. 2, Unit Operations and Product Fabrication. Lewis J. Cralley, Lester V. Cralley, and John E. Mutchler, Eds. Macmillan, New York, and Collier Macmillan, London, 1984. xiv, 537 pp., illus. \$60.

Information Technology and Civilization. Hiroshi Inose and John R. Pierce. Freeman, New York, 1984. xxii, 263 pp., illus. \$19.95; paper, \$9.95.

Inner Exile. Recollections of a Life with Werner Heisenberg. Elisabeth Heisenberg. Birkhäuser, Boston, 1984. xviii, 170 pp., + plates. \$24.95. Translated from the German edition (Munich, 1980) by S. Cappellari and C. Morris.

Inorganic Syntheses. Vol. 22. Smith L. Holt, Jr., Ed. Wiley-Interscience, New York, 1984. xviii, 278 pp., illus. \$42.50.

Insect Neurochemistry and Neurophysiology. Alexej B. Bořkovec and Thomas J. Kelly, Eds. Plenum, New York, 1984. xiv, 523 pp., illus. \$69.50. From a conference, College Park, Md., Aug. 1983.

Insulin-Like Growth Factors, Somatomedins. Basic Chemistry, Biology, Clinical Importance. E. Martin Spencer, Ed. Walter de Gruyter, New York, 1983. xiv, 664 pp., illus. \$109. From a symposium, Nairobi, Kenya, Nov. 1982.

Modern Methods in Protein Chemistry. Review Articles. Harald Tschesche, Ed. Walter de Gruyter, New York, 1983. x, 463 pp., illus. \$86.40. From a meeting, Damp/Kiel, Germany, Sept. 1982.

Molecular Aspects of Early Development. George M. Malacinski and William H. Klein, Eds. Plenum, New York, 1984. viii, 324 pp., illus. \$47.50. From a symposium, Louisville, Ky., Dec. 1982.

Molecular Immunology. A Textbook. M. Zouhair Atassi, Carel J. van Oss, and Darryl R. Absolom, Eds. Dekker, New York, 1984. x, 725 pp., illus. \$47.50.

Monoclonal Antibodies. Probes for the Study of Autoimmunity and Immunodeficiency. Barton F. Haynes and George S. Eisenbarth, Eds. Academic Press, New York, 1983. xviii, 318 pp., illus. \$45.

Multicritical Phenomena. R. Pynn and A. Skjeltop, Eds. Plenum, New York, 1984. xii, 472 pp., illus. \$75. NATO ASI Series B, vol. 106. From an institute, Gello, Norway, April 1983.

Multiresolution Image Processing and Analysis. A. Rosenfeld, Ed. Springer-Verlag, New York, 1984. viii, 385 pp., illus. \$29. Springer Series in Information Sciences, vol. 12. From a workshop, Leesburg, Va., July 1982.

Muon and Muonium Chemistry. David C. Walker. Cambridge University Press, New York, 1984. x, 179 pp., illus. \$49.50.

Muscles, Reflexes, and Locomotion. Thomas A. McMahon. Princeton University Press, Princeton, N.J., 1984. xvi, 332 pp., illus. \$50; paper, \$15.

Museum Collections and Computers. Report of an ASC Survey. Compiled by Lenore Sarasan and A. M. Neuner. Association of Systematics Collections, Lawrence, Kans., 1983. viii, 292 pp. Paper, \$16.

Myocardial Infarction and Cardiac Death. Erwin Margulies, Ed. Academic Press, New York, 1983. xiv, 220 pp., illus. \$32.50. Medicinal Chemistry, vol. 18.

Physical Geography. A Landscape Appreciation. Tom L. McKnight, with cartographic collaboration of Patricia Caldwell. Prentice-Hall, Englewood Cliffs, N.J., 1984. xxii, 488 pp. \$32.95.

The Physics of Hydrogenated Amorphous Silicon II. Electronic and Vibrational Properties. J. D. Joannopoulos and G. Lucovsky, Eds. Springer-Verlag, New York, 1984. xiv, 360 pp., illus. \$45. Topics in Applied Physics, vol. 56.

Physikalische Kinetik. E. M. Lifschitz and L. P. Pitajewski. Akademie-Verlag, Berlin, 1983. xiv, 480 pp. 48 M. Lehrbuch der Theoretischen Physik, Band 10. Translated from the Russian edition (Moscow, 1979) by Gerhard Diener.

The Physiology of Trematodes. J. D. Smyth and D. W. Halton. 2nd ed. Cambridge University Press, New York, 1984. xiv, 446 pp., illus. \$59.50; paper, \$23.95.

Plankton and Productivity in the Oceans. Vol. 2, Zooplankton. John E. G. Raymont. 2nd ed. Pergamon, New York, 1983. viii, 824 pp., illus. \$90; paper, \$45.

Plant Research and Agroforestry. Peter A. Huxley, Ed. International Council for Research in Agroforestry, Nairobi, Kenya, 1983. xvi, 617 pp., illus., + plates. Paper, \$15. From a meeting, Nairobi, April 1981.

Protein Synthesis. Translational and Post-Translational Events. Abraham K. Abraham, Thor S. Eikhom, and Ian F. Pryme, Eds. Human, Clifton, N.J., 1984. xviii, 477 pp., illus. \$59.50. Experimental Biology and Medicine. From a conference, Godøysund, Norway, June 1983.

Psychology in Utopia. Toward a Social History of Soviet Psychology. Alex Kozulin. MIT Press, Cambridge, Mass., 1984. xii, 179 pp. \$17.50.

Ptolemy's Almagest. Translated and annotated by G. J. Toomer. Springer-Verlag, New York, 1984. x, 693 pp., illus. \$64.

Public Schools in Hard Times. The Great Depression and Recent Years. David Tyack, Robert Lowe, and Elisabeth Hansot. Harvard University Press, Cambridge, Mass., 1984. xii, 267 pp., illus. \$20.

Purine Metabolism in Man—IV. Part B, Biochemical, Immunological, and Cancer Research. Chris H. M. M. De Bruyn, H. Anne Simmonds, and Mathias M. Müller, Eds. Plenum, New York, 1984. xvi, 520 pp., illus. \$69.50. Advances in Experimental Medicine and Biology, vol. 165. From a symposium, Maastricht, Netherlands, June 1982.

Quantitative Electron-Probe Microanalysis. V. D. Scott and G. Love, Eds. Horwood, Chichester, England, and Halsted (Wiley), New York, 1984. 345 pp., illus. \$44.95.

Quantum Chemistry. Raymond Daudel *et al.* Wiley-Interscience, New York, 1984. xvi, 558 pp., illus. \$97.

Quantum Gravity. M. A. Markov and P. C. West, Eds. Plenum, New York, 1984. xiv, 548 pp. \$79.50. From a seminar, Moscow, Oct. 1981.

Social and Personality Development: Essays on the Growth of the Child. William Damon, Ed. Norton, New York, 1983. xvi, 488 pp., illus. Paper, \$13.95.

Soil Biotechnology. Microbiological Factors in Crop Productivity. J. M. Lynch. Blackwell Scientific, Palo Alto, Calif., 1983. x, 191 pp., illus. Paper, \$21.60.

Stellar Atmospheric Structural Patterns. Richard N. Thomas. Centre National de la Recherche Scientifique, Paris, and NASA Scientific and Technical Information Branch, Washington, D.C., 1983 (available from the author, 135 Timber Lane, Boulder, Colo.). xxiv, 369 pp., illus. Cloth. Monograph Series on Nonthermal Phenomena in Stellar Atmospheres. NASA SP-471.

The Sulfur Electrode. Fused Salts and Solid Electrolytes. Ragnar P. Tischer, Ed. Academic Press, New York, 1983. xiv, 375 pp., illus. \$68.

Theory of Mathematical Structures. Jiří Adámek. Reidel, Boston, 1983 (distributor, Kluwer Boston, Hingham, Mass.). x, 317 pp., illus. \$59.50.

A Therapist's Manual for Cognitive Behavior Therapy in Groups. Lawrence I. Sank and Carolyn S. Shaffer. Plenum, New York, 1984. xiv, 269 pp. \$22.50.

Thermal Computations for Electronic Equipment. Gordon N. Ellison. Van Nostrand Reinhold, New York, 1984. xvi, 397 pp., illus. \$34.50.

Thermochemical Processing of Biomass. A. V. Bridgwater, Ed. Butterworths, Boston, 1984. xii, 344 pp., illus. \$39.95. From a workshop, Birmingham, England, April 1983.

A Thinker's Guide to Ultrasonic Imaging. Raymond L. Powis and Wendy J. Powis. Urban & Schwarzenberg, Baltimore, 1984. xiv, 417 pp., illus. \$47.50.

Toxicity Testing. Strategies to Determine Needs and Priorities. National Academy Press, Washington, D.C., 1984. xiv, 382 pp. Paper, \$22.50.

Viral Infections of Humans. Epidemiology and Control. Alfred S. Evans, Ed. 2nd ed. Plenum, New York, 1984. xxxviii, 720 pp., illus. \$24.50.

AAAS NEWS

(Continued from page 497)

Alfred Gilman of New Haven, Connecticut, member of Section N since 1955, 13 January 1984.

Sol Goodman of Carolina, Puerto Rico, member since 1983, 29 March 1984.

Earle C. Gregg of Chagrin Falls, Ohio, member of Section B since 1968, 13 April 1984.

John Haller, Department of Geological Sciences, Harvard University, member of Section E since 1969, 1 May 1984.

Aziz H. Hamdy, senior scientist, Upjohn Company, member of Section N since 1965, 25 May 1984.

Richard S. Holt of North Waterford, Maine, member since 1979, 27 April 1984.

Harold R. Hulpieu of Naples, Florida, member of Section N since 1924, 11 March 1984.

Milton J. Jena of Pittsburgh, Pennsylvania, member of Section N since 1959, 29 April 1984.

C. G. Harry Johnson of Delaware, Ohio, member of Section C since 1934, 1 April 1984.

Frances A. Johnston of Scottsdale, Arizona, member since 1936, 28 May 1984.

Albert A. Kondritzer of Lake Worth, Florida, member of Section S since 1981, 29 February 1984.

Ernest M. R. Lamkey of Wilmington, Delaware, member of Section G since 1918, 16 March 1984.

Leah Lowenstein, dean and vice president, Jefferson Medical College, Thomas Jefferson University, and secretary, AAAS Section N, member of Section N since 1965, 6 March 1984.

L. Vance McLean, Nocon Corporation, member of Section M since 1963, 12 April 1984.

Rocco S. Narcisi of Bedford, Massachusetts, member of Section W since 1967, 27 March 1984.

Peter G. Poetto of Leesburg, Florida, member since 1983, 19 March 1984.

Flora Murray Scott, professor emeritus of botany, University of California, Los Angeles, member of Section G since 1925, 24 March 1984.

Dexter C. Seymour of Franklin Lakes, New Jersey, member of Section C since 1958, 25 March 1984.

Michael K. Stafford of Santa Clara, California, member of Section B since 1978, 19 February 1984.

Stanislaw M. Ulam of Santa Fe, New Mexico, member of Section A since 1966, 13 May 1984.

D. C. Vickers of Danville, West Virginia, member of Section L since 1973, 8 March 1984.

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ANATOMICAL PATHOLOGY IN ALASKA

The University of Alaska, Fairbanks, WAMI Medical Education Program, offers an exciting and unique opportunity to a talented individual to help teach first year medical school courses for all or part of the 1984/1985 academic year. WAMI is a regionalized medical school with training sites in Washington, Alaska, Montana, and Idaho. The successful candidate will have a demonstrated and continuing commitment to research. Teaching assignments would include pathology and possibly parts of anatomy or cell biology, or microbiology. This is one-year appointment, for the 1984/1985 only, but the incumbent will be eligible to apply for an ongoing tenure-track faculty appointment commencing July 1985. Ph.D. or M.D. required. Excellent benefits. Salary about \$5000 per month at associate professor level. Applications must be postmarked by 22 August 1984. Applicants should send curriculum vitae and names of three references to: **Pathology Search, WAMI Medical Education Program, University of Alaska, Fairbanks, Alaska 99701.**

The University of Alaska is an Equal Opportunity/Affirmative Action Employer and Educational Institution. Your application for employment with the University of Alaska may be subject to public disclosure if you are selected as a finalist.

ASSISTANT ADJUNCT PROFESSOR OF SURGERY/OTOLARYNGOLOGY

The Division of Otolaryngology-Head and Neck Surgery at the University of California at San Diego (UCSD) is seeking candidates for a research position. The candidate should have a Ph.D. in auditory anatomy or physiology with demonstrated experience in performing cochlear electrophysiology. Two years of postdoctoral training and experience in teaching at undergraduate and postgraduate levels preferred. Appointment to terminate at the end of grant funding (projected 1985-1988).

Salary is related to rank and step of appointment within the established salary schedule at the UCSD School of Medicine faculty compensation plan. Curriculum vitae should be mailed to: **Jeffrey P. Harris, M.D., Ph.D., Chief of Otolaryngology Service, Division of Otolaryngology, UCSD Medical Center (H-895), 225 Dickinson Street, San Diego, Calif. 92103.**

Closing date is 17 August 1984.

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

ASSISTANT/ASSOCIATE PROFESSOR for a tenure-track research position. Responsibilities relate to systems analysis research on conservation agricultural production and/or postharvest systems for developing mathematical, statistical, and stochastic computer models with a team of multidisciplinary scientists. Ph.D. in agricultural engineering or related engineering with background in agricultural systems or agricultural sciences with strong background in mathematics, statistics, and systems analysis techniques. Send curriculum vitae and four letters of reference to: **Dr. Brahm P. Verma, Professor and Head, Agricultural Engineering Department, University of Georgia Experiment Station, Experiment, (Griffin) Ga. 30212; telephone: 404-228-7216.** Closing date is 15 August 1984 or until a suitable applicant is identified.

