

whatever this toy is good for, it is certainly broken. We would very much like to know where it is broken and what broke it." Most of the papers on supersymmetry are attempts to answer these two questions.

Some readers may be disappointed at the lack of discussion of the recent developments in cosmology and of the idea of composite quarks and leptons.

HENRY TYE

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## Books Received

- The Accidental Universe.** P. C. W. Davies. Cambridge University Press, New York, 1982. xii, 140 pp., illus. Cloth, \$19.95; paper, \$9.95.
- L'Acquisition du Langage.** Marie-Louise Moreau and Marc Richelle. Mardaga, Brussels, 1981. 264 pp. Paper, 590 BF. Psychology et Sciences Humaines, 108.
- Advances in Energy Systems and Technology.** Vol. 3. Peter Auer, Ed. Academic Press, New York, 1982. xvi, 308 pp., illus. \$39.50.
- Advances in Inorganic and Bioinorganic Mechanisms.** Vol. 1. A. G. Sykes, Eds. Academic Press, New York, 1982. x, 420 pp., illus. \$67.
- The Aerobics Program for Total Well-Being.** Exercise—Diet—Emotional Balance. Kenneth H. Cooper. Evans, New York, 1982. 320 pp., illus. \$16.95.
- The Aging Motor System.** James A. Mortimer, Francis J. Pirozzolo, and Gabe J. Maletta, Eds. Praeger, New York, 1982. x, 260 pp. \$29.95. Advances in Neurogerontology, vol. 3.
- Air Pollution.** Assessment Methodology and Modeling. Erich Weber, Ed. Plenum, New York, 1982. xviii, 330 pp., illus. \$39.50. NATO-Challenges of Modern Society, vol. 2.
- Algebraic Automata Theory.** W. M. L. Holcombe. Cambridge University Press, New York, 1982. xii, 228 pp., illus. \$29.50. Cambridge Studies in Advanced Mathematics 1.
- Calmodulin and Intracellular Ca<sup>++</sup> Receptors.** Proceedings of a symposium, Kyoto, Japan, July 1981. Shiro Kakiuchi, Hiroyoshi Hidaka, and Anthony R. Means, Eds. Plenum, New York, 1982. x, 476 pp., illus. \$49.50.
- Cancer Risk.** Assessing and Reducing the Dangers in Our Society. Office of Technology Assessment. Westview, Boulder, Colo., 1982. xiv, 240 pp., illus. Cloth, \$18; paper, \$10.95.
- Cardiovascular Measurement in Anaesthesiology.** Papers from a meeting, Vienna, Oct. 1981. C. Prys-Roberts and M. D. Vickers, Eds. Springer-Verlag, New York, 1982. xx, 326 pp., illus. Paper, \$47.20.
- Cataracts.** What You Must Know about Them. Charles D. Kelman. Crown, New York, 1982. x, 86 pp. + plates. \$9.95.
- Cell Wall-Deficient Bacteria.** Basic Principles and Clinical Significance. Gerald J. Domingue, Ed. Addison-Wesley Advanced Book Program, Reading, Mass., 1982. xvi, 596 pp., illus. \$21.95.
- Chance or Design?** James E. Horgan. Philosophical Library, New York, 1982. xiv, 234 pp. Paper, \$9.95. Reprint of the 1979 edition.
- Chemical and Biological Generation of Excited States.** Waldemar Adam and Giuseppe Cilento, Eds. Academic Press, New York, 1982. xii, 388 pp., illus. \$59.50.
- Current Topics in Developmental Biology.** A. A. Moscona and Alberto Monroy, Eds. Vol. 17, Neural Development. Part 3, Neuronal Specificity, Plasticity, and Patterns. R. Kevin Hunt, Ed. Academic Press, New York, 1982. xii, 320 pp., illus. \$42.
- Darwin for Beginners.** Jonathan Miller and Bonin Van Loon. Pantheon, New York, 1982. 176 pp., illus. Paper, \$3.95.
