physical type. These issues will continue to be debated.

The logical antecedents of western Oceania's Lapita pottery complex are to be found in mid-second-millennium B.C. eastern Indonesia. According to Bellwood, the pottery here may have lacked the well-established Lapita's intricate and complicated designs, but this seems to sidestep the derivation question. Reassessment of the antiquity of the Proto-Oceanic language grouping so that "the spread of the ancestral Polynesian Lapita culture through Melanesia after about 1600 B.C. correlates in linguistic terms with the period of Proto-Oceanic" (p. 322) fits more closely with the views of other Pacific archeologists.

In this volume, Bellwood ties together diverse findings into a masterly synthesis of early Southeast Asian prehistory and Austronesian origins. The book is essential reading for anyone interested in the prehistory of Southeast Asia.

WILLIAM S. AYRES Department of Anthropology, University of Oregon, Eugene, OR 97403

Some Other Books of Interest

The Genus Coelomomyces. JOHN N. COUCH and CHARLES E. BLAND, Eds. Academic Press, Orlando, FL, 1985. xvi, 399 pp., illus. \$84.50.

The fungal genus Coelomomyces was discovered by David Keilin in 1921. These fungi, writes Bland in the preface to this volume, are of interest for having "a life cycle that is unique among all known fungi, i.e., a pattern involving alternation of sporophytic and gametophytic phases between obligate mosquito/chironomic hosts and copepod hosts, respectively." Moreover, "because of their narrow host range and high degree of lethality" they are of potential use in the biological control of mosquito vectors of disease. This review of the genus opens with a brief introduction followed by accounts of life history (H. C. Whisler) and structure and development (Bland and Couch). A 217-page treatment of the taxonomy of the genus is then provided by Couch and Bland. There follow treatments of experimental systematics (B. A. Federici), physiology and biochemistry (R. A. Nolan), and culture (Bland). Biological control is the focus of the two final chapters in the volume: a brief general review of studies relevant to the use of Coelomomyces (H. C. Chapman) and an account of efforts using C. stegiomyiae in the Tokelau Islands (M. Laird). The illustrations in the volume include several color plates.-K.L.

Current Perspectives in Primate Biology. DAVID M. TAUB and FREDERICK A. KING, Eds. Van Nostrand Reinhold, New York, 1986. xx, 315 pp., illus. \$44.50; with Current Perspectives in Primate Social Dynamics, \$84.50. From a congress, Atlanta, GA, Aug. 1982.

Current Perspectives in Primate Social **Dynamics**. DAVID M. TAUB and FREDERICK A. KING, Eds. Van Nostrand Reinhold, New York, 1986. xxii, 531 pp., illus. \$54.50; with Current Perspectives in Primate Biology, \$84.50. From a congress, Atlanta, GA, Aug. 1982.

These companion volumes have their origins in the ninth congress of the International Primatological Society, characterized by the editors as the largest scientific meeting devoted to primates ever held and comprising some 500 presentations. With the aid of reviewers, a selection of 64 of the research reports presented at the congress was made. The biology volume contains 26 of these, grouped under the headings Reproductive Behavior, Biology, and Endocrinology; Physical Anthropology; and Biomedicine. The 38 papers allocated to the social dynamics volume are classified as dealing with Social Organization and Behavioral Development; Ecology; or Communication. Both volumes include two general addresses from the congress-"Primatology today" by King and "The origins of modern European primatology and the IPS" by Helmut O. Hofer-and each has a brief index.-K.L.

Books Received

Acid Rain and Friendly Neighbors. The Policy Dispute between Canada and the United States. Jurgen Schmandt and Hilliard Roderick, Eds. Duke University Press, Durham, NC, 1985. xiv, 333 pp., illus. \$45. Duke Press Policy Studies

Advancés in Neurology. Vol. 43, Myoclonus. Stanley Fahn, C. David Marsden, and Melvin H. Van Woert, Eds. Raven, New York, 1985. xx, 730 pp., illus. \$125. Advances in Nuclear Physics. J. W. Negele and

Erich Vogt, Eds. Vol. 16, Brian D. Serot and John Dirk Walecka. Plenum, New York, 1986. xiv, 327 pp., illus. \$49.50.

The Age of the Crowd. A Historical Treatise on Mass Psychology. Serge Moscovici. Cambridge Univer-sity Press, New York, and Maison des Sciences de PHOmme, Paris, 1985. viii, 408 pp., illus. \$49.50; paper, \$17.95. Translated from the French edition (1981) by J. Whitehouse

Alpha-Fetoprotein and Congenital Disorders. Gerald J. Mizejewski and Ian H. Porter, Eds. Academic Press, Órlando, FL, 1985. xvi, 363 pp., illus. \$35. Birth Defects Institute Symposia. From a symposium, Albany, NY. Oct. 1983.

Amazonia. Ghillean T. Prance and Thomas E. Lovejoy, Eds. Published in collaboration with the Interna-tional Union for Conservation of Nature and Natural Resources by Pergamon, New York, 1985. xiv, 443 pp., illus. \$27.95. Key Environments. Antarctica. W. N. Bonner and D. W. H. Walton,

Eds. Published in collaboration with the International Union for Conservation of Nature and Natural Resources by Pergamon, New York, 1985. x, 393 pp., illus. \$25.95. Key Environments.

Antinucleon- and Nucleon-Nucleus Interactions. George E. Walker, Charles D. Goodman, and Catherine Olmer, Eds. Plenum, New York, 1985. x, 504 pp., illus. \$79.50. From a conference, Telluride, CO, March 1985. Biological Museum Methods. Vol. 1, Vertebrates. George Hangay and Michael Dingley. Academic Press, Orlando, FL, 1985. xvi, 379 pp., illus. \$68. The Biology of Echinococcus and Hydatid Dis-

ease. R. C. A. Thompson, Ed. Allen and Unwin, Boston, 1986. xiv, 290 pp., illus. \$50. The Biology of Paramecium. Ralph Wichterman.

2nd ed. Plenum, New York, 1986. xx, 599 pp., illus. \$89.50.

Biotechnology of Marine Polysaccharides. Rita Colwell, E. R. Pariser, and Anthony J. Sinskey, Eds. Hemisphere, New York, 1985. xii, 559 pp., illus. \$79.95. From a lecture and seminar, Cambridge, MA, April 1984. MIT Sea Grant College Program Report no. MITSG 84-1

Building Models by Games. Wilfrid Hodges. Cambridge University Press, New York, 1985. viii, 311 pp. \$42.50. London Mathematical Society Student Texts, 2.

Calibration of Fundamental Stellar Quantities. D. S. Hayes, L. E. Pasinetti, and A. G. Davis Philip, Eds. Reidel, Dordrecht, 1985 (U.S. distributor, Kluwer, Hingham, MA). xxiv, 644 pp., illus., + microfiche. \$69.50; paper, \$29.50. From a symposium, Como, Italy, May 1984.

Cardiovascular Effects of Dihydropyridine-Type Calcium Antagonists and Agonists. A. Fleckenstein et al., Eds. Springer-Verlag, New York, 1985. xiv, 511 pp., illus. \$59. Bayer-Symposium 9. From a symposium, Boppard, Germany, Oct. 1984. The Case for Animal Experimentation. An Evolu-tionary and Ethical Perspective Methods.

tionary and Ethical Perspective. Michael Allen Fox. University of California Press, Berkeley, 1986. xiv, 263 pp. \$24.95. Cell Components. H. F. Linskens and J. F. Jackson,

Eds. Springer-Verlag, New York, 1985, xx, 399 pp., illus. \$69. Modern Methods of Plant Analysis, new vol. 1. series

Cell Culture and Somatic Cell Genetics of Plants. Vol. 2, Cell Growth, Nutrition, Cytodifferentiation, and Cryopreservation. Indra K. Vasil. Academic Press, Or-Indo, FL, 1985. xvi, 330 pp., illus. \$49.50. The Cellular and Molecular Biology of Inverte-

brate Development. Roger H. Sawyer and Richard M. Showman, Eds. University of South Carolina Press, Columbia, 1985. xii, 339 pp., illus. Belle W. Baruch Library in Marine Science, no. 15. From a conference, Georgetown, SC, 1984. A collection of 15 papers dedicated to the memory of Ernest Everett Just.

Central Nervous System Pathology. A New Approach. G. N. Kryzhanovsky. Consultants Bureau (Ple-num), New York, 1986. xxii, 421 pp., illus. \$79.50. Translated from the Russian edition (1980) by Nicholas Bobrov

The Challenge of Pain. Ronald Melzack and Patrick D. Wall. Basic Books, New York, 1985. 447 pp., illus. Paper, \$10.95. Reprint, 1983 edition.

The Chemist's English. Robert Schoenfeld. VCH, Weinheim, 1985. xii, 173 pp. DM 42. Cloning and the Constitution. An Inquiry into

Governmental Policymaking and Genetic Experimentation. Ira H. Carmen. University of Wisconsin Press, Madison, 1986. xvi, 224 pp. \$22.50. Contractile Proteins in Muscle and Non-Muscle

Cell Systems. Biochemistry, Physiology, and Patholo-gy. Emanuele E. Alia *et al.*, Eds. Praeger, New York, 1985. xx, 732 pp., illus. Database Machines and Database Management.

Esen Ozarahan. Prentice-Hall, Englewood Cliffs, NJ, 1986. xx, 636 pp., illus. \$42.95. Death and the Sexes. An Examination of Differen-

tial Longevity, Attitudes, Behaviors, and Coping Skills. Judith M. Stillion. Hemisphere, New York, 1985. xiv, 166 pp. \$28.50. Series in Death Education, Aging, and Health Care

Deceit Cate. Decspectives on Human and Nonhuman Deceit. Robert W. Mitchell and Nicholas S. Thompson, Eds. State University of New York Press, Albany, 1986. xxx, 388 pp., illus. \$44.50; paper, \$16.95. SUNY Series in Animal Behavior.

The Deep Proterozoic Crust in the North Atlantic Provinces. Alex C. Tobi and Jacques L. R. Touret, Ed. Reidel, Dordrecht, 1985 (U.S. distributor, Kluwer, Hingham, MA). xii, 603 pp., illus. \$74. NATO Ad-vanced Science Institutes Series C, vol. 158. From an

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(Continued on page 1284)

BOOK REVIEWS 1281

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DNA Synthesizer describes model 8600 for fully automated production of oligonucleotide and polynucleotide fragments. It produces chains up to 150 bases in length. Biosearch. Circle 580.

Guide to Chromatography is a treatise and compilation of theory, techniques, and applications as well as a catalog of instruments and accessories for gas and liquid chromatography. Chrompack. Circle 581.

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York, 1986. xx, 566 pp., illus. \$79.50. From a sympo-sium, Washington, DC, April 1984. Dopamine and Neuroendocrine Active Sub-stances. Emilio del Pozo and Edward Flückinger, Eds. Academic Press, Orlando, FL, 1985. xii, 244 pp., illus. \$25. From a symposium, Basel, March 1984. The Duality of the Mind. Proved by the Structure, Functions, and Diseases of the Brain and by the Phenom-ren a of Mental Derangement. and Shown to be Essential

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 Dynamical Systems. A Differential Geometric Approach to Symmetry and Reduction. Giuseppe Marmo et , Eds. Wiley, New York, 1985. xii, 345 pp., illus. \$64.95

Dynamics of Nonlinear Systems. Vladimir Hlavacek, Ed. Gordon and Breach, New York, 1986. x, 313 pp., illus. \$107. Chemical Engineering: Concepts and Reviews, vol. 2.

Earthworms. Their Ecology and Relationships with

Soils and Land Use. K. E. Lee. Academic Press, Orlando, FL, 1985. xviii, 411 pp., illus. \$65. Elements of Relativity Theory. D. F. Lawden. Wiley, New York, 1985. x, 108 pp., illus. Paper, \$14.95. Emotion. Theory, Research, and Experience. Vol. 3, Dicharding Fundation of Computing Research and Experience. Biological Foundations of Emotion. Robert Plutchik and

Henry Kellerman, Ed. Academic Press, New York, 1986. xxiv, 428 pp., illus. \$48.50; paper, \$29.95. **Energy and Environment**. The Unfinished Business. Congressional Quarterly, Washington, DC, 1985. x, 190 pp., illus. Paper, \$10.95.

Entropy in Relation to Incomplete Knowledge. K. G. Denbigh and J. S. Denbigh. Cambridge University Press, New York, 1985. viii, 164 pp. \$34.50. The Evolution of Complex and Higher Organisms.

David Milne et al., Eds. National Aeronautics and Space Administration, Washington, DC, 1985 (available from Superintendent of Documents, Washington, DC). xx, 193 pp., illus. Paper, \$8.50. NASA SP-478. Based on workshop, Moffett Field, CA, 1981 and 1982.
 The Freshwater Mollusca of Northern Africa. Dis-tribution. Biogeography and Palaecocology. Dirk Van

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opments in Hydrobiologia 25. Frontiers in Polymer Science. W. Wilke, Ed. Steinkopff, Darmstadt, 1985 (U.S. distributor, Springer-Ver-lag, New York). vi, 191 pp., illus. \$60. Progress in Colloid and Polymer Science.

Fundamentals and Applications of Ion Exchange. Lorenzo Liberti and John R. Millar, Eds. Nijhoff, Dor-drecht, 1985 (U.S. distribubtor, Kluwer, Hingham, MA). x, 484 pp., illus. \$65.50. NATO Advanced Science Institutes Series E, no. 98. Based on a conference, Maratea, Italy, May 1982.

The Future Impact of Automation on Workers.

Wassily Leontief and Faye Duchin. Oxford University Press, New York, 1986. xiv, 170 pp., illus. \$24.95. GABA and Mood Disorders. Experimental and Clinical Research. G. Bartholini, K. G. Lloye, and P. L. Morselli, Eds. Raven, New York, 1986. xvii, 222 pp., User 520.50. Lebertopeix de Bacherberg illus, \$29,50. Laboratories d'Etudes et de Recherches Synthélabo Monograph Series, vol. 4. From a sympo-sium, Paris, Aug. 1984.

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Gene Manipulations in Fungi. J. W. Bennett and Linda W. Lasure, Eds. Academic Press, Orlando, FL, 1985. xx, 558 pp., illus. \$75; paper, \$39.95.
Genetic Analysis of Animal Development. Adam S. Wilkins. Wiley-Interscience, New York, 1986. xiv, 546 pp., illus. \$69.95.
The Global Climate. John T. Houghton, Ed. Cam-bridge University Press, New York, 1985. vi, 233 pp., illus. Paper, \$19.95.
Global Nuclear Energy Bisks. The Search for Pre-

Global Nuclear Energy Risks. The Search for Preventive Medicine. Bennett Ramberg. Westview, Boulder, CO, 1986. xvi, 128 pp. \$22. Good to Eat. Riddles of Food and Culture. Marvin

Harris. Simon and Schuster, New York, 1985. 289 pp. \$17.95.

Low Dimensional Topology. Roger Fenn, Ed. Cambridge University Press, New York, 1985. xiv, 258 pp., illus. Paper, \$27.95. London Mathematical Society Lecture Note Series 95. From a seminar, Sussex, England, Aug. 1982.

Madagascar. Alison Jolly, Philippe Oberlé, and Ro-land Albignac, Eds. Published in collaboration with the International Union for Conservation of Nature and

Natural Resources by Pergamon, New York, 1985. xvii, 240 pp., illus. \$25.95. Key Environments. **Making Decisions**. D. V. Lindley. 2nd ed. Wiley, New York, 1985. xii, 207 pp. \$27.95.