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

POSITIONS OPEN

ASSISTANT PROFESSOR. Tenure-track position in the Department of Physiology. Applicants should have at least 2 years of postdoctoral training and hold the M.D. and/or Ph.D. degree in physiology. Excellence in teaching medical and graduate students is expected. Research interest in cardiovascular physiology with a cellular emphasis is preferred. Applicant should send curriculum vitae, list of publications, a brief statement of research interests, and at least three names of references by 15 September to: **James P. Filkins, Ph.D., Professor and Chairman, Department of Physiology, Loyola University of Chicago, Stritch School of Medicine, 2160 South First Avenue, Maywood, Illinois 60153.**

Loyola University of Chicago is an Equal Opportunity/Affirmative Action Employer.

ASSISTANT PROFESSOR

The Department of Laboratory Medicine and Pathology, University of Minnesota Medical School, announces an open position at the assistant professor level in the Division of Medical Technology. Responsibilities include teaching immunohematology and related subjects at the undergraduate and graduate levels, participation in development and direction of an active scientific research program, and some administrative duties. Opportunity may exist for participation in service laboratories. Candidates must have an M.S. degree in a basic or clinical science (Ph.D. preferred) and at least two years of clinical laboratory experience. Certification as a medical technologist and/or SBB(ASCP) and teaching experience desirable. Applications must be received by 30 October 1984. Send letter of application, curriculum vitae, including bibliography, and names of three references to: **Helen M. Hallgren, Department of Laboratory Medicine and Pathology, Box 198 Mayo Memorial Building, University of Minnesota, Minneapolis, Minn. 55455.** *The University of Minnesota is an Affirmative Action Employer and specifically invites and encourages applications from women and minorities.*

The Department of Biology at Georgia State University invites applications for an anticipated tenure-track position (**ASSISTANT PROFESSOR** level) with expertise in **HUMAN PHYSIOLOGY** (effective March 1985). Preference will be given to candidates with postdoctoral experience who have demonstrated outstanding potential for independent research. Salary will be commensurate with qualifications. The successful candidate will be expected to teach introductory courses in physiology and graduate course in area of specialization. Applications, including curriculum vitae, reprints, a statement of research plans, and three letters of reference should be sent to: **Chairman, Department of Biology, Georgia State University, Atlanta, Georgia 30303.** Deadline for receipt of applications is 15 September 1984. *Georgia State University, a unit of the University System of Georgia, is an Equal Educational Opportunity Institution and is an Equal Opportunity/Affirmative Action Employer in compliance with Title IX and other Civil Rights laws.*

BIOCHEMIST: The Departments of Orthopaedics and Biochemistry, Louisiana State University (LSU) Medical Center, invite applications for a faculty position in the area of connective tissue or collagen biochemistry. The appointment can be made at the level of assistant or associate professor or professor depending upon experience. In addition to the School of Graduate Studies, the Medical Center includes Dental, Medical, and Nursing Schools, and the School of Allied Health Professions. Applicants should send curriculum vitae, bibliography, a three-page summary of research goals, and the names of three references to the following: **Dr. Robert D'Ambrosia, Biochemistry Search Committee, Department of Orthopaedics, LSU Medical Center, New Orleans, Louisiana 70112.**

The Louisiana State University is an Equal Opportunity/Affirmative Action Employer.

CLINICAL ASSISTANT PROFESSOR position available in the University of Oklahoma, Department of Pediatrics. Research biochemist. Nontenure position. Applicant must have Ph.D. and 4 to 5 years of postdoctoral experience in membrane biochemistry, isolation and purification of membrane glycoproteins, carbohydrate analysis, and immunochemistry. Preferably experience with epithelial cells from mammalian intestine. Publication record essential. Send curriculum vitae to: **Dr. Ramon Torres, Professor of Pediatrics, Chief of the Pediatric Gastroenterology Section, Oklahoma Children's Memorial Hospital, P.O. Box 26307, Oklahoma City, Oklahoma 73126.**

POSITIONS OPEN

ASSISTANT PROFESSOR—RADIATION THERAPY

Requirements: M.D. and Board-certified in therapeutic radiology. Postresidency, academic experience, and experience and training in interstitial radiation therapy. Must be interested and experienced in academic research and writing. Salary open to negotiation depending upon experience. Apply to: **Search Committee, Department of Therapeutic Radiology, Box 494 University Hospitals, 420 Delaware Street, SE, Minneapolis, Minnesota 55455,** before 17 August 1984.

The University of Minnesota is an Equal Opportunity Educator and Employer and specifically invites and encourages applications from women and minorities.

ASSISTANT PROFESSOR OF ZOOLOGY The Ohio State University, Lima Campus

The Department of Zoology of The Ohio State University invites applications for a tenure-track position at the assistant professor level at the Lima Regional Campus of The Ohio State University, Lima, Ohio. Responsibilities will include teaching obligations in general biology and zoology and/or in introductory physiology and anatomy. Scholarly activities in research in the area of special interest are expected as well as participation in committee assignments and student advising. The appointment begins autumn quarter 1984 and the annual stipend for the 9-month period is \$22,080 to \$25,080, depending on qualifications and past experience. Please send curriculum vitae, copies of recent publications, and the names of three references from whom we may request letters of recommendation. Applications will be accepted until 17 August 1984. Send applications to: **Search Committee, Department of Zoology, The Ohio State University, 1735 Neil Avenue, Columbus, Ohio 43210.** *Women and minorities are urged to apply.*

The Ohio State University is an Affirmative Action/Equal Opportunity Employer.

CHAIRPERSON DEPARTMENT OF HORTICULTURE UNIVERSITY OF WISCONSIN-MADISON

Established plant scientist with demonstrated research, instruction and/or public service productivity and leadership experience is sought. Applicants must have a Ph.D. and a desire to continue professional activity in addition to administrative responsibility. The chairperson acts as executive officer of the department with responsibilities to the dean, College of Agricultural and Life Sciences, and to the departmental faculty which he/she chairs. The department is housed in a modern facility, has 25 faculty members, established graduate and undergraduate instructional programs, well-developed extension and public service programs, and recognized research programs in several phases of horticulture and plant breeding. Nominations and applications are invited through 1 November 1984, or until the position is filled. To apply, submit curriculum vitae, list of publications, and at least three letters of recommendation to: **Dr. Elden J. Stang, Chair, Search and Screen Committee, Department of Horticulture, 1575 Linden Drive, University of Wisconsin-Madison, Madison, Wis. 53706.**

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

NATIONAL SCIENCE FOUNDATION Washington, D.C. DIVISION OF COMPUTER RESEARCH

The Directorate for Mathematical and Physical Sciences is seeking qualified applicants for the position of **Deputy Director, Division of Computer Research.** This position is in the Senior Executive Service with a salary currently ranging from \$59,223 (ES-1) to \$64,008 (ES-3) for new SES appointment. Appointment may be on either a career or 2- or 3-year rotational basis. Applicants must have a Ph.D. or equivalent professional experience in computer sciences or related field, substantial research experience and strong evidence of scholarship in computer research, and supervisory/managerial experience involving the achievement of organizational objectives through subordinates.

Applicants should contact: **Margaret Cademartori, telephone 202-357-7857,** to request announcement EPS 84-24S (career appointment) or announcement EPS 84-34S (limited term appointment). Announcements contain complete qualification requirements and application procedures. Applications must be received by 5 October 1984.

Equal Opportunity Employer

POSITIONS OPEN

UNIVERSITY OF OKLAHOMA COLLEGE OF MEDICINE

Candidates for faculty appointment are invited to apply for the following positions:

BIOCHEMISTRY AND MOLECULAR BIOLOGY (number 0010)—**Research associate.** Faculty member to perform experiments in the area of the molecular biology of gene regulation with minimal supervision by the laboratory director to write papers and grant applications and to help supervise graduate assistants and technicians. Minimum qualifications: Ph.D. in molecular biology, biochemistry, or related area with emphasis on nucleic acid techniques. Background in cellular and developmental biology desirable. Selected candidate will be eligible for non-tenured faculty appointment.

Curriculum vitae may be directed to: **The University of Oklahoma College of Medicine, Department of Biochemistry and Molecular Biology, P.O. Box 26901, Oklahoma City, Okla. 73190.** PLEASE identify the vacancy number of the position as indicated. *We are an Equal Opportunity Employer.*

CANCER INVESTIGATOR

Research leadership position in immunology and molecular biology of human tumors. Applications are invited to fill an immediate position in the Department of Microbiology and Immunology. Ph.D. required with at least 3 years of postdoctoral experience in immunological and molecular research. Salary will be commensurate with experience. The applicant is expected to maintain existing and develop new, strong, and independent research programs on human tumors with emphasis on bladder cancer and lymphoma. Monoclonal antibody and transfection techniques are currently used. Please send curriculum vitae and a brief statement of research interest along with the names of three references by 17 August 1984 to: **Dr. John L. Fahey, Department of Microbiology and Immunology, University of California, Los Angeles, School of Medicine, Center for Health Sciences, Los Angeles, California 90024.** *The University of California is an Equal Opportunity/Affirmative Action Employer.*

CELLULAR OR MOLECULAR IMMUNOLOGIST UNIVERSITY OF KENTUCKY

The Kentucky Tobacco Research Board has approved the establishment of a research program in the area of pulmonary immunology. Of particular interest is research in the area of: induction and maintenance of pulmonary immunity, pulmonary inflammation, pulmonary defense mechanisms, immune aspects of pulmonary resistance to tumorigenesis, pulmonary macrophage physiology and recruitment and function of lymphocytes following local immunization in the lung. Consideration will also be given to cellular or molecular immunologists with an interest in expanding their current research program to include some aspect of pulmonary immunology. The program will complement a well established immunology program in the College of Medicine.

The position is open to a junior or senior scientist with a Ph.D., M.D., or D.V.M. degree and qualifications for tenure-track appointment at the level of assistant to full professor in an appropriate academic department in the College of Medicine. The salary is negotiable and will be commensurate with the qualifications of the individual. The program will receive substantial research support from the Kentucky Tobacco Research Board through the Tobacco and Health Research Institute. Closing date for applications is 15 September 1984 or until position is filled. Interested individuals should send curriculum vitae, list of professional references, and outline of research interests to: **Dr. Alan M. Kaplan, Chairman, Pulmonary Immunology Search Committee, Department of Medical Microbiology and Immunology, University of Kentucky, College of Medicine, Lexington, Kentucky 40536-0084.** *Affirmative Action/Equal Opportunity Employer.*

FACULTY POSITION, MICROBIOLOGY. Tenure-track position as assistant or associate professor rank available 1 January 1985. Applicants must have at least 2 years of postdoctoral experience. The appointee will be expected to develop an independent research program with a strong molecular orientation in mechanisms of microbial pathogenicity and to participate in teaching medical, dental and graduate students. Send curriculum vitae, names of three references, and a general statement of projected research by 1 November 1984 to: **Dr. L. William Clem, Department of Microbiology, University of Mississippi Medical Center, Jackson, Miss. 39216-4505.** *Equal Opportunity Employer, M/F/H/V.*

THE U.S. ARMY MEDICAL RESEARCH AND DEVELOPMENT COMMAND IS ACCEPTING PROPOSALS FOR RESEARCH IN VIRAL AND RICKETTSIAL DISEASES OF MILITARY IMPORTANCE

DAMD17-84-R-0099, ISSUE DATE: 1 AUG 1984

Novel methods to mitigate the pathophysiologic effects in military personnel induced by viruses and rickettsiae following natural infections and/or potential biological warfare agents are sought. Studies which address the identification and characterization of the pathogen, agent-host interactions, and the basis of immunity following immunization with live or subunit immunogens are of special interest.

Program emphasis is on flaviviruses, alphaviruses, and other arboviruses of military importance, the various infectious agents producing hepatitis, and viruses and rickettsiae capable of eroding combat strength in troops deployed in overseas areas. Research areas of interest include:

- EPIDEMIOLOGY**—Understanding of geographic disease potential and mechanisms of maintenance and transmission.
- STUDY OF STRAINS**—Novel methods for identification and characterization of strains of viruses and rickettsiae isolated from overseas areas.
- MOLECULAR VIROLOGY AND RICKETTSIOLOGY**—Studies on basic structure of viruses and rickettsiae in relation to pathophysiologic process, development of immunogens, etc.
- NUCLEIC ACID PROBES**—Development of probes useful in detection of genomes in samples from animal models, studies of nucleic acid and amino acid sequences, etc.
- ATTENUATED IMMUNOGENS**—Elucidation of determinants of attenuation and methods for studying their genomic stability.
- VIRAL AND RICKETTSIAL IMMUNOGENS**—Novel approaches based on nucleic acid recombinants, synthetic peptides, anti-idiotypes, alternate subunit derivatives, etc.
- PRODUCTION OF ANTIGENS**—Techniques for large scale production of viral and rickettsial antigens for human vaccine use.
- ASSAY OF IMMUNOGENS**—Novel *in vivo* or *in vitro* techniques for assay of vaccines.
- STABILIZATION OF IMMUNOGENS**—Techniques to increase stability of vaccines during optimum or adverse conditions of storage.
- IMMUNOGEN POTENTIATION**—Methods suitable to increase response of humans to vaccines.
- IMMUNE MECHANISMS**—Studies of humoral, mucosal and cell mediated responses and their role in protection of convalescents and vaccine recipients.
- HYBRIDOMAS**—Development of hybridoma cells secreting antibody to specific epitopes. Novel methods of producing T-cell hybridomas.
- PASSIVE THERAPY AND/OR TREATMENT**—Development and rationale for use of intravenous immunoglobulin from natural or laboratory derived sources.
- CHEMOTHERAPY**—Usefulness of various combinations of immune modulators and antiviral drugs in treatment of model viral infections.
- ENHANCEMENT OF IMMUNE MODULATORS**—Techniques for targeted delivery, sustained release, time release, etc.
- EFFICACY OF ANTIVIRAL DRUGS**—Novel *In vivo* and *In vitro* techniques for initial screening.
- GROWTH MEDIA**—Development of sources of semidefined or defined media which support growth of cells suitable for production of vaccines for human use.
- EARLY RAPID DIAGNOSIS**—Studies to improve basic understanding of the process.