- The Day after Midnight.** The Effects of Nuclear War. Based on a Report by the Office of Technology Assessment. Michael Riordan, Ed. Cheshire Books, Palo Alto, Calif., 1982. 144 pp., illus. Paper, \$7.95.
- Decomposer Basidiomycetes.** Their Biology and Ecology. Papers from a symposium, London, Mar. 1979. Juliet C. Frankland, J. N. Hedger, and M. J. Swift, Eds. Cambridge University Press, New York, 1982. xvi, 356 pp., illus. \$74.50.
- Deep Space.** Colin A. Ronan. Macmillan, New York, 1982. 208 pp., illus. \$25.95.
- The Delicate Art of Whale Watching.** Joan McIntyre. Sierra Club Books, San Francisco, 1982 (trade distributor, Random House, New York). 144 pp. \$12.50. A Yolla Bolly Press Book.
- Desert Soil Fauna.** John A. Wallwork. Praeger, New York, 1982. x, 296 pp., illus. \$37.50.
- Evolution of Matter and Energy in Cosmic and Planetary Scale.** M. Taube. Hausdruckerei des Eidgenössischen Instituts für Reaktorforschung, Würenlingen, Switzerland, 1982. Various pages, illus. Paper, \$15.
- Evolution of the Flora and Fauna of Arid Australia.** Papers from a symposium, Adelaide, 1980. W. R. Barker and P. J. M. Greenslade, Eds. Published in association with Australian Systematic Botany Society and ANZAAS, South Australian Division, by Peacock Publications, Frewill, South Australia, 1982. viii, 392 pp., illus. Paper, A\$32.95.
- The Expression of Knowledge.** Neurobehavioral Transformations of Information into Action. Robert L. Isaacson and Norman E. Spear, Eds. Plenum, New York, 1982. xviii, 424 pp., illus. \$39.50.
- Extraordinary Disorders of Human Behavior.** Claude T. H. Friedman and Robert A. Faguet, Eds. Plenum, New York, 1982. xvi, 314 pp., \$35. Critical Issues in Psychiatry.
- Extraterrestrials: Where Are They?** Papers from a symposium, College Park, Md., Nov. 1979. Michael H. Hart and Ben Zuckerman, Eds. Pergamon, New York, 1982. x, 182 pp., illus. Cloth, \$22.50; paper, \$9.50.
- Factors in Formation and Regression of the Atherosclerotic Plaque.** Proceedings of an institute, Belgrate, Italy, Sept. 1980. Gustav R. V. Born, Alberico L. Catapano, and Rodolfo Paoletti, Eds. Plenum, New York, 1982. viii, 266 pp., illus. \$39.50. NATO Advanced Study Institutes Series A, vol. 51.
- Ferroelectric Transducers and Sensors.** J. M. Herbert. Gordon and Breach, New York, 1982. xxvi, 438 pp., illus. \$46.50. Electrocomponent Science Monographs, vol. 3.
- Fieser and Fieser's Reagents for Organic Synthesis.** Vol. 10. Mary Fieser. Wiley-Interscience, New York, 1982. viii, 528 pp., illus. \$39.50.
- Flora Europaea Check-List and Chromosome Index.** D. M. Moore. Cambridge University Press, New York, 1982. x, 424 pp. \$49.50.
- Follow the Wild Dolphins.** Horace Dobbs. St. Martin, New York, 1982. xii, 264 pp. + plates. \$15.95.
- A Handbook of Game Design.** Henry Ellington, Eric Addinal, and Fred Percival. Kogan Page, London, and Nichols, New York, 1982. 156 pp., illus. \$25.
- Handbuch der Physik.** Encyclopedia of Physics. S. Flügge, Ed. Vol. 49/6, Geophysics III. Part 6, G. M. Nikol'skij, K. Rauer, P. Stubbe, L. Thomas, and T. Yonezawa. Springer-Verlag, New York, 1982. vi, 386 pp., illus. \$94.90.
- Health Conditions in the Americas, 1977-1980.** Pan American Health Organization, Washington, D.C., 1982. xii, 386 pp., illus. Paper, \$12. Scientific Publication No. 427.
