

were of short duration within the ten-year period, supplemented by incidental observations made by other observers during sojourns at various study sites. Chivers and Raemakers make a strong effort to piece together the spotty information into a view of long-term changes in environmental variables and in social and ecological patterns of the primates. The resulting chapter wanders among topics and provides overly detailed accounts of the lives of a few groups of gibbons. Although the latter accounts will have occasional value to the specialist, I believe most readers will find them tedious.

Some readers may be troubled by the authors' free and uncritical use of theory, hypothesis, and unrelated work in post hoc explanations of the patterns discerned in their studies. The explanations would better have been presented as hypotheses for testing than as explanations. Given that many of the hypotheses adduced could have been proposed ten years ago, it is possible to fault much of the enterprise for not proceeding within the framework of hypothesis testing, or at least with some specific problem orientation. The primary method of the contributors has been dawn-to-dusk follows of primate groups. The effort required to maintain a rigorous schedule of such work in a rain forest is prodigious, but greater progress might have resulted from adoption of sampling regimes incorporating measures of important environmental variables. Since 1975, this group has maintained systematic observation of forest phenology in ten sample plots amounting to 3.75 hectares of forest at Kuala Lompat. These valuable observations are presented in a chapter on the forest, but explanations of social patterns of the primates given, for example, in the general chapter on socioecology depend on postulated relations of animal behavior to characteristics of food sources—trees—that have gone unmeasured in the past ten years. Chivers and Raemakers suggest that differences between monogamous gibbons and polygynous monkeys depend on dietary specialization and size of food plants (pp. 295–296), and we are told that “less selective feeding . . . increases the number of females and young supported by the area defended by a male, favouring polygyny” (p. 296). This may be true, but no quantitative measures of food trees or food abundance are provided.

Chivers' volume should be viewed as a progress report. It is also a monument to his persistence and the dedication of other contributors to tedious work in a difficult environment over many years.

No doubt the attempt to put the work together with ten years' perspective will generate closer attention to theoretical underpinnings and experimental design. I applaud Chivers and his associates for providing an interim report that will, despite its weaknesses, be useful to biologists concerned with this important tropical region.

PETER S. RODMAN

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Books Received

Advances in Hydrosclerosis. Vol. 12. Ven Te Chow, Ed. Academic Press, New York, 1981. xii, 440 pp., illus. \$51.

Affinity Chromatography. Bioselective Adsorption on Inert Matrices. William H. Scouten. Wiley-Interscience, New York, 1981. xvi, 348 pp., illus. \$42.50. Chemical Analysis, vol. 59.

The Aging Process. A Health Perspective. Molly S. Wantz and John E. Gay. Winthrop (Prentice-Hall), Cambridge, Mass., 1981. xiv, 322 pp., illus. Paper, \$10.95.

Alternative Energy Sources. Proceedings of a symposium, Kuwait, Feb. 1980. Jamal T. Manassah, Ed. Academic Press, New York, 1981. Two volumes. xxiv, 922 pp., illus. \$94.50.

Analysis and Optimization of Systems. Proceedings of a conference, Versailles, Dec. 1980. A. Bensoussan and J. L. Lions, Eds. Springer-Verlag, New York, 1980. xiv, 1000 pp., illus. Paper \$57.90. Lecture Notes in Control and Information Sciences, vol. 28.

Analysis of Motivational Processes. Papers from a conference: Milton Keynes, England, Sept. 1979. Frederick M. Toates and Timothy R. Halliday, Eds. Academic Press, New York, 1980. x, 364 pp., illus. \$40.

Bioengineering, Thermal Physiology and Comfort. Papers from a conference, Karpacz, Poland, Sept. 1978. K. Cena and J. A. Clark, Eds. Elsevier, New York, 1981. ii, 290 pp., illus. \$61. Studies in Environmental Science, vol. 10.

Biological Aspects of Mental Disorder. Solomon H. Snyder. Oxford University Press, New York, 1981. xii, 260 pp., illus. Paper, \$6.95. Reprint of the 1980 edition.

Biological Fluidised Bed Treatment of Water and Wastewater. Papers from a conference, Manchester, Apr. 1980. P. F. Cooper and B. Atkinson, Eds. Published for the Water Research Centre by Horwood, Chichester, England, 1981 (U.S. distributor, Halsted [Wiley], New York). 412 pp., illus. \$99.95.

Biological Growth and Spread. Mathematical Theories and Applications. Proceedings of a conference, Heidelberg, July 1979. Willi Jäger, Hermann Rost, and Petre Tautu, Eds. Springer-Verlag, New York, 1980. xii, 512 pp., illus. Paper, \$34. Lecture Notes in Biomathematics, vol. 38.

Biomass as a Nonfossil Fuel Source. Papers from a symposium, Honolulu, Apr. 1979. Donald L. Klass, Ed. American Chemical Society, Washington, D.C., 1981. xii, 564 pp., illus. \$42. ACS Symposium Series, 144.

Cerebral Death. A. Earl Walker. Urban & Schwarzenberg, Baltimore, ed. 2, 1981. xii, 212 pp., illus. \$32.50.

Changing Disease Patterns and Human Behaviour. N. F. Stanley and R. A. Joske, Eds. Academic Press, New York, 1980. xiv, 666 pp., illus. \$98.50.

Characterisation of Catalysts. J. M. Thomas and R. M. Lambert, Eds. Wiley-Interscience, New York, 1981. xiv, 284 pp., illus. \$49.

Chemical Hazards in the Workplace. Measurement and Control. Papers from a symposium, Las Vegas, Aug. 1980. Gangadhar Choudhary, Ed. American Chemical Society, Washington, D.C., 1981. xii, 628 pp., illus. \$43. ACS Symposium Series, 149.

Developing the Amazon. Emilio F. Moran. Indiana University Press, Bloomington, 1981. xx, 292 pp., illus. \$22.50.

Differential Geometrical Methods in Mathematical Physics. Proceedings of conferences, Aix-en-Provence, Sept. 1979, and Salamanca, Sept. 1979. P. L. García, A. Pérez-Rendón, and J. M. Souriau, Eds. Springer-Verlag, New York, 1980. xii, 540 pp. Paper, \$29.50. Lecture Notes in Mathematics, vol. 836.

Diptera: Asilidae. Oskar Theodor. Israel Academy of Sciences and Humanities, Jerusalem, 1980 (U.S. distributor, Smithsonian Institution Press, Washington, D.C.). viii, 448 pp., illus. \$32. Fauna Palaestina, Insecta II.

Economics of the Environment. Horst Siebert. Lexington (Heath), Lexington, Mass., 1981. xii, 232 pp., illus. \$24.95.

The Effectiveness of Coaching for the SAT. Review and Reanalysis of Research from the Fifties to the FTC. Samuel Messick. Educational Testing Service, Princeton, N.J., 1980. vi, 136 pp. Paper.

Electromagnetic Theory of Gratings. R. Petit, Ed. Springer-Verlag, New York, 1980. xvi, 284 pp., illus. \$38.35. Topics in Current Physics, vol. 22.

Elements of Symbolic Logic. Hans Reichenbach. Dover, New York, 1980. xvi, 444 pp. Paper, \$7. Reprint of the 1947 edition.

Emergency Intervention. Jane Allyn Piliavin, John F. Dovidio, Samuel L. Gaertner, and Russell D. Clark, III. Academic Press, New York, 1981. xvi, 294 pp. \$21.50.

Endocrinological Cancer. Ovarian Function and Disease. Proceedings of a meeting, Rome, Dec. 1979. H. Adlercreutz, R. D. Bulbrook, H. J. Van der Molen, A. Vermeulen, and F. Sciarra, Eds. Excerpta Medica, Amsterdam, 1981 (U.S. distributor, Elsevier North-Holland, New York). xiv, 400 pp., illus. \$78. Research on Steroids, vol. 9.

The Ethnic Myth. Race, Ethnicity, and Class in America. Stephen Steinberg. Atheneum, New York, 1981. x, 278 pp., \$14.95.

Fertilizers and Soil Amendments. Roy H. Follett, Larry S. Murphy, and Roy L. Donahue. Prentice-Hall, Englewood Cliffs, N.J., 1981. xvi, 558 pp., illus. \$24.95.

A Field Guide to the Atmosphere. Vincent J. Schaefer and John A. Day. Drawings by Christy E. Day. Houghton Mifflin, Boston, 1981. xxii, 360 pp. + plates. \$13.95. Peterson Field Guide Series, 26.

File Techniques for Data Base Organization in COBOL. LeRoy F. Johnson and Rodney H. Cooper. Prentice-Hall, Englewood Cliffs, N.J., 1981. xvi, 368 pp., illus. \$19.95.

Finite Simple Groups II. Proceedings of a symposium, Durham, England, July 1978. Michael J. Collins, Ed. Academic Press, New York, 1980. xvi, 346 pp. \$57.50.

Firewood Crops. Shrub and Tree Species for Energy Production. National Academy of Sciences, Washington, D.C., 1980. xii, 238 pp., illus. Paper.

A First Course in Differential Geometry. Chuan-Chih Hsiung. Wiley-Interscience, New York, 1981. xviii, 344 pp., illus. \$29.95. Pure and Applied Mathematics.

A First Course in Group Theory. Cyril F. Gardiner. Springer-Verlag, New York, 1980. x, 228 pp. \$14.80.

Fisheries Biology. A Study in Population Dynamics. D. H. Cushing. University of Wisconsin Press, Madison, ed. 2, 1981. xvi, 296 pp., illus. \$17.50.

Fisheries Management. Robert T. Lackey and Larry A. Nielsen, Eds. Halsted (Wiley), New York, 1980. x, 422 pp., illus. \$34.95.

Food, Ecology and Culture. Readings in the Anthropology of Dietary Practices. J. R. K. Robson, Ed. Gordon and Breach, New York, 1980. x, 144 pp., illus. \$27.50. Reprinted from *Ecology of Food and Nutrition*, vols. 1–5.

Foundations of Developmental Psychology. Richard C. LaBarba. Academic Press, New York, 1981. xiv, 546 pp., illus. \$18.95.

4th International Adalat® Symposium. New Therapy of Ischemic Heart Disease. Proceedings of a symposium, Paris, Oct. 1979. Paul Puech and Rolf Krebs, Eds. Excerpta Medica, Amsterdam, 1980 (U.S. distributor, Elsevier North-Holland, New York). xii, 298 pp., illus. \$58.50.

Genetics. A Molecular Approach. Laura Livingston Mays. Macmillan, New York, and Collier Macmillan, London, 1981. xxii, 694 pp., illus. \$23.95.

Genetics of Higher Plants. Applications of Cell Culture. R. S. Chaleff. Cambridge University Press, New York, 1981. xiv, 184 pp., illus. \$42.50. Developmental and Cell Biology Series, 9.

Geomedical Aspects in Present and Future Research. Papers from a symposium, Oslo, May 1978. J. Låg, Ed. Universitetsforlaget, Oslo, 1981 (U.S. distributor, Columbia University Press, New York). 226 pp., illus. \$24.