Proposals may be submitted for one or more of the above topics or a specific portion of one topic. A proposer may submit separate proposals on different topics or different proposals on the same topic. The Government does not guarantee an award in each topic area.

In accordance with the Federal Acquisition Regulation (FAR) any contracts awarded under this solicitation may be of any type or combination of types which will promote the best interests of the Government. It is anticipated that multiple-year, incrementally-funded, level-of-effort type, cost reimbursement contracts will be awarded. Each increment will be approximately 12 months. Duration of the contract should be commensurate with the proposed scope of work but in no case shall exceed five years.

Research proposals shall include a table of contents and should cover the points cited below, insofar as they are applicable. The technical and business sections of the proposal must be separate. No cost information shall be included in the technical portion of the proposal.

- a. *Name and Address of Organization.* At least one copy must carry the original signatures of an official authorized to legally bind the organization.
- b. *Title of Proposed Research.*
- c. *Description of Proposed Research.* Submit a detailed description of the research objectives, hypothesis, approach, methods, relationship to the state of knowledge in the field and to comparable work in progress elsewhere, military significance, previous relevant experience, bibliography and pertinent literature citations.
- d. *Research Involving Human Subjects.* USAMRDC policies governing the use of human subjects parallel those contained in 45 CFR 46, 21 CFR 312 and DoD Instruction 5030.29. Submit a copy of completed Form HHS 596 with the proposal.
- e. *Research Involving Animals.* Acknowledgement that conduct and reporting of the studies shall adhere to the "Guide for the Care and Use of Laboratory Animals" (NIH) 78-23, (1978) must be included.
- f. *Research Involving Nucleic Acid.* Research involving nucleic acid must meet applicable NIH guidelines.

g. *Personnel.* Qualifications of the Principal Investigator and other senior professional personnel and the time each will devote to the research. This information, to the extent that it is information about an individual, is subject to the requirements of the Privacy Act of 1974 (5 USC 552 (a)). The principal purpose and routine use of the information are for the valuation of the qualifications of those persons who will perform the research. Disclosure of the information is voluntary, but failure to provide such will prevent evaluation of the proposal.

h. *Facilities and Equipment Available.*

i. *Cost Estimate.* An estimate of the total research project cost with a breakdown of funds by category (direct labor cost, indirect cost, property or equipment cost, travel cost, publication cost, consultant cost, other direct costs, fee or profit) by year must accompany each proposal and must be submitted on SF 1411 with complete supporting information. *No cost information shall be included in the technical portion of the proposal.*

Every effort will be made to protect the confidentiality of the proposal and any evaluations. The submitter may mark the proposal with a legend such as that provided in FAR 52.215-12. Proposals containing a more restrictive legend shall not be considered.

Unnecessarily elaborate brochures or presentations beyond that sufficient to present a complete and effective proposal are not desired.

Any proposal received after the exact time specified for submission of proposals will not be considered unless the circumstances described in FAR 52.215.10 apply.

CONSIDERATIONS

Reports. Quarterly, annual and final progress reports shall be required in accordance with the schedule of any resultant contract. Reprints of any publications resulting from sponsored research shall also be provided to the USAMRDC.

Contract Provisions. Contracts awarded shall contain, where appropriate, detailed special provisions concerning patent rights, rights in technical data and computer software, reporting requirements, equal employment opportunity, care of laboratory animals, use of human subjects, good laboratory practices requirements, acquisition and disposition of equipment, and other requirements. Contracts shall also incorporate all general provisions required by the FAR.

METHOD OF SELECTION AND EVALUATION CRITERIA

Proposals will be evaluated on a competitive basis by review committees composed of scientists knowledgeable in the topic area. Proposals will be evaluated first on their relevance to the chosen topic. Those found to be relevant will then be evaluated using the criteria listed below.

- a. *Research Objective.* Is it clear, valid and logical?
- b. *Military Requirement.* Is it clear, unique, relevant and significant?
- c. *Scientific Feasibility.* Are the plans, methods and procedures feasible, clear, valid, adequately referenced and state-of-the-art?
- d. *Investigator Competence.* Has the investigator demonstrated the scientific and administrative capability to effectively conduct the proposed research?
- e. *Requested Budget.* Is the budget realistic in terms of proposed objective, methodologies, supplies, salaries and travel?
- f. *Safety Considerations.* Is the investigator cognizant of the requirements for and capable of working with any hazardous materials involved? Has the organization agreed to allow storage and use of such materials in its facility?
- g. *Animal Use/Human Use Consideration.* Are the studies, in which animal models or human subjects to be used, to be conducted in accordance with all appropriate regulations? Are all necessary assurances of compliance and certificates provided? (NOTE: Failure to adequately document compliance will prevent evaluation of the proposal.)

Although cost will be a factor in the evaluation of proposals, technical merit in the above listed areas will be a more significant factor in the selection of a contractor. Further, to be selected for an award, the proposed cost must be realistic and reasonable.

Negotiations will be conducted with those contractors in the competitive range, determined by the factors in paragraphs a-g above. Final decisions for funding will be made by the USAMRDC based upon these criteria and consideration of possible duplication of other research and program balance. The USAMRDC may elect to fund several or none of the proposed approaches to the same topic. There is no commitment by the USAMRDC to make any awards on any topic, to make a specific number of awards or to be responsible for any monies expended by the proposer before award of a contract. It should be noted that only a duly appointed Contracting Officer has the authority to enter into a contract on behalf of the U.S. Government.

SUBMISSION OF PROPOSALS

Ten copies of the complete proposal are required for review and evaluation. Proposals must be submitted by 4:00 p.m. on 31 August 1984 to:

Commander
U.S. Army Medical Research and Development Command
ATTN: SGRD-RMA/DAMD17-84-R-0099 (Ms. D. Clark)
Fort Detrick, Frederick, MD 21701

Department of Health and Human Services
Public Health Service
Food and Drug Administration (FDA)
Center for Veterinary Medicine

GENETIC TOXICOLOGIST Human Food Safety Program

The Center for Veterinary Medicine, Food and Drug Administration, Rockville, Maryland, is seeking a genetic toxicologist with a broad background in general toxicology who will serve as a scientific reviewer of relevant mutagenicity and toxicity data utilized in the determination of the safety of residues in the edible tissue of food-producing animals administered veterinary pharmaceuticals and feed additives.

The applicant should possess a Ph.D. in cell and molecular biology, tumor biology, toxicology, or a closely related field with at least three or more years of relevant experience or equivalent qualifications. An in-depth knowledge of in vitro mutagenicity assays is required. The candidate should have the ability to make sound and justifiable recommendations and judgments and should have the ability to convey these recommendations both orally and in writing.

This is a Civil Service career-conditional appointment at the GS-13 level with a starting salary of \$36,327.

Benefits include Civil Service retirement and life and health insurance. *The FDA is an Equal Opportunity Employer.*

Submit application (SF-171, Personal Qualifications Statement), current performance appraisal, and names of three references to:

Food and Drug Administration
Personnel Office
Room 4B-03, 5600 Fishers Lane
Rockville, Md. 20857
Attention: Frank Shevock

DIRECTOR OF THE CHILD DEVELOPMENT AND MENTAL RETARDATION CENTER UNIVERSITY OF WASHINGTON

Nominations and applications are invited for the position of director of the Child Development and Mental Retardation Center (CDMRC) located on the University of Washington campus, Seattle, Washington. The CDMRC consists of four operating units (Behavioral Research Unit, Clinical Training Unit, Experimental Education Unit and Medical Research Unit).

Responsibilities: The director is responsible for the administration of the CDMRC; this includes coordinating, facilitating, and encouraging research and training activities and relating these activities to the University community and the community-at-large. The director reports to the vice president for health sciences who is advised by a committee of deans on all matters related to the administration of the CDMRC.

Qualifications: An earned doctorate with demonstrated excellence in academic administration; record of scholarship that would qualify the incumbent for a faculty appointment at the level of professor in one or more of the academic units affiliated with the CDMRC (College of Arts and Sciences, College of Education, School of Nursing, School of Medicine, School of Public Health and Community Medicine, and School of Social Work); firm commitment to interdisciplinary approaches; interpersonal skills and interests to facilitate activities and initiatives among and between the units and academic disciplines represented in the CDMRC; ability to develop, apply and adjust financial and physical plant plans and policies to meet changing research and clinical activities.

Salary: Commensurate with qualifications and experience. Send nominations or letters of application, résumés, and the names and addresses of five references to: Dean Milo Gibaldi, Chair, CDMRC Director Search Committee, C-314 Health Sciences, SC-61, University of Washington, Seattle, Wash. 98195.

Deadline for applications: 30 September. *The University of Washington is an Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

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 discernibly 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 no 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 30 September 1984.

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

DEVELOPMENTAL BIOLOGY—GENETICS— CELL AND MOLECULAR BIOLOGY

The Department of Biology at the University of Utah will make at least two junior level, tenure-track appointments in the above broadly defined areas. We seek outstanding candidate who can contribute to the continued growth and improvement of strong graduate and undergraduate programs in a diverse department. Candidates with research interests bridging two or more of the above specialties (for example, developmental genetics) are of particular interest, but excellence will be the primary criterion in making these appointments. Address applications or nominations to:

Dr. W. Joseph Dickinson
Department of Biology
University of Utah
Salt Lake City, Utah 84112

Please send résumé and three letters of reference by 15 September 1984.

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

DIRECTOR. Maxwell Museum of Anthropology, University of New Mexico, beginning January 1985, pending budgetary approval. Director develops exhibits, budgetary approval. Director develops exhibits, public programs, and manages collections; supervises 16 staff, student employees, and volunteers; and works with Department of Anthropology, other departments, and a friends organization. This senior (associate professor or above), tenure-line, 12-month position, with some teaching, requires Ph.D. in anthropology, proven research/publication education, and 3 to 5 years of museum administrative or curatorial experience. Send letters, curriculum vitae, and names of references to: **Chairman, Search Committee, Maxwell Museum of Anthropology, University of New Mexico, Albuquerque, New Mexico 87131.**

HEAD, DIVISION OF ENVIRONMENTAL HYGIENE AND SAFETY. The Department of Environmental Health, University of Cincinnati, is seeking a qualified scientist to head its Division of Environmental Hygiene and Safety. Environmental and/or industrial hygiene, engineering, physical science and/or analytical chemistry background preferred. The department is a comprehensive interdisciplinary department, with well established research and training programs. It also contains Divisions of Toxicology, Occupational Medicine, Epidemiology and Biostatistics, Bioenvironmental Sciences and Bibliographic Research. Collaboration between divisions as well as with other investigators in the University and elsewhere such as in nearby EPA and NIOSH facilities is encouraged. Unique opportunity for energetic and creative person in rapidly advancing field. Send curriculum vitae, bibliography, and description of experience and research interests as well as names of three references to: **Professor Howard E. Ayer, Department of Environmental Health, University of Cincinnati Medical Center, Cincinnati, OH 45267-0056. Telephone: 513872-5708. An Equal Opportunity/Affirmative Action Employer.**

POSITIONS OPEN

DIRECTOR—SURGICAL ONCOLOGY. The Department of Surgery, University of Wisconsin Medical School, is recruiting a director of the Surgical Oncology Program. Responsibilities include administrative oversight of the program, patient care, teaching of residents and medical students, and directing a laboratory research program. Requires Board-certification in a surgical specialty and 5 years of experience in directing a laboratory research program. Send curriculum by 1 November 1984 to: **Chairman, Department of Surgery, University of Wisconsin Medical School, G5/359 Clinical Science Center, 600 Highland Avenue, Madison, Wis. 53792. The University of Wisconsin is an Equal Opportunity/Affirmative Action Employer.**

DIRECTOR, PULMONARY DIVISION

The Department of Medicine of the University of Minnesota Medical School is seeking applications or nominations for director of its Pulmonary Division. Candidates must be skilled in research, patient care, teaching, and administration. Extramural research funding is highly desirable. Candidates must have an M.D. degree, have completed training in internal medicine and pulmonary medicine, and be qualified for the rank of full or associate professor. Start-up funds and additional funded faculty positions are available. Please send curriculum vitae and applications or nominations to: **I. Dodd Wilson, M.D., Vice Chairman, Department of Medicine, Box 172, University Hospitals, Minneapolis, Minnesota 55455.**

The University of Minnesota is an Equal Opportunity Educator and Employer and specifically invites and encourages applications from women and minorities.

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 with 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—VIROLOGY
The Department of Virology and Epidemiology, Baylor College of Medicine, invites applications for two tenure-track faculty positions in a strong, research-oriented department. We are seeking innovative individuals to establish and/or maintain vigorous, independent, high quality research programs in **VIRAL IMMUNOLOGY OF MOLECULAR VIROLOGY** and to contribute to the departmental graduate program. Academic rank dependent upon qualifications. Salary will be competitive. Applicants should have a Ph.D. or M.D. degree and postdoctoral training. Interested persons should respond by 15 September 1984, by sending curriculum vitae, statement of research interests, and the names of three references to: **Dr. Janet Butel, Search Committee, Department of Virology and Epidemiology, Baylor College of Medicine, 1 Baylor Plaza, Houston, Texas 77030. Baylor College of Medicine is an Equal Opportunity Employer.**

FACULTY POSITION

Stanford University, Department of Psychiatry and Behavioral Sciences, wishes to develop a long-term research and evaluation component as part of psychiatric clinical services. Underlying aim is to integrate clinically relevant research with teaching and patient care.

We seek an experienced, senior individual highly skilled at conducting a wide range of psychiatric treatments, who is an accomplished investigator in psychosocial and treatment evaluation in psychiatry, and who has a proven record of published scholarly and empirical research.

Applicants should send current curriculum vitae to: **Rudolf H. Moos, Ph.D., Department of Psychiatry and Behavioral Sciences, Stanford University, Stanford, California 94305. Stanford University is an Equal Opportunity Employer and welcomes nominations of women and minority group members and applications from them.**

QUALITY CONTROL/ DNA-BASED DIAGNOSTICS

A fast growing Bio-Technology firm has a position with our R & D Department located in the greater New York metropolitan area.