- The Heart Sounds.** New Facts and Their Clinical Implications. Aldo A. Luisada and Francesco Portallupi. Praeger, New York, 1982. x, 246 pp., illus. \$27.50.
- Heat Exchanger Design Handbook.** Hemisphere, Washington, D.C., 1982. Five volumes. Various pages, illus. Vol. 1, Heat Exchanger Theory, Vol. 2, Fluid Mechanics and Heat Transfer, Vol. 3, Thermal and Hydraulic Design of Heat Exchangers, Vol. 4, Mechanical Design of Heat Exchangers, Vol. 5, Physical Properties. In five loose-leaf notebooks, \$600.
- Heat Transfer 1982.** Proceedings of a conference, Munich, Sept. 1982. U. Grigull, E. Hahne, K. Stephan, and J. Straub, Eds. Hemisphere, Washington, D.C., 1982. Six volumes, illus. Vol. 1, Review and Keynote Papers, xiv, 382 pp. Vols. 2-6, General Papers, xviii, 594 pp.; xviii, 518 pp.; xviii, 584 pp.; xviii, 588 pp.; and xviii, 612 pp. The six-volume set, \$395.
- Lightning, Auroras, Nocturnal Lights, and Related Luminous Phenomena.** A Catalog of Geophysical Anomalies. Compiled by William R. Corliss. Sourcebook Project, Glen Arm, Md., 1982. vi, 242 pp., illus. \$11.95.
- Linear Models.** An Introduction. Irwin Guttman. Wiley, New York, 1982. x, 358 pp. \$36.95.
- Lipoprotein Precipitation.** M. Burstein and P. Legmann. Karger, Basel, 1982. viii, 132 pp., illus. \$58.25. Monographs on Atherosclerosis, vol. 11.
- Lords of the Arctic.** A Journey Among the Polar Bears. Richard C. Davids. Photographs by Dan Guravich. Macmillan, New York, and Collier Macmillan, London, 1982. xx, 140 pp. + plates. \$29.95.
- Machine Intelligence 10.** Papers from a workshop, Cleveland, Nov. 1981. J. E. Hayes, Donald Michie, and Y-H Pao, Eds. Horwood, Chichester, England, and Halsted (Wiley), New York, 1982. viii, 576 pp., illus. \$99.95.
- Major Technological Risk.** An Assessment of Industrial Disasters. Patrick Lagadec. Translated from the French edition (1981) by H. Ostwald. J. C. Chicken, Tech. Ed. Pergamon, New York, 1982. xx, 516 pp., illus. \$60.
- Maleic Anhydride.** B. C. Trivedi and B. M. Culbertson. Plenum, New York, 1982. xvi, 872 pp., illus. \$89.50.
- Noninvasive Techniques for Assessment of Atherosclerosis in Peripheral, Carotid, and Coronary Arteries.** Papers from a workshop. Thomas F. Budinger and five others, Eds. Raven, New York, 1982. xxx, 242 pp., illus. \$49.
- North American Horticulture.** A Reference Guide. Compiled by the American Horticultural Society. Barbara W. Ellis, Ed. Scribner, New York, 1982. xvi, 368 pp. \$50.
- North American Tortoises.** Conservation and Ecology. R. Bruce Bury, Ed. Fish and Wildlife Service, Washington, D.C., 1982. viii, 126 pp., illus. Paper. Wildlife Research Report 12.
- Nuclear Power.** Both Sides. The Best Arguments For and Against the Most Controversial Technology. Michio Kaku and Jennifer Trainer, Eds. Norton, New York, 1982. 282 pp. \$14.95.
- Numerical Dating in Stratigraphy.** Gilles S. Odin, Ed. Wiley-Interscience, New York, 1982. Two volumes. lvi, 1024 pp., illus. \$134.
- Nutrition Policy Implementation.** Issues and Experience. Papers from a conference. Nevin S. Scrimshaw and Mitchel B. Wallerstein, Eds. Plenum, New York, 1982. xiv, 558 pp., illus. \$65.