Green Wisdom. Arthur W. Galston. Illustrated by Lauren Brown. Basic Books, New York, 1981. xii, 218 pp. \$12.95.

Growth and Regulation of Animal Populations. Lawrence B. Slobodkin. Dover, New York, ed. 2, 1980. xiv, 234 pp., illus. Paper, \$6.

A Guide to Classification in Geology. J. W. Murray. Horwood, Chichester, England, and Halsted (Wiley), New York, 1981. 112 pp., illus. \$19.95. Ellis Horwood Series in Geology.

Handbook of Clinical Neuropsychology. Susan B. Filskov and Thomas J. Boll, Eds. Wiley-Interscience. (Continued on page 686)

(Continued from page 638)

meets in Santa Barbara, California. For more information on Division publications and meetings, write Alan E. Leviton, executive director, Pacific Division, AAAS, c/o California Academy of Sciences, San Francisco, California 94118.

News from Interciencia

Symposia on topics relating science and technology to development issues continue to be organized by the Interciencia Association (IA), the inter-American federation of national scientific organizations which AAAS helped to found in 1975. These events, 14 of which have been sponsored since 1976, have taken place in all eight countries which comprise the Interciencia group (Brazil, Canada, Colombia, Costa Rica, Jamaica, Mexico, the United States, and Venezuela).

IA will join with the Venezuelan Association for the Advancement of Science, the Apsen Institute's Food and Climate Forum, and the Venezuelan Ministry of Agriculture in sponsoring "Agro-Climate Modelling and Information Systems" at Caracas on 20-26 September 1981. A symposium, "Biomass Substitutes for Liquid Fuels," is scheduled tentatively for Campinas, Brazil, 20-23 October 1981, with IA and the Brazilian Society for the Progress of Science as cosponsors.

Symposia were held at Kingston, Toronto, and Caracas in the late 1980 and early 1981. With the Jamaican Society of Scientists and Technologists as cosponsor, the Kingston meeting on 18-21 November 1980, dealt with "Materials for the Future: Renewable Organic Resources for Industrial Raw Materials." Thirty experts from 12 countries presented some 20 papers. The U.S. component was led by Irving Goldstein of North Carolina State University.

At the AAAS meeting in Toronto, IA and the Association of the Scientific, Technological, and Engineering Community of Canada (SCITEC) cosponsored panels on acid rain and the cancer cell surface. With the support of the Canadian International Development Agency, they also organized a seminar for Latin American science writers.

At Caracas, 8-12 March 1981, IA joined with the Venezuelan Association in presenting "The Scientific Community and Its Role in Decision-Making on Development Alternatives." Thirty-four participants from eight countries participated in the symposium, which was sup-

ported by Venezuela's National Council for Scientific and Technological Research. *Interciencia* editor Marcel Roche was a coarranger of the event, which included presentations by scholars as well as government officials including two cabinet ministers. Participants from AAAS included past president Emilio Q. Daddario and Michael Moravcsik of the University of Oregon.

With its May-June issue, the journal *Interciencia* observed its fifth anniversary of uninterrupted publication under the editorship of Marcel Roche. The bi-monthly publication, "a journal of science and technology for development," contains articles in Spanish, English, and Portuguese, with abstracts in all three languages.

JAMES W. ROWE

Office of International Science

Reduced Chautauqua Program for 1981-82

In February a zero-budget program of Chautauqua Short Courses for College Teachers loomed on the horizon for the 1981-82 academic year. The AAAS Office of Science Education is now pleased to announce that a reduced program of 30 short courses will be offered for the 1981-82 academic year. The prospect for 1982-83, however, does not look good.

From late October 1981 through April 1982, 12 regional field centers each will host four to five short courses (on the average). The topics remain timely, including astronomy bizarre; qualitative physics; industrial organic and pharmaceutical chemistry; genetics and society; arms uncontrolled; cognition and teaching; problem solving; and microcomputers in the laboratory.

Two changes of note are that most courses will be offered in single sessions of 3 days and no support for participants' lodging will be available. The full schedule of courses will appear in the 4 September issue of *Science*.

A brochure with descriptions of the various courses, as well as schedules and application forms, will be available later this month from the AAAS Office of Science Education, Box 81-82, at the AAAS address.

For more information about the activities and publications described in AAAS News, write to the appropriate office, AAAS, 1776 Massachusetts Avenue, NW, Washington, D.C. 20036, unless otherwise indicated.

BOOKS RECEIVED

(Continued from page 643)

ence, New York 1981. xx, 806 pp., illus. \$35. Wiley Series on Personality Processes.

Handbook of the Hypothalamus. Vol. 3, Behavioral Studies of the Hypothalamus. Part B. Peter J. Morgane and Jaak Panksepp, Eds. Dekker, New York, 1981. xiv, 464 pp., illus. \$93.50.

Handbook on Reference Methods for Soil Testing. Council on Soil Testing and Plant Analysis, Athens, Ga., ed. 2, 1980. xxii, 130 pp. Paper, \$7.50.

Handling Radioactivity. A Practical Approach for Scientists and Engineers. Donald C. Stewart. Wiley-Interscience, New York, 1980. xvi, 282 pp., illus. \$35.

Interventional Diagnostic and Therapeutic Procedures. Barry T. Katzen. Springer-Verlag, New York, 1980. xviii, 156 pp., illus. \$22.50. Comprehensive Manuals in Radiology.

Introduction to Applicable Mathematics. Part 1, Elementary Analysis. Fred A. Hinchey. Halsted (Wiley), New York, 1981. viii, 288 pp. \$19.95.

An Introduction to Chemical Equilibrium and Kinetics. Louis Meites. Pergamon, New York, 1981. xiv, 550 pp., illus. Cloth, \$75; paper, \$19.95. Pergamon Series in Analytical Chemistry, vol. 1.

Introduction to Colloid and Surface Chemistry. Duncan J. Shaw. Butterworths, Boston, ed. 3, 1980. vii, 274 pp., illus. \$14.95.

Muscular Dystrophy Research. Advances and New Trends. Proceedings of a symposium, Venice, Apr. 1980. C. Angelini, G. A. Danieli, and D. Fontanari, Eds. Excerpta Medica, Amsterdam, 1980 (U.S. distributor, Elsevier North-Holland, New York). xii, 332 pp., illus. \$68.25.

The Natural Environment and the Biogeochemical Cycles. O. Hutzinger, Ed. Springer-Verlag, New York, 1980. xvi, 258 pp., illus. \$57.90. The Handbook of Environmental Chemistry, vol. 1, part A.

Nippon. A Charted Survey of Japan 1980/81. Edited by the Tsuseta Yano Memorial Society under supervision of Ichiro Yano. Kokusei-sha, Tokyo, 1980. 350 pp., illus. Y 3700.

North Sea Oil. Resource Requirements for Development of the U.K. Sector. J. Kenneth Klitz. Pergamon, New York, 1980. xiv, 260 pp., illus. \$36.

Origins and Evolution of Eukaryotic Intracellular Organelles. Papers from a conference, Jan. 1980. Jerome F. Frederick, Ed. New York Academy of Sciences, New York, 1981. x, 512 pp., illus. Cloth or paper, \$99. *Annals of the New York Academy of Sciences*, vol. 361.

Other Worlds. A Portrait of Nature in Rebellion. Space, Superspace and the Quantum Universe. Paul Davies. Simon and Schuster, New York, 1981. 208 pp. \$11.95.

Peace against War. The Ecology of International Violence. Francis A. Beer. Freeman, San Francisco, 1981. xxviii, 448 pp., illus. \$19.95. A Series of Books in International Relations.

Robust Statistics. Peter J. Huber. Wiley, New York, 1981. xii, 308 pp. \$28.95.

The Science of Entomology. William S. Romoser. Macmillan, New York, and Collier Macmillan, London, ed. 2, 1981. xiv, 576 pp., illus. \$21.95.

Science, Students, and Schools. A Guide for the Middle and Secondary School Teacher. Ronald D. Simpson and Norman D. Anderson. Wiley, New York, 1981. xiv, 558 pp., illus. \$18.95.

The Sciences of the Artificial. Herbert A. Simon. MIT Press, Cambridge, Mass., ed. 2, 1981. xiv, 248 pp., illus. Paper. \$4.95.

Techniques and Applications of Path Integration. L. S. Schulman. Wiley-Interscience, New York, 1981. xviii, 360 pp. \$31.95.

Techniques in Operational Research. Vol. 2, Models, Search and Randomization. Brian Conolly. Horwood, Chichester, England, and Halsted (Wiley), New York, 1981. 338 pp., illus. \$77.95. Ellis Horwood Series in Mathematics and Its Applications.

Technology Transfer, Innovation, and International Competitiveness. Sherman Gee. Wiley-Interscience, New York, 1981. xii, 228 pp., illus. \$23.50.

Tested Studies for Laboratory Teaching. Proceedings of a conference, Calgary, Canada, June 1979. Jon C. Glase, Ed. Kendall/Hunt, Dubuque, Iowa, 1980. xvi, 272 pp., illus. \$19.95.

Thallium-201 and Technetium-99m-Pyrophosphate. Myocardial Imaging in the Coronary Care Unit. Frans J. Th. Wackers, Ed. Nijhoff, The Hague, 1981 (U.S. distributor, Kluwer Boston, Hingham, Mass.). xii, 256 pp., illus. \$42. Developments in Cardiovascular Medicine, 9.

Theoretical Aspects and New Developments in Magneto-Optics. Proceedings of an institute, Antwerp, July 1979. Jozef T. Devreese, Ed. Plenum, New York, 1980. xii, 626 pp., illus. \$69.50. NATO Advanced Study Institutes Series B, vol. 60.

Wilderness Rivers of America. Michael Jenkinson. Abrams, New York, 1981. 276 pp., illus. + index. \$40. A Chanticleer Press Edition.