Maximum-Entropy and Bayesian Methods in In-verse Problems. C. Ray Smith and W. T. Grandy, Jr., Eds. Reidel, Dordrecht, 1985 (U.S. distributor, Kluwer, Hingham, MA). x, 492 pp., illus. \$44.50. Fundamental Theories of Physics.

Medium Energy Nucleon and Antinucleon Scattering. H. V. von Geramb, Ed. Springer-Verlag, New York, 1985. x, 578 pp., illus. Paper, \$33.30. Lecture Notes in Physics, 243. From a symposium, Bad Honnef, June 1985.

Membrane Transport Drive by Ion Gradients. Giorgio Semeza and Rolf Kinne, Eds. New York Acade-my of Sciences, New York, 1985. xii, 462 pp., illus. Cloth or paper, \$106. Annals of the New York Academy of Sciences, vol. 456. From a conference, New York, Oct. 1984.

Microbial Energetics. Edwin A. Dawes. Blackie, Glasgow, 1986 (U.S. distributor, Chapman and Hall, New York). viii, 187 pp., illus. \$39.95. Mind over Machine. The Power of Human Intuition

and Expertise in the Era of the Computer. Hubert L. Dreyfus and Stuart E. Dreyfus with Tom Athanasiou. Free Press (Macmillan), New York, 1986. xviii, 231 pp. \$16.95. Moving America to Methanol. A Plan to Replace

Oil Imports, Reduce Acid Rain, and Revitalize Our Domestic Economy. Charles L. Gray, Jr., and Jeffrey A. Alson. University of Michigan Press, Ann Arbor, 1986.

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 viii, 144 pp., illus. 25; paper, \$12.50.
 The Mycoplasmas. Vol. 4, Mycoplasma Pathogenicity. S. Razin and M. F. Barile, Eds. Academic Press, Orlando, FL 1985. xx, 508 pp., illus. \$75.
 Mycotoxins. Formation, Analysis and Significance. J. E. Smith and M. O. Moss. Wiley, New York, 1985. vi, 148 pr. illus. \$275. 148 pp., illus. \$2

Natural Resistance of Plants to Pests. Roles of Allelochemicals. Maurice B. Green and Paul A. Hedin,

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 Sterol Biosynthesis Inhibitors and Anti-Feeding
 Compounds. T. Kato *et al.* Springer-Verlag, New York, 1986. x, 151 pp., illus. \$38. Chemistry of Plant Protection 1

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Subcellular Taxonomy. An Ultrastructural Classification System with Diagnostic Applications. I. C. McIay and Peter G. Toner. Hemisphere, Washington, DC, 1985. viii, 86 pp. \$41.50.

Surnames and Genetic Structure. Gabriel Ward Lasker. Maps and diagrams by C. G. N. Mascie-Taylor, A. J. Boyce, and G. Brush. Cambridge University Press,

A. J. Boyce, and G. Brush. Cambridge University Press, New York, 1985. viii, 148 pp., illus. \$24.95. Synthetic Adjuvants. Arlette Adam. Wiley-Intersci-ence, New York, 1985. xvi, 239 pp. \$55. Modern Concepts in Immunology, vol. 1. Synthetic Fuels. G. E. Beghi, Ed. Reidel, Dordrecht, 1985 (U.S. distributor, Kluwer, Hingham, MA). vi, 497 pp. illus. \$50. Jerge Courses on Energy Surfame and

pp., illus. \$59. Ispra Courses on Energy Systems and Technology. From a course, Ispra, Italy, May 1984. **Teaching Thermodynamics**. Jeffery D. Lewins, Ed.

Teaching Inermodynamics, Jenery D. Lewins, Ed., Plenum, New York, 1985. xx, 517 pp., illus. \$79.50.
From a workshop, Cambridge, England, Sept. 1984.
Techniques and Concepts of High-Energy Phys-ics III. Thomas Ferbel, Ed. Plenum, New York, 1985.
viii, 436 pp., illus. \$75. NATO Advanced Science Insti-tutes Series B, vol. 128. From an institute, St. Croix, VI,

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Unbounded Non-Commutative Integration. J. P. Jurzak. Reidel, Dordrecht, 1985 (U.S. distributor, Kluwer, Hingham, MA). xx, 191 pp. \$39.50. Mathematical Physics Studies.

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Anatomist/Cell Biologist. Ph.D., anatomy and physiology. Three year postdoctoral in biochemistry and biophysics. Twelve years of experience teaching histology, oral histology, and craniofacial developmental biology. Present title: professor. Over 70 publications, three textbooks, 17 microfiche. Preference: dental school anatomy or oral biology position. Box 107, SCIENCE. 6/6, 13

Behavioral Pharmacologist. Ph.D. Postdoctoral training, awards, grants, publications, teaching experience. Familiarity with neuropharmacological/biochemical techniques, different operating systems, behavioral effects in several species. Seeking challenging research opportunities. Box 97, SCIENCE. X

R&D Director. Experienced laboratory/pilot plant/research director for major U.S. fermentation company seeks position with R&D section of new venture. Entrepreneurial spirit, startup experience. Equity position desirable. Box 108, SCIENCE. X

Neurotoxicologist. Ph.D. postdoctoral, editorial, grant, and regulatory experience. Specialist in in vivo techniques. Seeks academic, industrial, or government position. Box 109, SCIENCE. 6/6, 20

6 JUNE 1986

POSITIONS OPEN

ACADEMIC COORDINATOR. Full-time, job security, academic staff position. Responsible for coordination of all aspects of Michigan State University's summer teaching program in ecology, limnology, and other field sciences and its lifelong education programs. Duties include curriculum development, preparation of brochures and other published materials, recruitment of students, and management of logistics. Applicants should have a background in the biological sciences, as well as experience in administration and program development. Graduate degree preferred. Salary level commensurate with training and experience. Submit curriculum vitae, statement of interest, and three letters of recommendation by 15 July 1986 to: Academic Coordinator Search Committee, Kellogg Biological Station, Michigan State University, Hickory Corners, Michigan 49060. MSU is an Affirmative Action/Equal Opportumity Institution.

ACADEMIC PATHOLOGIST—Full-time, tenuretrack position with Marshall University School of Medicine. Experience in hemato/immunopathology desirable. Should be Board-eligible/Board-qualified in Anatomic Pathology/Clinical Pathology. Send curriculum vitae to: Stebbins B. Chandor, M.D., Department of Pathology, Marshall University School of Medicine, 1542 Spring Valley Drive, Huntington, WV 25704. An Affirmative Action/Equal Opportunity Employer.

ANTICIPATED POSTDOCTORAL POSITION DROSOPHILA GENETICS NORTHERN ILLINOIS UNIVERSITY DEKALB, ILLINOIS

Two-year study of genetic basis of phenotypic plasticity. Experience with *Drosophila* necessary. Start 1 September. Salary: \$18,000. Send curriculum vitae and two references by 27 June to: Dr. Samuel Scheiner, Department of Ecology and Evolutionary Biology, University of Arizona, Tucson, AZ 85721. The University is an Affirmative Action/Equal Opportunity Employer.

ASSISTANT PROFESSOR ENVIRONMENTAL HEALTH SCIENCES

Tenure-track position available July 1986. Responsibilities include research and teaching graduate students in the Master of Public Health Program of the University of Texas School of Public Health Branch at San Antonio. Teaching two courses in environmental health: one with emphasis on environmental factors and health, the second on environmental factors and health, the second on environmental factors and health, the secence/doctoral level training in one or more of the following areas: (i) air, water, solid, and hazardous wastes; (ii) environmental legislation, program operation, health effects, and pollution control processes. Send inquiries, curriculum vitae, and transcripts, and have three letters of reference sent to: Dr. Robert Oseasohn, Associate Dean, The University of Texas School of Public Health, MPH Program at San Antonio, 7703 Floyd Curl Drive, San Antonio, TX 78284. Telephone: 512-691-6845. An Equal Opportunity Employer. Women and minorities are encouraged to apply.

ASSISTANT/ASSOCIATE PROFESSOR OF BIOCHEMISTRY

Tenure-track positions at the assistant and/or associate professor levels are available in the Department of Biochemistry. Candidates for assistant professor are expected to hold a Ph.D. degree, have several years of postdoctoral training, and have demonstrated high quality research and teaching abilities. Candidates for associate professor should additionally have an established research program with continuous funding and a substantial record of publication. Preference will be given to individuals using contemporary methods of biochemistry and molecular biology, including recombinant DNA techniques and/or monoclonal antibodies. Start-up funds are available. Interested individuals should submit curriculum vitae, a list of at least four professional references, and a brief statement of research interests to: Dr. Russell A. Prough, Chairman, Department of Biochemistry, University of Louisville KN00 of Medicine, Health Sciences Center, Louisville, KY 40292. Applicants will be reviewed beginning 1 August 1986. The University of Louisville is an Affirmative Action/Equal Opportunity Employer.

POSITIONS OPEN

AQUATIC ECOLOGY. Michigan State University announces a unique opportunity to recruit *three* Assistant/ Associate Professors (tenure-stream) in experimental aquatic ecology. Positions will involve: limnology, population and community ecology, or aquatic ecosystems. Residency at the Kellogg Biological Station (KBS) with a joint appointment in the Department of Zoology and other academic units as appropriate. Emphasis on research and graduate training. Teaching involves summer programs at KBS with periodic commitment to campusbased courses at the graduate level. Applications should include curriculum vitae, publications, three letters of recommendation, and a statement of academic interests. Submit by 31 July 1986 to: Chairman, Search Committee, Kellogg Biological Station, Michigan State University, Hickory Corners, Michigan 49060. Michigan State University is an Affirmative Action/Equal Opportunity Institution.

ASSISTANT/ASSOCIATE/ FULL PROFESSOR-LEVEL POSITION IN VASCULAR CELL BIOLOGY

Position open in basic biomedical research on the staff of the Cleveland Clinic Foundation's Research Institute. The successful applicant would be expected to establish an independent research program and collaborative ties with existing independent laboratories involved in diverse aspects of vascular biology. Current areas of research interest include lipoprotein-cell interactions, connective tissue production, vascular cell growth control, and leukoyte-vessel wall interactions. Candidates should have a Ph.D. or M.D. and a minimum of 3 years of postdoctoral experience. Applicants with experience in molecular biology, cell biology, or biochemistry (not necessarily related to vascular biology) will be given preference.

The Cleveland Clinic Research Institute offers a stimulating and supportive environment for career growth, as well as competitive salary, excellent fringe benefits, and substantial funds for establishing a research effort. Applications accepted immediately. Deadline 30 June. Send curriculum vitae, statement of research interests, and names of at least three references to:

Muriel Daly Administrative Assistant Section of Atherosclerosis Research (FF4) Cleveland Clinic Research Institute 9500 Euclid Avenue Cleveland, OH 44106

ASSISTANT RESEARCH SCIENTIST: Ph.D. in cellular biochemistry to work with Dr. Arnold Stern, Department of Pharmacology. Experience preferred in structural and metabolic biochemistry for oxygen and metabolism toxicity studies. Excellent salary and benefits. Please send résumés to: Joan Harmon, Personnel Department, New York University Medical Center, 317 East 34 Street, 7th Floor, New York, NY 10016. An Afirmative Action/Equal Opportunity Employer, M/F.

FACULTY POSITION ENDOWED CHAIR IN BIOCHEMICAL RESEARCH UNIVERSITY OF LOUISVILLE

Nominations and applications are invited for the newly established Preston Polk Joyes endowed chair in biochemical research at the University of Louisville, Department of Biochemistry, School of Medicine. We seek an established scientist with an outstanding record of publication, funding, and leadership in his/her field. The candidate should currently hold the rank of associate or full professor or equivalent in biochemistry or relevant discipline. Although the area of scientific expertise is open, preference will be given to candidates with currently successful programs in biochemistry or molecular biology utilizing recombinant DNA technology. Major responsibility will be the direction of a vigorous, independent research program. Other duties may include graduate and professional teaching and university service. The position will be tenured at the level of professor. Applicants should forward curriculum vitae and the names of at least four references. Nominators need send only a letter of nomination documenting the contributions of the candidate. Address all correspondence by 31 July 1986 to: Professor David V. Cohn, Chair, Search Committee, Department of Biochemistry, Health Sciences Center, University of Louisville, Louisville, KY 40292. Affirmative Action/Equal Opportunity Employer.

ASSISTANT PHARMACOLOGIST

Adria Laboratories, an aggressive leader in the development and marketing of ethical pharmaceuticals, has an immediate opening for a resourceful scientist. Responsibilities will focus on planning and implementing pharmacologic studies using animal subjects in the preclinical evaluation of anti-tumor drugs. The position requires a B.S. in biology or related field. Experience in cell culture, in vitro methods, and handling radioisotopes is essential as are strong communication skills. We offer outstanding career rewards in the form of compensation, benefits, and growth potential. For consideration, please forward résumé and salary requirements to: ADRIA LABORA-TORIES, P.O. Box 16529, Columbus, OH 43216. *An Equal Opportunity Employer, M/F/H/V*.

ASSISTANT PROFESSOR. Beginning investigator with Ph.D. in the exercise sciences with specialization in area of temperature regulation during acute and chronic exercise. One or more years of postdoctoral experience in temperature regulation is desirable. Individual will be expected to attract external funding and will assume direction of Ph.D. emphasis in environmental physiology and team-teach in selected undergraduate and graduate courses in physiology and exercise physiology. Submit letter of application, curriculum vitae, three reprints, and three letters of recommendation to: C. M. Tipton, Ph.D., Head, Department of Exercise and Sport Sciences, University of Arizona, Tucson, Arizona 85721. Deadline 1 July 1986. An Affirmative Action/Equal Opportunity Employer.

ASSISTANT PROFESSORS IN PHARMACOLOGY/TOXICOLOGY Endocrine Pharmacology/Toxicology Developmental (Fetal/Neonatal) Pharmacology/Toxicology Carcinogenesis/Genotoxicology Neuropharmacology/Neurotoxicology Renal Pharmacology/Toxicology Other Areas of Pharmacology/Toxicology

Two tenure-track faculty positions in the above mentioned areas are available in the Department of Pharmacology and Toxicology at the University of Mississippi Medical Center in Jackson.

Candidates must have at least 2 years of postdoctoral training and a record of research accomplishment. The candidates should be committed to developing strong, independent, fundable research programs and to participate in medical, dental, and graduate teaching in one of the above areas. A complete curriculum vitae, including a brief statement of research interests, and three letters of recommendation should be sent to:

Dr. I. K. Ho Professor and Chairman Department of Pharmacology and Toxicology University of Mississippi Medical Center Jackson, Mississippi 39216–4505

The University of Mississippi Medical Center is an Equal Opportunity Employer, M/F/V/H.

BIOCHEMISTRY FACULTY POSITIONS MEHARRY MEDICAL COLLEGE

The Department of Biochemistry will have several positions to fill at the assistant professor level during the 1986 to 1987 academic year. Preference will be given to applicants with expertise in the following areas: (i) molecular biology/molecular genetics of eukaryotic or prokaryotic systems, (ii) membrane biochemistry or molecular biology of transmembrane signaling (iii) regulatory aspects of cellular and/or metabolic biochemistry, and (iv) physical biochemistry and/or enzymology. Exceptional candidates in other areas of biochemistry will also be considered. Successful applicants will be expected to develop and/or maintain funded research programs of high quality and to participate in the graduate and professional school teaching responsibilities of the Department of Biochemistry. Applicants should send curriculum vitae, names of four individuals who may be contacted for reference, and a summary of research interests or on-going projects to: Ifeanyi J. Arinze, Ph.D., Chairman, Department of Biochemistry, Meharry Medical College, Nashville, TN 37208. Mebarry Medical College is an Equal Opportunity/Affirmative Action Employer.