- On the Edge of the Sea.** Mural Painting at Tancanh-Tulum, Quintana Roo, Mexico. Arthur G. Miller with appendixes by Joseph W. Ball, Frank P. Saul, and Anthony P. Andrews. Dumbarton Oaks, Washington, D.C., 1982. xiv, 134 pp., illus., + plates. \$35.
- Oppenheimer.** The Years of Risk. James W. Kunetka. Prentice-Hall, Englewood Cliffs, N.J., 1982. xii, 292 pp. + plates. \$15.95.
- Organic Reactions.** Vol. 28. William G. Dauben, Ed. Wiley, New York, 1982. x, 348 pp., illus. \$39.50.
- Orogeny.** John G. Dennis, Ed. Hutchinson Ross, Stroudsburg, Pa., 1982 (distributor, Academic Press, New York). xviii, 380 pp., illus. \$46. Benchmark Papers in Geology, vol. 62.
- Race with Extinction.** Herpetological Notes of J. R. Slevin's Journey to the Galapagos 1905-1906. Thomas H. Fritts and Patricia R. Fritts, Eds. The Herpetologists' League, 1982 (available from W. Ronald Heyer, Smithsonian Institution Natural History Building, Washington, D.C.). viii, 98 pp., illus. Paper, \$12. Herpetological Monograph No. 1.
- Radiation Biology.** Donald J. Pizzarello, Ed. CRC Press, Boca Raton, Fla., 1982. xii, 298 pp., illus. \$85. CRC Series in Radiotracers in Biology and Medicine.
- Radioimmunoassay of Gut Regulatory Peptides.** Stephen R. Bloom and Richard G. Long, Eds. Praeger, New York, 1982. x, 194 pp., illus. \$24.95. Methods in Laboratory Medicine, vol. 2.
- Ranking, Resource and Exchange.** Aspects of the Archaeology of Early European Society. Papers from a symposium, Philadelphia, May 1980. Colin Renfrew and Stephen Shennan, Eds. Cambridge University Press, New York, 1982. viii, 168 pp., illus. \$39.50. New Directions in Archaeology.
- Reaction Injection Molding and Fast Polymerization Reactions.** Proceedings of a symposium, Atlanta, Mar. 1981. Jiri E. Kresta, Ed. Plenum, New York, 1982. viii, 302 pp., illus. \$42.50. Polymer Science and Technology, vol. 18.
- Reading Expository Material.** Papers from a conference, Madison, Wis., 1980. Wayne Otto and Sandra White, Eds. Academic Press, New York, 1982. xiv, 304 pp. \$29.50. Educational Psychology.
- Red Deer.** Behavior and Ecology of Two Sexes. T. H. Clutton-Brock, F. E. Guinness, and S. D. Albon. Original drawings by Priscilla Barrett. University of Chicago Press, Chicago, 1982. xxii, 378 pp. Cloth, \$37.50; paper, \$12.95. Wildlife Behavior and Ecology.
- Reform of Environmental Regulation.** Wesley A. Magat. Ballinger (Harper and Row), Cambridge, Mass., 1982. xiv, 190 pp. \$26.50.
- Vitamin E.** Biochemical, Hematological, and Clinical Aspects. Papers from a conference, New York, Nov. 1981. Bertram Lubin and Lawrence J. Machlin, Eds. New York Academy of Sciences, New York, 1982. xii, 506 pp., illus. Cloth or paper, \$95. Annals of the New York Academy of Sciences, vol. 393.
- VLSI Electronics.** Microstructure Science. Vol. 5. Norman G. Einspruch, Ed. Academic Press, New York, 1982. xii, 404 pp., illus. \$54.
- VNR Color Dictionary of Minerals and Gemstones.** Michael O'Donoghue. Van Nostrand Reinhold, New York, 1982. 160 pp. \$12.95.
- Wolf-Rayet Stars.** Observations, Physics, Evolution. Papers from a symposium, Cozumel, Mexico, Sept. 1981. C. W. H. de Loore and A. J. Willis, Eds. Reidel, Boston, 1982 (distributor, Kluwer Boston, Hingham, Mass.). xx, 618 pp., illus. Cloth, \$69.50; paper, \$34.50. International Astronomical Union Symposium No. 99.