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Biochemist/Pharmacologist. Ph.D. 1977. Postdoctoral training in RNA sequencing and in environmental toxicology. Broad experience in cell culture techniques, cellular fractionation, protein and RNA purification, enzyme kinetics, and metabolism. Seeks research position in industry only. Box 194, SCIENCE. X

Biochemist. Ph.D. 1975. Research experience in phospholipid absorption, regulation and enzymology, fatty acid synthesis, hypolipidemic drug action, membrane lysis, structure-function relationship of microsomal membrane, and cell surface interactions. Academic or industrial position desired. Box 195, SCIENCE. X

Biological Oceanographer/Marine Pollution Biologist. Ph.D. Extensive experience with marine invertebrates/teleosts and fate and effects of oil. Seeks postdoctoral or research/teaching position involving fate and effects of organic contaminants. Résumé and references available. Reply to: Box 196, SCIENCE. 8/7, 14

Microbiologist/Immunologist. Ph.D. Ten years of experience in clinical and food microbiology, tumor immunology, veterinary biologics and academics; publications; skilled at practical and theoretical problem solving; excellent managerial and communication skills. Seeking challenging industrial position in research, development, technical management, or manufacturing. Box 197, SCIENCE. X

Pathobiologist. Ph.D. 1981, broad interests in various aspects of the mechanisms of disease. Research experience in enzymology and immunology. Seeking academic (teaching, research, postdoctoral) or industrial position. Box 198, SCIENCE. X

POSITIONS WANTED

Technical Translator. All subjects, quick and efficient. Specializing in Russian and German. Prefers work on free-lance basis/conference translation. R. Radzai, 124B Moss Avenue, Oakland, Calif. 94611; telephone: 415-658-8485. X

POSITIONS OPEN

ANATOMY—NIH postdoctoral position in development biology/teratology at the Department of Anatomy, University of Nebraska Medical Center, Omaha, Nebraska, available immediately. Subspecialty area open, but current faculty interests include: early development of the CNS, whole embryo culture, several aspects of reproductive biology. Send résumé and names of three references to: Dr. W. K. Metcalf, Department of Anatomy, University of Nebraska Medical Center, 42nd and Dewey Avenue, Omaha, Neb. 68105. *The University of Nebraska is an Affirmative Action/Equal Opportunity Employer.*

ASSISTANT ADJUNCT PROFESSOR OF MEDICINE AND ONCOLOGY—The University of California, San Diego (UCSD) Cancer Center seeks an investigator (Ph.D. or M.D.) to conduct independent laboratory research in experimental cancer chemotherapy using in vitro culture systems and athymic mice. There will be responsibility for supervising the staff managing the large athymic mouse colony at UCSD. A minimum of 5 years of experience with anticancer agents is preferred. Prior experience in conducting research with athymic mice and familiarity with anthracycline usage is required. Appointee must have demonstrated research productivity and ability to secure independent research grants. Participation in the departmental teaching program of medical and postdoctoral students is required. Salary related to rate and step of appointment within the established salary schedule of the University of California, San Diego. Apply by 7 September 1981 to: Cancer Center, H-221, University of California, San Diego, 225 Dickinson Street, San Diego, Calif. 92103. *The University of California, San Diego, is an Equal Opportunity/Affirmative Action Employer.*

We are seeking applicants for a tenure-track position at the ASSISTANT PROFESSOR level in the areas of CELL OR MOLECULAR BIOLOGY. Applicants must have a Ph.D. or M.D. degree and postdoctoral training. Faculty in the Department of Biochemistry and Molecular Biology are expected to maintain an excellent research program as well as to participate in teaching. Prior to 1 October 1981, curriculum vitae, a description of proposed research, and four letters of reference should be sent to: Dr. Gary S. Stein, Chairman, Search Committee, Department of Biochemistry and Molecular Biology, College of Medicine, University of Florida, Box J-245 JHMH, Gainesville, Florida 32610. *Equal Opportunity/Affirmative Action Employer.* Anticipated starting date: 1 January 1982.

The Department of Neurosciences, University of California, San Diego (UCSD), has a tenure track position at the ASSISTANT PROFESSOR level, available immediately. Candidates should have a Ph.D. or M.D. degree and demonstrated ability to carry out a strong, independent research program in the neurosciences. The position requires teaching of neurosciences at the graduate and medical school levels. Opportunities exist for collaborative research with the broad, interdisciplinary Neurosciences Group at UCSD. Send curriculum vitae, bibliography, and names and addresses of five references to: Search Secretary, Department of Neurosciences, M-008, University of California, San Diego, La Jolla, 92093. *The University of California is an Equal Opportunity/Affirmative Action Employer.*

The Department of Neurosciences, University of California, San Diego, is seeking qualified NEUROLOGIST to fill a full-time faculty position in the professorial series. This position will be available immediately. Qualifications include Board-eligibility or certification in neurology, California licensure, and demonstrated excellence in teaching and research. The candidate should have well-established credentials as an investigator in the basic or clinical neurosciences. Rank and salary open, depending on experience and qualifications. Send curriculum vitae, bibliography, and names and addresses of five references to: Search Secretary, Department of Neurosciences, M-008, University of California, San Diego, La Jolla, Calif. 92093. *The University of California is an Equal Opportunity/Affirmative Action Employer.*

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The University of Texas Medical Branch is seeking well-qualified candidates for the position of associate dean for community affairs. This position has existed since 1972 and reports to the dean of medicine.

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The associate dean for community affairs will coordinate current community programs and will develop new and innovative programs related to the community, will assist in the development of topical on-campus programs related to women in medicine and other areas benefiting the faculty, staff, and students, and will work closely with the dean on a wide range of issues.

Applicants must qualify for a faculty position in a specific discipline and will be expected to participate actively in teaching and research activities.

Medical school or health sciences administrative experience is expected. The successful candidate will have demonstrated leadership and interpersonal skills, and should have experience in obtaining extramural funds through grants or contracts.

Applicants should send a letter describing the benefits and problems in relating a medical school to its community, and current curriculum vitae.

Applications no later than 31 August 1981 to: George T. Bryan, M.D., Dean of Medicine, Suite 528, Administration Building, University of Texas Medical Branch, Galveston, Texas 77550.

The University of Texas Medical Branch is an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.

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Diamond Shamrock, a recognized leader in chemicals, oil, and gas, has immediate openings due to expanding operations in the Department of Safety Assessment:

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RESEARCH CHEMIST, requires a M.S. or a B.S. with 3 to 5 years of experience, preferably in analytical chemistry. Experience should include familiarity with extraction applicable to residue assays. Duties include processing of biological samples for determination of pesticides and animal drugs. This person is responsible for immediate supervision of a technician and completion of projects to support and expand the use of agricultural chemicals and animal drugs. Experience with analytical instrumentation is desirable.

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The Quillen-Dishner College of Medicine is seeking applicants for the position of Assistant Dean/Director of Medical Education for Johnson City Medical Center Hospital. The assistant dean/director of medical education is the representative of the office of the dean for the College of Medicine at the hospital and is responsible for coordination and participation in the activities of the undergraduate, graduate, and postgraduate education within Johnson City Medical Center Hospital, one of the four hospitals affiliated with the College of Medicine. The director of medical education reports directly to the dean of the College of Medicine, but consults regularly with the hospital administration and medical staff of the hospital. The candidates should be medical doctors, preferably with experience in medical education and medical staff governance.

The Quillen-Dishner College of Medicine is a community-based, Veterans Administration-affiliated school scheduled to graduate its first class of students in May 1982. The College is located in the Southern Appalachian Mountain area in an attractive, growing, economically sound community with ready access to multiple outdoor recreational facilities.

Interested applicants should contact: **Dr. Herschel Douglas, Dean, Quillen-Dishner College of Medicine, P.O. Box 23, 320A, East Tennessee State University, Johnson City, Tennessee, 37614; telephone: 615-928-6426, extension 315. East Tennessee State University offers Equal Opportunity in its employment, admissions, and educational activities and is an Affirmative Action Employer.**

ASSISTANT PROFESSOR

Duties: Teaching-research. Teaching responsibility for anatomy and physiology, and invertebrate physiology, with potential for developing a course in histology. Duties include directing undergraduate research projects, advising students, and university committees.

Qualifications: Ph.D. with demonstrated competence in teaching and research. Postdoctoral experience is desirable. If lacking any formal teaching or postgraduate research experience, the applicant should have strong supporting letters stating demonstrated promise.

Salary: Commensurate with training and experience. Applications and nominations should be submitted no later than 1 September 1981.

Please send résumés to:

**Morgan State University
Department of Biology
Spencer Hall 305A
Baltimore, Maryland 21239
Telephone: 301-444-3070**

ASSISTANT PROFESSOR OF BIOCHEMISTRY

The Department of Biochemical Sciences, Princeton University, invites applications for tenure-track positions at the assistant professor level. Candidates should have a strong background in molecular biology, molecular genetics, or biochemistry and demonstrated excellence in research. An interest in eukaryotic organisms is preferred. Applicants should submit complete curriculum vitae, including a list of references and a description of future research program, to: **Dr. S. J. Flint, Biochemical Sciences, Princeton University, Princeton, N.J. 08544.**

Princeton University is an Affirmative Action/Equal Opportunity Employer.

SWISS INSTITUTE FOR EXPERIMENTAL CANCER RESEARCH

Applications are invited for an ASSOCIATE SCIENTIST appointment to participate in an established research project in experimental hematology/oncology, with particular emphasis on regulation of cell differentiation and drug action on cells in culture. Some years of postdoctoral experience in the field, as evidenced by published work, are desired.

This staff position is nontenured with a 3- to 5-year contract. Starting date: 1 January 1982 plus or minus 2 months.

Applications with curriculum vitae and names of two references to be sent to:

**Chief of Personnel
SWISS INSTITUTE FOR
EXPERIMENTAL CANCER RESEARCH
Reference: O/N
1066 Epalinges/Lausanne
Switzerland**

Closing date: 10 September 1981.

POSITIONS OPEN

STANFORD UNIVERSITY California

Applications are invited for an opening at the ASSISTANT PROFESSOR level in the newly formed Program in the History of Science. Candidates should have demonstrated ability in the area of 19th- and 20th-century physical science.

Curriculum vitae and the names of at least two referees should be sent before 15 November 1981 to: **Professor Eric Hutchinson, Academic Secretary, Stanford University, Stanford, Calif. 94305.**

Stanford University is an Equal Opportunity Employer.

ASSOCIATE DEAN AND ASSOCIATE DIRECTOR PENNSYLVANIA AGRICULTURAL EXPERIMENT STATION COLLEGE OF AGRICULTURE

The Pennsylvania State University invites applications and nominations for the position of associate dean and Associate Director, Pennsylvania Agricultural Experiment Station.

The associate dean and associate director of the Pennsylvania Agricultural Experiment Station is responsible to the dean of the College who is also director of the Station. The primary responsibility is that of senior administrator for research in the College of Agriculture.

Qualifications must include (i) an earned doctorate in agricultural or related sciences; (ii) demonstrated outstanding achievement in agricultural research; (iii) ability to motivate the productive capacity of research faculty; and (iv) demonstrated ability to administer research programs effectively.

Nominations and applications, including a résumé of professional experience and qualifications, will be received until 2 October 1981 or until a suitable candidate has been identified. Applications should be addressed to:

**Dr. Gene M. Love
Associate Dean for Resident Education
271 C Agricultural Administration Building
University Park, Pennsylvania 16802**

An Equal Opportunity/Affirmative Action Employer

BIOCHEMISTRY—Postdoctoral research associate to participate in research on biochemical mechanisms involved in blood clotting and fibrinolysis. Actively pursued areas are: (i) characterization of protein binding sites, (ii) molecular phenomenon occurring in blood clotting, and (iii) development of new fibrinolytic agents. Experience in protein chemistry required. Position available immediately. Salary: \$14,000. Send three references and résumé to: **Dr. Andrie Z. Budzynski, Temple University School of Medicine, Thrombosis Research Center, 34 North Broad Street, Philadelphia, Pa. 19140. Equal Opportunity/Affirmative Action Employer, M/F/H.**

BIOCHEMIST/MOLECULAR BIOLOGIST

University medical research seeks a Ph.D. biochemist. Must have background and advanced research experience in state-of-the-art knowledge of recombinant DNA research. Send résumé to:

**Jack G. Chirikjian, Ph.D.
Georgetown University Medical Center
3900 Reservoir Road, NW
Washington, D.C. 20007**

Position open for **CHEMISTRY PROFESSOR**. Instructor, associate professor. M.S. Rank and salary based on degree and experience. General chemistry and analytical chemistry. Position available immediately. Send résumé and three letters of recommendation to:

**Sister Barbara Baer
St. Mary of the Plains College
Dodge City, Kans. 67801
Telephone: 316-225-4171**

FACULTY POSITION AVAILABLE IN PHARMACOLOGY

An assistant professor, tenure-track position is available in pharmacology for an M.D.-Ph.D. with fundamental research interests. Clinical experience is desirable but not absolutely necessary. Joint appointment with appropriate clinical department can be arranged.