DEPARTMENT OF PHYSIOLOGY UNIVERSITY OF ALBERTA

The Department of Physiology at the University of Alberta invites applications for a position at the AS-SISTANT PROFESSOR rank. The successful candidate must have a Ph.D. degree and at least 2 years of postdoctoral experience, and have demonstrated outstanding ability for independent research. Preference will be given to investigators with experience in the following areas: enzyme chemistry, ion channel techniques, electrophysiology and ion flux studies, biochemistry and biophysics of neurotransmitter release, cellular calcium metabolism, and smooth muscle and synaptosomes. A good background in chemistry and pharmacology will be necessary to carry out such research. The successful candidate will be expected to fit in with existing research programs in ion channel and smooth muscle physiology and peptide hormone studies, and will be expected to participate in the department's teaching program. The candidate will be expected to apply to the Alberta Heritage Foundation for Medical Research (AHFMR) for a scholarship. AHFMR also offers establishment grants for setting up a well-equipped laboratory and for initial operating expenses.

The University of Alberta is an Equal Opportunity Employer, but in accordance with Canadian employment and immigration regulations, this advertisement is directed to Canadian citizens and permanent residents.

Interested applicants should send their curriculum vitae, an outline of their proposed research program, and the names of three referees before 30 June 1986 to:

The Chairman Department of Physiology University of Alberta Edmonton, Alberta Canada T6G 2H7

ASSISTANT PROFESSOR, PEDIATRICS, with joint faculty appointment in pharmacological sciences to develop research in developmental toxicology of metals beginning July 1986 and January 1987. We seek an individual with a Ph.D. and at least 1 year of postdoctoral achievement as innovative investigator. Must have strong publication record and experience in extramural funding. Excellent facilities, equipment, and maximal opportunity for scientific growth. Send curriculum vitae to: Carol R. Angle, M.D., Professor of Pediatrics and Director, UNMC Toxicology Program, C.O.P. 4037, University of Nebraska Medical Center (UNMC), 42nd and Dewey Avenue, Omaha, Nebraska 68105. Curriculum vitae will not be considered after 1 October 1986. The University of Nebraska is an Equal Opportunity/Affirmative Action Employer.

ASSISTANT PROFESSOR—Tenure-track. The Department of Anatomy and Cell Biology, University of Southern California (USC) School of Medicine seeks a Ph.D. or M.D. with 2 to 3 years of productive postdoc-toral experience in vision research. Preference given to applicants qualified to pursue independent research in biochemical and ultrastructural aspects of retinal and choroidal development. The individual chosen must show promise for obtaining independent research funding and present a strong record of prior productivity in this field. Teaching duties will require experience in histology, cytology, and embryology. Candidates should request at least three individuals who are independent to the data the strong teaching the data the strong record of prior productivity in the other is a profit to the data the strong teaching the data the strong teaching the data the strong teaching teaching the strong teaching teaching the strong teaching tea

Candidates should request at least three individuals who are in a position to judge their current profession potential to write on their behalf. Send complete résumés before 1 July 1986 to: Dr. D. E. Kelly, Chairman, Department of Anatomy and Cell Biology, 1333 San Pablo Street, Los Angeles, CA 90033. An Equal Opportunity Employer.

COMPUTER SCIENTIST. Responsible for research in computer vision applied to robotics and related duties. Requires Ph.D. in computer science and 1 year of experience in research in computer vision and artificial intelligence. Also requires knowledge of vision techniques as applied to man-made objects, fast algorithms utilizing model based vision, and projective geometry and mathematics; and familiarity with hardware and large software systems. Salary: \$51,000 per year. Site of employment and interviews: Menlo Park, California. Send this ad and a résume to: Job number M.V. 3631, P.O. Box 9560, Sacramento, CA 95283–0560, not later than 7 July 1986.

POSITIONS OPEN

ASSOCIATE PROFESSOR/ PROFESSOR PHARMACEUTICS

Temple University School of Pharmacy, Department of Pharmaceutical Sciences, invites applications for a tenure-track position at the professor/associate professor level starting as early as 1 January 1987. Candidates should have a Ph.D. in pharmacy or a related discipline and demonstrated ability to teach, develop an independent research program, and secure extramural funding in collaboration with the pharmaceutical industry. Individuals with research interests which involve physico-chemical determinants of control of drug release and/or nonclassical drug delivery systems are preferred, but outstanding applicants working in other areas are urged to apply. Interested individuals should send curriculum vitae and references to:

Dr. Ronald Gautiei, Chairman Department of Pharmaceutical Sciences Temple University School of Pharmacy 3307 North Broad Street Philadelphia, PA 19140

Temple University is an Affirmative Action/Equal Opportunity Employer

BIOCHEMIST—Position available for research in the regulation of immune response via immune network, mechanism involved in the somatic mutation of immunoglobulin variable region genes, and development of immunotherapy with drug-containing liposome targeting to tumor cells. Experience in cell culture and hybridoma techniques, antibody purification with affinity chromatography and analysis using RIA and HPLC, preparation of antibodies to liposomes, and recombinant DNA techniques desirable. The successful candidate should have Ph.D. degree in immunology or B.S. degree with 3 years of equivalent experience in immunological research. Salary: \$25,000 per year. Mail résumé to: New York State Job Service, 584 Delaware Avenue, Buffalo, NY 14020. D.O.T. code: 041.061-026, Job order number 0101658. Equal Opportunity Employer.

BIOCHEMISTRY/TISSUE CULTURE

Applicants are being sought for a tenure-track position at the level of ASSISTANT or ASSOCIATE PROFES-SOR with significant experience and demonstrated accomplishments in tissue culture in both neural and nonneural tissues. Candidates should be able to develop a creative research program in areas clinically relevant to psychiatry and the neurosciences, as well as being able to join in collaborative research. Candidates should be either M.D. psychiatrist or Ph.D. biochemist. Background in metabolism is advantageous. Applicants should send curriculum vitae and references to: Dr. Robert W. Guynn, Department of Psychiatry and Behavioral Sciences, University of Texas Medical School, P.O. Box 20708, Houston, Texas 77225. An Equal Opportunity Employer. Women and minorities are encouraged to apply.

CELLULAR/MOLECULAR BIOLOGIST

Full-time, tenure-track position in a nine member Biology Department. Ph.D. required. Experience teaching at the college level preferred, to teach broad range of courses including genetics, biochemistry, and developmental biology. Initial review of applications begins 20 June 1986. Submit letter of application, résumé, and three letters of recommendation to: **Personnel Services**, **Northeastern State University, Tahlequah, OK 74464.** An Equal Opportunity/Affirmative Action Employer.

The Department of Biology, Emory University, seeks to fill a temporary teaching position in the area of DEVELOPMENTAL BIOLOGY. The position is for 1 year, beginning 1 September 1986 or 1 January 1987, and is renewable for a second year. Undergraduate teaching responsibilities will include courses in the area of developmental biology. Applicants should send their curriculum vitae, including a statement on teaching interests and experiences, and arrange to have three letters of reference sent by 15 July 1986 to: Dr. William Murdy, Chairman, Department of Biology, Emory University, Atlanta, GA 30322. Emory is an Equal Opportunity/Affirmative Action Employer.



Environment Canada Inland Waters Directorate National Hydrology Research Institute Saskatoon, Saskatchwan

We require an experienced scientist to conduct research into the hydrology of alpine regions by investigating the role of snow and ice masses in the hydrologic cycle, particularly their influence on river systems and water supply. You will be responsible for examining the relevant hydroclimatic factors governing spatial and temporal variations in the perennial snow and ice masses of the Cordillera. You will be responsible for providing advice on problems in the general subject area of alpine hydrology to other interested individuals and agencies.

You require graduation with a doctorate degree from a recognized university, or a lesser degree with evidence of research experience and productivity equivalent to that of a doctorate degree, in an earth sciences program in glacial or alpine hydrology, or in a related field. You should also possess experience in the conduct of original research in glacial hydrology or glaciology, and have been in the field during several seasons in an alpine or arctic environment. Knowledge of English is essential.

We offer a salary ranging from \$28,176 to \$52,409 commensurate with your qualifications and experience.

Forward your résume and/or application form, quoting reference number S-86-31-6382-47JG-(G35), to:

Joan Girling (613) 996-8054 Public Service Commission of Canada Ottawa, Ontario K1A 0M7

Closing Date: June 27, 1986

Personal information you provide is protected under the Privacy Act. It will be held in personal information bank PSC/P-PU-040 Personnel Selection Files.

Preference will be given to Canadian Citizens.

anada

The Public Service of Canada is an equal opportunity employer

CARDIOVASCULAR RESEARCHERS

We have a unique opportunity for you!

If you are interested in blood pressure regulation and atherosclerosis, we are setting up and staffing a new cardiovascular research unit to be located within the Department of Pharmacology at Washington University School of Medicine, St. Louis. Although the laboratories will be administered by Washington University, the senior scientific staff will be employees of G.D. Searle and Searle will provide the operating funds.

These laboratories are intended to be an interface between academic and industrial research and should benefit from the best of both worlds.

If you are an experienced Ph.D. cardiovascular scientist and seek this kind of challenge, please send your CV, references and salary history to:

Joan Lineberry — BB5A Searle Research & Development #0WU-1 700 Chesterfield Village Parkway St. Louis, MO 63198

SEARLE

Equal Opportunity Employer

ASSOCIATE EDITOR SCIENCE MAGAZINE

Editorial position available for a Ph.D. inorganic chemist, physical chemist, or solid-state physicist with two or three years of research experience; wide general interest in science and instrumentation; and publications in the refereed literature. The successful candidate's initial duties will include editing manuscripts for clarity and style. Progress to wide responsibilities in manuscript selection is expected. Previous editorial experience not required. This is a full-time position in our Washington editorial office. Please submit résumé with cover letter, including salary requirements, to:

> Carolyn Bell SCIENCE Magazine 1333 H Street, NW Washington, D.C. 20005

Equal Opportunity Employer

BIOLOGICAL OCEANOGRAPHY CHESAPEAKE BAY INSTITUTE THE JOHNS HOPKINS UNIVERSITY

The Chesapeake Bay Institute is seeking applicants for a senior position in biological oceanography. Candidates should have a minimum of 8 to 10 years of experience and possess an excellent scholarly record in research. The successful applicant will be expected to develop a strong research program in the institute, and should have some administrative ability to provide leadership for the biological oceanography group. We are particularly interested in applicants whose backgrounds will complement our existing staff of plankton biologists and microbiologists, but will base our selection on the strength of the applicant, regardless of specific research area. Respondents should submit a letter of application describing research interests and background, current curriculum vitae, and names and addresses of four references to: Dr. Dennis A. Powers, Acting Director, Chesapeake Bay Institute, 4800 Atwell Road, Shady Side, Maryland 20764. The closing date is 1 August 1986. The Johns Hopkins University is an Equal Opportunity/Affirmative Action Employer.

Ph.D. with research experience in CARDIOVASCU-LAR PHYSIOLOGY and research techniques including surgical, radioisotopes, ultrasound, and drug studies. Salary commensurate with experience. Address inquiries and curriculum vitae to: Chairman, Department of Medicine, East Carolina University School of Medicine, Greenville, NC 27834. Equal Opportunity Employer thru Affirmative Action.

DIFFERENTIATED CELL CULTURES—RE-SEARCH ASSOCIATE needed to initiate cell cultures from human and nonhuman species and to characterize cell cultures for specific cell type markers by biochemical and immunological methods. Qualified candidate should have a Ph.D. and 2 years of postdoctoral training. Experience evaluating optimal media for differentiated cell cultures would be useful. Position requires a minimum of administrative duties on documentation of specimens collected for the NIA Aging Cell Culture Repository. Send résumé and references to: Dr. Arthur E. Greene, Coriell Institute for Medical Research, Copewood and Davis Streets, Camden, NJ 08103. Equal Opportunity Employer.

DIRECTOR OF CLINICAL MEDICINE (SENIOR INVESTIGATOR)

Immediate need for a research based physician with extensive malaria patient experience. Will be responsible for all aspects of the clinical/field trials of malaria vaccines, including but not limited to protocol development, monitoring, and related clinical backstopping. Should have experience in the conduct of clinical investigations in a developing country setting and will require an in-depth knowledge of FDA regulations regarding the phased clinical testing of new drugs and vaccines. Will be the primary liaison for U.S. Agency for International Development with various organizations concerned with malaria vaccine clinical/field trials, including WHO, PAHO, FDA, and others. Field experience with human malaria is required. Submit complete résumé and three references to: The American Institute of Biological Sciences, 1800 North Kent Street, number 930, Arlington, Virginia 22209.

Stanford University Medical School is seeking a DI-RECTOR for its Laboratory Animal Diagnostic Laboratory within the Division of Laboratory Animal Medicine. Candidates must be D. V.M.S. with Board-certification by the American College of Veterinary Clinical Pathology. A post-D.V.M. Ph.D. degree is desirable. Interest in, and ability to, conduct biomedical research as indicated by a strong publication record is required. The diagnostic laboratory director is expected to maintain an academic research program of distinction and to qualify for appointment as an assistant professor in the School of Medicine. Stanford University is committed to increasing representation of women and members of minority groups on its faculty and particularly encourages applications from such candidates. Send curriculum vitae, letter outlining research interests, and the names of three references to: Thomas E. Hamm, Jr., D.V.M., Ph.D., Director, Division of Laboratory Animal Medicine, Stanford University Medical School, Stanford, California 94305.

POSITIONS OPEN

MEDICAL COLLEGE OF GEORGIA DIRECTOR OFFICE OF GRANTS AND CONTRACTS AND EXECUTIVE DIRECTOR MEDICAL COLLEGE OF GEORGIA RESEARCH INSTITUTE

The director of the Office of Grants and Contracts of the Medical College of Georgia and the executive director of the MCG Research Institute is a vital link between faulty and administration in the promotion of research at the Medical College of Georgia, the Health Sciences Center of the State of Georgia. The position, available 1 September 1986, involves administration of grants and contracts from federal, state, private agencies, and industry; administration of institutional grant programs, technology transfer, developing workshops for young investigators in the Schools of Medicine, Dentistry, Allied Health Sciences, and Nursing, and working with the directors of the Offices of Research Support Services and Research Computing and Statistics. The Director reports to the vice president of research and interacts with the Board of Directors of the Research Institute. The director should have an advanced degree, preferably in a biomedical science, and administrative and leadership experience in the area of grants and contracts. Salary is commensurate with experience. Curriculum vitae and three references should be sent before 30 June to:

Lowell M. Greenbaum, Ph.D. Vice President for Research Medical College of Georgia Augusta, GA 30912

Equal Opportunity/Affirmative Action Program.