# Personnel Placement

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## POSITIONS WANTED

**Biochemist, Ph.D.** Seeks position in industry or academia. Experience with recombinant DNA technology and protein purification/enzymology, some immunological, cell culture techniques. Publications, teaching experience. Box 65, SCIENCE. X

**Statistically Oriented Biologist, Ph.D.** (1983) in plant ecology. Extensive experience in project design and statistical data analysis. Broad training in both univariate and multivariate statistics. Programming experience in SAS, BMDP, SPSS, and FORTRAN. Exceptionally diverse background includes both field and laboratory research. B.S. degree in zoology. Publications. Graduate teaching experience in botany and ecology. Seeks position in industry, government, consulting, or academia that will take advantage of quantitative skills. Box 45, SCIENCE. X

**Earth/Space Science Instructor, M.A.**, physical geography, 1976. Three years of teaching experience in earth science and astronomy. Willing to relocate. 1607 Ohio Street, Bluefield, W.Va. 24701. X

**Ecological Modeller, Ph.D., M.S.** 1981. Mathematical and computer simulation modelling of aquatic systems, environmental impact assessment, aquatic toxicology, applied statistics, computer programming. Seeks position in Washington, D.C., vicinity. Résumé, references, and publications available upon request. Kenneth Rose, HR-20, Center for Quantitative Science, University of Washington, Seattle, Wash. 98195. X

**Grant Proposal Preparation.** Services include skilled manuscript preparation and editing of scientific proposals. Individual and institutional requests welcomed. G.P.S. P.O. Box 603, Middlebury, Vt. 05753. X

**Research Assistant—May 1983 B.S.** in economics. Seeks career path position in social science research while pursuing graduate studies. Programming and statistical training. D.C. area. Box 68, SCIENCE.

3/18; 4/15

## POSITIONS WANTED

**Neuropharmacologist/Neurochemist, Ph.D.** Experienced investigator; many publications. Psychotropic drugs, neuropsychiatric diseases. Seeks position in industry or academia. Box 70, SCIENCE. X

**Senior Neurophysiologist, Ph.D.**, with 18 years of experience in teaching and research, desires position with clinical team engaged in electrophysiological research. Box 69, SCIENCE. X

**Virologist/Cell Biologist,** postdoctoral experience in cell culture, avian and tumor virology; seeks position in Indiana after August 1983. Box 62, SCIENCE. 3/18, 25

## POSITIONS OPEN

### ACADEMIC PATHOLOGIST AND CHAIR DEPARTMENT OF PATHOLOGY

University of Nevada School of Medicine seeks to appoint an academic pathologist and chair of the Department of Pathology. Board-certification in anatomic and clinical pathology required. Must document ability to work and communicate effectively with faculty, house staff, laboratory technologists, and administrative personnel. Evidence of successful research and university service, medical student and resident teaching, and pathology practice must be documented. This is a senior leadership position, responsible for the development and management of educational programs of the Department of Pathology and for conducting research and scholarly activity appropriate to the specialty.

Submit letter of application, curriculum vitae, and five references no later than 1 May 1983 to: **David Westfall, Ph.D., Chair, Pathology Search Committee, School of Medicine, University of Nevada, Reno, Nevada 89557.** *The University of Nevada is an Equal Opportunity/Affirmative Action Employer.*

### AGRONOMIST

Looking for an agronomist with a Ph.D. and at least 2 years of field plot experimentation training and 2 years of experience in job offered. Assist in developing new agricultural research and development projects, primarily overseas in underdeveloped countries. Preparation of technical project proposals utilizing library facilities and technical personnel of the University of Wisconsin to supplement other resource material available on various developing countries. This will include background data on the economic and political situation in countries where projects are being considered. New projects are being considered and studied in various countries of the developing world. Knowledge of languages such as Spanish, Urdu, and Arabic are required. Candidate must be willing and flexible to live abroad for extended periods and must be ready to travel extensively. Full-time; 40 hours per week; \$33,000 per year. Send résumé to: **Sath Menon, Job Service, Madison Local Office, 206 North Broom Street, Madison, Wis. 53703.** Telephone: 608-266-3678. This ad not paid for with Job Service funds.

The University of Manitoba, Faculty of Medicine, has positions available as **ASSISTANT PROFESSOR.** These positions are available in response to the development of a multidisciplinary program in the area of recombinant DNA technology as applied to neuroscience, endocrinology, and molecular genetics. The successful applicant(s) will be expected to develop an independent research program utilizing recombinant DNA techniques. Send curriculum vitae, including a brief outline of future research interest, to: **Dr. Henry G. Friesen, Professor and Head, Department of Physiology, University of Manitoba, 770 Bannatyne Avenue, Winnipeg, Manitoba, Canada R3E 0W3.**

**ASSISTANT/ASSOCIATE PROFESSOR—IMMUNOLOGIST.** The Department of Microbiology, University of Nevada School of Medicine, invites applications for a tenure-track position as assistant/associate professor in the area of immunology. The candidate is expected to participate in instruction of medical students and an interdisciplinary graduate program in cell and molecular biology. The successful candidate will be expected to develop an independent, competitive research program. The applicant must have a Ph.D. or equivalent degree and postdoctoral experience in immunology. Submit curriculum vitae and names of three references to: **Mark R. Hall, Ph.D., Department of Microbiology, University of Nevada School of Medicine, Reno, Nevada 89557.** Closing date: 15 May 1983. *The University of Nevada is an Equal Opportunity/Affirmative Action Employer.*