Send inquiries and curriculum vitae to: **Dr. J. Lerner, Chairman, Department of Pharmacology, University of Virginia Medical School, Charlottesville, Virginia 22908.**

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

POSITIONS OPEN

BIOCHEMIST—MOLECULAR ENDOCRINOLOGIST. Research associate and postdoctoral positions available for research related to biochemistry of reproduction with emphasis on mechanism of hormone action, receptor purification, membrane biochemistry, glycoprotein hormone chemistry, and associated problem areas. Ph.D. in biochemistry preferred. Positions available immediately. Please forward curriculum vitae and names of three references to:

**Dr. Leo E. Reichert, Jr.
Professor and Chairman
Department of Biochemistry
Albany Medical College
Albany, New York 12208**

Albany Medical College is an Equal Opportunity Employer.

CARDIOVASCULAR PHYSIOLOGIST

A tenure-track position at the rank of assistant professor or associate professor is available in the Department of Physiology and Biophysics of the University of Tennessee Center for the Health Sciences. Candidates should have a Ph.D. or M.D. degree, a minimum of 2 years of postdoctoral training, and a strong research background in cardiovascular physiology. Demonstrated ability to initiate a strong, independent research program and to engage in the teaching activities of the department are expected. Send curriculum vitae, a brief statement of research interests, and the names of three references to: **Dr. Leonard Share, Chairman, Department of Physiology and Biophysics, University of Tennessee Center for the Health Sciences, Memphis, Tennessee 38163. An Equal Opportunity/Affirmative Action Employer.**

CELL GENETICIST. A staff position is available in a Molecular Biology Department which has a comprehensive program in mammalian biochemical and molecular genetics. We are seeking a person with experience in cell genetics to develop a research program on gene regulation in somatic cells that complements present work being done in the department. Applicants should send curriculum vitae and the names of three references to: **Dr. Kenneth Paigen, Department of Molecular Biology, Roswell Park Memorial Institute, 666 Elm Street, Buffalo, New York 14263. An Equal Opportunity Employer, M/F.**

FACULTY POSITION—Tenure-track assistant professorship for **molecular biologist-geneticist** interested in mechanisms of bacterial pathogenesis. Preference will be given to an individual with interests in working with *Pseudomonas*, *Staphylococcus* and/or *Haemophilus* species and who has potential for and commitment to developing an independent research program and an interest and an aptitude for teaching graduate, medical, and dental students. Position available during 1981-1982 academic year. Salary commensurate with experience but not less than \$26,000 for a 12-month appointment. Applicants should submit a letter outlining current and future research interests, curriculum vitae, and bibliography, and arrange for three letters of reference to be sent to: **Dr. Roy Curtiss III, Department of Microbiology, Box 11 SDB, The University of Alabama in Birmingham, Birmingham, Alabama 35294. An Equal Opportunity/Affirmative Action Employer.**

GEOPHYSICIST—Faculty position for 12-month, tenure-track appointment. A seagoing marine seismologist with interest in seismic reflection, refraction, or microseismicity is sought. Candidates with strong backgrounds in non-marine seismology or other branches of marine geophysics will also be considered. Duties include maintaining active research programs and obtaining outside funding, teaching graduate courses, and supervising graduate students. Rank is associate professor. Applicants who meet all requirements, but have less experience than is normally required for associate professor rank, will be considered for appointment at the rank of assistant professor. Salary: \$24,000 to \$37,000, commensurate with experience. Send résumé and names of three references by 1 October 1981 to: **G. Ross Heath, Dean, School of Oceanography, Oregon State University, Corvallis, Oregon 97331. An Affirmative Action/Equal Opportunity Employer.**

GLYCOPROTEIN CHEMIST Ph.D.

Expertise in protein isolation chemistry. Salary negotiable. Research faculty appointment. Send curriculum vitae, bibliography, and letters of reference to: **C. M. P. Loeb, Administrator, University of California, Los Angeles, Medical School, Room A3-34, 1000 Veteran Avenue, Los Angeles, Calif. 90024. An Equal Opportunity Employer.**

ANNOUNCEMENT

Stanford University, in cooperation with the University of California, announces that patent licenses are now available on a non-exclusive basis for the genetic engineering inventions of Dr. Herbert W. Boyer of the University of California and Dr. Stanley N. Cohen of Stanford University (U.S. Patent No. 4,237,224 issued 2 December 1980 and pending U.S. Patent Application No. 959,288 filed 9 November 1978). We gratefully acknowledge the financial support of the American Cancer Society, the National Institutes of Health, and the National Science Foundation to the fundamental research programs from which the inventions resulted.

Earned royalties for end products are scaled, based on sales volume, from 1.0 percent to 0.5 percent of sales, for annual sales over \$10 million. To encourage companies to license early, a multiple of the minimum annual fees of \$10,000 can be credited against earned royalties. For example, for licenses signed before 15 December 1981, licensees may credit \$50,000 (against earned royalties otherwise payable in a future year) for each \$10,000 annual fee paid before commercial sales begin or 1987, whichever occurs first. Terms for licenses signed after 15 December 1981 will be less favorable to the licensee. The license also requires that licensees specifically express intent to comply with the physical and biological containment standards of the NIH guidelines for recombinant DNA research.

Pursuant to 19USC337a, patent licenses are applicable to sales in the United States of products derived from practice of methods of the patents outside of the United States.

The universities intend to use royalty revenue for educational and research purposes which, in turn, may result in yet other scientific advances for public use and benefit.

For a copy of the license agreement, write to: The Office of Technology Licensing, 105 Encina Hall, Stanford University, Stanford, California 94305.

STANFORD UNIVERSITY

UNIVERSITY OF ALBERTA DEPARTMENT OF PHARMACOLOGY FACULTY AND RESEARCH POSITIONS

The University of Alberta, Department of Pharmacology, is seeking applications for a tenure-track faculty position at the level of assistant professor. Applicants should have a Ph.D. in pharmacology or a related discipline, proven research abilities, and be enthusiastic and competent lecturers. Closing date: 1 October 1981.

In addition, the Alberta Heritage Foundation for Medical Research is offering 5-year scholarships (which may be renewed for a further 5 years) to those with excellent and well-documented research skills. These positions have an academic rank (usually assistant professor) and salary similar to that of a regular faculty position, and are designed to provide support for young and very promising investigators. The Department of Pharmacology is seeking applicants for such awards. In the first instance applications should be made to the department. If approval is given for the applicant to proceed, the appropriate forms will be submitted to the Heritage Foundation for consideration by their Scientific Advisory Committee. The closing dates for competitions are 1 September 1981 and 1 April 1982.

Canadian citizens and permanent residents of Canada will be given preference for these positions. *With this exception, the University of Alberta is an Equal Opportunity Employer.*

Those interested should apply in writing, enclosing curriculum vitae, the names of at least three referees, and any other relevant information, to: Dr. David Cook, Department of Pharmacology, University of Alberta, Edmonton, Alberta, Canada T6G 2H7. Telephone: 403-432-3575.

During Canadian mail strike:
University of Alberta
Box 413

Sweetgrass, Montana 59484

TECHNICAL DIRECTOR

The Naval Ocean Research and Development Activity (NORDA), a field activity of the Office of Naval Research, which is located in Bay St. Louis, Miss., is seeking an eminently qualified person to serve as Technical Director.

The Technical Director is responsible for the planning, conduct, and staffing of the technical program of NORDA. The major components of NORDA are the Ocean Science and Technology Laboratory (OSTL), a broadly based ocean science R&D laboratory, which currently encompasses environmental and acoustic prediction model development, physical oceanography, chemical oceanography, marine biology, marine geology and geophysics, air-sea interaction, ocean acoustics, measurement systems development, ocean technology and engineering support; and the Ocean Programs Management Office, which directs an applied ocean R&D contract program related to Navy systems development and engineering. The total budget is approximately \$35M. Substantial continued growth is projected over the next five years. NORDA is expected to continue in its goal to become one of the nation's foremost oceanographic research centers.

Applicants must have an indepth knowledge of physical sciences as indicated by a PHD or equivalent experience and a successful record of research or research leadership. In addition, the candidate's total experience must provide evidence that all of the managerial and technical requirements of the position are met.

Salary Range: \$52,247 to \$61,600 (Currently limited by law to \$50,112.50). Interested candidates should submit a Standard Form 171, Personal Qualifications Statement, along with the Supplemental Questionnaire to:

Civilian Personnel Office
Code 140 S
NORDA
NSTL Station, MS 39529

For additional information, call Ms. Lou Ann Lott at (601) 688-4640. Applications must be received or postmarked by 31 August 1981.

An Equal Opportunity Employer

U. S. Citizenship Required

Senior Research Pharmacologist

We are the Research and Development Division of The Revlon Health Care Group, a worldwide group of diversified companies providing products and services in the field of human health.

Our Pharmacology Department, based at our lower Westchester County location, currently has an outstanding opportunity for a Pharmacologist/Senior Research Scientist to participate in an established cardiovascular research effort.

Responsibilities will involve directing and participating in primary and secondary evaluations of new drugs; including new methods of development. Candidates should have a PhD in pharmacology or a related field with a minimum of

2 to 5 years post-doctoral experience in cardiovascular research.

A background in classical whole animal myocardial experimentation is essential and expertise in the biochemistry of myocardial functions is desirable. Candidates must have an established research record and excellent communication skills.