ECOLOGICAL GENETICS/ EVOLUTIONARY BIOLOGY

Visiting assistant professor with interest and expertise in ecological genetics and evolution; nontenure-track, but renewable for up to 3 years. Interest in plant-insect interactions or theoretical evolutionary genetics preferred, but any research interests in general area of ecological genetics or evolution of animals or plants considered. Teaching responsibility is an undergraduate course in evolution for biology majors and participation in a graduate seminar. Position begins approximately 1 August 1986. Submit curriculum vitae, statement of research interests and teaching experience, brief description of areas in which applicant might be able to contribute to graduate seminars, and three letters of recommendation by 20 June to: Dr. Sara Via, Department of Biology, University of Iowa, Iowa City, IA 52242. The University of Iowa is an Equal Opportunity/Affirmative Action Employer.

EDITORIAL POLYMATH

Lively new biweekly tabloid newspaper for science professionals needs associate editor in its Washington office. Must have broad, strong background in "hard" science, knowledge of science policy, and editing experience—ideally, editing short essays and opinion pieces. Technical writing/editing is NOT appropriate training for this job. Write: Editor, THE SCIENTIST, 1101 15th Street, NW, Washington, DC 20005.

FACULTY POSITION-IMMUNOLOGIST

The Department of Pathology and Laboratory Medicine at Emory University invites applications for a tenured or tenure-track faculty position in immunology at the rank of assistant or associate professor. Candidates are expected to assist in the development of a program in autoimmunity, especially as it relates to mechanisms of viral induced myocarditis and cardiomyopathy in both human and experimental models. Applicants should have at least 2 years of postdoctoral experience and have demonstrated research ability in modern immunology. The successful candidate, while assisting the development of an independent research program, will be expected to compete successfully for external funding and participate in teaching immunopathology to graduate and undergraduate students. Rank and salary will be commensurate with experience. Send curriculum vitae, a statement of research plans, and three letters of recommendation to: Kenneth W. Sell, M.D., Ph.D., Chairman, Department of Pathology, Room 703 WMB, Emory University School of Medicine, Atlanta, GA 30322. An Afjirmative Action/Equal Opportunity Employer.

POSITIONS OPEN

FACULTY POSITION, DEPARTMENT OF NEU-ROSURGERY, tenure-track. Individual sought to spearhead basic and clinical research group in one of the following areas: neural regulation of cerebral circulation; neural transplantation; neural plasticity. Excellent possibilities for collaboration with groups using chemical neuroanatomy, cellular biophysics and neurophysiology, image analysis, ultrastructural, molecular and culture techniques. Successful candidate will have experience with cellular, molecular, and morphological approaches, and ability to attract outside funding. Send curriculum vitae, statement of research background/goals, and names of four references to: John M. Tew, Jr., M.D., Chairman Neurobiology Search, Department of Neurosurgery, University of Cincinnati College of Medicine, ML 515, Cincinnati, OH 45267–0515. The University of Cincinnati College of Medicine is an Affirmative Action/ Equal Employment Opportunity Employer.

FACULTY POSITION IN PHARMACOLOGY

Applications are invited for a tenure-track faculty position in the broad area of molecular pharmacology. Candidates are sought with the Ph.D. degree, preferably in pharmacology, and with proven accomplishments in the application of DNA recombinant technology, immunology, receptor subunit chemistry, or other techniques related to pharmacology-oriented research. Rank and salary are flexible and commensurate with

Rank and salary are flexible and commensurate with qualifications. A clear capability for generating extramural research support and for working as an independent investigator will be critical factors in the selection process. Start-up funds are available.

Please send curriculum vitae, three representative reprints, and the names and addresses of three references to: Dr. Elliot S. Vesell, Department of Pharmacology, Pennsylvania State University College of Medicine, Hershey, PA 17033. Deadline for receipt of applications is 21 July 1986.

An Affirmative Action/Equal Opportunity Employer.

LIPID AND LIPOPROTEIN RESEARCH GROUP UNIVERSITY OF ALBERTA

The Faculty of Medicine at the University of Alberta has established a new group sponsored by the Alberta Heritage Foundation for medical research. **Five faculty positions** will be available for scientists with major commitments to research in the area of lipids and lipoproteins. At least two of the positions will be filled by M.D. or M.D./Ph.D. scientists willing to spend 75 percent of their time on research-related activities.

Interested individuals should reply in writing by 1 August 1986, including a curriculum vitae, and the names of three referees to:

Dr. Dennis Vance, Director Lipid and Lipoprotein Research Group c/o Associate Dean (Research) Faculty of Medicine University of Alberta Edmonton, Alberta T6G 2R7 Canada

The University of Alberta is an Equal Opportunity Employer, but in accordance with Canadian immigration regulations this advertisement is directed in the first instance to Canadian citizens and permanent residents.

MOLECULAR BIOLOGIST AGRICULTURAL AND VETERINARY DIAGNOSTICS

AgriTech Systems, Inc., a dynamic biotechnology firm specializing in diagnostics for agricultural, veterinary and food testing applications, has an immediate opening for a highly motivated scientist with a record of achievement. The ideal candidate will have a Ph.D. degree and postdoctoral experience in molecular biology with state-ofthe-art understanding of gene isolation, characterization, and expression.

Salary is commensurate with experience. Please send résumé in confidence to:

Director, Research and Development AgriTech Systems, Inc. 58 Fore Street Portland, ME 04101 An Equal Opportunity Employer

FACULTY POSITION—ENDOCRINOLOGIST. The Department of Physiological Sciences, College of Veterinary Medicine, Oklahoma State University, invites applications and nominations for a tenure-track position in endocrinology. Candidates should possess a Ph.D. degree or equivalent in physiology or a related field with emphasis on endocrinology or reproductive physiology. A D.V.M. degree is desirable, but not essential. Candidates should be interested in teaching professional and graduate students and should show evidence of being able to conduct an independent research program. The person in this position will be responsible for teaching endocrinology and reproductive physiology to veterinary medical students. Additional teaching responsibilities in general physiology may be assigned. Initial appointment will be dependent on rank (assistant professor, 3 years; associate professor, 4 years; professor, indefinite). Salary will be commensurate with rank and experience. Send nominations or applications to: E. C. Short, Chairman, Physiological Sciences Search Committee, College of Veterinary Medicine, Oklahoma State University, Stillwater, Oklahoma 74078. Applications should include curriculum vitae with a list of at least three references. To assure full consideration, applications should be received by 15 July 1986. Appointment is planned as soon thereafter as possible.

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

RESEARCH FACULTY POSITION is available in a clinical department to study ion transport and intracellular pH regulation in epithelia. This position will involve ongoing microelectrode studies of ion transport in gastrointestinal epithelia and will provide an opportunity to independently develop a related area of investigation. Candidates should have an M.D. or Ph.D. degree with postdoctoral experience in electrophysiologic techniques. Salary is negotiable. Applicants please send curriculum vitae and names and addresses of three individuals for references to: Laurence Y. Cheung, M.D., Washington University School of Medicine, 4989 Barnes Hospital Plaza, Suite 3105, St. Louis, Missouri 63110.

THE UNIVERSITY OF BRITISH COLUMBIA Head of the Department of Biochemistry

Head, Department of Biochemistry in the Faculty of Medicine at the University of British Columbia.

The person appointed would be responsible for directing and developing the teaching and research programs of the department. A candidate should be a qualified biochemist with substantial academic experience.

Starting date and salary are subject to negotiation. The University of British Columbia offers equal opportuni-

The University of British Columbia offers equal opportunity for employment to qualified male and female candidates. In accordance with Canadian immigration requirements, priority will be given to Canadian citizens and permanent residents.

Applications, accompanied by a detailed curriculum vitae, and the names of three individuals for references, should be directed to:

Dr. A. Eisen Associate Dean, Research and Graduate Studies Room 317, Instructional Resources Center University of British Columbia 2194 Health Sciences Mall Vancouver, B.C. Canada V6T 1W5

RHONE-POULENC, RESEARCH CENTER has a number of openings for scientists in ongoing programs to be carried out in its new research center located near Columbia, Maryland. All positions require a Ph.D. with 2 to 3 years of postdoctoral experience or equivalent experience and responsibilities. IMMUNOLOGISTS. Available positions require a

IMMUNOLOGISTS. Available positions require a background in the biochemistry, immunology, and molecular biology of animal responses to pathogenic bacteria with a knowledge of caprine and bovine antibody responses or in the modification of antibody structure by chemical and molecular biological means. ORGANIC CHEMISTS. Available positions require a

ORGANIC CHEMISTS. Available positions require a background in synthesis, polymers, immobilization, or enzymatic synthesis. **BIOCHEMISTS**. Positions are available in the areas of

BIOCHEMISTS. Positions are available in the areas of enzymology, peptide synthesis, protein isolation, and enzyme and cell immobilization. Qualified applicants should send a résumé including three references to: Maria D. Williams, Purification Engineering, Inc., 9505 Berger Road, Columbia, MD 21046. An Equal Opportunity Employer.

6 JUNE 1986

CALIFORNIA BIOTECHNOLOGY INC.

DIRECTOR—PRODUCT & PROCESS DEVELOPMENT

California Biotechnology Inc., is seeking an outstanding individual for the position of **Director of Product & Process Development**. The successful candidate will be responsible for planning and directing a product/process development facility that will contain laboratories for fermentation, purification, formulation, and analysis of new pharmaceutical products. The products will be primarily, but not exclusively recombinant DNA encoded polypeptides produced via mammalian cell substrates.

The Director will staff and coordinate the individual laboratories and will guide promising new products from research to clinical trials. Close interaction with Project Leaders, Regulatory Affairs, Business Development and Marketing, and outside pharmaceutical companies can be expected.

Qualified candidates must have a Ph.D. and a minimum of three to five years experience managing a process/product development facility in the biotechnology or pharmaceutical industry. Demonstrated scientific creativity and leadership skills with a strong ability to pursue aggressive product development schedule a must.

FORMULATIONS CHEMIST

A position is available for a **Formulations Chemist** to strengthen and develop our drug delivery research group. The Formulations Chemist will prepare formulations of drugs and protein/ peptide products using our unique Intranasal Drug Delivery System. Experience with chemistry of micelles, emulsions and liposomes would be an advantage. A PhD or equivalent is preferred.

California Biotechnology Inc. is a rapidly growing biotechnology and drug delivery company engaged in the development of health care products. We offer a stimulating research environment with a competitive compensation and benefits package including equity participation. Submit resumes/curriculum vitae with references to:

Human Resources/MF California Biotechnology Inc. 2450 Bayshore Parkway Mountain View, CA 94043

An Equal Opportunity Employer

THE FIRST WORD IN... PHARMACEUTICAL RESEARCH

Abbott Laboratories is recognized internationally for its commitment and successes in scientific research. Our Pharmaceutical Products Division is strengthening its tradition of innovation with major new projects and areas of discovery. We now seek the following individuals to join this expanding division.

Ph.D. MICROBIOLOGIST

Working within an interdisciplinary group of synthetic chemists, microbiologists and enzymologists, responsibilities will involve research aimed at the discovery of novel classes of antibiotics. Qualifications include experience in bacterial physiology, biochemistry and/or pathogenesis. Post-doctoral experience is preferred.

BS/MS — CARDIOVASCULAR PHARMACOLOGY

This is a Research Associate position involving animal research studies. Qualified candidates will have a BS or MS degree with a theoretical background in cardiovascular pharmacology or physiology. Experience in standard in vitro and in vivo cardiovascular techniques, radioligand binding, and computer data handling, as well as top leadership abilities, are also required.

Abbott is headquartered in an attractive suburban area on the Lake Michigan shoreline just 30 miles north of Chicago. In addition to an exceptional scientific environment supported by our \$3.5 billion organization, we offer an excellent salary and benefits package including profit sharing and stock retirement plan. For confidential consideration, send resume with salary history to: Patricia Handy/ Corporate Placement, Dept. SM/6-6. Abbott is an Affirmative Action Employer.



FIRST WORD IN...SUCCESS



Industrial **Postdoctoral Position-Biology**/ Pharmacology

Monsanto Agricultural Company is seeking a Postdoctoral Scientist to participate in biochemical toxicology research involving hepatocyte cultures at our Environmental Health Laboratory in St. Louis, Missouri. Responsibilities of the position include: cryopreservation and long term culturing of hepatocytes from multiple mammalian animal species, characterization of xeno-biotic metabolism of cultured hepatocytes, and validation of cultured hepatocytes as an experimental system to study species comparison of chemical toxicity.

Candidates are required to have: a Ph.D in Cell Biology, Pharmacology, or other related disciplines and experience in hepatocyte cultures and measurement of xenobiotic metabolism. This position has an anticipated duration of 2 years. Scientific associations and publications from this research will be encouraged

Monsanto provides a generous compensa-tion package relative to your responsibilities and qualifications. Interested candidates, please forward your resume to: Vernon L. Bozarth, Mail Zone CS6K; Monsanto Company; 800 N. Lindbergh Blvd.; St. Louis, MO 63167. An Equal Opportunity/ Affirmative Action Employer M/F/H/V.

Monsanto

Research Scientist Anticancer Drug **Evaluation & Development**

The Bristol-Myers Company, a worldwide leader in the research, development, and marketing of pharmaceutical, medical care, consumer and nutritional products, has an exceptional opportunity available in cancer research for an individual who excels in the technical and scientific aspects of anticancer drug evaluation and development. Our selected candidate will participate in the development of new in vivo human tumor xenograft models in nude mice and anti-tumor evaluation of monoclonal antibody drug conjugates

Requires a Ph.D. with relevant experience plus demonstrated ability to design, implement and evaluate new tumor models and techniques to be applied to drugtargeting research. Documented evidence of innovative research accomplishments is necessary. The successful candidate will become a team member on an interdisciplinary project, and contribute to the interaction of cancer chemotherapy with Immunology and Chemistry. For confidential consideration forward your resume, including salary history, in confidence, to: BRISTOL - MYERS COMPANY, Pharmaceutical Research & Development Division, P.O. Box 5100, 5 Research Parkway, Wallingford, CT 06492, Attn: Senior Employment Administrator. An equal opportunity employer.



SENIOR SCIENTIST-**NEUROPHARMACOLOGY**

The Sterling-Winthrop Research Institute, the research division of Sterling Drug Inc., announces an opening for a senior level scientist in its Pharmacology Department

The successful candidate should have a PhD in Pharmacology and 1-2 years post doctoral experience in neuropharmacology, neurochemistry, neurobiology or a related discipline. This position will involve working with a multidisciplinary group developing novel treatments for pain and age related neurodegenerative diseases. Expertise in cellular and subcellular biochemical techniques for studying nerve function is desirable. Demonstrated oral and written communication skills are essential.

We offer an attractive salary and benefits package with the opportunity for professional growth. The Institute is located near Albany, NY which is a center for summer and winter recreational activities.

Please send CV including salary requirements in confidence

Nancy E. Laranjo, **Employee Relations Administrator**

STERLING-WINTHROP

RESEARCH INSTITUTE

A Division of Sterling Drug Inc.

Columbia Turnpike, Rensselaer, NY 12144 Equal Opportunity Employer M/F/H/V

NATIONAL INSTITUTES OF HEALTH PUBLIC HEALTH SERVICE DEPARTMENT OF HEALTH AND HUMAN SERVICES

The National Institute of Neurological and Communicative Disorders and Stroke (NINCDS) invites nominations and applications for the and Stroke (NINCDS) invites nominations and applications for the position of Chief, Surgical Neurology Branch (SNB), Intramural Research Program (IRP). This is a Civil Service position in the Senior Executive Service with a salary range of \$61,296 to \$68,700 per annum. The person selected may be eligible for Physician's Comparability pay up to \$10,000 per year. A one-year probationary period must be served by the individual selected if not currently in the Senior Executive Service. the Senior Executive Service.