We are seeking an individual with an M.S. or Ph.D. in Chemistry, Biology or Statistics with experience in Clinical Quality Control techniques, experimental design or procedural implementations. The candidate should have excellent verbal and written communication skills and a background in statistical analysis. Experience with DNA and Southern blotting techniques is desired.

The Scientist will have responsibilities for development of quality control procedures to be implemented in a clinical situation, procedural validations and write ups. The Scientist will also provide needed statistical support and oversee training of technical staff for developed procedures.

For prompt consideration, please send resume with salary requirements to Dr. Ronald C. Dorazio.



4 Westchester Plaza
Elmsford, New York 10523

PROGRAM MANAGER

**BASIC RESEARCH IN
ELECTRONIC ENGINEERING
(OPTICAL SIGNAL PROCESSING)**

(#525-84)

The Air Force Office of Scientific Research, Air Force Systems Command, located at Bolling Air Force Base in Washington, DC, invites applications from qualified U.S. citizens with a background in university, Government and/or industrial research. The successful applicant plans and manages a contract research program conducted primarily at universities and industrial laboratories. The research program includes optical signal processing, nonlinear optical computation, image transmission and the physics of related electronic and optical materials, devices and circuits. The program will develop along the chosen applicant's technical capabilities and interests. It is desired that the incumbent possess a PhD in Electrical Engineering, Optical Physics, or equivalent. Demonstrated competence for technical program management is essential. The position is career civil service GM-13 (\$36,327-\$47,226 per year) or GM-14 (\$42,928-\$55,807 per year) depending on qualifications. No prior Government service is required. Send Office of Personnel Management Standard Form 171, "Personal Qualifications Statement" and list of publications to:

**Civilian Personnel Office
(#525-84)
1776 ABW/DPCS-84-3
Attn: Mrs. Hittinger
Andrews AFB MD 20331**

Applications must be received by 24 September 1984

AN EQUAL OPPORTUNITY EMPLOYER

CELANESE IS CREATING THE FUTURE

Unique Research Opportunity In Polysaccharide Microbiology

Celanese has been involved in polysaccharide research for many years. We've made significant strides in finding new ways to use and produce polysaccharides of importance in the food, textile and petroleum industries. And we're not waiting around for others to catch up!

BIOCHEMIST/ MICROBIOLOGIST

A rare opportunity for a rare person—someone with a strong desire to join our professional team of dedicated scientists. We'd like you to have a Ph.D. in Microbiology, Biochemistry or Organic Chemistry—plus 2 years postdoctoral work in a university or industry. But we'll consider any applicant with a distinguished record of accomplishment in one of these fields, or in Genetics or Biochemical Engineering. Good communications skills are essential.

Since your research is keyed toward commercial applications, a sense of entrepreneurship would help. But you'll go from pure to applied research and back again many times over—finding new ways to prepare and isolate existing polysaccharides, researching new potential polysaccharide-producing organisms, and exploring the genetic manipulation of these organisms. You'll help Celanese make better products at lower cost, and find new ways for us to meet the challenges of diminishing natural resources.

You'll work at our conveniently located modern Corporate Technical Center in suburban Summit, NJ—enjoying an excellent salary and benefits package, and a professionally stimulating environment. If you think you've got what it takes to help Celanese create a better future for us all, we want to hear from you. For immediate confidential consideration, please send your resume, including salary history, to: Employee Relations Dept. P.K.S.

**CELANESE RESEARCH COMPANY
86 Morris Avenue
Summit, New Jersey 07901**

We Are An Equal Opportunity
Employer M/F/H/V

 **CELANESE**
Summit Technical Center

POSITIONS OPEN

FACULTY POSITION: Assistant professor of medicine. Physician with post-residency internal medicine training in endocrinology, metabolism, and nutrition. Proven research experience with competence to conduct in vivo human studies of substrate turnover utilizing stable isotopes, indirect calorimetry, and body composition techniques. Send curriculum vitae to:

Robert G. Campbell, M.D.
Monroe Community Hospital
435 East Henrietta Road
Rochester, New York 14603

TENURE-TRACK FACULTY POSITION IN TOXICOLOGY, University of Arizona, to develop a research program in some area of toxicology related to food science and nutrition, and to teach an undergraduate course in food analysis and a graduate course in area of interest. Position in approximately 85 percent research, 15 percent teaching. Send résumé, complete list of publications, copy of official transcript if degree was obtained in the last 3 years, and names of three references to: **Darrel E. Goll, Nutrition and Food Science, University of Arizona, Tucson, Ariz. 85721. An Equal Opportunity/Affirmative Action/Title IX/Section 504 Employer.**

FACULTY POSITION IN NEUROSCIENCE-MORPHOPHARMACOLOGY

ASSISTANT OR ASSOCIATE PROFESSOR OF PHARMACOLOGY—The Department of Pharmacology at the University of Vermont College of Medicine invites applications for a tenure-track position. This position is designed for someone with an interest in studying the peripheral neural control of the circulation. The research facilities available allow a broad spectrum of techniques to be utilized, and include a JEOL 100CX Transmission EM and a Cambridge Stereoscan 100. Applicants for assistant professor should have a Ph.D. or M.D. degree and two or more years of postdoctoral training and experience in electron microscopy techniques. Candidates must demonstrate competent teaching ability and excellence in independent research, and have strong commitments to both activities. The successful candidate will be expected to fulfill moderate teaching responsibilities in medical, undergraduate, and graduate courses and to establish a vigorous and productive independent research program that merits extramural support. Preference will be given to those whose research areas complement those of the existing faculty. *Women and minority candidates are encouraged to apply.* Letters of application, curriculum vitae, a brief description of research and career goals, and the names of three referees must be received by 14 September 1984. Address to: **Chairman, Search Committee, Department of Pharmacology, College of Medicine, University of Vermont, Burlington, Vermont 05405.**

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

FOREST BIOTECHNOLOGY—Assistant or associate professor. Appointee shall direct an innovative and contemporary research program in gene regulation of commercial tree species. Basic research in protoplast culture, molecular biology and biochemistry with emphasis on growth regulation, disease resistance and/or stress tolerance is desired. The university is currently strengthening a multidisciplinary program in plant improvement, providing the opportunity for cooperation with other scientists. A support person will be assigned to the position. An earned Ph.D. in plant physiology, microbiology, biochemistry, molecular biology, or a related field is required. Salary commensurate with qualifications. Send letter of application, curriculum vitae, college transcripts, and three letters of recommendation to: **Arnett C. Mace, Jr., Director, School of Forest Resources and Conservation, University of Florida, Gainesville, Florida 32611. Telephone: 904-392-1791. Refer to Position Number 93462. Closing date: 15 September 1984.**

UNIVERSITY OF CALIFORNIA, SAN FRANCISCO—GASTROENTEROLOGY: POSTDOCTORAL POSITION available immediately for biochemist to study microsomal glucuronidation. Background in enzyme purification, enzymology, immunochemistry, or molecular biology preferred. One year of guaranteed support, possibility of additional years. Send curriculum vitae and references to: **Norbert Blackkaert, M.D., Department of Laboratory Medicine, Room L-518, University of California, San Francisco, Calif. 94143. The University of California is an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.**

POSITIONS OPEN

FOREST ECOLOGIST

The New York Botanical Garden, Institute of Ecosystem Studies, offers a rare challenge to a forest ecologist to carry out research in a 40-acre forest in the New York Botanical Garden, Bronx, N.Y. The forest ecologist will initiate and coordinate research leading to a management plan to perpetuate this highly stressed forest. Funds are available for initial one-year appointment plus staff assistance and expenses. Continuation subject to funding availability. Ph.D. or equivalent experience required. Send letter, curriculum vitae, and three references by 31 August to:

Gene E. Likens
Institute of Ecosystem Studies
Mary Flagler Cary Arboretum
Box AB
Millbrook, N.Y. 12545

The Institute of Ecosystem Studies is an Equal Opportunity Employer.

Applications for a tenure-track position are invited from individuals with doctoral training in GENETICS and postdoctoral training in an academic setting. Applicants in an area of eukaryotic genetics who are studying problems using molecular approaches are preferred. Successful candidates will be expected to pursue a vigorous independent research program and to teach undergraduates in genetics and graduate students in an area of their specializations. Applications should include curriculum vitae, recent publications and grant support, a statement of proposed research plans, and the names of three scientists willing to write letters of recommendation. The starting date for this position will be between 1 January 1985 and 1 September 1985. Applications should be sent by 15 October 1984 to: **Dr. David Sullivan, Department of Biology, Syracuse University, Syracuse, New York, 13210. Syracuse University is an Affirmative Action/Equal Opportunity Employer.**

IMMUNOLOGIST

The Fred Hutchinson Cancer Research Center has one or two positions for immunologists. We are seeking candidates who have significant research accomplishments and potential for further independent growth. Successful candidates will be expected to secure independent research funds. While we will consider persons in all areas of immunology, we are most interested in individuals who may interact with the molecular biology, membrane research and/or clinical research programs at the Center. Interested individuals should submit their curriculum vitae list of references, and a brief description of their current and future research interests to: **Irwin D. Bernstein, M.D., Chairman, Immunology Search Committee, Fred Hutchinson Cancer Research Center, 1124 Columbia Street, Seattle, Wash. 98104. Equal Opportunity Employer.**

IMMUNOLOGIST (Ph.D.)

Research associate needed to work with principal investigator in studies of the pathogenesis of immune disorders of the blood. Midwestern location. Two years of previous postdoctoral experience required. Background in immunochemistry desirable, but not essential. Excellent opportunity for professional development in an exciting research environment. Send curriculum vitae and other particulars in confidence to: **Box 180, SCIENCE.**

An Affirmative Action/Equal Opportunity Employer

MOLECULAR GENETICIST with an interest in exploiting restriction fragment length polymorphisms and other molecular genetic characters, to establish a new laboratory in our Genetics Department. Major collaborative projects among our existing Biochemical Genetics, Population Genetics, and Immunogenetics Laboratories involve genetic influence on predisposition to atherosclerosis in baboons; regulation of immune functions and of X-chromosome inactivation in marsupials; and organization of genes in and near the major histocompatibility complexes of mice, rats, marsupials, baboons and humans. Animal resources include over 2800 baboons and 1000 marsupials in addition to standard laboratory animals. The successful applicant will be expected to develop a strong independent research program and will have the opportunity to collaborate in any of the above projects. Academic affiliation is possible. This is an excellent opportunity for a creative scientist in a young, expanding department. Send résumé, statement of research interests, and names and addresses of three references to: **Personnel Manager, Southwest Foundation for Biomedical Research, P.O. Box 28147, San Antonio, Texas 78284. Equal Opportunity/Affirmative Action Employer.**

POSITIONS OPEN

INSTRUCTOR/RESEARCH ASSISTANT PROFESSOR/BIOCHEMIST

Applications are invited for this full-time, nontenure-track position beginning in the fall/winter 1984. The appointee will carry out research to elucidate the function of the *clb* gene, which produces combined lipase deficiency in mice. Applicants should be talented biochemists with at least 2 years of postdoctoral experience in the general area of enzyme regulation. Expertise in the production of monoclonal antibodies would be extremely helpful. Salary is highly competitive and benefits are much better than average. Send curriculum vitae, summary of research experience, and the names, addresses, and telephone numbers of three references to: **Dr. J. R. Paterniti, Jr., Search Committee, Division of Arteriosclerosis and Metabolism, Department of Medicine, Mount Sinai School of Medicine, 1 Gustave Levy Place, New York, N.Y. 10029. An Equal Opportunity Employer.**

THE UNIVERSITY OF SYDNEY

LECTURESHIP IN PLANT ANATOMY AND PLANT PHYSIOLOGY—SCHOOL OF BIOLOGICAL SCIENCES (Reference Number 26/06).

Applications are invited from persons qualified to teach functional plant anatomy (up to second year) and to participate in teaching plant physiology (up to third year); to establish a related research programme and to supervise research students.

LECTURESHIP—SCHOOL OF BIOLOGICAL SCIENCES (Reference Number 26/07).

The School seeks to strengthen teaching and research in eukaryotic molecular genetics. Applications are invited from persons with appropriate qualifications in molecular biology, and with a special interest in areas related to eukaryotic gene structure and function.

Salary range: A\$24,353 to A\$31,994 per annum (under review).

Appointments to lectureships are capable of leading to tenure but are usually probationary for 3 years. The University reserves the right not to proceed with any appointment for financial or other reasons.

Applications, quoting reference numbers, including curriculum vitae, list of publications, and names of three referees, to: **The Registrar, University of Sydney, NSW 2006, Australia,** by 31 August 1984, from whom further information is available.