## POSITIONS OPEN

### ANATOMY—ASSISTANT PROFESSOR

Applications are invited for the above position which will be available on 1 July 1983. Applicants must hold an earned doctorate. The primary teaching responsibilities will be in histology and embryology, but some participation in the gross anatomy course is also necessary. Research is expected and encouraged. We offer unique opportunities to work with others in any of the medical basic science disciplines. Kirksville should prove particularly attractive to those who enjoy working with professional level students and prefer a small town/rural environment. Please submit curriculum vitae, a statement of research interest, and the names of three references to: **Frederick John Julyan, Ph.D., Professor and Chairman, Department of Anatomy, Kirksville College of Osteopathic Medicine, Kirksville, Mo. 63501.** *An Equal Opportunity/Affirmative Action Employer.*

**ASSISTANT PROFESSOR OF BIOLOGY:** tenure-track position. New College is a highly selective liberal arts college with a strong commitment to involving students in independent study or research. Dedication to teaching and maintaining a research program which engages highly motivated undergraduates are essential. Previous teaching experience is desirable. Among other things, the person will teach genetics. We prefer someone with a background in invertebrate biology, marine biology, or related area. Send résumé and references to: **Professor Peter A. Kazaks, Chairman, Division of Natural Sciences, New College of University of South Florida, Sarasota, Florida 33580.**

The IPFW Physics Department expects to have a tenure-track **ASSISTANT PROFESSOR** position available for fall 1983. Candidates should have a Ph.D. in physics and evidence of ability in undergraduate teaching. Preference will be given to candidates who can develop an experimental research program involving undergraduate students in the area of atomic physics, especially laser spectroscopy. Send résumé and list of three references by 18 April 1983 to: **Dr. John M. Robinson, Chair, Department of Physics, Indiana University—Purdue University at Fort Wayne, Fort Wayne, Indiana 46805.** *An Equal Opportunity/Affirmative Action Employer.*

**ASSISTANT OR ASSOCIATE PROFESSOR OF PHYSIOLOGY AND BIOPHYSICS.** The Department of Physiology and Biophysics at the University of Vermont College of Medicine invites applications for a tenure-track position. Applicants for assistant professor level should have Ph.D. in physiology and/or biophysics and two or more years of postdoctoral training, or the M.D. degree and equivalent research training. Candidates must demonstrate outstanding teaching ability and excellence in independent research, and have strong commitments to both activities. The successful candidate will be expected to fulfill moderate teaching responsibilities in medical, undergraduate, and graduate courses with distinction, and to establish a vigorous and productive independent research program that merits extramural support. Preference will be given to those whose research areas complement those of the existing faculty and to those willing and able to teach in areas other than their specialties. *Women and minority candidates are encouraged to apply.* Letters of application, curriculum vitae, a brief description of research and career goals, and the names of three referees must be received by 25 April 1983. Address to: **Dr. W. R. Gibbons, Search Committee, Department of Physiology and Biophysics, University of Vermont College of Medicine, Burlington, Vt. 05405.** *The University of Vermont is an Equal Opportunity/Affirmative Action Employer.*

### ASSISTANT PROFESSOR OF PHYSIOLOGY

The Physiology Department of the West Virginia School of Osteopathic Medicine (WVSOM) expects an opening in a tenure-track position for a neurophysiologist. The position will be available on or after 1 July 1983. The duties and responsibilities of the position include the teaching of neuro and muscular physiology, participation in the committee structure of the institution, and participation in a developing research program. Applicants should have a Ph.D. Applications, including a current résumé and the names of three references, should be sent to: **Elizabeth Blatt, Ph.D., Associate Dean for Academic Affairs/Basic Science, West Virginia School of Osteopathic Medicine, 400 North Lee Street, Lewisburg, West Virginia 24901.** Deadline for applications is 1 May 1983.