The Chief, Surgical Neurology Branch provides technical and admin-istrative direction and leadership to the Institute's clinical and research program in surgical neurology and serves as the focal point within the Federal sector, the scientific community, and the public for these activities

Candidates must meet the minimum educational requirements for Medical Officer, GS-602 (or equivalent combination of experience and training), as defined by the U.S. Office of Personnel Manage-ment Handbook X-118, Qualification Standards for Positions under the General Schedule. This information is available in Federal Personnel Offices and Federal Job Information Centers. Further information about the position and qualifications requirements may be obtained by contacting Ms. Janet Follin at 301-496-6334. A Personal Qualifications Statement (SF-171), accompanied by a cur-rent curriculum vitae and bibliography should be submitted to: rent curriculum vitae and bibliography should be submitted to:

Ms. Janet E. Follin NINCDS Personnel Office Building 31, Room 8A23 National Institutes of Health 9000 Rockville Pike Bethesda, Maryland 20892.

APPLICATIONS MUST BE POSTMARKED NO LATER THAN June 30, 1986

ALL QUALIFIED CANDIDATES WILL RECEIVE CONSIDER-ATION WITHOUT REGARD TO RACE, RELIGION, COLOR, SEX, AGE, NATIONAL ORIGIN, LAWFUL POLITICAL AFFIL-IATION, MARITAL STATUS, UNION MEMBERSHIP, OR ANY NONDISQUALIFYING PHYSICAL OR MENTAL HANDICAP. NIH IS AN EQUAL EMPLOYMENT OPPORTUNITY EMPLOYER.

Toxicologist-Investigative Toxicology

The Department of Investigative Toxicology at Smith Kline & French Laboratories, located in the new Upper Merion facility, is seeking a scientist to fill a challenging laboratory position.

The successful candidate will:

- Conduct acute and subacute toxicity studies and supervise study team personnel
- Insure that study protocols are followed and that the quality of data collection and recording are in compliance with the Unit Standard Operating Procedures (SOP's) and Good Laboratory Practice Regulations (GLP's).
- Evaluate the significance of pharmacologic/toxicologic effects.
- Arrange, coordinate, and perform necropsies.
- Summarize data, perform statistical analysis and prepare final drafts of toxicology reports.
- Keep abreast of current developments in pharmacology/toxicology and participate in investigative research.

Candidates are required to have:

- A masters or bachelors degree in biology or related field with 5 to 10 years of experience in industrial toxicology. Familiarity with the utilization of computers for data collection and
- analysis.
- No known allergies to common laboratory animals.

We offer excellent compensation and benefits. For confidential consideration, send your resume and names of three references to: George Kissell, Manager, Personnel Relations, SmithKline Beckman Corporation, 1554 Spring Garden Street, Philadelphia, PA 19101. We are an Equal Opportunity Employer, M/F/H/V.



MERRELL DOW RESEARCH INSTITUTE Strasbourg Center

invites applications for

Senior Organic Chemist

The Strasbourg Research Center is devoted to fundamental research directed toward therapeutic agents. Our international multidisciplinary group of scientists, (Chemistry, Biochemistry, Pharmacology) is well recognized for their contribution to science. The stimulating environment of the Center offers an opportunity for a high level of achievement.

The successful candidate for this position will have a doctorate and 1-2 years postdoctoral experience in organic chemistry. The potential for future leadership in a growing concern is an important consideration. Highly motivated candidates ready to accomplish avant-garde exploratory synthetic chemistry are much desired. Some research programs of current interest

are the design and execution of complete stereoselective syntheses for enzyme inhibitors and receptor (ant)agonists. Work is underway on many aspects of cell differentiation and cell membrane phenomena. Control of cellular function through molecular interactions is a central theme for our means for drug design. With experience, it will be expected that the scientist will develop Independently and foster the future directions of Center science.

Our Research Center is located in Strasbourg, FRANCE, the crossroads of Europe. With its excellent University, beautiful Cathedral and lovely setting on the Rhine, Strasbourg is a particularly inviting place to live

Salary and conditions of employment are commensurate with the importance of this position and the experience of the appointee. Please send C.V. +3 names of referees to Prof. Robert E. Ireland, Director, Merrell Dow Research Institute, 16 rue d'Ankara, 67084 Strasbourg Cédex France.

Biotechnology Research Institute (Montreal, Quebec)

The Biotechnology Research Institute, a division of the National Research Council of Canada, is located in Montreal. It will employ approximately 240 people and will host up to 200 researchers from industries, universities and other research organizations. This new research institute pursues generic research, both basic and applied, aimed at finding solutions to general problems related to industrial development of biotechnology. In order to pursue its goals, the Institute is seeking scientists and engineers in various fields as indicated hereunder.

Protein Engineering Scientists (*RB86-52*)

The Enzyme Technology Section requires scientists to work in the field of protein chemistry, enzyme kinetics, protein modification, peptide synthesis and molecular design. Research in these areas will be directed to the isolation and characterization of proteins and enzymes, chemical and physical studies including sequencing, synthesis, surface mapping and kinetics.

Applied Microbiologists (RB86-51)

The Applied Microbiology Group requires microbiologists with backgrounds in fermentation using bacteria (aerobic, anaerobic), yeasts and filamentous fungi. The duties include identification and development of promising microbial products and processes, selection, improvement, and preservation of strains (in collaboration with genetic engineers), and optimization of cultivation media and conditions (in collaboration with biochemical engineers).

Senior Fermentation Microbiologist (RB86-54)

The Applied Microbiology Group requires a senior microbiologist to lead a group of several scientists engaged in research and development of novel fermentation processes. The group leader will conduct an active personal research program, as well as coordinate the work of the other microbiologists.

Immunologists (RB86-46)

The Molecular Immunology & Cell Fusion Section requires molecular and cellular immunologists with a background in hybridoma technology, immunochemistry, immunogenetics or T-cell cloning techniques.

Mammalian Cell Culture Specialists (RB86-55)

The Molecular Genetics of Higher Eukariots Group requires a molecular biologist or bio-chemist with a background in large-scale mammalian cell culture. Duties include the development of large-scale culture processes for mammalian cell in high-density suspension or on microcarrier, the optimization of these culture and cultivation media, the preservation of cell lines, the analysis of products synthesized by these genetically engineered mammalian cells by RIA, ELISA and protein analysis techniques.

Biochemical Engineers (Large-scale Separation) (*RB86-56*)

The Biochemical Engineering Section requires engineers to develop purification processes up to pilot scale and to conduct generic research on recovery and processing techniques applicable to biotechnology. The duties include characterization and improvement of techniques for separation and purification of fermentation and cell culture products as well as scale-up and process engineering studies. Research projects are to be conducted on various unit operations including chromatography, membrane-based systems, extraction and solid-liquid separations.

Biochemical Engineers (Process Control) (*RB86-48*)

The Biochemical Engineering Section requires engineers to work in the area of modelling, control and optimization of bioprocesses. Duties include development and implementation of sensors and probes, process modelling studies as well as development and implementation of process control systems and strategies. Studies involve control of fermentors, bioreactors and downstream processing equipment up to pilot scale.

Candidates for these positions should have a Ph.D. in a relevant discipline and at least 2 years of post doctoral experience. Some positions are at the level of group leader and require additional in-depth knowledge of the subject area and several years of experience in applied research and technology transfer.

Both English and French are working languages at the Institute. Benefits are fully competitive and salary will be commensurate with qualifications and experience. Please send detailed curriculum vitae, in confidence, quoting the appropriate reference number, to:

Biotechnology Research Institute

c/o The Manager, Employment Office National Research Council of Canada Ottawa, Canada K1A OR6



National Research Conseil national Council Canada de recherches Canada Canadä

DIRECTOR OF RESEARCH

The Research Department of Interferon Sciences, Inc., a fast growing biotechnology company located in central New Jersey, has a newly created senior level position available immediately within the management of the research group. The candidate should have 5-10 years of research experience beyond the required PhD or MD with a proven history of managerial experience and a solid publication record.

Applicants should send curriculum vitae, a brief summary of research interests and the names of three references to:

L. Zuckerman, Director of Personnel INTERFERON SCIENCES, INC. 783 Jersey Avenue New Brunswick, NJ 08901 An Equal Opportunity Employer M/F

CALIFORNIA BIOTECHNOLOGY INC. STAFF SCIENTIST

California Biotechnology Inc. invites applicants for a research position in an expanding program on molecular approaches to reproductive biology and contraception. Applicants should have a recent Ph.D. with at least 2 years of relevant post-doctoral experience and a strong background in biochemistry, and either reproductive endocrinology or reproductive immunology. A knowledge of molecular biology will be helpful. California Biotechnology is an established company located in the Palo Alto area, and has a strong commitment to applying molecular biology to major areas of medical research. Send curriculum vitae and the names of three references to:

Reproductive Biology Group Ad #5 California Biotechnology Inc. 2450 Bayshore Parkway Mountain View, CA 94043



Research Associates

The 3M Company, a world leader in technology, has immediate openings for 2 research associates with expertise in molecular biology or immunochemistry. The candidates must possess a BS/BA or MS degree and at least two years of laboratory research experience. The 2 positions are detailed below:

MOLECULAR BIOLOGIST: Experience in recombinant DNA methods and instrumentation. Bacteriology/microbiology experience desirable. Experience in nucleic acid hybridization a plus.

IMMUNOCHEMIST: Experienced in analytical and preparative methods in characterization of monocleic acid hybridization a plus.

This is an exceptional opportunity to participate in a challenging research program tied in with pharmaceutical, diagnostic, and medical objectives. 3M offers an interactive multi-disciplinary environment with abundant opportunity for personal and professional advancement.

Interested persons should send their resume in confidence to P.D. Capiz.

Staffing & Employee Resources/3M 224 1W 3M Center St. Paul, MN 55144

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



Pulmonary Research Technician



An equal opportunity employer

Pfizer Central Research has an immediate opening for a laboratory assistant within the Pulmonary Group of its Department of Immunology and Infectious Disease. The successful candidate will participate in a project designed to evaluate the efficacy of novel compounds in the prevention of antigen-induced bronchoconstriction.

You must have an MS/BS in Physiology/ Biology and experience with *in vivo* animal models of allergic airway disease. This experience should include measurement of the mechanics of respiration, blood gas analysis, and knowledge of small animal surgical techniques, particularly as they apply to the cardiopulmonary system. A working knowledge of statistical analysis is also desirable.

In addition to the potential for career growth, this position provides an opportunity for a motivated individual to contribute to all levels of experimental work in a stimulating professional environment. We offer an excellent salary, benefit and relocation package plus an attractive southeastern Connecticut shore location. Qualified applicants should submit their resume, including summary of research accomplishments, to: Lorraine C. Corr, Personnel Associate, Pfizer Central Research, Eastern Point Road, Groton, CT 06340.

INVERTEBRATE NEUROENDOCRINO-LOGY-Research Scientist or associate position available immediately to investigate endocrine regulation of crustacean reproduction. Position will be part of interdisciplinary research team with state-of-art laboratories for peptide chemistry, molecular biology, and biochemistry. Salary: \$21,000 and up, based on experience. By 30 June, send résumé, plus three references to: Dr. L. L. Keeley, Laboratory for Invertebrate Neuroendocrinology Research, Entomology Department, Texas A&M University, College Station, TX 77843. Telephone: 409-845-9727.

MOLECULAR BIOLOGIST FOR TENURE-TRACK FACULTY POSITION for development of a research program in the molecular biology of thoracic cancers. The successful candidate will be expected to develop an individual and collaborative research program. Experience in gene cloning technology, eukaryotic cell biology, and oncogene amplification and activation is desired. A doctoral degree with at least 2 years of postdoctoral experience is required. A fully equipped laboratory, technical assistance, and a competitive salary will be provided. To apply, send curriculum vitae, recent publications, and the names of three references to: Jack A. Roth, Chairman, Department of Thoracic Surgery, Box 109, University of Texas M. D. Anderson Hospital, 6723 Bertner Avenue, Houston, Texas 77030. Telephone: 713-792-6932. An Equal Opportunity/Affirmative Action Employer.

MOLECULAR BIOLOGY—Research Associate, immediate position to investigate insect neurohormone genes and neuroendocrine regulated processes. Applicant will be part of interdisciplinary research team with stateof-art facilities for peptide chemistry, molecular biology, and biochemistry. Starting salary: \$20,000. By 30 June, send résumé, plus three references to: Dr. L. L. Keeley, Laboratory for Invertebrate Neuroendocrinology Research, Entomology Department, Texas A&M University, College Station, TX 77843. Telephone: 409-845-9727.

PATHOLOGY CHAIRPERSON

The University of California, Irvine, is seeking applicants for the position of professor and chairperson of the Department of Pathology. The department is actively engaged in research, education, and service. The successful candidate will be director of pathology at the University of California, Irvine Medical Center, and in charge of the academic programs at affiliated institutions. The position requires strong academic and administrative skills. Applicants should include a complete curriculum vitae and names and addresses of at least five references. The University of California, Irvine is an Equal Opportunity/Affirmative Action Employer. Please send applications to:

Richard M. Friedenberg, M.D. Chairman, Pathology Search Committee University of California, Irvine Medical Center Department of Radiological Services (Route 140) 101 City Drive South Orange, CA 92668

POSTDOCTORAL/ELECTRON MICROSCOPY. Postdoctoral fellow, electron microscopist/cell biologist interested in project on role of mast cells in eye allergies. Studies may include EM histochemistry, as well as light microscopic analysis of degranulating mast cells in a mucosal system. Write: Mathea R. Allansmith, M.D., Eye Research Institute and Harvard Medical School, 20 Staniford Street, Boston, MA 02114. Equal Opportunity/Afirmative Action Employer.

POSTDOCTORAL FELLOW/RESEARCH ASSO-CIATE available. Will be involved in a project to examine the potential interactions of ground and drinking water pollutants on renal and hepatic function. Successful applicant should have a background in toxicology or pharmacology with particular emphasis on renal and/or hepatic studies. Individuals with a background in cellular or biochemical pharmacology/toxicology also should apply. Inquiries and applications should be made to: William O. Berndt, Ph.D., Dean of Graduate Studies and Research, Vice Chancellor for Academic Affairs, University of Nebraska Medical Center, 42nd and Dewey Avenue, Omaha, NE 68105. An Affirmative Action/Equal Opportunity Employer, M/F/H/V.

UNIVERSITY OF UTAH MEDICAL CENTER Salt Lake City, Utah Department of Medical Informatics POSTDOCTORAL FELLOW Title: Genetic Mapping of Cancer in Utah Kindreds

A position is available immediately for a Ph.D. with a background in molecular biology. Candidate must be interested in human gene mapping. Our current studies involve putative genes for colon cancer, melanoma, and neurofibromatosis. Candidate will work with team to map these loci and refine linkages as they are found. Candidate will develop new projects in cancer genetics. Position for 2 years minimum, competitive salary. Send curriculum vitae to: Mark H. Skolnick/D. Timothy Bishop, Genetic Epidemiology, Department of Medical Informatics, University of Utah Research Park, 410 Chipeta Way number 105, Salt Lake City, UT 84108.