We offer a competitive salary and excellent fringe benefits. Please send resume, including salary history, in complete confidence to: Manager, Selection and Placement, Research and Development Division, Dept. 6251, Revlon Health Care Group, Suite 816, 50 Rockefeller Plaza, New York, NY 10020

An equal opportunity employer M/F

REVLON Health Care Group

POSITIONS OPEN

DEVELOPMENTAL BIOLOGIST. The Department of Biological Sciences at the George Washington University invites applications for the position of assistant professor (tenure-track) to begin January or August 1982. Academic year (10 months) salary: \$16,500 to \$18,000, depending on experience. Applicants must have a Ph.D., and postdoctoral research experience is preferred. The candidate should be prepared to teach undergraduate and graduate courses in vertebrate embryology and developmental biology, and to initiate a strong research program. Responsibilities will include directing graduate and undergraduate research. Applicants should provide curriculum vitae, undergraduate and graduate transcripts, a list of publications, a list of courses the applicant is prepared to teach, a statement of future research plans, and three letters of reference. Applications should be sent to: **Dr. Stefan O. Schiff, Chairman, Department of Biological Sciences, The George Washington University, Washington, D.C. 20052.** All applications must be completed by 21 September 1981. *The George Washington University is an Equal Opportunity/Affirmative Action Employer.*

ELECTRON MICROSCOPY TECHNICIAN. Position open immediately for an EM technician at Lamar University (LU) in Beaumont, Texas. Duties include standard laboratory methods related to research using TEM. Applicant should have either 2 years of experience in TEM techniques or a M.S. with an EM-related thesis. Postdoctoral candidates would be accepted. Curriculum vitae and portfolio of work should be sent to: **Dr. Leon McGraw, Jr., Box 10037 LU, Beaumont, Texas 77710.** *An Equal Opportunity Employer.*

The Departments of Biochemistry and Pharmacology at The University of Virginia invite applications from qualified persons for a joint tenure-track appointment at the assistant professor level. The individual is expected to sustain a strong and creative research program, preferably in the area of **EUKARYOTIC MOLECULAR BIOLOGY**, and will be required to teach some aspect of biochemistry and/or pharmacology in the Medical School. Please send curriculum vitae, bibliography, and the names of three references to: **Dr. Burton Litman, Department of Biochemistry, School of Medicine, University of Virginia, Charlottesville, Va. 22908.** Deadline for receipt of applications is 1 October 1981. *The University of Virginia is an Equal Opportunity/Affirmative Action Employer.*

IMMUNOLOGIST—CELL BIOLOGIST

The Department of Bacteriology and Immunology, University of North Carolina School of Medicine, Chapel Hill, seeks assistant or associate professor level, tenure-track faculty in immunology. Interests in the molecular biology of cellular immunity, or the genetics of immune responsiveness helpful. We seek persons of demonstrated research productivity. Position(s) available immediately. *Applications particularly invited from women and minorities; an Affirmative Action/Equal Opportunity Employer.* Reply with curriculum vitae and names of references to: **P. Frederick Sparling, M.D., 804 Faculty Laboratory Office Building, Chapel Hill, N.C. 27514.**

INSECT PHYSIOLOGIST—BIOCHEMIST. Postdoctoral research associate position available beginning September 1981 to work on hormonal controls of development and reproduction of phycitid moths. Training and experience in biochemistry and tissue culture strongly desired. Send curriculum vitae and three letters of recommendation to: **Dr. V. J. Brookes, Department of Entomology, Oregon State University, Corvallis, Oregon 97331.** *Oregon State University is an Affirmative Action/Equal Opportunity Employer and complies with Section 504 of the Rehabilitation Act of 1973. Applications from females and minorities are encouraged.*

INSTRUCTORS IN MEDICAL SCIENCES Pacific College of Naturopathic Medicine (PCNM) San Rafael, California

We invite applications for fall 1981 in the following courses:

Biochemistry	Nutrition
Embryology	Organology
Histology	Pathology
Immunology	Physical Diagnosis
Neuroscience	Roengenology

Inquiries and curriculum vitae may be directed to:

PCNM, Academic Department
498 Point San Pedro Road
San Rafael, California 94101

POSITIONS OPEN

We are seeking an independent **INVESTIGATOR** with skills and demonstrated competence in the broad field of **CELL BIOLOGY**. The successful candidate is likely to have had 5 years of postdoctoral experience and should be a Canadian citizen or a landed immigrant. It is expected that the appointee would have a strong research program, develop appropriate collaboration with other faculty, and provide an educational resource to colleagues on the nature of the functioning of eukaryotic cells.

It is hoped that this appointment will provide a new dimension in scientific endeavor at McMaster and, at the same time, capitalize on some of the existing strengths within the faculty. Salary, academic rank, and departmental affiliation will be negotiated. Interested candidates are invited to send curriculum vitae and three current letters of reference to: **Dr. D. R. McCalla, Faculty of Health Sciences, McMaster University, 1200 Main Street West, Hamilton, Ontario, Canada L8N 3Z5.**

University of California Cooperative Extension IPM SPECIALIST—LIVESTOCK AND POULTRY Location: Riverside Campus

Career position to coordinate and conduct animal-related IPM educational and implementation programs. Prefer Ph.D. in pest management or veterinary entomology. Assure affirmative action in development and delivery of programs. Contact: **Cooperative Extension Academic Personnel, 331 University Hall, University of California, Berkeley, Calif. 94720; telephone: 415-642-9300, extension 38.** Closes 4 September 1981. Refer to number 8116.

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

MICROBIOLOGIST/BIOCHEMIST. Federal term (2-year) appointment. Opportunity for a qualified research professional to apply microbiological/enzymatic technology to increasing the efficiency of lignocellulosics conversion to alternative chemicals/fuels. Candidate to conduct research targeted at enzymatic processes to generate fermentable sugars (glucose/xylose) from pretreated cellulosic/hemicellulosic feedstocks. Candidate to evaluate mixed microbial processes for direct bioconversion of agriresidues to fermentation chemicals. Salary based on qualifications and experience. GS-11 position. Position located at the NRRC, Peoria, Illinois. Send curriculum vitae and references to: **Dr. R. W. De-troy, FL, NRRC (s), U.S. Department of Agriculture, 1815 North University, Peoria, Ill. 61604.** Telephone: 309-685-4011. *An Equal Opportunity Employer.*

MOLECULAR BIOLOGIST to carry out study of immunoglobulin gene arrangement in human leukemias and lymphomas. Background in relevant techniques (Southern blotting, nick-translation, and so forth) required; some experience in immunology helpful, but not necessary. Appointment is at the research associate level; exceptionally qualified individuals will be considered at the assistant member (professor) level. Position available immediately. Send curriculum vitae and the names of three references to: **Dr. G. R. Kitchingman, Division of Virology, St. Jude Children's Research Hospital, Memphis, Tenn. 38101.**

MOLECULAR GENETICS

The Department of Molecular Biology and Genetics at Johns Hopkins University School of Medicine will have openings at the assistant professor level beginning in July 1982. Candidates of exceptional promise in research and teaching are invited to apply by submitting their curriculum vitae, a brief statement of research plans, and the names of two or three individuals who may be contacted as references to: **Daniel Nathans, Department of Molecular Biology and Genetics, Johns Hopkins University School of Medicine, Baltimore, Md. 21205.** *Johns Hopkins University is an Equal Opportunity/Affirmative Action Employer.*

PHARMACY. Research assistant II/III. Salary: \$9,000—, negotiable. To conduct electrophysiological studies, specifically including, but not limited to, the following: intracellular and extracellular recording from axons, heart and skeletal muscles; recording of heart and skeletal muscle contractions; monitoring of synaptic potentials. Preparations to be used include phrenic nerve-diaphragm preparations, heart muscle, isolated single electroplax. Experience and training in electrophysiological techniques. M.S. or Ph.D. preferred. Knowledge of electronics useful. Reply to: **Philip Rosenberg, U-92, University of Connecticut, Storrs, Conn. 06268.** *Equal Opportunity Employer, H/V.*

POSITIONS OPEN

NEUROBIOLOGIST—Research associate position available immediately to study the effects of chronic ethanol treatment on the rodent hippocampus. Candidate should have a Ph.D. and experience with neuroanatomical techniques. Send curriculum vitae and at least two letters of recommendation to: **Dr. Don Walker, Department of Neuroscience, College of Medicine, Box J-244, University of Florida, Gainesville, Florida 32610.** Telephone: 904-392-2777.

PATHOLOGIST/EXPERIMENTAL. Background and/or interest in developing expertise in evaluation of tissues for minerals and ions using modern analytical techniques. Record of research accomplishment necessary. Capable of developing grant-supported research program. *Women and members of minority groups are encouraged to apply.* Please forward curriculum vitae to: **John E. Craighead, M.D., Chairman, Department of Pathology, University of Vermont, Burlington, Vt. 05405.**

PHARMACOLOGY CHAIRPERSON AND FACULTY urgently needed. Teaching and administrative practice essentials. Research encouraged. Salary according to experience. Newly created accredited school. Please send résumé and names of three references to: **Chairman, Department of Pharmacology, Ponce School of Medicine, Box 7004, Ponce, P.R. 00732.** *An Equal Opportunity Employer.*

POLAR OCEANOGRAPHER/ SEA ICE DYNAMICIST

A position is available under the Intergovernmental Personnel Act of 1970 for persons now employed in state/local government or in colleges and universities. This position is located within the Oceanic Processes Branch of the Environmental Observation Division of the Office of Space and Terrestrial Applications, NASA Headquarters. The position is for 1 year, with the possibility for renewal for an additional year. Pay will be at a level commensurate with experience, and will be established after a review of qualifications.

Candidates must have been employed by the university in a permanent position for at least 90 days or be a career employee of a state or local government. Candidates must also meet the federal qualification standards for the position. These are as follows: a degree in an appropriate field of science, plus 3 years of progressively responsible experience in duties related to the position.

This individual will be responsible for planning, developing, and implementing a scientific research program in satellite remote sensing of oceanic processes in polar regions. A background in polar oceanography, sea ice dynamics, or a closely related field is required; experience in remote sensing, although desirable, is not essential. A Ph.D. or equivalent training and experience is mandatory.

Interested parties should send a current résumé to: **NASA Headquarters, attention: Catherine Zegowitz, Code EPM-3, Washington, D.C. 20546.**

Selection for this position will be made from otherwise eligible candidates without discrimination for any nonmerit reason such as race, color, religion, sex, national origin, politics, marital status, physical handicap, age, membership or nonmembership in an employee organization, or personal favoritism.

POSITIONS IN NEW PRIVATE RESEARCH LABORATORY to develop biomedical applications of liposome technology. Highly desirable physical and intellectual environment in Princeton, N.J. Academic affiliations possible; highly competitive salary and benefits. Applicants must have Ph.D., M.D., or D.V.M., plus relevant postdoctoral experience. The following positions are available: membrane or lipid biochemist, virologist, animal pathologist, and pharmaceutical chemist or physical pharmacist. Send curriculum vitae and list of three references to:

**Dr. Marc J. Ostro, Scientific Director
Liposome Laboratories
P.O. Box 1425
Princeton, N.J. 08540**
An Equal Opportunity Employer

POSTDOCTORAL POSITIONS available dealing with membrane structure and function relationships. Studies involve tissue culture and isolated intestinal cells. Some work related to enterotoxin mode of action. Training in membrane physiology, biochemistry, or molecular microbiology desirable. Send curriculum vitae and three letters to: **Dr. James L. McDonel, Department of Microbiology, Cell Biology, Biochemistry, and Biophysics, The Pennsylvania State University, University Park, Pa. 16802.**

An Equal Opportunity Employer

DIRECTORS BIOTECHNOLOGY

An aggressive, solidly financed genetic engineering company, equity-controlled by scientists, is seeking resourceful individuals with strong leadership potential. The corporation, located in northern New Jersey, is inviting applications from accomplished, innovative researchers with distinguished records of achievement in **RECOMBINANT DNA** or **HYBRIDOMA** technology for research director positions.