MOLECULAR IMMUNOLOGY RESEARCH POSITION. Ph.D.—Postdoctoral/academic research position in molecular immunology with mucosal immunology group. Experience in molecular biology and knowledge of cellular immunology required. Academic research requires 2 years of postgraduate work and established bibliography. Reply to: **Dr. Martin Kagnoff, Department of Medicine, M-023D, University of California, San Diego (UCSD), La Jolla, Calif. 92093,** by October 1984. Salary set within UCSD research series salary scale. *UCSD is an Equal Opportunity/Affirmative Action Employer.*

MUSEUM CURATOR, INVERTEBRATE PALEONTOLOGY. Applications are sought from invertebrate paleontologists with substantial curatorial experience and strong publication records. Familiarity with Mesozoic and/or Cenozoic marine mollusks of western North America desired. Salary: \$20,172 to \$37,500. Send résumé and names of three references by 1 September to: **Dr. E. C. Wilson, Natural History Museum of Los Angeles County, 900 Exposition Boulevard, Los Angeles, Calif. 90007. Telephone: 213-744-3320. An Equal Opportunity Employer.**

NMR FACULTY POSITION

A position is open at the rank of associate or full professor for an NMR spectroscopist with 2D-FT and in vivo expertise. The successful candidate will have responsibility for a Bruker Biospec 2.3/400 Imager/Spectrometer and ready access to a Bruker AM 400 (widebore) spectrometer as well as a Bruker BNT-1100 whole body imager. All three instruments will be part of the Baylor College of Medicine NMR Center located at The Woodlands campus, about 30 miles north of the main campus in Houston. Ample opportunities exist for interaction with biophysicists, biochemists, physician scientists, and others with biomedical expertise. Primary appointment will be in the Department of Biochemistry with opportunities for joint appointment in other departments. Interested candidates should send curriculum vitae and three references to: **Dr. Joel Morrisett, NMR Search, Baylor College of Medicine, The Methodist Hospital, M.S. 601A, Houston, Texas 77030. An Equal Opportunity/Affirmative Action Employer.**

CHIEF, LABORATORY OF VIRAL CARCINOGENESIS

National Institutes of Health
National Cancer Institute

The National Cancer Institute has an opening for Chief, Laboratory of Viral Carcinogenesis. Duties include the scientific and administrative supervision of a broad and comprehensive program of research in experimental oncology. Directs complex studies involving several disciplines including oncological and comparative virology, immunology, biochemistry, molecular and cellular biology, genetics, clinical medicine, and pathology.

The position requires the leadership and experience in one or a combination of the above disciplines. Experience and background in program planning, implementation, administration and evaluation of in-house as well as collaborative research is required.

In addition to three years of experience, minimum educational requirements include a 4 year course of study in an accredited college or university leading to a bachelor's degree with major study in microbiology, chemistry or genetics. A doctorate or equivalent training in speciality area is desirable.

This is a Civil Service Career-Conditional Appointment under the Merit Pay System at the GS-15 level with a salary range of \$50,252 to \$65,327 depending on qualifications of the applicant selected. Benefits include Civil Service Retirement/Social Security, life and health insurance. This is a supervisory position and may require the incumbent to serve a one year probationary period. U.S. Citizenship is required. Submit application (SF-171, Personal Qualifications Statement), current performance appraisal and names of three references to:

Ms. Rados, Cancer Personnel Office, Bldg. 31, Rm. 3A23, 9000 Rockville Pike, Bethesda, MD 20205; Tel: 301/496-6864. Applications must be received or postmarked by September 21, 1984. NIH is an equal opportunity employer.

BACTERIOLOGIST

Kallestad, a leading medical diagnostic company located in Austin, Texas, is seeking highly motivated scientists in bacteriology.

Position requires Ph.D. plus at least 2 years experience in identification and characterization of bacterial surface antigens. Supervisory and industrial experience desirable but not essential.

Technical Staff:

B.S. or M.S. level personnel with at least 2 years of research experience will be considered for technical support staff.

Austin is located in the hill country of Central Texas. The University of Texas and numerous high technology companies provide Austin with a rich intellectual and cultural environment. Nearby lakes and rivers provide excellent opportunities for outdoor recreation.

Kallestad offers competitive salary and benefits. Please send resume and salary requirements to: Personnel Office, Kallestad Laboratories, 2000 InterFirst Tower, Austin, Texas 78701.

Kallestad is an equal opportunity employer.

Kallestad
LABORATORIES, INCORPORATED

IMMUNO

AKTIENGESELLSCHAFT FÜR CHEMISCH-MEDIZINISCHE PRODUKTE
RESEARCH CENTER ORTH (near Vienna)

Molecular Biologists

We are expanding our program for genetically engineered biomedical products.

We are seeking persons with proficiency in recombinant DNA-technology plus experience in gene cloning.

Our program includes development in mammalian, yeast, bacterial and viral systems.

The candidate must have a Ph. D. degree from a recognized university, at least two years postdoctoral experience, and an appropriate record of research productivity.

We offer an excellent working environment in a recently completed research facility with a commitment to maintaining contemporary equipment and technologies.

Interested persons should send a resume and three letters of recommendation to

IMMUNO AG

Dr. St. Karwautz, Personnel Manager
Industriestraße 72
A-1220 Vienna, Austria



ISNAR

DIRECTOR GENERAL

International Service for National Agricultural Research

The International Service for National Agricultural Research (ISNAR), with its headquarters in The Hague, Netherlands, was established in 1980. It is one of thirteen international agricultural research organisations which are supported by the Consultative Group on International Agricultural Research (CGIAR), an association of official and private donor agencies, co-sponsored by FAO, UNDP and the World Bank.

ISNAR's working language is English. It strengthens national agricultural research capacities of developing countries by providing assistance in research planning, research organisation, research management and in formulating research policy. Its multi-disciplinary staff conducts reviews of national research programmes and organisations, provides training, arranges workshops and conferences, disseminates information and does research on research systems.

Dr. William K. Gamble, ISNAR's first Director General retires in 1985, and his successor would be expected to have—

- experience in organisation, administration and management preferably in agricultural research in developing countries
- knowledge of conditions in developing countries
- contacts with donor agencies
- proficiency in English and French or Spanish

Those interested in being considered for the post of Director General should apply enclosing an up-to-date curriculum vitae by not later than November 1984 to

The Chairman,
ISNAR Search Committee,
35 Clarence Road,
Harpden,
Herts. AL5 4AH
ENGLAND.

If required, additional information will be provided by ISNAR, P.O. Box 93375, 2509 AJ The Hague, Netherlands.

Associate Research Scientist

The Pharmaceutical Research and Development Division of Bristol-Myers Company has an excellent opportunity for a Research Scientist to join its Screening and Biological Evaluation Department. Selected candidate will be involved in the development and testing of novel biochemical and biological screens of fermentation broths.

Responsibilities will include enzyme and protein isolation, development and maintenance of tissue culture cell lines, development of methods for membrane receptor/ligand binding studies, preparation and isolation of polyclonal/monoclonal antibodies, EIA and ELISA.

To qualify, you will need an MS in a Biological Science, preferably Biochemistry or Cell Biology, and 2-4 years laboratory experience or equivalent combination of education and experience. Background must include cell culture, enzyme/protein isolation and the preparation of antibodies.

We offer an excellent starting salary, comprehensive benefits and exceptional opportunity for professional achievement. For prompt, confidential consideration, forward your resume with salary history and requirement, to: EMPLOYMENT RECRUITER



**BRISTOL-MYERS COMPANY
RESEARCH AND DEVELOPMENT DIVISION**

P.O. Box 4755, Syracuse, New York 13221

An equal opportunity employer M/F

UNIVERSITY OF ODENSE

Denmark

Department of Molecular Biology

PROFESSOR IN EXPERIMENTAL MICROBIOLOGY

Applications are invited for the tenable chair in experimental microbiology. Candidates should have a distinguished research record in control of gene expression in prokaryotic or eukaryotic microorganisms. Preference will be given to applicants experienced in recombinant DNA technology.

The successful applicant will conduct the teaching program in general microbiology and contribute to graduate and undergraduate teaching programs in molecular biology.

Further information is obtainable from Institute of Molecular Biology, Odense University, telephone (09) 15 86 00, ext. 2391.

The applicant should contain information about the candidate's teaching experience.

The employment field covers the Ministry of Education and the institutions under it. The wage frame is 37, and the salary amounts to Danish Kroner 316.271,08 a year inclusive of bonuses as per the 1st April, 1984.

A professional selection committee will discuss the applications and their recommendation will be sent out to all applicants in its complete form.

Applications in 5 copies, marked "Position No. 0019" enclosing curriculum vitae and documentation for professional and pedagogical activities must be made to the Queen and sent together with all enclosures also in 5 copies to: *Journalskontoret, Odense University, Campusvej 55, DK 5230 Odense M, Denmark, so that we will receive it on the 1st October, 1984 as the latest.*

POSITIONS OPEN

LECTURER/DIRECTOR OF SURGICAL RESEARCH LABORATORIES

A cardiothoracic researcher is needed to direct our Surgical Research Laboratories. Duties include, but are not limited to, administration of the laboratories and coordination and participation in major research projects. Ability to perform various sophisticated surgical techniques, including open heart surgery in animals, is required. Teaching surgical techniques to medical students, residents, and fellows is also an essential requirement of this position. A strong scientific background is needed, supported by publications in a related field. A graduate degree in health services administration or a closely related field is essential. Send résumés to: **Dr. Irshad H. Chaudry, Department of Surgery, Yale University School of Medicine, 333 Cedar Street, New Haven, Conn. 06510.** Closing date: 4 September 1984.

An Affirmative Action Employer

MASS SPECTROSCOPIST. The Department of Chemistry, Arizona State University, is seeking applicants for a permanent position as research specialist in mass spectrometry. Responsibility for operation and maintenance of Varian MAT 312 high resolution mass spectrometer. Opportunities exist for collaborative research with faculty. Salary competitive. Ph.D. in chemistry preferred with strong background in mass spectrometry. Experience in one or more of the following areas is desirable: GCMS, FAB/SIMS, MIKES, FD, CI. Send résumé to: **Personnel Department, Arizona State University, Tempe, Ariz. 85287,** by 15 September. Send three letters of recommendation to: **Dr. Morton Munk, Department of Chemistry, Arizona State University, Tempe, Ariz. 85287.** *Arizona State University is an Affirmative Action/Equal Opportunity Employer.*

NEUROBIOLOGY POSTDOCTORAL POSITION available to study neuronal growth, development, and transmitter phenotypic expression. Research will involve the study of peptide neurotransmitter metabolism in sympathetic and striatal neurons. Background in biochemistry or immunohistochemistry desirable. Send résumé and two references to: **Dr. John Kessler, Departments of Neurology and Neuroscience, Albert Einstein College of Medicine, 1300 Morris Park Avenue, Bronx, New York 10461.**

POSTDOCTORAL FELLOW

Two postdoctoral positions are available for research on the structure, immunology, and biological activity of protein toxins. Preference will be given to candidates with experience in one or more of the following areas: (i) the use of traditional techniques (for example, column chromatography and HPLC) for protein purification, (ii) the preparation and biological testing of antibodies, (iii) the synthesis and testing of chimeric toxins, or (iv) ligand binding studies on receptors for proteins. Applicants interested in the position should send curriculum vitae, a list of publications, and the names of three references to: **Dr. Lance L. Simpson, Department of Pharmacology, College of Physicians and Surgeons, Columbia University, 630 West 168 Street, New York, N.Y. 10032.** *Columbia University is an Affirmative Action/Equal Opportunity Employer.*

POSTDOCTORAL FELLOW—An opening exists with a group focusing strongly on protein biochemistry and protein (including apolipoprotein)-lipid interactions. Structure-function relationships will be investigated from the perspective of biological relevance. Applicants must have a Ph.D. or equivalent training and appropriate prior postdoctoral training to indicate familiarity with the established methodologies for protein separation, isolation, characterization, and functional studies relating to cholesterol transport. Submit complete résumé and names of three references to: **Dr. R. T. Holzbach, G1 Research Unit, Cleveland Clinic Foundation, 9500 Euclid Avenue, Cleveland, Ohio 44106.**

Affirmative Action/Equal Opportunity Employer

POSTDOCTORAL FELLOW

Position immediately available in a group interested in the cellular and immunological aspects of connective tissue in rheumatoid diseases. Studies utilize cell culture for cloning, attachment and proliferation assays, hybridoma and general immunologic techniques. Salary commensurate with experience. Send curriculum vitae and names of three references to: **Steffen Gay or William T. Koopman, Division of Clinical Immunology and Rheumatology, University of Alabama in Birmingham Medical Center, Birmingham, Ala. 35294.** *An Equal Opportunity Employer.*

DIVISIONAL FELLOW in MATERIALS SCIENCE

\$36,000 to \$50,000
per year

Lawrence Berkeley Laboratory is seeking a scientist with demonstrated innovative research capabilities in areas relating to the fundamental aspects of ceramic processing. The successful candidate will be appointed Divisional Fellow in the Center for Advanced Materials (CAM), for a term of up to five years, with the expectation that the Fellow's professional accomplishments and growth will warrant promotion to a permanent position as Senior Scientist. Applicants should hold a Ph.D. degree in Materials Science or in a related discipline, have a minimum of three years of experience beyond the Ph.D. degree, and be interested in the practical application of scientific principles to ceramic processing. Interested applicants should apply in person or send two copies of curriculum vitae, list of publications, and names of at least three references to: **Lawrence Berkeley Laboratory, Building 90 Room 1042, 1 Cyclotron Road, Berkeley, CA 94720. Refer to Job #A/3027.** An Equal Opportunity Employer M/F/H.



**LAWRENCE
BERKELEY
LABORATORY**

Senior Development Chemist

The Peptide Chemistry Dept. of SmithKline Beckman Corp. is seeking an Organic Chemist to augment our multidisciplinary staff. The scientist's responsibilities will include: the development of novel methodologies in peptide synthesis; assisting in development of large scale peptide synthesis equipment for in-house use; and development of economic, large scale purification methods.

The successful candidate will have:

- Ph.D. in synthetic organic chemistry
- 1-2 years' post-doctoral experience
- Significant experience in synthesis and purification of biological molecules
- Proven research ability evidenced by a superior publication record
- Excellent communication skills
- Experience in peptide chemistry desirable

The Peptide Chemistry Department, located in Palo Alto, thirty miles South of San Francisco, offers an excellent salary, benefits and relocation policy. Please send your resume and publication list in confidence to **A.L. GROSS, SMITHKLINE BECKMAN CORPORATION, 1050 Page Mill Road, Palo Alto, CA 94304.** We are an equal opportunity employer, M/F/H/V.

**SmithKline
Beckman**
CORPORATION

POSTDOCTORAL POSITIONS

With The Biotechnology Division of Standard Oil Company (Indiana)– Corporate Research Department

Openings now exist at Amoco Research Center of Standard Oil Company (Indiana) for recent graduates with training in Bio-Organic Chemistry. Expertise in nucleoside/nucleotide chemistry would be especially desirable. The successful candidates will join on-going research programs involved in DNA diagnostics and enzyme engineering.