*WVSOM is an Affirmative Action/Equal Opportunity Employer.*

## POSITIONS OPEN

**ASSISTANT PROFESSOR OF PLANT PATHOLOGY.** Applications are invited for a tenure-track faculty position available 1 August 1983. Responsibilities include teaching general plant pathology (50 percent) and conducting basic and applied research (50 percent) in cereal pathology. Fundamental concepts, epidemiology, resistance, and/or control may be emphasized. Ph.D. in plant pathology required; specialization in subdiscipline is open. Applicants should send curriculum vitae, transcripts, and names of three references to: **Arlen D. Davison, Chairman, Department of Plant Pathology, Washington State University, Pullman, Wash. 99164-6430.** Application deadline is 10 May 1983. *An Equal Opportunity/Affirmative Action Employer.*

**ASSISTANT RESEARCH SCIENTIST.** To study mechanisms of neuronal stimulation by extracellular currents. This is a basic research project but has relevance to neural prostheses. Research includes microelectrode recording and cable theory modeling. Candidate should have recent Ph.D. in neuroscience, biophysics, or bioengineering. Salary: \$18,000 to \$20,000, available immediately. Send curriculum vitae and names of three references to: **Dr. C. Nicholson, Department of Physiology and Biophysics, New York University Medical Center, 550 First Avenue, New York, N.Y. 10016.**

### COMPARATIVE PHYSIOLOGIST

The Department of Biology, University of Alabama in Birmingham, invites applications for a tenure-track position at the assistant professor level. The position is for a **COMPARATIVE PHYSIOLOGIST** and will begin 1 September 1983. Postdoctoral experience desirable. Specialization in the areas of endocrinology, reproductive strategies, and/or physiological ecology is preferred. Ability and willingness to teach undergraduate courses in physiology and to contribute to graduate programs are necessary. Send curriculum vitae, three letters of reference, and other pertinent information by 15 April 1983 to: **Dr. Daniel D. Jones, Department of Biology, University of Alabama in Birmingham, University Station, Birmingham, Ala. 35294.** *An Affirmative Action/Equal Opportunity Employer.*

## POSITIONS OPEN

Anticipated positions in biology (three). Assistant professor or lecturer for 1983-1984; renewal possible. (i) **BIOLOGIST** to teach biology for the non-major, introductory animal or plant biology, and upper division courses in either microbiology or science for prospective elementary school teachers. (ii) **BIOLOGIST/AGRICULTURAL SCIENTIST** to teach biology courses for agriculturally oriented students. Lower division courses in introductory biology; upper division courses include pest management and analysis of soil ecosystems. (iii) **MICROBIOLOGIST/BIOLOGIST** to teach general microbiology, medical microbiology, and assist in introductory courses such as human anatomy or cell biology. Doctorate required. Salary range: \$17,412 to \$22,896. Filing deadline: 4 April 1983. Send curriculum vitae, copies of transcripts, and names and addresses of three references to: **Search and Screening Committee, Department of Biology, California State College, Bakersfield, 9001 Stockdale Highway, Bakersfield, Calif. 93311.** *Equal Opportunity/Affirmative Action/Title IX Employer, M/F/H.*

### BIOLOGY

Full-time faculty position in liberal arts college. Position requires teaching courses and laboratories in general biology, human anatomy and physiology, ecology, and environmental biology, and advising and counseling students. Person should have a strong commitment to excellence in undergraduate education. Ph.D. preferred. Rank and salary commensurate with qualifications. Send curriculum vitae and three references by 15 April 1983 to: **Dr. Annette Muckerheide, Biology Department, College of Mount St. Joseph, Mount St. Joseph, Ohio 45051.** *An Equal Opportunity Employer.*

**BOTANIST.** Immediate opening for field-oriented systematic botanist to carry out floristic or monographic studies in tropical South America. Ph.D. is required, and field experience in Latin America and fluency in Spanish are desirable. Send résumé and names of three references to: **Personnel Office, Missouri Botanical Garden, P.O. Box 299, St. Louis, Missouri 63166-0299.** *An Equal Opportunity/Affirmative Action Employer.*

## POSITIONS OPEN

**BIOLOGY,** assistant professor, for a tenure-track position starting August 1983. Ph.D. in microbiology, demonstrated teaching proficiency in general microbiology, microbial physiology, and pathogenic and/or food microbiology required. The successful applicant will be expected to teach one or more graduate courses as well, preferably in public health microbiology, immunology, or virology, and to conduct research and direct student research. Applicants are to include: curriculum vitae, academic transcripts, evidence of teaching experience, statement outlining research interests, and three letters of recommendation. Submit application by 1 April 1983 to: **Dr. Harlan Q. Stevenson, Chairman, Department of Biology, Southern Connecticut State University, 501 Crescent Street, New Haven, Conn. 06515.** *Affirmative Action/Equal Opportunity Employer.*