Qualified individuals will have the opportunity to utilize their broad backgrounds to help determine the direction of our multidisciplinary, academically oriented research efforts. They will receive an excellent salary complemented by a noncontributory stock allocation plan and a full program of benefits. Send curriculum vitae in confidence to:

BOX , SCIENCE

GENETIC ENGINEERING

CALGENE is a new company created to develop, produce and market agricultural products, using an integrated plant and microbial science capability ranging from recombinant DNA to field breeding. We have strong financial resources and an outstanding Scientific Advisory Board. Our laboratories in Davis, California are ideally located for agricultural science.

TECHNICAL DIRECTOR

We are seeking a senior scientist to direct our product development programs, involving, by the end of 1981, a staff of at least ten scientists and supporting technical groups. Candidates should have a Ph.D. degree and demonstrated capabilities in molecular biology, biochemistry, genetics and/or related areas.

PLANT CELL CULTURE

We are also seeking Ph.D. biochemists and geneticists with plant cell culture expertise, particularly with protoplasts, to work with our molecular biologists in using recombinant DNA methods to engineer improved crop plants.

CALGENE offers a competitive salary and benefit package with significant equity participation. Please send resume, list of publications and statement of research interests, in strict confidence to:

CALGENE, INC.

Dept. 100
1410 Marina Circle
Davis, California 95616
An Equal Opportunity Employer



GENEX CORPORATION

GENEX has positions open at the Ph.D. level for individuals with expertise in:

PHYSIOLOGY AND GENETICS OF:

Pseudomonads
Bacillus subtilis
Coryneforms
Thermophiles
Saccharomyces cerevisiae

ENZYMOLGY AND PROTEIN CHEMISTRY

MAMMALIAN CELL CULTURE: IMMUNE SYSTEM CELLS

GENEX CORPORATION is a rapidly growing company engaged in the application of molecular genetics and biochemical engineering technologies to problems of commercial importance. GENEX offers a stimulating, cooperative research environment, competitive salaries and fringe benefits, and excellent research facilities. Located in Rockville, Maryland, with 100 employees, GENEX will be moving to a new, 90,000 square foot facility in 1981.

Positions are also available at the M.S. and B.S. level.

Qualified applicants should submit, in confidence, a curriculum vitae and the names of three references to:

Sheila Fullenbaum
Personnel Manager
GENEX CORPORATION
12300 Washington Avenue
Rockville, MD 20852

Plant Biologist

The Plant Genetics Department of Pfizer Central Research is looking for creative individuals to participate in a multi-disciplinary research program for crop improvement. This department provides basic research support for the corn and soybean breeding programs of Pfizer Genetics, Inc.

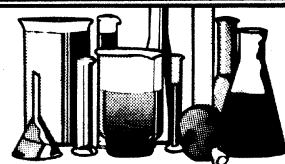
Applicants should have strong formal training in plant biology, agronomy or crop science at the M.S. level. Experience in one or more of the following areas is desirable: plant tissue culture; genetics; stress physiology; field crop breeding methods; plant pathology.

In addition to an exceptional opportunity for professional recognition and growth, we offer a comprehensive salary/benefits package and attractive Connecticut shore living. Please send resume and brief description of research interests to: **Ms. Lorraine C. Corr, Pfizer Central Research, Eastern Point Road, Groton, CT 06340.**



An equal
opportunity
employer

Analytical Protein Chemist



Genentech, Inc., a leader in the field of recombinant DNA research and manufacturing is seeking a BS or MS Biochemist to join a rapidly growing protein structural analysis group.

Candidates should have a strong background in protein sequencing or amino acid analysis. Should also have an interest in developing new instrumentation and chemical methodology related to microanalysis of proteins.

We are located on the San Francisco peninsula and offer a highly challenging work environment, competitive salaries and an excellent benefit package.

Please send resume and names of three references to **Human Resources** referring to **Position #11-107.**

Genentech, Inc.

460 Point San Bruno Boulevard
South San Francisco, CA 94080

We are an equal opportunity employer m/f

POSITIONS OPEN

POSTDOCTORAL ASSOCIATE. Position available September 1981 or after. Postdoctoral associate to work on rapid kinetics of hemoglobin and thus study of protein conformation. Salary commensurate with experience. Send résumé to: **Dr. Quentin H. Gibson, Section of Biochemistry, Molecular and Cell Biology, Wing Hall, Cornell University, Ithaca, New York 14853.** An Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL FELLOW. Applicants sought with strong cDNA cloning background for project in *Drosophila* developmental genetics. First year funding guaranteed. Send curriculum vitae and names of three references to: **Professor Stuart Kauffman, Biochemistry and Biophysics Department, University of Pennsylvania School of Medicine, Philadelphia, Pennsylvania 19104.** Equal Opportunity Employer.

Scripps Institution of Oceanography invites applications for **THREE TO FIVE POSTDOCTORAL POSITIONS** distributed among the following fields:

- 1) Inshore processes/coastal engineering.
- 2) Marine pollution and the assimilative capacity of the ocean for social wastes, utilizing resonance ionization spectroscopic analytical methods.
- 3) Climate research, including long-range weather forecasting and impacts of increased atmospheric carbon dioxide.

Private foundation funding limits awards to U.S. citizens. Appointments are for 1 or 2 years. Applicant should have a background in appropriate physical sciences for work in one of these fields at the Ph.D. level or equivalent. Appointments in the University of California system will be at the level of postgraduate research or assistant research. Salary from \$17,112 to \$28,400, commensurate with qualifications. Submit résumé (specify position/field), including names of references, before 18 September 1981 to: **J. D. Frautschy, Deputy Director, A-010, Scripps Institution of Oceanography, University of California at San Diego, La Jolla, Calif. 92093.** Request position profiles at the same address. An Equal Opportunity/Affirmative Action Employer.

A **POSTDOCTORAL POSITION** is available for a recent Ph.D. with interests in the mechanism of protein biosynthesis in chloroplasts. Specific projects will include the isolation and characterization of the initiation factors; an investigation of the mechanism of initiation; and localization of the genes encoding the chloroplast initiation factors. Background and experience in enzymology or nucleic acid purification is desirable. Interested persons should contact: **Dr. Linda L. Spremulli, Department of Chemistry, University of North Carolina, Chapel Hill, N.C. 27514.** Telephone: 919-966-1566. An Affirmative Action/Equal Opportunity Employer.

POSTDOCTORAL POSITION available immediately to investigate the mechanisms of pituitary hormone biosynthesis. Study involves the regulation of gonadotropin production and its relationship to the reproductive cycle, using mRNA isolation, cell-free translations, recombinant DNA, and cloning techniques. Persons with experience in endocrinology, biochemistry, molecular biology, or recombinant DNA, with an interest in reproduction, will be given preference. Send curriculum vitae and a list of three references to: **Thomas Landefeld, Pathology Department, University of Michigan, Ann Arbor, Mich. 48109;** telephone: 313-763-0247.

POSTDOCTORAL POSITION in oncology available immediately in NCI-supported training program. Multidisciplinary research opportunities in the etiology, diagnosis, and treatment of cancer. Candidates will be selected from recent Ph.D.'s with training in basic medical sciences or recent M.D.'s who wish to develop a career in cancer research. Trainees must be U.S. citizens or permanent residents. Candidates may apply by submitting their curriculum vitae and a letter indicating their career goals. Write to: **Dr. Sheldon Dray, Program Director, Department of Microbiology/Immunology, University of Illinois Medical Center, P.O. Box 6998, Chicago, Ill. 60680.**

POSTDOCTORAL POSITION available 1 September 1981 to study the mechanism and control of the biogenesis of intracellular sterol distributions in *Acanthamoeba* and hepatocytes. Background in biochemistry/cell biology preferred. Send applications and three letters of reference to: **Dr. E. A. Dawidowicz, Harvard Medical School, Biophysical Laboratory, Department of Physiology and Biophysics, 25 Shattuck Street, Boston, Mass. 02115.** An Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

POSTDOCTORAL POSITION to study **LIPID-LIPID AND LIPID-PROTEIN INTERACTIONS BY MULTINUCLEI NMR SPECTROSCOPY.** Experience in membrane biophysics and/or familiarity with FT-NMR techniques desirable. Annual stipend dependent upon experience (\$16,000 minimum). Send curriculum vitae, three references, summary of previous research, and a statement of research interests to: **Dr. W. J. Baumann, The Hormel Institute, University of Minnesota, Austin, Minn. 55912.** University of Minnesota is an Equal Opportunity Educator and Employer and specifically invites and encourages women and minority applicants.

POSTDOCTORAL POSITION IN BIOCHEMISTRY/BIPHYSICS for studies of molecular mechanisms underlying alterations in membrane structure and function in specific heart and liver diseases, using animal models. Research includes aspects of bioenergetics, ion transport, free radical reactions, and lipid-protein interactions with cell, organelle, and model membranes. Salary: \$16,000 per year, plus fringe benefits. Position available immediately; renewal up to 3 years. Send curriculum vitae and names of three references to: **Dr. William H. Thayer, Department of Pathology, HAHNEMANN MEDICAL COLLEGE & HOSPITAL, 230 North Broad Street, Philadelphia, Pa. 19102.** We are an Equal Opportunity Employer.

POSTDOCTORAL POSITION available immediately for research related to binding of fluoride by bacteria. Background in handling bacteria and isotopes is desirable. Salary: \$14,000. Send curriculum vitae and two letters of recommendation to: **Dr. William W. Yotis, Professor of Microbiology, Loyola University Medical School, 2160 South First Avenue, Maywood, Ill. 60153.** An Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL POSITION—BIOCHEMISTRY/MOLECULAR BIOLOGY. A position is available immediately to study the molecular biology and biochemistry of trypanosomes as they differentiate in vitro. African trypanosomes are the causative agent of sleeping sickness. We are primarily interested in studying the biochemical changes that occur as the trypanosomes develop a cytochrome system in vitro. Previous experience in the area of mitochondrial biogenesis is desirable but not necessary. The individual must have a Ph.D. degree in biochemistry, cell or molecular biology. Recombinant DNA experiments will be performed to identify changes or control of gene expression during differentiation, and experience with this technology is preferable. Salary: \$13,000 to \$15,000. Send curriculum vitae and names of references by 1 October 1981 to: **Dr. George C. Hill, Associate Professor, Department of Pathology, Colorado State University, Fort Collins, Colorado 80523.** Telephone: 303-491-7086. An Affirmative Action/Equal Opportunity Employer.