Your benefits will come in the form of outstanding professional exposure and a state-of-the-art industrial environment. We are located in Naperville, Illinois, just 30 miles west of Chicago, and offer a choice of urban, suburban, or rural living. These appointments are for one year, renewable for a second by mutual agreement. We offer an exceptional salary and a comprehensive benefits package. If you qualify for a position, please send a resume with a detailed qualifying letter to:



**Professional Recruiting Coordinator
AMOCO RESEARCH
CENTER**
P.O. Box 400
Naperville, IL 60566

An Equal Opportunity Employer M/F/H

Bio-organic Chemist

Antibody-Drug Targeting

The Pharmaceutical Research and Development Division of Bristol-Myers Company has an excellent opportunity for a Research Scientist to join its Immunology Department. Selected candidate will participate in a research program in targeting of cytotoxic agents to tumors with monoclonal antibodies. Responsibilities will include design, synthesis and characterization of antibody-drug conjugates, novel coupling techniques, drug derivatives and linker molecules.

To qualify, you will need a PhD in Organic/Bio-organic Chemistry with a strong background in synthesis. Position requires 1-3 years relevant experience in bio-organic chemistry, protein modification, coupling chemistry, or related applications of synthesis to biomolecular problems. Experience in antibody modification or targeting (drugs, isotopes, toxins), pro-drug design and synthesis or biomimetic chemistry preferred. Demonstrated ability for innovative molecular design and synthetic achievement a must.

At Bristol-Myers, we provide a scientific environment that encourages publication and career development. We offer an excellent starting salary, comprehensive benefits and exceptional opportunity for professional achievement. Our Syracuse, New York location is in an area with fine cultural, educational and recreational advantages. For prompt, confidential consideration, forward your resume with salary history and requirement, to: **EMPLOYMENT RECRUITER**



**BRISTOL-MYERS COMPANY
RESEARCH AND DEVELOPMENT DIVISION**
P.O. Box 4755, Syracuse, New York 13221
An equal opportunity employer M/F

POSITIONS OPEN

PEDIATRIC IMMUNOLOGIST. The Department of Pediatrics of the University of Michigan is seeking applications from BC/BE pediatricians for a full-time, tenure-track faculty position at the assistant or associate professor level. Candidates should demonstrate capability for independent research. Clinical experience in bone marrow transplantation is desirable. The successful candidate will be encouraged to pursue an active research program with an opportunity for a joint appointment in a basic science department. Send inquiries and letters of application, including detailed curriculum vitae, to: **Stanley A. Schwartz, M.D., Ph.D., Director of Immunology, Department of Pediatrics, The University of Michigan, 3073 SPH-I, Ann Arbor, Mich. 48109.** *The University of Michigan is a nondiscriminatory, Affirmative Action Employer. Code 56FO.*

PLANT CELL AND MOLECULAR BIOLOGY UNIVERSITY OF GEORGIA

The Botany Department of the University of Georgia is accepting applications for one or two faculty positions in the general area of plant cell and/or molecular biology. The department has an established program in this area of plant sciences. Appointments can be made at any academic level but it is anticipated at least one of these positions will be filled at the senior level. Successful candidates will be expected to maintain an active research program, contribute to the teaching efforts of the department, and participate in the University of Georgia Center for Plant Cell and Molecular Biology.

Applicants should submit curriculum vitae, statement of research interests, and arrange to have three letters of reference sent to: **Dr. Alan Jaworski, Chairman Search Committee, Department of Botany, University of Georgia, Athens, Ga. 30602,** by 15 November 1984. Applications will be reviewed starting 15 September 1984.

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

PLANT/MICROBIAL MOLECULAR BIOLOGIST: Applications are invited for a faculty position available 1 July 1985 at the associate or professor level in the Department of Microbiology and Cell Science, University of Florida. We are seeking an individual with extensive experience in research and demonstrated ability to acquire funds for and maintain an internationally recognized research program in molecular genetics/molecular biology with emphasis on plant systems. Other qualifications include a Ph.D. in microbiology, genetics, biochemistry, molecular biology, or related discipline. Appointee will be expected to assume a leadership position in this area of research, to supervise and contribute to the education of graduate students and postdoctoral associates, and to interact with other research programs. Excellent facilities and an attractive salary will be provided commensurate with these qualifications. Applicants should submit a résumé of qualifications, a list of published and completed research, future research plans, names of five references, and other relevant information before 1 November to:

Dr. L. O. Ingram
Search and Screen Committee
Department of Microbiology and Cell Science
1059 McCarty Hall
University of Florida
Gainesville, Florida 32611
An Equal Opportunity/Affirmative Action Employer

POSTDOCTORAL POSITIONS IN MAGNETIC RESONANCE are available in September for fundamental work in magnetic relaxation spectroscopy, solid state high resolution rare spin spectroscopy, and magnetic imaging. Work involves fundamental efforts in biophysical dynamics, nuclear magnetic relaxation, and the development of magnetic imaging contrast reagents. Equipment includes an NMR dispersion spectrometer, a double resonance rare spin spectrometer for solids, a triple resonance rare spin solids spectrometer under construction, and imaging spectrometers on order. A strong background in chemical physics or physical chemistry, or magnetic resonance will be strong assets. Send information to: **Professor Robert G. Bryant, Departments of Radiology and Biophysics, Box 648, University of Rochester Medical Center, 601 Elmwood Avenue, Rochester, New York 14642.**

POSITIONS OPEN

POSTDOCTORAL POSITIONS—To participate in ongoing studies of electron microscopy of parasitic diseases. A background in electron microscopy and immunology will be desirable. Please send curriculum vitae and two or three letters of reference to: **Dr. Masamichi Aikawa, Institute of Pathology, Case Western Reserve University, Cleveland, Ohio 44106.** *An Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL POSITION available immediately for 2 years. Recent Ph.D. with strong training in biochemical pharmacology to study the uptake and the binding of olfactory stimulants by the antennules of a marine organism, the spiny lobster. Applicant will determine uptake kinetics, define biochemical properties of olfactory purinoceptors, and interact with physiologists in determining possible relations between uptake and chemoreception. Proposed salary: \$14,500. Send curriculum vitae, description of research interests, and names and telephone numbers of three references to: **Dr. William E. S. Carr, C. V. Whitney Laboratory for Experimental Marine Biology and Medicine, Route 1, Box 121, St. Augustine, Fla. 32086.**

POSTDOCTORAL POSITION available 1 September 1984 to study geminivirus gene expression in plants and transformed plant cells. Applicants should have a background in molecular genetics and recombinant DNA techniques. Plant cell culture experience useful. Send curriculum vitae and names of three references to: **Dr. David M. Bisaro, Department of Botany, Plant Pathology and Microbiology, Auburn University, Auburn, Alabama 36849.** *An Equal Opportunity Employer.*

POSTDOCTORAL POSITION available 1 September 1984 for molecular biologist to investigate regulation of developmental hemoglobin switching in amphibians. Salary: \$14,000 to \$18,000, depending on capabilities and experience. Send résumé and names of three references to: **Dr. Robert H. Broyles, Department of Biochemistry and Molecular Biology, University of Oklahoma Health Sciences Center, P.O. Box 26901, Oklahoma City, Okla. 73190.** *An Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL POSITION available immediately to study immunological and molecular aspects of herpesvirus pathogenesis and latency. Background in molecular virology and/or immunology is preferred. Send curriculum vitae and names of three references to: **Dr. Roberta Meyers-Elliott, Jules Stein Eye Institute, University of California, Los Angeles, School of Medicine, Los Angeles, Calif. 90024.** Candidates must be U.S. citizens. *An Affirmative Action Employer.*

POSTDOCTORAL POSITION

To study gene expression of adenovirus-2, specifically, early region 1A and 1B functions. Applicants with background in molecular biology/biochemistry and experience with recombinant DNA techniques, and protein biochemistry is preferred. Attractive terms. Apply to: **Dr. M. L. Harter, Department of Microbiology F669, New Jersey Medical School, 110 Bergen Street, Newark, N.J. 07103.**

POSTDOCTORAL POSITION available August 1984 to study the interaction of bacterial lipopolysaccharide with eucaryotic cell membranes. Applicants must have a strong background in biochemistry with experience in at least one of the following areas: lipid chemistry/carbohydrate chemistry/membrane receptors. Experience with purification and characterization of amphipathic molecules useful. Salary commensurate with experience. Send curriculum vitae and names of three references to: **Dr. Diane M. Jacobs, Department of Microbiology, State University of New York (SUNY)—Buffalo, Buffalo, NY 14214.** *SUNY/Buffalo is an Affirmative Action/Equal Opportunity Employer.*

POSTDOCTORAL POSITION available on studies of molecular mechanism of anion metabolite transporters (phosphate, pyruvate, glutamate) of the mitochondrial inner membrane. Research program encompasses the identification and isolation of transport proteins, studies of their structure (including preparation and sequencing of cDNA) and function in mitochondrial and artificial membranes, and of processes related to the biosynthesis of these membrane proteins. Minimum salary: \$16,000 plus fringe benefits. Send curriculum vitae and two references to: **Dr. Hartmut Wohlrab, Boston Biomedical Research Institute, 20 Staniford Street, Boston, Mass. 02114.** *Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

POSTDOCTORAL OR SENIOR POSTDOCTORAL POSITION. Peptide, polymer, or immunochemist with experience in protein modification to conjugate large numbers of chromophores to monoclonal antibodies. The work will be done in a multidisciplinary laser medicine group. Send curriculum vitae and three letters of reference to: **Professor John A. Parrish, Wellman Laboratories, Department of Dermatology, Harvard Medical School, Massachusetts General Hospital, Boston, Mass. 02114.** *An Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL POSITIONS to study pharmacologic activities of copper complexes in models of inflammation, seizure, or cancer. Send curriculum vitae and names of three references to: **Professor J.R.J. Sorenson, College of Pharmacy—Slot 522, 4301 West Markham, Little Rock, Ark. 72205.**

POSTDOCTORAL POSITION available September 1984 to study the role of cAMP dependent protein kinases, and protein phosphorylation in mediating the effects of hormones on the growth and transport functions of cultured kidney epithelial cells in serum-free medium. Applicants should have a Ph.D. in biochemistry, cell biology, or a related field. Salary is commensurate with experience. Send curriculum vitae and names of three references to: **Dr. Mary L. Taub, Department of Biochemistry, 102 Cary Hall, State University of New York at Buffalo, Buffalo, New York 14214.**

POSTDOCTORAL POSITION available immediately for recent Ph.D. for study of nucleic acid abnormalities in autoimmune disease using recombinant DNA techniques. Background in biochemistry and/or immunology desirable. Please submit statement of research interests and curriculum vitae to: **Dr. Charles Steinman, Director, Division of Rheumatology, State University of New York—Downstate Medical Center, 450 Clarkson Avenue, Box 42, Brooklyn, N.Y. 11203.** *Equal Opportunity/Affirmative Action Employer, M/F.*

POSTDOCTORAL POSITION is available immediately for protein chemistry and recombinant DNA studies on eukaryotic protein synthesis factors which will probe protein-mRNA interactions, active sites of the factors and their genetic organization. Experience with one of the two above techniques is desirable. Send curriculum vitae and names of three references to: **Dr. William C. Merrick, Department of Biochemistry, Case Western Reserve University, Cleveland, Ohio 44106.**

POSTDOCTORAL POSITION IN BIOCHEMISTRY is available now to study intermediates and kinetics of protein secondary structure folding using Raman spectroscopy. Salary: \$18,000 to \$19,000. Send curriculum vitae, description of research experience, and names of three references to: **Dr. Robert Williams, Biochemistry Department, Uniformed Services University of the Health Sciences, 4301 Jones Bridge Road, Bethesda, Md. 20814.** *An Affirmative Action/Equal Opportunity Employer.*

POSTDOCTORAL POSITION

A postdoctoral fellowship will be available September 1984 for research concerned with discerning the mechanism of fatty acid transport in prokaryotic and eukaryotic organisms. Biochemical, genetic, and recombinant DNA techniques are being used to determine the membrane components involved in transporting fatty acids in *Escherichia coli* and yeast. Knowledge and experience in recombinant DNA technology sequencing and protein purification are essential. Send curriculum vitae and three references to: **Dr. William D. Nunn, Molecular Biology and Biochemistry, University of California, Irvine, Calif. 92717.** *The University of California is an Affirmative Action/Equal Opportunity Employer.*

POSTDOCTORAL RESEARCH ASSOCIATE—A position is available for a plant physiologist or biochemist to study the regulation of assimilate partitioning in crop plants. Possible areas of research are: (i) role of cell wall acid invertase in phloem unloading, (ii) turgor regulation of sugar transport and metabolism and (iii) sugar and amino acid transport using tonoplast and plasma membrane vesicles. Position available to 1 October for 1 to 2 years. Salary commensurate with experience. Send résumé and three letters of reference to: **Roger E. Wyse, USDA-ARS, Plant Biochemistry Laboratory, Utah State University, UMC 63, Logan, Utah 84322; telephone: 801-750-3062.** *Utah State University is an Affirmative Action/Equal Opportunity Employer.*

MANAGER, Immunology-Microbiology

General Diagnostics, a major manufacturer of diagnostic products, is seeking a highly qualified individual to plan and manage research programs related to the development of new concepts and products concerned with the rapid identification of infectious diseases utilizing immuno-chemical techniques.

To qualify for this highly visible position, you should have a PhD in Immunology or Microbiology with 6 years' industrial diagnostic research experience, with emphasis in Immunology and/or Microbiology, and be familiar with immunoassay methodologies.

This position, based in our NJ headquarters, offers a competitive salary and benefits, and the opportunity for growth and recognition. Interested and qualified applicants should submit their confidential resume, including salary history and requirements, to: **Mr. Robert Borsdorf, Supervisor-Human Resources, Warner Lambert/General Diagnostics Research, 170 Tabor Road, Morris Plains, New Jersey 07950**

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WALTER REED ARMY INSTITUTE OF RESEARCH

SALARY: GS-12 \$30,402 PA

Opportunity for senior engineer with microwave and/or millimeter wave experience in radar, communications, antennas, transmitters, digital signal processing to work in challenging biomedical research areas.