POSTDOCTORAL FELLOW. Position open for postdoctoral fellow with background in biochemistry or immunology. Work involves purification of microbial components via immobilized monoclonal antibodies. See [Taxian 22, 733 (1984); Methods Enzymol. 104, 381 (1984)]. Salary: \$19,000. For an interview, send résumé to: Dr. Joseph W. Burnett, University of Maryland Hospital, Division of Dermatology, 22 South Greene Street, Baltimore, MD 21201. An Equal Opportunity Employer.

POSTDOCTORAL FELLOW/ RESEARCH ASSOCIATE

Available immediately to study the molecular mechanism(s) of interferon action against membrane viruses. A strong background in cell biology and biochemistry is required. Experience in cell membrane fractionation to study viral glycoprotein transport and expression to cell surface; lipid biochemistry and enzymology is preferred. Salary depending upon experience. Please send curriculum vitae, three references, and a statement of research interest to: Dr. Radha K. Maheshwari, c/o Civilian Personnel, Uniformed Services University of the Health Sciences, 4301 Jones Bridge Road, Bethesda, MD 20814–4799.

POSTDOCTORAL FELLOWS (two) needed immediately to: (i) seek information-specific responses of human hippocampal formation and amygdala neurons (useful skill: extracellular unit recording), and (ii) quantitative glucose metabolism using tracer kinetic modelling and positron emission tomography (useful skill: VAX programming). Send curriculum vitae to: E. Halgren, 73-364 CHS, University of California, Los Angeles,CA 90024. The University of California is an Affirmative Action/Equal Opportunity Employer.

POSTDOCTORAL POSITION available September 1986. NIH fellowship to study S-adenosylmethioninedependent protein methylation reactions using yeast cytochrome c as a model system. Opportunity to gain experience in molecular cloning in vitro transcription and in vitro translation reactions. Applicants must be U.S. citizens or landed immigrants. Please send curriculum vitae and names and addresses of three references to: Dr. Woon Ki Paik, Fels Research Institute, Temple University School of Medicine, 3401 North Broad Street, Philadelphia, PA 19140. Equal Opportunity Affirmative Action Employer.

POSTDOCTORAL POSITION available 1 July to study receptor synthesis, assembly and membrane turnover at the neuromuscular synapse. Background in biochemistry and/or molecular biology helpful. Send curriculum vitae and names of two references to: Dr. S. Bursztajn, Neurology Department, Baylor College of Medicine, Houston, TX 77030.

POSTDOCTORAL POSITION—Baculovirus molecular biology. Candidate must have training in recombinant DNA technology. Send curriculum vitae and names of three references by 1 July 1986 to: Dr. G. F. Rohrmann, Department of Agricultural Chemistry, Oregon State University (OSU), Corvallis, OR 97331. Telephone: 503-754-3791. OSU is an Affirmative Action/Equal Opportunity Employer and complies with Section 504 of the Rehabilitation Act of 1973.

POSITIONS OPEN

POSTDOCTORAL FELLOW/RESEARCH ASSO-CIATE: The applicant must have a Ph.D. degree in cell biology, molecular biology, biochemistry, or immunology. The fellow/associate would work with Winship Cancer Center faculty in projects involving production of melanoma specific cytotoxic lymphocytes for therapy. The fellow/associate would be responsible for experimental design, supervision, and coordination of research activities with tissue culture specialists and participating faculty. Experience in establishing melanoma and lymphocyte cultures, cell growth assays, growth of cells in defined culture medium, and cellular immunology procedures. Salary commensurate with qualifications and experience. *Emory University is an Affirmative Action/Equal Opportunity Embloyer*. Send curriculum vitae and three letters of reference to: Kenneth W. Sell, M.D., Ph.D., Emory University School of Medicine, Winship Cancer Center, 1327 Clifton Road, NE, Atlanta, GA 30322.

POSTDOCTORAL POSITION/NEUROPHAR-MACOLOGY: NIH funded postdoctoral research position available immediately for research into purinergic modulation of seizure susceptibility. Techniques employed include intracerebral microinjections, radioligand binding, HPLC, primary cell culture, and chemoconvulsant seizure threshold determinations. Knowledge of stereotaxic procedures desirable. Successful candidate will interact with active group of neuroscientists engaged in interdisciplinary research. Send curriculum vitae, statement of research interests, and names of three references to: T. F. Murray, Hatfield Marine Science Center, Newport, OR 97365. Oregon State University is an Affirmative Action/Equal Opportunity Employer.

POSTDOCTORAL POSITION available immediately to study biochemistry, molecular biology, and regulation of expression of murine Qa/TL region class I alloantigens. Applicants should have experience in recombinant DNA and/or molecular biochemistry techniques. Send curriculum vitae and three letters of reference to: Richard G. Cook, Ph.D., Howard Hughes Medical Institute, Department of Microbiology and Immunology, Baylor College of Medicine, Houston, Texas 77030.

POSTDOCTORAL POSITIONS

Postdoctoral positions available in molecular biology of hemoparasitic discases. Research areas include: mechanisms of antigenic variation in *Trypanosoma brucei*; expression and analysis of *Anaplasma* and *Babesia* surface protein genes. Experience in recombinant DNA methods, especially prokaryotic and eukaryotic expression systems, is desirable. Salary is commensurate with experience and training. Send curriculum vitae outlining academic training, citizenship, research experience, a list of publications, a statement of professional goals, and three letters of reference to: Dr. A. F. Barbet, University of Florida, Department of Infectious Diseases, Box J-137, J. Hillis Miller Health Center, Gainesville, FL 32610. The University of Florida is an Equal Opportunity/ Affirmative Action Employer.

POSTDOCTORAL RESEARCH ASSOCIATE IN MOLECULAR BIOLOGY is available at the University of Illinois in Urbana. NIH-supported position(s) for 3 years to join active immunology laboratories to study the molecular mechanism of virus-induced, coordinate expression of interferon, and Pro-opiomelanocortin genes in lymphoid cells. Research is directed at the interface of molecular immunology and neuroendocrinology. Send curriculum vitae, transcripts, and three letters of reference to: Dr. Keith Kelley, 162 Animal Science Laboratory, 1207 West Gregory Drive, Urbana, IL 61801.

RESEARCH ASSOCIATE with Ph.D. for a Protein Core Facility at Center for Advanced Biotechnology and Medicine. Non-tenure position renewable annually for a maximum of 3 years. Strong background in synthetic or analytical chemistry and an aptirude for automated instrumentation essential. Plan and carry out projects involving structural analysis of proteins, synthesis of peptides and oligonucleotides, and methods development in these areas. A competitive salary commensurate with qualifications offered. All applications and résumés to be submitted to: Dr. Stanley Stein, CABM, Waksman Institute of Microbiology, Rutgers University, P.O. Box 759, Piscataway, NJ 08854. Equal Opportunity/Affirmative Action Employer.

NOISE MAK

trait: we're achievers. logy. We're a diverse organization, but our people all share at least one common chemistry, engineering and biotechnoand women in many disciplines, such as

may be a big hit. discipline, maybe you should get on the stick and contact us. Who knows? You If your background is in a technical

Sci. Louis, MO 63167, An Equal O 70 please send your resume or letter of inquiry to: Director, Professional Bmployment, Monsanto Company, 800 N. Lindbergh Blvd., Mail Zone F4EE-S, Sc. Louis, MO 63167, An Equal Oppor-transformed and the second second second second St. Louis, MO 63167, An Equal Oppor-generation of the second sec For more information or consideration,

bit of noise while their careers grow. risk takers...people who like to make a Because we like independent thinkers... Monsanto is a place where your work will drum up a little excitement. Why?

skill and dedication of hard-working men health and chemicals. We do it with the areas as agriculture and food products, Company, Fisher Controls International, Inc., G.D. Searle & Co., and NutraSweet Company. Together, we manufacture more than 1,000 products in such diverse cultural Company, Monsanto Electronic Materials really six companies: Monsanto Agri-And we have more ways than you pro-bably thought. The modern Monsanto is

Monsanto

A POSTDOCTORAL POSITION is available starting June 1986, for 2 years to study the hormonal control of differentiation of teratoma cell lines at the cellular and molecular levels. Work will involve protein purification and DNA recombinant technologies. Experience in molecular biology or protein chemistry preferred. Candidates should send a copy of curriculum vitae and names of three references to:

Andrea L. Terwillegar Personnel Manager W. ALTON JONES CELL SCIENCE CENTER 10 Old Barn Road Lake Placid, New York 12946 An Affirmative Action/Equal Opportunity Employer.

POSTDOCTORAL POSITION

The Dana-Farber Cancer Institute is seeking to fill one research position at the postdoctoral level to study the mechanism of action and therapeutic potential of immunotoxins. This project, which encompasses various areas of biochemical, cell biological and pharmacological research, requires an individual with versatile interest and ability. Joint appointment will be held in an appropriate department of Harvard Medical School. Send curriculum vitae and names of three references to: Dr. Vic Rasso, Dana-Farber Cancer Institute, 44 Binney Street, Boston, MA 02115. An Equal Opportunity Employer.

POSTDOCTORAL POSITIONS available immediately for biochemists, biophysicists, and molecular biologists to study (i) the mechanism of gene expression in both prokaryotic and eukaryotic systems, and (ii) the nucleic acid-protein interactions. Send résumé and three letters of recommendation to: Professor Cheng-Wen Wu, Department of Pharmacological Sciences, State University of New York (SUNY)–Stony Brook, Stony Brook, NY 11794. SUNY–Stony Brook is an Affirmative Action/Equal Opportunity Educator and Employer. AK number 116-B.

POSTDOCTORAL POSITION IN ECOLOGI-CAL GENETICS available 30 September 1986 to study mating systems of forest trees (particularly variation in male fertility) using electrophoretically detectable variation and models of plant mating systems. Duration: 1 year with possibility of renewal. Closing date: 15 July 1986. Send curriculum vitae and names of three references to: Daniel Schoen, Department of Biology, McGill University, 1205 Avenue Doctor Penfield, Montreal, Quebec CANADA H3A 1B1.

POSTDOCTORAL POSITION, HUMAN GENET-ICS. Available immediately to study the molecular genetics and regulation of the human arginase gene loci in normal man and in patients with deficiency of liver arginase. Familiarity with the techniques of molecular genetics required. Salary is competitive and funding is stable. Send curriculum vitae and three references to: Stephen Cederbaum, M.D., UCLA Mental Retardation Research Center, 760 Westwood Plaza, Los Angeles, CA 90024; telephone: 213-825-0402. Equal Opportunity/Affirmative Action Employer.

REPRODUCTIVE BIOLOGIST

Experienced embryologist with Ph.D. required to work in busy laboratory devoted to both service and research aspects of human infertility.

Facilities include successful IVF and GIFT programs, gamete and embryo cryopreservation, techniques for the study and treatment of oligospermia, the induction and intensive monitoring of ovulation, and active research into the causes and treatment of early pregnancy wastage. The laboratory has a nucleus staff of three biologists and three technologists and is linked to a large private infertility clinic with research undertaken in affiliation with the University of Western Australia.

Full job description will be discussed at any consequent interview. Salary negotiable in keeping with applicant's experience and expectations.

Apply within 3 weeks of the date of this advertisement, with detailed curriculum vitae to:

Dr. J. L. Yovich Pivet Laboratory Pty. Ltd. 166-168 Cambridge Street Leederville, Perth Western Australia 6007

POSITIONS OPEN

POSTDOCTORAL POSITION available immediately to study electrophysiological effects of anticholinesterases in hippocampal slices. Experience with electrophysio ological techniques is required. Send curriculum vitae and names of three references to: Civilian Personnel, Dr. John Sarvey, School of Medicine, Uniformed Services University of the Health Sciences, 4301 Jones Bridge Road, Bethesda, MD 20814-4799. An Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL POSITION

Studies involve characterization of the human genes for the α and β subunits of the Na⁺K⁺-ATPase and structure-function relationships of this enzyme using molecular genetic tools including the characterization of mutants. Send curriculum vitae to: Jerry B. Lingrel, Department of Microbiology and Molecular Genetics, ML 524, University of Cincinnati College of Medicine, 231 Bethesda Avenue, Cincinnati, OH 45267. The University of Cincinnati is an Equal Opportunity/Affirmative Action Employer.

TWO POSTDOCTORAL POSITIONS IN MEM-BRANE BIOCHEMISTRY. Available immediately and in September 1986 to study membrane interactions of complement and toxin proteins. Experience in biochemistry/biophysics, especially fluorescence recovery after photobleaching (FRAP) methods, preferred. Send curriculum vitae and names of three references to: Dr. Valerie Hu, Department of Biochemistry, Uniformed Services University of the Health Sciences, 4301 Jones Bridge Road, Bethesda, MD 20814–4799.

RESEARCH ASSOCIATE to carry out and supervise experiments on the molecular basis for the oncogenicity of *Herpesvirus saimiri* and the use of herpesviruses as vectors for gene expression. Candidates are expected to have completed two or more years of postdoctoral work and have demonstrated expertise with *Herpesvirus saimiri*, molecular cloning, DNA sequencing, and analysis of low molecular weight RNA. Salary: \$25,850 per annum. Please send curriculum vitae, publication list, and names of three references to: Division of Employment Security, Hurley Building, Boston, MA 02144, and refer to job reference number 6624.

RESEARCH ASSOCIATE POSITION: available immediately in the Department of Medicine, University of Chicago, and Howard Hughes Medical Institute for a period of two or more years. Candidate must have Ph.D. or M.D. degree and two or more years of research experience in molecular biology/gene cloning. Expertise in tissue culture, hybridoma methodology and/or microinjection is highly desirable. Areas of research in the laboratory include cloning of cell cycle specific genes and genes transcriptionally regulated by oncogenes. Salary in the range \$24,000 to \$28,000, depending upon experience. Please submit curriculum vitae and names of three references to:

Vikas P. Sukhatme, M.D., Ph.D. Department of Medicine, Box 28 Billings Hospital S508 University of Chicago and Howard Hughes Medical Institute 5841 South Maryland Avenue Chicago, Illinois 60637 An Equal Opportunity Employer.

RESEARCH SPECIALIST EMORY UNIVERSITY ATLANTA, GEORGIA

Position immediately available to plan, design, coordinate, and implement research protocols designed to investigate the growth and characterization of human melanoma specimens. Duties involve sterile tissue culture procedures, operation of B-D FACS analyzer, performing routine immunological tests to characterize cell surface antigens, and cryopreservation of cells grown in culture from biopsy.

Applicants must have a master's degree in a field related to the research area or a bachelor's degree in a field related to the research area and 2 years of related experience. Send résumé to: Sheryl Dotson, Emory University, Employment Center, 637 Asbury Circle, Atlanta, GA 30322. Job number 320-976 or telephone for more information 404-727-7611.

An Equal Opportunity/Affirmative Action Employer

POSITIONS OPEN

PSYCHOPHARMACOLOGIST

The expanding Department of Pharmacology, under the direction of **Dr. Martin Schechter**, is offering a tenure-track position for an assistant or associate professor. The successful candidate must have a Ph.D. in pharmacology, research interests in behavioral pharmacology, neurochemical analysis (HPLC), and/or receptor binding that merits extramural funding; and will be expected to teach medical and graduate students. Ample laboratory space and start-up funds available. Send curriculum vitae, brief description of research goals, teaching experience, and names of three references by 15 July to: Office of Human Resources, Northeastern Ohio Universities College of Medicine, P.O. Box 95, Rootstown, Ohio 44272. An Affirmative Action/Equal Opportunity Employer.