POSTDOCTORAL POSITION IN BIOCHEMISTRY—BIOCHEMICAL NUTRITION

A position is available to study folate enzymology and the regulation of one-carbon metabolism. Areas of interest include the metabolic role of folyl polyglutamates and the interrelationship between vitamin B₁₂ and folate metabolism. Experience in enzymology and/or cell culture desirable. Send curriculum vitae and names of three references to: **Dr. Barry Shane, Department of Biochemistry, The Johns Hopkins University School of Hygiene and Public Health, 615 North Wolfe Street, Baltimore, Maryland 21205.**

POSTDOCTORAL POSITION available immediately to study dietary lipid modulation of immune responsiveness and tumorigenesis. A background in immunology and lipid biochemistry preferred. Please send curriculum vitae, statement of research background and interests, and three letters of reference to: **Dr. Kent L. Erickson, Department of Human Anatomy, University of California, School of Medicine, Davis, Calif. 95616.** The University of California is an Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL RESEARCH ASSOCIATE POSITION IN NEUROTOXICOLOGY to study the effects of toxicants on the developing peripheral and central visual system. Experience in neurophysiology, visual psychophysics, and/or electronics desired. Available immediately. Send letter with curriculum vitae and names of three references to: **Donald A. Fox, Department of Pharmacology, University of Texas Medical School, Houston, Texas 77025.** The University of Texas is an Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

POSTDOCTORAL POSITIONS IN BEHAVIORAL GENETICS. Ph.D. or M.D. with training in genetics, psychology, psychiatry, neuroscience, or related field. Emphasis on multidisciplinary approaches to human problems. Participating faculty from genetics, psychology, psychiatry, psychopharmacology, neuropsychology, neuroanatomy, cell biology, biochemistry, and statistics. Send curriculum vitae, statement of research and training goals, three letters of reference, and other supporting materials to: **V. Elving Anderson, Dight Institute for Human Genetics, University of Minnesota, Minneapolis, Minn. 55455** (or telephone: 612-373-3639). For consideration on first review, apply by 28 August. The University is an Equal Opportunity Educator and Employer and specifically invites and encourages applications from women and minorities.

POSTDOCTORAL POSITION available immediately to study the regulation of gene expression in the brain. Candidate should have a Ph.D. with training in mRNA purification, cDNA preparation, cloning, and DNA sequencing. Salary is \$20,000 per year, plus travel expenses. Term of appointment is 1 or 2 years. The Research Department is affiliated with the University of Hawaii School of Medicine. Send curriculum vitae to:

**Dr. Claire Zomzely-Neurath, Director
Department of Research
The Queen's Medical Center
1301 Punchbowl Street
Honolulu, Hawaii 96813**

An Equal Opportunity/Affirmative Action Employer

POSTDOCTORAL-RESEARCH ASSOCIATE POSITION for biochemist—cell biologist, available 1 September for 2 to 3 years, to identify, isolate, and characterize insulin-like growth factor and α -thrombin receptors [*J. Biol. Chem.* 256, 2767 (1981)] from cultured cells and tissues.

Experience in membrane protein chemistry, monoclonal antibody production, and/or ligand receptor characterization is desirable but not essential; \$15,000 to \$20,000, yearly depending on qualifications.

Send curriculum vitae and names of three references to: **Dr. James F. Perdue, Lady Davis Institute for Medical Research—Sir Mortimer B. Davis—Jewish General Hospital, 3755 Cote St. Catherine Road, Montreal, Quebec, Canada H3T 1E2.**

POSTDOCTORAL RESEARCH ASSOCIATE in electron microscopy or energy loss spectroscopy to conduct research on a high resolution STEM on biological molecules or catalysts at the single atom level or to work on electron energy loss in solid state materials, particularly in the EXAFS region. Candidates can join with existing programs of study or initiate their own work. Salary commensurate with experience. Send résumé and references to: **Professor A. V. Crewe, Enrico Fermi Institute, 5640 Ellis Avenue, University of Chicago, Chicago, Ill. 60637.**

POSTDOCTORAL RESEARCH ASSOCIATE to study the light and electron microscopy of the injured and regenerating central nervous system. Candidates should have a strong background in electron microscopy. Position available immediately for 1 year with the possibility of subsequent years. Send curriculum vitae, statement of background and interests, and names and addresses of three references to: **Dr. Gerald J. Bernstein, Department of Physiology, The George Washington University School of Medicine, Washington, D.C. 20037.** Affirmative Action/Equal Opportunity Employer.

POSTDOCTORAL RESEARCH POSITION available 15 October 1981. Research involves the study of the structure and function of adeno-associated virus DNA. Knowledge of molecular biology desirable. This position is funded by an NIH training grant. Please send résumé and addresses of three references to: **Dr. Kenneth I. Berns, Box J-266, JHMHC, University of Florida, Gainesville, Florida 32610.** An Equal Opportunity/Affirmative Action Employer.

POSTGRADUATE RESEARCH position available immediately. Ph.D. to do behavioral and polygraphic research in mammals with damaged CNS. Skills in instrumentation and statistics preferred. Send curriculum vitae and recommendation letters to: **J. R. Villablanca, Mental Retardation Research Center, 760 Westwood Plaza, Los Angeles, Calif. 90024.** University of California, Los Angeles, is an Affirmative Action Employer, M/F/H.

POSTDOCTORAL TRAINING IN AGING

A postdoctoral training grant was awarded by the National Institute on Aging to a Philadelphia-area consortium of biologists. Participating investigators and their respective parent institutions are as follows:

Richard C. Adelman, Ph.D.—*Temple University*
George T. Baker, III, Ph.D.—*Drexel University*
Renato Baserga, M.D.—*Temple University*
Vincent J. Cristofalo, Ph.D.—*Wistar Institute*
David Kritchevsky, Ph.D.—*Wistar Institute*
Elliot Levine, Ph.D.—*Wistar Institute*
Warren Nichols, M.D., Ph.D.—*Institute for Medical Research*
Jay Roberts, Ph.D.—*Medical College of Pennsylvania*
Arthur Schwartz, Ph.D.—*Temple University*

The program is designed to provide multi-disciplinary post-doctoral training for persons who intend to pursue a career in research on bio-medical aspects of aging. Potential areas of research include: the role of hormones in altered tissue and cellular responsiveness; cardio-vascular pharmacology; control of cellular proliferation *in vitro*; *in vitro* proliferation and senescence of vascular endothelial cells; lipid metabolism; molecular genetics; lifespan extension by DHEA treatment; and mutagen aspects of cellular senescence.

Available resources include: commercially maintained colonies of Sprague-Dawley and Fisher 344 rats; normal diploid human embryonic lung fibroblasts, as well as other cell types, maintained in culture; a repository of mutant cell culture from humans afflicted with apparent precocious syndromes of aging; and various strains of *Drosophila melanogaster*, including a number of enzyme and DNA-repair deficient mutants. Traditional laboratory training will be supplemented by regularly scheduled research seminars involving all personnel, and availability of formal courses in aging.

All interested applicants should send credentials and letters of recommendation to Dr. Richard C. Adelman, Executive Director, Institute on Aging, Temple University, 1601 N. Broad Street, Philadelphia, PA 19122.

Drug Safety Evaluation

Outstanding opportunity for a Ph.D. in toxicology or equivalent with substantial industrial experience in drug safety evaluation to assume study director responsibilities for in-house and contract laboratory studies. The individual selected for this key position must be quantitatively oriented, able to organize, analyze and interpret animal toxicity data, possess above average writing skills and communicate effectively. The selected candidate will be offered a competitive salary commensurate with experience and a liberal benefits package. Relocation will be assisted. Please forward your resume in confidence to:

Michael D. Szap,
Personnel Department

Endo Laboratories, Inc.
Subsidiary of E. I. du Pont de Nemours & Co. (Inc.)
1000 Stewart Avenue
Garden City, New York 11530

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MICROBIOLOGIST/ PhD

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Hoechst-Roussel Pharmaceuticals, Inc. is a part of Hoechst AG, one of the world's largest pharmaceutical companies. Due to recent FDA approval of our third generation antibiotic, we have created a new position for an Assistant Director of Scientific Marketing. Requirements will include a PhD in Microbiology and 2 or more years of pharmaceutical industry experience in antibiotics research or marketing.

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SENIOR (Ph.D.) BIOCHEMICAL ENGINEER

The Company Biochemical (Antibiotic) Division is seeking a Senior Biochemical Engineer to work in the fermentation technology area.

The position involves work on the development of fermentation processes. Specific project work may involve scale-up of new fermentation processes and strains and development of control strategies for batch and continuous fermentations. The Senior Biochemical Engineer will be responsible for coordinating project work of other scientists.

The technical or academic background should include a B.S. degree in Biochemistry, M.S. degree in Biochemical Engineering, and Ph.D. degree (or in final phase of degree program; degree requirement to be satisfied by date of employment) in Biochemical Engineering. This academic background and/or experience must provide a broad knowledge of general microbiology, microbial nutrition and physiology, biochemistry, and bioengineering. The individual must have a thorough understanding of the above disciplines and their application to fermentation technology via team effort.

Salary: \$2175

SEND RESUME: Indiana State Employment Service
10 N. Senate Avenue
Indianapolis, IN 46204
Attn: B. Anderson
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POSITIONS OPEN

Position open for a **FULL PROFESSOR** in the Thrombosis Research Center of the Temple University School of Medicine, from 1 August 1982. Candidates must have Ph.D. in biochemistry or pharmacology, have wide international recognition for their general accomplishments within the field of platelet biochemistry, and for their special accomplishments for studies on the phospholipid/prostaglandin metabolism of the cell. Tenure-track position. Applicants should send their curriculum vitae and three references to: **Dr. Robert Colman, Director, Thrombosis Research Center, Temple University School of Medicine, 3400 North Broad Street, Philadelphia, Pa. 19140. Equal Opportunity Employer, M/F/H.**

PROFESSOR HARVARD SCHOOL OF PUBLIC HEALTH DEPARTMENT OF BIOSTATISTICS

Applicants from the fields of biostatistics, applied mathematics, or biomedical computing are invited to apply. Candidates should be outstanding scholars who have made distinguished contributions to the medical sciences. The individual selected for this tenured position is expected to initiate and lead a significant research program and participate in the teaching programs of the department.

Send curriculum vitae, statement of current and future interests, and the names of five individuals who would be willing to respond to a request for evaluation to:

Professor Donald F. Hornig
Harvard School of Public Health
665 Huntington Avenue, Building 1, Room 1308
Boston, Mass. 02115

Harvard University is an Equal Opportunity Employer with an Affirmative Action Program.