Responsibilities include research and development in medical hazards as well as medical diagnostic and therapeutic applications of microwave/millimeter wave energy.

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Interested applicants should send a Personal Qualifications Statement, Form SF-171 to:

**CIVILIAN PERSONNEL OFFICE
RECRUITMENT AND PLACEMENT
BLDG 11 ROOM 2-118
WASHINGTON, D.C. 20307
ATTN: MS. KATHRYN E. LEWIS**

Biochemist/ Molecular Biologist

Johnson and Johnson Biotechnology Center, Inc., is currently seeking a Ph.D. level scientist with a degree in Biochemistry or Pharmacology to join its La Jolla, CA, research laboratory staff.

Ideal candidate will have Postdoctoral experience in recombinant DNA methodology and/or polypeptide immunochemistry. In addition, pharmaceutical research experience in the areas of neuropharmacology/neurochemistry would be seen as valuable credentials for this position which interfaces basic and applied research in the CNS.

Responsibilities will include identification and biological characterization of new brain proteins through the use of recombinant DNA techniques.

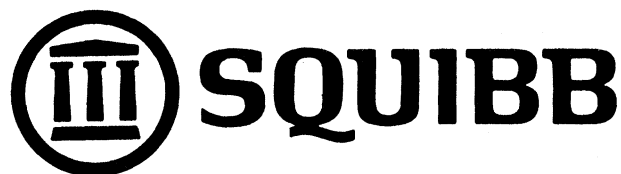
We offer a competitive salary and excellent benefits package plus the opportunity for professional growth. Qualified applicants should send resume or CV to:

**Dr. W.L. Hartop,
Johnson and Johnson Biotechnology Center, Inc.,
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SECTION HEAD Microbiological Control

E. R. Squibb & Sons, a leading pharmaceutical manufacturer located in New Brunswick, New Jersey, has an immediate opening for a Section Head in its Microbiological Control Department.

Applicants for this position should have a PhD in Microbiology with 5-7 years of supervisory and technical experience in Quality Control or Research in the pharmaceutical industry. Applicants should have familiarity with automated and computerized systems within a laboratory environment.

The successful candidate will plan, develop and direct the implementation of programs that insure accurate microbiological testing of sterile and non-sterile products; analyze test results and procedures, and develop projects to improve laboratory efficiency through implementing automated and computerized systems. The individual will also direct, supervise and develop a staff of professional and hourly employees.

In addition to excellent growth potential with a recognized leader in the industry, we offer a salary commensurate with experience and an excellent benefit program. For confidential consideration, please submit your resume with salary requirements to: **Dept. GM, E. R. Squibb & Sons, P.O. Box 191, New Brunswick, NJ 08903.** An Equal Opportunity Employer.

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Merger and reorganization have created available territories in Boston, So. California, Minneapolis, Texas and Upstate N.Y.

Minimum B.S. degree in biochemistry or allied field with relevant laboratory experience. Sales experience in research products recommended but not required.

Please send resumé to:

Mr. Wayne E. Fowler
GIBCO/BRL DIVISION
LIFE TECHNOLOGIES, INC.
Box 6009, 8717 Grovemont Circle
Gaithersburg, MD 20877

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SCIENCE

Posters

The following posters of *Science* covers are available:

9 February 1979, Locomotive in China;

30 March 1979, Tropical flowering tree;

29 July 1979, 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.

POSITIONS OPEN

POSTDOCTORAL RESEARCH ASSOCIATE. Modeling of protein structure and protein hydration by molecular dynamics calculations. **Dr. Jan Hermans, Department of Biochemistry, University of North Carolina, Chapel Hill, N.C. 27514. Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL OR RESEARCH ASSOCIATE POSITION available starting 1 September 1984, to study metabolic controls and red cell membrane cytoskeletal network assembly. Send curriculum vitae and names of three references to: **Dr. M. Tao, Department of Biological Chemistry, University of Illinois at Chicago, College of Medicine, Chicago, Illinois 60612. University of Illinois is an Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL RESEARCH ASSOCIATE, CELL BIOLOGY/BIOCHEMISTRY, position available starting 1 September 1984 in laboratory conducting research on cell-cell interactions, oxygen radical metabolism, and cellular protein biochemistry. Experience in basic experimental cell biology and/or immunology with emphasis on oxygen radical mediated injury desirable. Salary will be competitive and commensurate with training and experience. Send biographical information, reprints of pertinent publications, and the names of three references to: **Veena B. Antony, M.D., Veterans Administration Hospital, 1481 West 10 Street, Room 111P, Indianapolis, Ind. 46223.**

PROFESSOR AND CHAIRMAN DEPARTMENT OF IMMUNOLOGY AND MEDICAL MICROBIOLOGY COLLEGE OF MEDICINE UNIVERSITY OF FLORIDA

The department is seeking applicants having an M.D. or Ph.D. degree, and a distinguished record of creative research. Candidates should have a commitment to excellence in teaching medical, dental, and veterinary medical students as well as to graduate education and research. The department has an internationally recognized research program and maintains a dynamic graduate training program with a major focus in molecular biology. The College strongly encourages interaction between the department and other Basic Science and Clinical Units in the Health Center. Salary negotiable. Anticipated starting date: on or before 1 July 1985. Interested individuals should send curriculum vitae and the names of three references by 1 November 1984 to:

Dr. Allen H. Neims
Chairman, Immunology and
Medical Microbiology Search Committee
Box J-267-J. Hillis Miller Health Center
University of Florida College of Medicine
Gainesville, Florida 32610

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UNIVERSITY OF GUELPH DEPARTMENT OF ANIMAL AND POULTRY SCIENCE

The Department of Animal and Poultry Science, University of Guelph, is seeking applicants for a **professor/associate professor/assistant professor** (teaching/research/extension) in meat science and growth and metabolism; tenure-track position.

The individual will have the responsibility of teaching diploma and undergraduate courses in meat science. An opportunity exists to develop a graduate course that is commensurate with his/her research program. The individual will be expected to develop an outstanding research program in poultry meat and have a research interest in the quality of poultry products (eggs). The individual must be able to interact with both the production and processing sectors of the poultry industry.

Qualifications include a Ph.D. in a discipline of animal and poultry science or poultry products; working knowledge of poultry slaughter, grading, and processing for retail sale is desirable. An ability to communicate effectively and work harmoniously is expected.

Applications will be accepted until 15 October 1984. Applications should include a complete resumé, transcripts, and list of four references. Send to: **Dr. R. R. Hacker, Chairman, Department of Animal and Poultry Science, University of Guelph, Guelph, Ontario, Canada N1G 2W1.**

In accordance with Canadian Immigration requirements, priority will be given to Canadian citizens and permanent residents of Canada.

Position subject to final budgetary approval.



SYNERGEN, INC.

Synergen, Inc., one of the largest privately-held biotechnology firms, is seeking exceptional scientists to join its expanding efforts to apply molecular biology, genetics and recombinant DNA techniques to challenging research projects. Synergen is incorporating the best features of an academic environment into a more focused research setting. We offer competitive salaries and benefits, the chance to grow and learn, and to benefit from our success through equity participation. Our laboratories, located in Boulder, Colorado, are well equipped and located within minutes of the University of Colorado.

We are particularly interested in scientists with two or more years of post-doctoral experience and research associate level people in the following fields:

Mammalian Virology: To join an expanding effort to understand eucaryotic gene expression and to develop viral vectors for a variety of applications.

Fermentation Engineering: We are interested in individuals with experience in scale-up of fermentative production processes and protein purification. We are currently in the initial design phase for a pilot production facility.

Microbial Genetics: Researchers to analyze and manipulate novel biosynthetic pathways and organisms through a combination of modern genetic selection and recombinant techniques.

We are also interested in individuals with skills in cellular immunology, enzymology, and biochemistry of natural products. Scientists with more extensive post-graduate experience are also encouraged to inquire. Please include a list of publications and references addressed to:

Recruitment Director
Synergen, Inc.
1885 33rd Street
Boulder, Colorado 80301

ELECTROPHYSIOLOGIST

G.D. Searle & Company has an opening for someone with training in Electrophysiology at a Master's Degree level. General experience in single unit recording, microinjection, drug microinjection, using air pressure, microelectrode preparation, small animal surgery and in vitro recording from brain slices is desirable. The scientist will work in a completely equipped electrophysiological laboratory as part of the CNS section in a team effort directed towards developing a better understanding of brain function and drug action in the treatment of neurological and psychiatric disorders. Searle is an equal opportunity employer and does not discriminate on the basis of race, sex, or religion. All qualified candidates are encouraged to send resume to:

Barbara Gardner
#78T-5

Searle Research and Development
Division of G.D. Searle & Co.
4901 Searle Parkway
Skokie, Illinois 60077

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The Sr. Research Associate will be responsible for reviewing, updating and editing the content and format of medically descriptive entries for a computerized database and published reference book. Will work with medical specialists in updating the medical data. Will also oversee data entry of medical information.

Excellent organizational and communication skills essential. Familiarity with computer terminal, usage helpful. Knowledge of disease classification and coding systems also desirable.

We offer a competitive salary and excellent benefits including tuition reimbursement. For prompt consideration, please forward your resume with salary history to:

Sr. Research Assoc. - KN 139
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POSITIONS OPEN

POSTDOCTORAL RESEARCH POSITION available immediately. The following studies are currently investigated. Mechanism of adenovirus DNA replication using oligonucleotide-directed mutagenesis, cloning and expression of genes for the viral encoded proteins using both prokaryotic and eukaryotic expression vectors. Background in molecular biology, virology, or purification of proteins desirable. Salary open. Send curriculum vitae and names of references to: **Dr. R. Padmanabhan, Department of Biochemistry, University of Kansas Medical Center, 39th and Rainbow, Kansas City, Kans. 66103. An Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL SCHOLAR

Available immediately to study molecular regulation of expression of unique mitogen-induced enzymes in hominoid cells. Ph.D. with experience in molecular biology and biochemistry preferred. Salary: \$16,000 to \$20,000.

Send curriculum vitae and names of references to: **H. Mohrenweiser, Department of Human Genetics, Box 015, University of Michigan Medical School, Ann Arbor, Mich. 48109.**

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REPRODUCTIVE RESEARCH BIOLOGIST: U.S. Environmental Protection Agency is seeking candidates for consideration against a potential opening in the area of reproductive toxicology. This position will be located in the Reproductive Toxicology Branch, Developmental Biology Division, Health Effects Research Laboratory. It is a federal Civil Service (term) position not to exceed 4 years; although subsequent career opportunities are a distinct possibility. Salary range: \$30,549 to \$39,711 depending upon experience.

The successful candidate will be expected to: (i) develop a program of research to evaluate the consequences of exposure to potential toxins on ovarian physiology, and/or implantation, and/or pregnancy and lactation in laboratory animals and (ii) closely collaborate with other scientists similarly evaluating morphological, biochemical, endocrinological, and behavioral reproductive processes.

The candidate: (i) should possess a Ph.D. in biology or allied disciplines or possess equivalent experience and/or (ii) have postdoctoral research experience as evidenced by publications in peer-reviewed journals.

Forward curriculum vitae to: **Dr. Neil Chernoff, Director, Developmental Biology Division, c/o Personnel Management Division (MD-29), Research Triangle Park, North Carolina 27711.**

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RESEARCH ASSISTANT PROFESSOR (nontenure-track). Individual required to join projects on the active transport of cations across cell membranes. Experience required in at least three of the following areas: isotopic fluxes in erythrocyte ghosts, cultured epithelial cells, or muscle, microelectrode measurements in muscle cells. Position available from fall 1984. Please send curriculum vitae and names of three references to: **Dr. Jack H. Kaplan, Department of Physiology, G4, University of Pennsylvania, Philadelphia, Pa. 19104. An Equal Opportunity/Affirmative Action Employer.**

RESEARCH ASSOCIATE (postdoctoral), Rockefeller University—Position available for research in area of membrane receptor related to chemotherapy. Required: strong background and experience in biochemistry, preparative organic chemistry, protein fragmentation, separation and identification. Send résumé and three references of recommendation to: **Box 197, Rockefeller University, 1230 York Avenue, New York, N.Y. 10021. An Equal Opportunity Employer.**

RESEARCH ASSOCIATE/ CARDIO-RESPIRATORY PHYSIOLOGIST

Research position in the Department of Pediatrics, University of Tennessee Memorial Research Center and Hospital, Knoxville, Tennessee. Possibility of adjunct appointment with sister basic science program at the main campus. Candidates must have a Ph.D. with postdoctoral experience. Experience or interest in developmental clinical or basic cardio-respiratory physiology preferred. Send curriculum vitae to: **Sachchida N. Sinha, M.D., Department of Pediatrics, University of Tennessee Memorial Research Center and Hospital, 1924 Alcoa Highway, Knoxville, Tennessee 37920.** Closing date for receiving applications: 24 August 1984.