RESEARCH GENETICIST—two positions. U.S. Department of Agriculture (USDA), Agricultural Research Service (ARS), Aberdeen, Idaho. ARS seeking geneticists to conduct basic and applied research to develop wheat, oats, and barley germplasm. Ph.D. is desirable. Must be U.S. citizen. Salary range: \$26,381 to \$31,619. Contact: Dr. D. W. Sunderman, Research Leader at telephone 208-397-4181. For applications, information and forms, contact: Pat Roberts, Personnel Division, ARS, USDA, Building 003, Beltsville, MD 20705 at telephone 301-344-3138. Application deadline 1 July 1986. Equal Opportunity Employer.

THE UNIVERSITY OF THE WEST INDIES ST. AUGUSTINE, TRINIDAD, W.I.

SENIOR LECTURERS (ASSISTANT PROFES-SOR) required for biochemistry and physiology departments, Faculty of Medical Sciences, to teach integrated medical/dental/veterinary curricula. Research areas: Biochemistry: Applications of new gene technology to human disease and biochemical effects of environmental pollutants. Physiology: Cardiorespiratory research including industrial and environmental pollutant monitoring. Annual salary range: TT\$54,708 to TT\$101,856. Passages, pension, housing. Curriculum vitae naming three references to: Campus Registrar.

STUDY DIRECTOR-TOXICOLOGY: Hazleton Laboratories, one of the world's leading contract laboratories, has an outstanding opportunity for a toxicologist with a strong scientific background and excellent communication skills. Responsible for preparing protocols, study schedules, interim and final reports. Involves extensive client contact and provides technical support to other areas of the organization. Requires a Ph.D. in toxicology or related science, plus 5 years of experience. Send letter of introduction and résumé to: Personnel Manager, Hazleton Laboratories, P.O. Box 7545, Madison, WI 53707. An Equal Opportunity Employer.

SWALLOWING SCIENTIST

The Johns Hopkins Swallowing Center is looking for a doctoral level scientist with background in patient care and research in the field of speech-airway-swallowing interaction. The individual is expected to be a full member of a multidisciplinary team of physicians-scientists devoted to advancing insight into pathophysiology and management of dysphagia. The Johns Hopkins University offers a competitive salary and fringe benefit package. The primary academic appointment will be in otolaryngology-head and neck surgery. Applications of interested candidates should be directed to: Martin W. Donner, M.D., Director of The Johns Hopkins Hospital, 600 North Wolfe Street, Baltimore, MD 21205. Johns Hopkins is an Equal Opportunity Employer.

TUMOR CELL BIOLOGISTS:

Laboratory director, Ph.D. Scientists and technicians need extensive knowledge of tumor cell biology and tumor immunology, to establish, propagate, and evaluate primary human tumor cell lines. Responsibilities will include involvement with monoclonal antibodies, lymphokines, drugs and toxins, flowcytometry, and nude mice. Excellent opportunity for advancement with rapidly expanding company providing new biological approaches to the treatment of cancer. Contact: **Robert K. Oldham, M.D., Biotherapeutics Inc., 400 Eddy Lane, Franklin, TN 37064–2917. Telephone: 615-794-4700**.

Research Scientists

SYNERGEN, a leading biotechnology company, has openings for the following scientists:

Molecular Biologists with special interests in the problems of gene expression in microorganisms. We are particularly interested in constructing expression systems to make biologically active eukaryotic proteins in microorganisms.

Protein Biochemists with experience in protein purification and characterization who are interested in applying these skills to isolating small quantities of, and determining the structure of, physiologically interesting proteins from tissues, or to the development of large-scale isolation procedures for proteins from recombinant organisms.

Molecular/Cell Biologists to study eukaryotic gene expression, to design systems for expressing recombinant proteins in animal cells.

Fermentation Scientists with expertise in fermentation development and process scaleup for recombinant protein production.

SYNERGEN, located in Boulder, Colorado, offers the opportunity to pursue scientific careers in a stimulating intellectual and physical environment. We seek recent Ph.D.'s with post-doctoral experience and more senior people interested in becoming part of a rapidly expanding company. We offer competitive salaries, generous benefits, and the financial stability required for future development. Please send a CV, bibliography and references to: SYNERGEN, Recruitment Director, 1885 33rd Street, Boulder, Colorado 80301.



U.S. PUBLIC HEALTH SERVICE EPIDEMIOLOGY TRAINING PROGRAM 1987

Applications are invited for a three-year training program in Medical Epidemiology. Successful candidates will be appointed as USPHS service fellows (a non-tenured, junior professional civil service classification). Applications must be received by September 8, 1986, to be considered for the period to begin approximately July 1, 1987.

During the first year, successful trainee applicants will attend a university to study epidemiology, biostatistics, and related subjects. During the subsequent two years, individuals will work with senior epidemiologists in participating USPHS agencies (Alcohol, Drug Abuse, and Mental Health Administration; Food and Drug Administration; National Center for Health Statistics; and the National Institutes of Health) primarily in research studies. A matching procedure will be employed to assure that each individual is assigned to a preceptor whose area of expertise is of interest to the trainee, and consistent with his/her career plans. Salaries will be provided according to the scale in effect for staff fellows in intramural research at ADAMHA and NIH. First year salaries are currently \$30,000 for physicians, \$21,000 for non-physicians. Educational costs and (allowable) relocation expenses for the first year are provided.

Basic requirements for application to the program are:

- 1. M.D., doctorate in an allied health profession, or Ph.D. in a biomedical or behavorial science, or equivalent, and one year of
- post-doctoral training or experience (by July 1, 1987).
- U.S. Citizenship at time of application.
 Acceptability to an accredited university offering an M.P.H. or
- 5. Acceptability to an accredited university offering an M. P.H. or equivalent, or more advanced public health degree (for the first year of this program).

To obtain further program details and application forms, *send a postcard only*, with your *printed* name and home mailing address to:

PHS Epidemiology Training Office Attention: E. Patterson NIH, Building 1, Room 238 Bethesda, Maryland 20892

Please... DO NOT SEND letters, curriculum vitae, resumes, transcripts, reprints, etc. until you have reviewed the instructions for submission and completed the application form.

(The USPHS is an equal opportunity employer)

 CNS Electrophysiologist
 Behavioral Pharmacologist



An equal opportunity employer

Pfizer's expanding commitment to Neuroscience research has created two new career opportunities at the Assistant Scientist level. You will join a multifaceted research team studying a variety of mental diseases and CNS disorders. Both positions require an MS or BS degree in a neuroscience-related field and at least 2–3 years of relevant experience.

For one opening, you must be a skilled CNS electrophysiologist able to conduct *in vivo* and *in vitro* experiments. You should possess extensive hands-on experience with intracellular and/or extracellular neuronal recording techniques. Expertise in microelectrode fabrication, iontophoresis, pressure ejection of drugs and data analysis is essential. A working knowledge of brain slice preparations, neuropharmacology and computer applications is desirable.

The second position requires a behavioral pharmacologist who will be responsible for designing, programming and performing experiments, and for data analysis/documentation. A demonstrated ability to work independently, coordinate the work of other technical staff, and effectively summarize and communicate results is necessary. Experience with operant conditioning paradigms and with computerized data collection/analysis (especially with VAX and/or PDP/11 computers) is desirable, as is an extensive knowledge of statistics (SAS or BMDP).

These positions offer a stimulating professional environment, including superior laboratory facilities, and opportunity for career growth. We offer a competitive salary/benefits package and relocation assistance to an attractive Connecticut shore area. Qualified applicants should send a resume, description of research experience and names of three references to: Mrs. Lorraine Corr, Personnel Associate, Pfizer Central Research, Eastern Point Road, Groton, CT 06340.

DIRECTOR

MARYLAND BIOTECHNOLOGY INSTITUTE

The University of Maryland has established the Maryland Biotechnology Institute (MBI) to serve as the administrative location of a major biotechnology initiative in the state of Maryland. The Institute now includes three research centers; the Center for Advanced Research on Biotechnology, which will investigate protein structure and protein engineering; the Center of Marine Biotechnology; and the Center for Medical Biotechnology. Plans are also being developed for an Agricultural Biotechnology Center and a Bioethics Center within the Institute.

The Director of the MBI will have the responsibility to coordinate the several research centers and work closely with the directors of the centers to develop and approve budgets, implement join programs with industry, develop programs of grant support and long range research directions, and recruit and retain eminent research staff. The Director will work closely with academic departments, research units, and faculty at the University.

The Director must be a well-established scientist with demonstrated abilities to initiate research and establish an environment for creative activities that respond to the needs of academic, government, and commercial organizations. He/she will have both the capacity and the interest in working in an academic environment and will 1 expected to qualify for a tenured professorship in un appropriate department at the University of Maryland. The Director will combine strong scientific credentials and an entrepreneurial spirit necessary to bring MBI into an international leadership position in biotechnology. He/she must display skills appropriate to develop harmonious working relationships among universities, federal agencies, county and state governments, and private industry.

For best consideration, submit a curriculum vitae and the names of three references before June 30, 1986, to

Bernard V. Khoury Associate Vice President for Acac'emic Affairs UNIVERSITY OF MARYLAND Adelphi, Maryland 20783

The University of Maryland is an Equal Opportunity/ Affirmative Action Employer and actively solicits the names of women and minority candidates.



THE UNIVERSITY OF MARYLAND

HOFFMANN-LA ROCHE

Associate Scientist Biochemistry

The Department of Pharmacology and Chemotherapy of Hoffmann-LaRoche has an opening for an Associate Scientist.

Candidates should have an MS in Biochemistry or other related field, and should be competent in basic biochemical techniques such as protein and nucleic and purification enzyme assays, polyacrylamide and agarose gel electrophoresis. Background in microbiology helpful but not essential.

We offer a fully commensurate salary, excellent benefits, and a truly professional working environment in a suburban, campus-like setting. Please send your resume with current salary information to: Ms. Fran Newman



Nutley, NJ 07110 Products that matter from people who care

HOFFMANN-LA ROCHE INC.

An equal opportunity employer

Anti-Fungal Research Program Fungal Molecular Biologist





At Lederle Laboratories Division of American Cyanamid, you'll discover an exceptional opportunity to join our microbial products discovery program, and the chance to lead a research team involved in developing novel detection systems for anti-fungal agents.

The ideal candidate will have a Ph.D. in Molecular Biology, Biochemistry or related discipline, plus a minimum of 5-7 years' relevant experience. A strong background in fungal genetics and recombinant DNA technology is essential.

At Lederle, you'll discover a highly professional research environment in Rockland County, just 35 miles from New York City. For immediate consideration, please forward your CV and brief history of related research to: Mrs. N. Levine, Medical Research Division, American Cyanamid Company, Lederle Laboratories, Pearl River, NY 10965. We are an equal opportunity employer m/f.



Dedicated People Dedicated to People Since 1906

Director Synchrotron X-Ray Source Project Argonne National Laboratory

Argonne National Laboratory has recently completed a conceptual design for a 6 GeV synchrotron x-ray source, which has been reviewed favorably by the Department of Energy. The Department of Energy has given this project high priority and preconstruction R&D is underway prior to an early start on construction.

We seek a Director for this Project. Responsibilities will include the leadership of the experienced Argonne design group as we move to the engineering design phase, completing the assembly of the team responsible for the construction, directing the contruction project, and ultimately moving the facility into the operations phase. The successful candidate will have demonstrated the capability to direct a large, complex construction project, preferably through direct involvement therewith, and to meet well-defined temporal and financial goals. While a background with accelerators is important, preference will be given to candidates with both accelerator and x-ray experience. This background will normally include a Ph.D. degree in either physics or engineering. Our intention is that the Director of the construction project continue as Director into the operations phase. The Director will also be the principal spokesman for the Project in the scientific/technological community.

Candidates should submit a resume by July 1, 1986, detailing relevant experience, explicitly describing involvement with construction projects, and including the names of at least three persons who can provide letters of recommendation, to:

Ralph W. Bagdonas Director of Personnel Box GeV-55 ARGONNE NATIONAL LABORATORY 9700 S. Cass Avenue Argonne, Illinois 60439 Argonne is an equal opportunity employer.

TOXICOLOGIST

A Midwest Fortune 100 company has an immediate opening for a staff toxicologist to join a small health and safety group. Responsibilities will include assessing the safety of new and existing chemicals used in manufacturing operations.

The qualified candidate will possess a MS or PhD degree in an appropriate discipline with at least 1 year industrial toxicological experience and a working knowledge of EPA/OECD testing and risk assessment procedures.

As well as an excellent position with an industry leader, we offer outstanding benefits, relocation assistance and compensation. If combining versatility and creativity with your technical background interests you, we encourage you to forward your resume to:

> Salaried Employment 511 P.O. Box 81252 Cleveland, Ohio 44181

An Equal Opportunity Employer, M/F/H/V

RESEARCH OPPORTUNITIES IN CANCER THERAPEUTICS

The Dow Chemical Company, in Midland, Michigan, is a recognized world leader in the chemical industry. Expanded research efforts in the area of cancer therapeutics and immunotherapy have created an immediate need within the Biotechnology Laboratory in the Central Research Department for qualified researchers in the following areas:

PROTEIN CHEMISTRY

The successful candidate will have a PhD and two or more years of post-doctoral or industrial experience in Protein Chemistry. Experience in state-of-the-art techniques for protein isolation, purification and characterization is essential. Research efforts will be directed toward application of this experience to the development of compounds for biotech-based cancer therapeutics.

IMMUNOLOGY

The ideal candidate will have a PhD with experience in Cellular Immunology/Hybridoma Technology. The ability to implement and execute independent research in the generation of monoclonal antibodies is required.

TUMOR BIOLOGY/CANCER IMMUNOLOGY

The successful candidate will have experience in the design, implementation and evaluation of experimental animal studies for the evaluation of monoclonal antibodies and/or radioactive immunoconjugates for the therapeutic treatment of human cancer. Qualified candidates will possess a PhD in the biological sciences and two or more years of postdoctoral or industrial experience.

The above candidates must also possess strong communication skills and a desire to carry out independent research while functioning as part of an interdisciplinary research team.

The Dow Chemical Company offers a stimulating work environment and a competitive salary and benefits package.

Send resume to:

7

Technical Recruiting Department K-1 P.O. Box 1655 Midland, MI 48641-1655



THE DOW CHEMICAL COMPANY IS AN EQUAL OPPORTUNITY EMPLOYER

POSTDOCTORAL INVESTIGATOR

Tissue Culture Research

As an international leader in the medical care products and services industry, Travenol Laboratories is making major advances in the research and development of diagnostic and therapeutic products. We currently seek a postdoctoral investigator for our Corporate Research and Development facility located in northern Illinois.

Responsibilities include participation in research involving the development of new tissue culture scale-up procedures for mammalian cell lines and subsequent separation of the proteins in the spent culture media. Ph.D. in Microbiology, Biochemistry, Chemical Engineering, or the equivalent is required. Experience with tissue culture of mammalian cells and sterile techniques is essential. Experience with HPLC separations and/or bioreactors (fermenters) is desirable.

In addition to strong research support, Travenol provides a competitive salary and benefits package. For immediate consideration, please send your resume to:

Staffing/Manpower Planning Dept. WK:EN Travenol Laboratories, Inc. P.O. Box 490 Round Lake, IL 60073



HOFFMANN-LA ROCHE

Protein Crystallography Senior Scientist

Hoffmann-La Roche, a leader in the pharmaceutical industry, is seeking a second protein crystallographer as part of its expanding research on protein structure. The crystallographer, in concert with a group that includes specialists in smallmolecule crystallography, biomolecular NMR, computational chemistry, and molecular graphics, will conduct collaborative research on proteins (e.g., recombinant human proteins, receptors, and enzymes) to assist in the discovery of new drugs.