RESEARCH ASSISTANT PROFESSOR OF BIOCHEMISTRY. This 2- to 3-year position is available immediately to study the biosynthesis and mechanism of mitochondria proton pumps. Individuals with experience in protein synthesis, protein chemistry, or membrane reconstitution preferred. Applicants should send curriculum vitae and the names of three references to: **Dr. Ronald R. Fisher, Chairman, Department of Chemistry, University of South Carolina, Columbia, S.C. 29208. An Equal Opportunity/Affirmative Action Employer.**

RESEARCH ASSISTANT PROFESSOR DEPARTMENT OF NEUROSURGERY

The Department of Neurosurgery, Tufts University-New England Medical Center, is seeking applicants for the position of research assistant professor to develop and direct basic research in areas of neuroscience that interface with a clinical department. Prospective candidates should have several years of postgraduate (M.D. or Ph.D.) experience. Qualified individuals should submit curriculum vitae and letters of recommendation to: **Dr. William A. Shucart, Professor and Chairman, Department of Neurosurgery, New England Medical Center, 171 Harrison Avenue, Boston, Mass. 02111. Equal Opportunity/Affirmative Action Employer.**

RESEARCH ASSOCIATE. Metabolic rates of enzyme control in cells; purification of enzyme technique; regulatory role of phosphoglycolate in liver; metabolites in tissues; \$17,500 per year. Require Ph.D. in biochemistry; 40 hours. Contact: **B. Hardy, 1709 South Broad Street, Philadelphia, Pa. 19148.**

RESEARCH INSTITUTE DIRECTOR

The University of Nebraska Medical Center invites nominations and applications for the position of director, Eppley Institute for Research in Cancer and Allied Diseases. The Institute is federally funded for research in chemical and environmental carcinogenesis. Recently new research support has been provided by the state. Qualifications include an earned doctorate, outstanding research accomplishments, and administrative skills. Responsibilities include administration and leadership of the Institute in developing and administering research programs. Applications and nominations, accompanied by curriculum vitae and the names of three references, should be received by 1 October 1981. Direct communications to: **Dr. David T. Purtillo, Chairman of the Search Committee, University of Nebraska Medical Center, 5001 Wittson Hall, 42nd and Dewey Avenue, Omaha, Nebraska 68105.**

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

POSITIONS OPEN

RESEARCH ASSOCIATES OR JUNIOR STAFF MEMBERS

Available in the Department of Virology, Showa University Research Institute for Biomedicine in Florida. Research opportunities for researchers who are interested in studying the molecular biology of Epstein-Barr virus and/or Marek's disease virus. Also, staff positions are available for investigators who are capable of pursuing independent research in molecular virology. Experience in recombinant DNA technology or hybridoma is favorably considered. The Institute is newly established in the campus of the University of South Florida by Showa Medical School in Japan. Send curriculum vitae and names and addresses of three references to: **Dr. Meihan Nonoyama, Showa University Research Institute for Biomedicine in Florida, P.O. Box 40965, St. Petersburg, Florida 33743.**

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RESEARCH ASSOCIATE

Beginning 1 October for 2 years. Salary: \$19,000. Study etiology of diabetic neuropathy in animals. Use biochemical methods to study lipid metabolism in peripheral nerves. Ph.D. in biochemistry. Send résumé to: **Personnel, Position Number 236, New York State Institute for Basic Research in Mental Retardation, 1050 Forest Hill Road, Staten Island, N.Y. 10314. Affirmative Action/Equal Opportunity Employer, M/F.**

Wanted—RESEARCH DIRECTOR
specializing in virology and immunology to work in poultry health industry in eastern United States. *Equal Opportunity Employer. Box 199, SCIENCE.*

University of California, Los Angeles (UCLA)/Harbor Medical Center seeks a **SENIOR PSYCHIATRIST** as Chief of Psychopharmacology. Must be qualified for professorship at UCLA, and California license. Extensive published research and well established reputation in the field essential. Write to:

Milton H. Miller, M.D.
UCLA/Harbor Medical Center
1000 Carson Street
Torrance, California 90509

STATE GEOLOGIST

The University of Alabama invites nominations and applications for the position of state geologist of Alabama. The state geologist is the chief administrative officer of the Geological Survey, established in 1848, and also serves as state oil and gas supervisor and ex officio secretary of the State Oil and Gas Board. The Survey is one of the major such organizations in the country with a total current budget of approximately \$2.8 million. In addition to proven administrative ability, candidates must have as a minimum a master's degree in geology and substantial experience in some phase of geology and petroleum exploration and/or production. Preference will be given to candidates with the Ph.D. in geology or a closely related earth science discipline. The salary is negotiable. Nominations and applications (including résumés) should be sent before 15 September 1981 to:

Dr. David Cole
Chairman, Search Committee for State Geologist
Office for Academic Affairs
The University of Alabama
University, Alabama 35486

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

EXPERIENCED VETERINARIAN sought to direct a newly expanded Animal Care Facility at New York State Psychiatric Institute, affiliated with Columbia University. Primate experience desirable. Other resident species include marine mollusks, birds, cats, and a wide variety of rodents. The facility supports investigators in the behavioral sciences, psychopharmacology, neuroanatomy, neuroendocrinology, neurophysiology, neurotoxicology, developmental neurobiology, and medical genetics. Personal and collaborative research in any of these areas accommodated and encouraged. New York State salary starts at \$37,383. For further information, please send curriculum vitae and a brief description of clinical and research experience to: **Dr. Dennis D. Kelly, New York State Psychiatric Institute, 722 West 168 Street, New York, New York 10032.**

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POSITIONS OPEN

POSTDOCTORAL POSITION

Available immediately to study catecholamines interactions with endocrine systems. Applicants with background in neurochemistry, neuroendocrinology, or cell culture are preferred. Send curriculum vitae and names of references to: **Dr. Nira Ben-Jonathan, Department of Physiology, Indiana University School of Medicine, 1100 West Michigan Street, Indianapolis, Indiana 46223. An Equal Opportunity Employer.**

SCIENTIST

If you are a scientist in a biomedical or environmental field and have a research grant(s) or contract(s) as principal investigator, and are in a situation where you do not witness direct visibility of the indirect costs generated by your grant(s) but wish to, then we can help you!! We offer you a research environment where: indirect costs visibly support the research effort; a multidisciplinary group of sophisticated scientists work as a team in attacking research problems; joint academic and research ranks in which emphasis of effort (teaching/research) is where you desire; graduate students; minimum, if any, committee work; sophisticated research equipment and facilities which are openly used by all scientists; and a choice living environment of pleasant year round oceanside climate located in Florida. If these initial characteristics meet with the standards of the way you desire to live and work, and wish to relocate, please send your resume, copy of grant/contract proposal(s) that you have determined can be transferred, and a letter of intent to: **Box 200, Science.**

Affirmative Action/Equal Opportunity Employer

SENIOR RESEARCH BIOCHEMIST/BIOLOGIST Structural Biopolymers

Battelle's Columbus Laboratories has an immediate opening for an individual with a Ph.D. in biochemistry or a related field. Extensive experience in the study of structural macromolecules, especially collagen, and an established reputation in the area of structural biopolymers are required. Must have demonstrated ability to generate research support from agencies such as the National Institutes of Health. Excellent opportunity to establish a new research program. Typical topics might include diseases of structural polymers, molecular biology, or interaction of collagen/non-collagen materials. Interaction with a multidisciplinary group of biomaterials scientists, cellular biologists, immunologists, spectroscopists, and other biochemists will be essential. We offer excellent fringe benefits and salary commensurate with experience. Send curriculum vitae to: **Dr. David J. Fink, Project Manager, Biotechnology, Medical and Molecular Biology Section,**



Columbus Laboratories
505 King Avenue
Columbus, Ohio 43201

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TRAINING PROGRAM

POSTDOCTORAL TRAINING IN CLINICAL CHEMISTRY. Positions are available 1 July 1982, for basic scientists or physicians interested in careers as laboratory directors in academic laboratory medicine. The 2-year program provides practical experience in clinical chemistry laboratories and extends relevant basic scientific knowledge. Salaries equal NIH fellowships. Deadline: 15 November 1981. Write: **Dr. Margaret Kenny, Co-director, Postdoctoral Training Program in Clinical Chemistry, Department of Laboratory Medicine, SB-10, University of Washington, Seattle, Wash. 98195. An Equal Opportunity/Affirmative Action Employer.**

ASSISTANTSHIP

BIOCHEMICAL TOXICOLOGY

Postdoctoral research assistantship available immediately in University of South Florida Medical Center for aggressive individual with doctorate in pharmacology-toxicology. Program involves pulmonary metabolism and response to certain drugs and industrial chemicals. Strong background in biochemistry and physiology a must. Send curriculum vitae and names of three references to: **Mark R. Montgomery, Ph.D., Research Service (151), VA Hospital, 13000 North 30 Street, Tampa, Fla. 33612.**

SENIOR NUCLEIC ACID CHEMIST

We are seeking a Senior Nucleic Acid Chemist with a Ph.D. and minimum of three years post-doctoral experience in synthesis of oligodeoxyribonucleotides of defined sequence. Candidates must have demonstrated expertise in synthesis of oligodeoxyribonucleotides by Triester chemistry, as documented in a substantial number of relevant publications. Familiarity with phosphite and methylphosphonate chemistry is highly desirable. In addition, applicants should have familiarity and experience in applying these techniques to biological systems, and a knowledge of characterization of oligonucleotides by NMR. Salary range: \$28,000-\$29,500. Qualified applicants should submit curriculum vitae, publications and three references to:

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POST-DOCTORAL FELLOW

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Technical Scientific Coordinators

The Lawrence Berkeley Laboratory, operated by the University of California for the U.S. Department of Energy (DOE), invites all persons with a scientific background and familiarity with electro-chemistry to apply for positions responsible for technical contract management; review and evaluation of research proposals; and the planning and coordination of long-range technical programs. This position requires demonstrated organizational and writing skills; some travel involved. Salary range is \$1697-\$2770 per month.

Interested candidates should send two (2) resumes, including salary history, to: **Carol A. Beck, LAWRENCE BERKELEY LABORATORY, One Cyclotron Road, Berkeley, CA 94720.** (Please refer to Job #1066 when applying.) An equal opportunity employer m/f/h.



**LAWRENCE
BERKELEY
LABORATORY**

U.S. PUBLIC HEALTH SERVICE EPIDEMIOLOGY TRAINING PROGRAM —1982

The U.S. Public Health Service (USPHS) invites applications for a proposed extension of a training program in medical epidemiology. Up to twelve (12) persons per year, who already have an M.D., a doctorate in an allied health profession, or Ph.D. in a biomedical or behavioral science (e.g., biochemistry, psychology, etc.), may be accepted as staff fellows of the USPHS (a non-tenured, junior professional classification under Civil Service) for a three-year period of duty. Applications received by *September 15, 1981* may be considered for service to begin on or about *July 1, 1982*. During the first year, each successful applicant will attend a university, at government expense, as a candidate for the M.P.H. or equivalent degree. During the subsequent two years, individuals will work in association with senior epidemiologists in the participating USPHS agencies (Alcohol, Drug Abuse, and Mental Health Administration; Centers for Disease Control; Food and Drug Administration; and the National Institutes of Health), primarily in research studies. A matching procedure akin to the national internship matching 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 the NIH. At this time (1981), remuneration for a physician is \$30,000 per annum for the first year, with a \$2,000 increase annually for the second and third years. Educational costs for the first year are provided in addition.

Basic requirements for application to the program are:

1. M.D., doctorate in an allied health profession, or Ph.D. in a biomedical or behavioral science, *and* one year of post-doctoral training or experience (by July 1, 1982).
2. U.S. citizenship.
3. Acceptability to an accredited university offering an M.P.H. or equivalent degree.

Further details of the program, and application forms, may be obtained from:

Robert S. Gordon, Jr., M.D., M.H.S.
Special Assistant to the Director, NIH
National Institutes of Health
Building 1, Room 238
Bethesda, Maryland 20205

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