An Affirmative Action/Title IX/Section 504 Employer

POSITIONS OPEN

PROTEIN CHEMIST

The W. Alton Jones Cell Science Center invites applications for the position of head of the protein chemistry laboratory. The candidates should be willing to collaborate closely with the recombinant DNA laboratory and with several tissue culture laboratories that are engaged in the isolation, characterization, and modification of bioeffectors produced by various differentiated cell types. Expertise in modern microtechniques of protein sequencing is expected. Particular consideration will be given to candidates with background in conformational studies of proteins and experience in synthetic peptide chemistry. Synthetic peptides will be used for structure-function studies in cell cultures and for raising antibodies. Salary negotiable. Applicants should send curriculum vitae and references to: **Dr. Gordon Sato, W. Alton Jones Cell Science Center, 10 Old Barn Road, Lake Placid, New York 12946.**

RESEARCH SPECIALIST/BIostatistician—Seattle area. Need master's of science in biostatistics, 1 year of experience, and ability to speak, read, and write Japanese and English. Will do epidemiological and biostatistical analyses in areas of environmental epidemiology, health care technology assessment, and consequences of an aging population; review literature, interpret statistics, write scientific papers in Japanese and English; develop data collection plans and design studies; program and use mainframe computers using Fortran, PASCAL, APL and BASIC, and utilize BMDP, SPSS, STATPAK, GLIM3, IMSL. Salary: \$1834 per month; 40-hour week. Reference Job Order Number 888626 and send résumés only to: **Employment Security Department, Employment Service Division, attention: AEC Unit, Olympia, Wash. 98504.**

Equal Opportunity Employer, M/F/V/H

RESEARCH POSITION

Ph.D. or M.D. with research experience in cardiovascular physiology wanted to work in a research laboratory in a university-affiliated, suburban New York hospital. This is an opportunity for an independent and motivated scientist with good communication skills to work in conjunction with an active clinical cardiovascular team, to participate in ongoing research, and to initiate new avenue of investigation. The hospital, located on Long Island, houses extensive research facilities. A research building is under construction to provide support and core services as well as an interchange of ideas between investigators in different fields. The research laboratory is fully equipped and staffed. This is a stimulating work environment with an excellent and fully funded salary. The successful applicant will be expected to apply for grants. Experience beyond the doctoral level is required and a full benefits package is provided. A letter, including a summary of research goals, and a résumé should be submitted to: **Dr. Roy Nelson, Division of Cardiovascular Surgery, North Shore University Hospital, Manhasset, New York 11030.**

SENIOR SCIENTIST, GYNECOLOGIC CANCER RESEARCH (Ph.D. or M.D.)—Memorial Sloan-Kettering Cancer Center is establishing the Avon Chair for research in a field related to or applicable to the problems of gynecologic cancers. The scientist will direct a laboratory-based research program and need not be a clinician in gynecologic cancer. The incumbent of the Avon Chair, whose research will address problems related to gynecologic malignancies, will interact with other research scientists and with the Division of Gynecology of the Department of Surgery. Other responsibilities will include training of postdoctoral and research fellows. Salary to be negotiated. Please send curriculum vitae and biography to: **Search Committee, c/o John L. Lewis, Jr., M.D., Memorial Sloan-Kettering Cancer Center, 1275 York Avenue, New York, N.Y. 10021. An Equal Opportunity/Affirmative Action Employer.**

SENIOR SCIENTIST

The W. Alton Jones Cell Science Center invites applications for the position of senior scientist. The candidates should be able to direct a laboratory of membrane lipid biochemistry dealing with hormonal effects on the lipid metabolism of cultured cells. Candidates must have a M.D. or Ph.D. degree with at least 5 years of experience as an independent investigator and with the ability to supervise others. Salary is negotiable. Applicants should send curriculum vitae with a list of publications and references to: **Personnel Manager, W. ALTON JONES CELL SCIENCE CENTER, 10 Old Barn Road, Lake Placid, New York 12946.**

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CONFERENCE

CELLULAR AND MOLECULAR ASPECTS OF AGING: THE RED CELL AS A MODEL. 8 to 11 September 1984, at the Hyatt Regency Hotel, Minneapolis, Minnesota. This conference will explore the erythrocyte as a simple model for processes of aging which affect structural proteins, enzymes, membranes, and general cellular metabolism. Topics include aging of nonerythroid cells and molecules, effects of red cell age on hemoglobin and general cell metabolism, membrane changes in red cell senescence and destruction, age-related changes in cellular function, environmental determinants of red cell survival, in vitro aging of erythrocytes, and comparative aspects of red cell aging. Information and registration material: **Diane Konzen, Department of Laboratory Medicine, Box 198 Mayo, University of Minnesota, Minneapolis, Minn. 55455.**

AWARDS

ARE YOU INTERESTED IN WORKING IN SPACE BIOLOGY?

National Aeronautics and Space Administration (NASA) is offering several **RESEARCH ASSOCIATE AWARDS** for scientists to work in laboratories capable of providing scientific advice and facilities relevant to **SPACE BIOLOGY**. The awards will vary from \$15,000 to \$19,000 based on experience. They are planned for a 12-month period with the possibility of renewal. Proposals are due 1 April for 1 July funding and 1 October for 1 January funding. Eligible: U.S. citizens having Ph.D., D.Sc., M.D., D.D.S., or D.V.M. For information/application forms, contact (specify award date applying for): **Dr. X. J. Musacchia, Chairman, NASA Award Committee, Graduate School, University of Louisville, Louisville, Ky. 40292, or Dr. Thora W. Halstead, Space Biology Research Associates' Program, Life Sciences Division, NASA Headquarters, Washington, D.C. 20546.**

FELLOWSHIPS

NIH POSTDOCTORAL FELLOWSHIPS IN REPRODUCTIVE BIOLOGY. Multidisciplinary training sponsored by a faculty of 13 from the Departments of Physiology and Anatomy at the Oregon Health Sciences University and the Oregon Regional Primate Center. Beginning stipend is \$14,040. Applicants must be U.S. citizens or permanent residents. Send résumé and two letters of reference to: **Dr. John A. Resko, Department of Physiology, Oregon Health Sciences University, Portland, Oregon 97201. Equal Opportunity Employers.**

POSTDOCTORAL FELLOWSHIP

Merck Sharp and Dohme Research Laboratories has an immediate opening for a postdoctoral fellow in the Biophysics Group in the Department of Biochemistry. The successful candidate must have a Ph.D. (or M.D./Ph.D.) and be well trained in cardiovascular physiology or pharmacology or related areas. The postdoctoral fellowship is in fundamental research; the successful candidate will work with a group using in vivo P-31 NMR spectroscopy to study experimental heart models.

Salaries and benefits are excellent. Send curriculum vitae to: **Susan R. Jenkins, Merck & Company, Inc., P.O. Box 2000, Rahway, New Jersey 07065.**

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POSTDOCTORAL FELLOWSHIP position open. NIH-supported. Available 1 July 1984 in red cell membrane biology. Candidates completing or with Ph.D. in structural biology, cell biology, biochemistry, or physiology would be appropriate. Skill in standard biochemical and morphological techniques is required. Salary is relevant NIH salary for level of experience and subject is membrane biology of human neonatal RBC. Research involves structure and function of red cell membrane proteins and lipids as applied to neonatal RBC. Project is part of comprehensive red cell membrane biology program project in which there are extensive opportunities for further development of the research. Send curriculum vitae and two names of references to: **Stanley L. Schrier, M.D., Chief, Hematology Division, Stanford University Medical Center, Stanford, California 94305. Stanford University is an Equal Opportunity/Affirmative Action Employer.**

THE U.S. ARMY MEDICAL RESEARCH AND DEVELOPMENT COMMAND IS ACCEPTING PROPOSALS FOR RESEARCH IN MEDICAL ENTOMOLOGY

DAMD17-84-R-0088, ISSUE DATE: 1 AUG 1984

Studies which address identification, biology, vector-disease agent-host interactions, insecticide resistance, modeling and prevention/control of insect/arthropod vectors of military important diseases are sought. Program emphasis is on those military important insect/arthropod vectors of human arboviral, malarial and leishmanial diseases occurring in the Middle East, Africa, and Central and South America. Research areas of interest include:

- DISEASE VECTOR BIOLOGY AND CONTROL**
Characterize for insect vectors: vector-disease agent-host interactions; ecology; vector efficiency; response to insecticides and repellents.
- TAXONOMY OF MEDICALLY IMPORTANT INSECTS**
Prepare illustrated identification manuals and/or monographs for vector groups.
- MECHANISMS OF ARTHROPOD-BORNE DISEASE TRANSMISSION**
Genetic and physiological influences on vector competence.
- MODE OF ACTION OF INSECT/ARTHROPOD REPELLENTS**
Biochemical and physiological mechanisms of vectors involved in repellency/nonattractancy.
- DISEASE AGENT DETECTION OF INSECT VECTORS**
Develop novel assays to identify and quantify human disease agents in natural vector populations.
- PREDICTIVE MODELING FOR VECTOR AND/OR DISEASE CONTROL**
Computer simulation model(s) for mosquito-borne disease control/prevention.
- TEST FOR INSECTICIDE RESISTANCE IN VECTORS**
Novel test for rapid detection of insecticide resistance in mosquito vectors.
- METHODOLOGY AND MATERIAL FOR DETECTION AND/OR CONTROL OF VECTORS**
Novel approaches for insect vector detection and/or control.

Proposals may be submitted for one or more of the above topics or a specific portion of one topic. A proposer may submit separate proposals on different topics or different proposals on the same topic. The Government does not guarantee an award in each topic area.

In accordance with the Federal Acquisition Regulation (FAR) any contracts awarded under this solicitation may be of any type or combination of types which will promote the best interests of the Government. It is anticipated that multiple-year, incrementally-funded, level-of-effort type, cost reimbursement contracts will be awarded. Each increment will be approximately 12 months. Duration of the contract should be commensurate with the proposed scope of work but in no case shall exceed five years.

Research proposals shall include a table of contents and should cover the points cited below, insofar as they are applicable. The technical and business sections of the proposal must be separate. No cost information shall be included in the technical portion of the proposal.

a. *Name and Address of Organization.* At least one copy must carry the original signatures of an official authorized to legally bind the organization.

b. *Title of Proposed Research.*

c. *Description of Proposed Research.* Submit a detailed description of the research objectives, hypothesis, approach, methods, relationship to the state of knowledge in the field and to comparable work in progress elsewhere, military significance, previous relevant experience, bibliography and pertinent literature citations.

d. *Research Involving Human Subjects.* USAMRDC policies governing the use of human subjects parallel those contained in 45 CFR 46, 21 CFR 312 and DoD Instruction 5030.29. Submit a copy of completed Form HHS 596 with the proposal.

e. *Research Involving Animals.* Acknowledgement that conduct and reporting of the studies shall adhere to the "Guide for the Care and Use of Laboratory Animals" (NIH) 78-23, 1978) must be included.

f. *Personnel.* Qualifications of the Principal Investigator and other senior professional personnel and the time each will devote to the research. This information, to the extent that it is information about an individual, is subject to the requirements of the Privacy Act of 1974 (5 USC 552(a)). The principal purpose and routine use of the information are for the valuation of the qualifications of those persons who will perform the research. Disclosure of the information is voluntary, but failure to provide such will prevent evaluation of the proposal.

g. *Facilities and Equipment Available.*

h. *Cost Estimate.* An estimate of the total research project cost with a breakdown of funds by category (direct labor cost, indirect cost, property or equipment cost, travel cost, publication cost, consultant cost, other direct costs, fee or profit) by year must accompany each proposal and must be submitted on SF 1411 with complete supporting

information. No cost information shall be included in the technical portion of the proposal.

Every effort will be made to protect the confidentiality of the proposal and any evaluations. The submitter may mark the proposal with a legend such as that provided in FAR 52.215-12. Proposals containing a more restrictive legend shall not be considered.

Unnecessarily elaborate brochures or presentations beyond that sufficient to present a complete and effective proposal are not desired.

Any proposal received after the exact time specified for submission of proposals will not be considered unless the circumstances described in FAR 52.215-10 apply.

CONSIDERATIONS

Reports. Quarterly, annual and final progress reports shall be required in accordance with the schedule of any resultant contract. Reprints of any publications resulting from sponsored research shall also be provided to the USAMRDC.

Contract Provisions. Contracts awarded shall contain, where appropriate, detailed special provisions concerning patent rights, rights in technical data and computer software, reporting requirements, equal employment opportunity, care of laboratory animals, use of human subjects, good laboratory practices requirements, acquisition and disposition of equipment, and other requirements. Contracts shall also incorporate all general provisions required by the FAR.

METHOD OF SELECTION AND EVALUATION CRITERIA

Proposals will be evaluated on a competitive basis by review committees composed of scientists knowledgeable in the topic area. Proposals will be evaluated first on their relevance to the chosen topic. Those found to be relevant will then be evaluated using the criteria listed below.

a. *Research Objective.* Is it clear, valid and logical?

b. *Military Requirement.* Is it clear, unique, relevant and significant?

c. *Scientific Feasibility.* Are the plans, methods and procedures feasible, clear, valid, adequately referenced and state-of-the-art?

d. *Investigator Competence.* Has the investigator demonstrated the scientific and administrative capability to effectively conduct the proposed research?

e. *Requested Budget.* Is the budget realistic in terms of proposed objective, methodologies, supplies, salaries and travel?

f. *Safety Considerations.* Is the investigator cognizant of the requirements for and capable of working with any hazardous materials involved? Has the organization agreed to allow storage and use of such materials in its facility?

g. *Animal Use/Human Use Consideration.* Are the studies, in which animal models or human subjects to be used, to be conducted in accordance with all appropriate regulations? Are all necessary assurances of compliance and certificates provided? (NOTE: Failure to adequately document compliance will prevent evaluation of the proposal.)

Although cost will be a factor in the evaluation of proposals, technical merit in the above listed areas will be a more significant factor in the selection of a contractor. Further, to be selected for an award, the proposed cost must be realistic and reasonable.

Negotiations will be conducted with those contractors in the competitive range, determined by the factors in paragraphs a-g above. Final decisions for funding will be made by the USAMRDC based upon these criteria and consideration of possible duplication of other research and program balance. The USAMRDC may elect to fund several or none of the proposed approaches to the same topic. There is no commitment by the USAMRDC to make any awards on any topic, to make a specific number of awards or to be responsible for any monies expended by the proposer before award of a contract. It should be noted that only a duly appointed Contracting Officer has the authority to enter into a contract on behalf of the U.S. Government.

SUBMISSION OF PROPOSALS

Ten copies of the complete proposal are required for review and evaluation. Proposals must be submitted by 4:00 p.m. on 31 August 1984 to:

Commander
U.S. Army Medical Research and Development Command
ATTN: SGRD-RMA/DAMD17-84-R-0088 (Ms. D. Clark)
Fort Detrick, Frederick, MD 21701

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Intersociety Working Group

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