Qualifications: PhD in a relevant discipline and a strong, broad background in protein crystallography, and an interest in the relationship of protein structure to function. Emphasis will be placed on the practical aspects of protein crystallography, including crystallization, data collection, structure solution and refinement.

Roche offers an environment which encourages scientific achievement and initiative. Please send a C.V. and the names of three references to: Position V.M., c/o Mrs. Eleanor M. Malone, Professional Employment and Staffing Specialist



An equal opportunity employer

HEALTH SCIENTISTS AND TOXICOLOGISTS

ENVIRON[®] is a fast-growing, multidisciplinary health and environmental science consulting firm with offices in Washington, D.C. and Princeton, N.J. We are seeking qualified health scientists and toxicologists in both offices to serve our expanding base of private and public sector clients.

We have immediate openings for health scientists and toxicologists with Ph.D., M.S., or M.P.H. degrees and at least two years' experience in data evaluation and risk assessment. Successful candidates must be able to demonstrate good writing skills. Prior consulting or project management experience desirable.

ENVIRON offers competitive salaries and excellent benefits. Equal opportunity employer, M/F. Send resume and salary requirements, recent writing samples, and names of three references to Personnel, Dept. No. 686, ENVIRON Corporation, The Flour Mill, 1000 Potomac Street, N.W., Washington, D.C. 20007. Indicate your preference in job location, if any.

E N V I R O N Counsel in Health and Environmental Science

VETERINARY PATHOLOGIST PHARMACEUTICAL RESEARCH

Warner-Lambert/Parke-Davis Pharmaceutical Research Division, a world leader in drug discovery and development, has positions available immediately in our Pathology and Experimental Toxicology Department for veterinary pathologists. These opportunities are located at our research complex in Ann Arbor, Michigan, adjacent to the University of Michigan campus.

Responsibilities for pathologists include the design, conduct and reporting of a variety of toxicology studies with emphasis on the clinical and anatomical pathologic evaluation of animals used in studies to determine the safety of new drug candidates. Warner-Lambert pathologists contribute in the drug development process by participating in multi-disciplinary project teams.

Requirements for these positions include a D.V.M. degree and board certification in veterinary pathology (ACVP). Some industry experience is desirable; however this position is at the entry level.

Qualified candidates are invited to send resume, salary requirements, and references, in confidence to:

Ms. Maggie Wolin WARNER-LAMBERT/PARKE-DAVIS 2800 Plymouth Road • Ann Arbor, MI 48105



An Equal Opportunity Employer M/F/H

POSTDOCTORAL RESEARCH ASSOCIATE

Position is open on our NIH Cardiovascular Training Grant to study the molecular biology of arteriosclerosis. Experience in virology helpful. Requirements include: a Ph.D. and/or M.D. Experience in techniques used in molecular biolgy and U.S. Citizenship required. Position will be available July 1, 1986. Salary is commensurate with post graduate experience.

Please send curriculum vitae including publication record and three references to: Dr. David T. Hajjar, Associate Professor and Co-Director, Department of Pathology.



CORNELL UNIVERSITY MEDICAL COLLEGE

1300 York Avenue New York, New York 10021 an equal opportunity employer m/f/h

Fellowships in Science Broadcast Journalism

WGBH-Boston, a major producer of broadcast programs including NOVA, is again seeking six proven science writers with a strong record of published articles for a general audience. Successful applicants will be highly skilled journalists willing to risk their talents on a new career in broadcast science reporting and programming.

In return for that commitment, WGBH will train six Fellows for eleven months in the special skills of radio and television production. Training is rigorous, and requires making programs in a working professional environment for local and national broadcast.

The third—and last—year of the Fellowships will begin in January of 1987, and carries a stipend of \$25,000. Applications must be received by September 1, 1986.

For details, please send a resume and letter of interest to:

David Kuhn, Director Macy Fellowships WGBH 125 Western Avenue Boston, MA 02134



Microbial Physiologist



An equal opportunity employer

Pfizer Central Research is seeking a highly qualified individual for its Fermentation and Recovery R&D group. The successful candidate should have a PhD in Microbiology or Biochemistry with a strong emphasis on microbial physiology. Relevant post-doctoral experience is highly desirable. Hands-on knowledge of modern chromatographic, electrophoretic and radiochemical methods is essential. Experience with computer-coupled instrumentation and the ability to work as a member of a highly motivated multidisciplinary team are important.

Duties will include optimization of fermentation processes for medicinals, enzymes, antibiotics and other chemicals, basic studies of metabolic pathways and control mechanisms and the isolation and analysis of key metabolic intermediates.

This position offers an excellent opportunity for professional recognition and career growth. We also offer competitive compensation, a comprehensive benefit package and the opportunity to live in an attractive Connecticut shore community. Please send resume and description of research accomplishments to: Jerry K. Larson, PhD, Manager of Employment, Pfizer Central Research, Eastern Point Road, Groton, CT 06340.

PHARMACEUTICAL RESEARCH

BURROUGHS WELLCOME CO., is an innovative pharmaceutical company with corporate headquarters and research laboratories in the ever-growing Research Triangle Park, North Carolina. We house the largest industrial library in the state and our staff maintains close research contact with three local major universities, and medical centers.

Immediate openings exist in the following areas:

MOLECULAR NEUROBIOLOGY — Senior Scientist (#1552)

Requirements include a Ph.D. or M.D. with postdoctoral experience in recombinant DNA research. Candidate will be involved in studying synaptogenesis and neuronal differentiation, and will interact with other members of the Neurobiology Group. Duties also involve establishment of a departmental core facility in molecular biology. Mentor: N. Sahyoun, M.D.

CELLULAR NEUROBIOLOGY — Postdoctoral Fellow

M.D. or Ph.D. required with proficiency in one or more of the following areas: primary neuronal cultures with immunohistochemistry, growth factors, oncogenes. Successful applicant will interact with other members of the group investigating selected aspects of neuronal growth and differentiation. Mentor: N. Sahyoun. M.D.

For the two positions listed above, send curriculum vitae, statement of research interests, and three (3) letters of recommendation by July 15, 1986 to: Employment Supervisor, Burroughs Wellcome Co., 3030 Cornwallis Road, Research Triangle Park, N.C. 27709.

VIROLOGY — Research Scientist I (2 positions)

(*1559) To identify potential targets for human retroviruses chemotherapy and to identify potential inhibitors. Requires a M.S. in biological sciences or Bachelor's (or equivalent) with two years' experience in the virology field. Must have a strong background in retrovirology and molecular biology. Experience in working with nucleic acids and enzymes is essential.

(*1567) To provide basic support for virus research laboratory and assist in biochemical virology research aimed at elucidating the mechanism of action of antiviral compounds. Requires a M.S. in microbiology or Bachelors in microbiology or biochemistry (or equivalent) plus two years' relevant research experience. Must have experience in basic cell culture and virus cultivation / purification methodology. Experience in nucleic acid or protein biochemistry preferred.

Individuals with virology experience as listed above should submit curriculum vitae and transcripts to: Employment Supervisor, Burroughs Wellcome Co., 3030 Cornwallis Road, Research Triangle Park, N.C. 27709.

BURROUGHS WELLCOME CO. offers a comprehensive company-paid benefit package and a stimulating environment for scientific research. We encourage qualified minority, temale, veteran and handicapped individuals to apply. BURROUGHS WELLCOME CO. Wellcome An Equal Opportunity/Affirmative Action Employer



Chimerix Corporation is engaged in the development of innovative concepts and products aimed at the clinical testing market. The company recently completed con-struction and has moved into new modern research facilities and is now seeking to fill several positions:

SCIENTISTS—Two positions are available. Qualified individuals should possess a Ph.D. in biochemistry or related science with at least 3 years of industrial experience in fluorescence immunoassay kit design and devel-opment. Broad knowledge in general biochemical and immunochemical techniques is a must.

SCIENTIST-The position requires a Ph.D. in biochemistry or related field with at least 2 years of postdoctoral experience in protein derivatization, purification, and characterization. Individual with experience in immunoassay reagent and procedure development is preferred

ASSOCIATE SCIENTISTS—Positions are available for individuals possessing a B.S. or an M.S. degree in biochemistry or related field with more than 3 years of industrial experience in immunoassay development.

The company's research facilities are located in an attrac-The company's research rachines are located in an attrac-tive suburban community in the greater Hartford area conveniently located midway between New York and Boston and providing excellent cultural, educational, and recreational pursuits. Applicants should send résumé, including three references, to: Chimerix Corporation, P.O. Box 976, Glastonbury, CT 06033, Attention: **Recruiting**

VICE PRESIDENT—AGRICULTURE AND NATURAL RESOURCES UNIVERSITY OF CALIFORNIA

The president and the regents of the University of California invite nominations and applications for the position of vice president-Agriculture and Natural Re-sources. The appointment will be effective as of 1 October 1986.

The vice president-Agriculture and Natural Resources reports directly to the president of the University of California and is the chief administrative officer for the Division of Agriculture and Natural Resources. The division is a state-wide research and public service orga-nization responsible for activities in agriculture, natural resources, family and consumer sciences, forestry, wildlands conservation and utilization, youth development, and related areas.

Candidates should have a demonstrated commitment to excellence in teaching, research, and public service and a record of academic and administrative achievement in agriculturally related teaching, research, and cooperative extension programs. Previous administrative experience should evidence abilities in planning and program evaluation, budgeting for complex organizations, public and governmental relations, affirmative action, resource de-velopment and direction of agriculturally related research, teaching, and public service. The position re-quires an earned doctorate in an appropriate discipline. Salary and perquisites competitive. Applications, accom-Salary and perquisites competitive. Applications, accom-panied by current résumés, and nominations may be addressed to: The President's Office, 714 University Hall-VPANR, University of California, Berkeley, California 94720, and should be received no later than 30 June to be given full consideration. An Equal Oppor-tunity/Affirmative Action Employer.

SYMPOSIUM

FOURTH INTERNATIONAL SYMPOSIUM ON IMMUNOBIOLOGY OF PROTEINS AND PEP-TIDES-PRESENTATION AND T CELL RECOG-NITION OF PROTEINS AND PEPTIDES. 30 November to 4 December 1986, Riviera Hotel, Las Vegas, Nevada. The conference will focus on several aspects of antigenic recognition including the structure of the T-cell receptor and its recognition sites on proteins. Posters related to the symposia are invited. For more informa-tion, contact: Journeys Unlimited, 4528 Beechnut, Houston, Texas 77096.

CONFERENCE

INTERNATIONAL CONFERENCE ON PROSTAGLANDIN AND LIPID METABOLISM IN RADIATION INJURY



To be held 2 and 3 October 1986 at the Crowne Plaza

Hotel in Rockville, Maryland. Included among planned topics of discussion are: Methods for detecting arachidonic acid metabolites. and other products of lipid peroxidation. Mechanisms of arachidonic acid and lipid peroxidation. Free radical generation and associated membrane and DNA damage. Alterations of prostaglandins and other lipids induced by ionizing radiation and by ultraviolet light in biological tissues. Prostaglandins as mediators of radiation damage, their role in tissue recovery processes, and their use as

radioprotective agents. The meeting will include both platform and poster presentations. These proceedings will be published. The abstract deadline is 16 August 1986. Registration fee is

abstract deadune is 16 August 1960. Registration ice is \$45 (\$25 for students). Sponsored by The Armed Forces Radiobiology Re-search Institute. For further information, contact: Din-gle Associates, 1625 Eye Street, NW, Suite 915, Washington, DC 20006.

FELLOWSHIPS

POSTDOCTORAL FELLOWSHIP

Molecular biology of Coccidioides immitis. Postdoctoral research associate to investigate molecular biology of *Cucidioides immitis* morphogenesis/pathogenesis. Experi-ence in DNA/RNA molecular biology and cloning tech-niques expected. Submit résumé, brief summary of research experience, and three references to: Dr. Garry T. Cole, Department of Botany, University of Texas, Austin, Texas 78713-7640.

The University of British Columbia, Department of Oceanography, NSERC UNIVERSITY RE-SEARCH FELLOWSHIPS. Applications are invited from suitably qualified candidates for NSERC University Research Fellowships to be held in the Department of Oceanography. Applicants must be Canadian citizens or landed immigrants. Applications from all disciplines in marine science will be considered. We are especially interested in candidates having training and experience in (i) the molecular aspects of marine microbiology and (ii)

Please write for further particulars and send applica-tions, with curriculum vitae and the names and addresses of three referees to:

Dr. S. Pond, Acting Head Department of Oceanography The University of British Columbia Vancouver, B.C. Canada V6T 1W5

POSTDOCTORAL FELLOWSHIPS IN PSYCHO-**BIOLOGY:** We are accepting applications for M.D. or Ph.D. postdoctoral training in an NIMH-funded pro-gram. Training is centered around conducting indepen-dent research, with human subjects or animal models, of physiological and behavioral processes which underlie a variety of clinical disorders. Research interests of core faculty include: development of sleep-wake state, cardio-vascular and respiratory regulation; ontogeny of feeding vascular and respiratory regulation; ontogeny of feeding and associative learning; mother-infant interaction, sepa-ration and attachment; developmental toxicology; ag-gression; processes underlying pain and analgesia; the psychobiology of time and time perception. Stipends awarded according to NIMH guidelines for 1 year with 2-year option. NIMH requires trainces be U.S. citizens. To apply: send three reference letters, curriculum vitae and letter describing your research interests to: Myron A. Hofer, M.D., Developmental Psychobiology, Co-lumbia University, Box 40, 722 West 168 Street, New York, NY 10032. Affirmative Action/Equal Oppor-tunity Employer. tunity Employer.

FELLOWSHIPS

TWO PREDOCTORAL FELLOWSHIPS are available immediately. Both are 12-month positions with expected durations of 4 years. The first is a pure research expected durations of 4 years. The first is a pure research appointment for the study of retinal neurophysiology using intracellular recording techniques. The second is open regarding research area and involves some teaching responsibilities (approximately 10 hours per quarter, fall and winter only). Applicants must have at least a B.S./B.A. degree with outstanding academic record. Pro-gram will lead to P.D. text free trianed is \$10.000 plus gram will lead to Ph.D., tax free stipend is \$10,000, plus fee waiver. Send curriculum vitae, letter indicating re-search background and interests, plus transcripts, GRE scores and three letters of recommendation by 13 June 1986 to: Dr. Gary A. Dudley, Department of Zoolog-ical and Biomedical Sciences, Ohio University, Athens, Ohio 45701.

POSTDOCTORAL FELLOWSHIP: HUNTING-TON DISEASE—A postdoctoral fellowship is available immediately to pursue the cloning of the Huntington disease gene using the chromosome hopping approach, as well as other techniques of large-scale chromosomal as well as other techniques of large-scale chromosomal mapping. Candidates should be experienced in molecular genetics, especially phage lambda library construction and screening. Experience with linkage analysis, somatic cell genetics, and pulsed field gel electrophoresis is desirable. Send curriculum vitae and names of three references to: Dr. Francis S. Collins, Departments of Internal Medicine and Human Genetics 4708 Medi-Internal Medicine and Human Genetics, 4708 Medi-cal Sciences II, Box 0618, University of Michigan Medical School, Ann Arbor, MI 48109–0618.

MARKETPLACE

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