Position in **DAIRY SCIENCE:** The Department of Animal Sciences at Washington State University seeks a faculty member at the assistant/associate rank for a tenure-track teaching/research position. Research should include basic approaches to important problems of the dairy industry. Teaching responsibilities will include undergraduate courses in dairy production and management. For more information, write: **Dr. J. K. Hillers, Chair, Screening Committee, Department of Animal Sciences, Washington State University, Pullman, Wash. 99164-6310.** Telephone: 509-335-4022. Review of applications will begin 30 May 1983. *Washington State University is an Equal Opportunity/Affirmative Action Employer.*

### ENDOCRINOLOGIST

Position available immediately for a **POSTDOCTORAL FELLOW OR RESEARCH ASSOCIATE** with interests and expertise in biochemical endocrinology to investigate pituitary and hypothalamic hormone biosynthesis, processing, and secretion. Experience in recombinant DNA methodology helpful but not essential. Salary up to \$20,000, depending on qualifications and training. Send curriculum vitae, reprints, statement of experience and goals, and list of three references to: **Dr. J. D. Neill, Department of Physiology and Biophysics, University of Alabama in Birmingham, Birmingham, Ala. 35294.** *An Equal Opportunity/Affirmative Action Employer.*

## Biotechnology Opportunity in Japan

Pall Corporation, the world leader in Filtration Technology, has an immediate opening for a Ph.D. level Molecular Biologist/Biochemist with expertise in recombinant DNA techniques.

You will provide product support and technical insight to further our penetration of the Japanese market for membranes in the field of Biotechnology. Excellent written and oral skills in Japanese are required.

We provide an excellent salary and competitive benefit package. To apply, please send your resume to: **Arnold Weiner, President-Assistant, Process & Biomedical**

subsidiary of



"Fine Filtration"

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1-18-8 Ohsaki,  
Shinagawa-ku  
Tokyo 141, Japan

*Equal Opportunity Employer M/F*

## CHAIRPERSON DEPARTMENT OF BIOLOGY BOSTON COLLEGE

Applications and nominations are invited for chairperson of the Department of Biology of Boston College. Founded in 1863, Boston College is a Jesuit university with a total enrollment of approximately 13,500. The Department of Biology currently has 19 faculty members, 40 graduate students in M.S., M.S.T., and Ph.D. programs and 800 B.S. degree students. Active research programs are in the areas of biochemistry, genetics, developmental biology, immunology, and cellular and organismal physiology.

The successful candidate must have an earned doctorate and teaching experience in one of the biological sciences, a strong record of academic excellence and scholarly publication and a successful record of research funding. The field of research specialization is open but it should complement one or more of the major areas of the department. The candidate should also have qualities of leadership and a dedication to graduate and undergraduate education that will aid the department in the development of its research and teaching activities.

The appointment will be made at the senior level with tenure and with a highly competitive salary. The appointment will be made as soon as possible, actual duties to begin no later than September 1984. Upon appointment the chairperson will direct recruitment for two additional faculty positions. The University will provide support and resources to further the development of excellence in the department.

Interested candidates should send a letter of application, complete résumé, three letters of reference, and a few representative publications by 15 April 1983:

Chair of Biology Search Committee  
McGuinn Hall 349  
Boston College  
Chestnut Hill, Mass. 02167

*An Equal Opportunity/Affirmative Action Employer*

## PHARMACOLOGISTS

### Pharmaceuticals R&D

**We are US subsidiary of ICI (UK) whose research introduced propranolol, clofibrate, tamoxifen citrate, and chlorhexidine. Last Fall we introduced atenolol, a unique, cardioselective, once-a-day beta blocker.**

**Ph.D. in Renal Pharmacology or Physiology. Demonstrated competence in studies using isolated vascular or renal tissue is highly desirable. Responsibilities will include the evaluation and development of novel compounds in the renal program, using both in vivo and in vitro techniques.**

**M.S. with training and/or experience in the areas of Respiratory Physiology/Pharmacology. B.S. candidates with training and one or more years of experience will be given favorable consideration. Responsibilities will include the development and pharmacological characterization of in vivo animal models capable of assessing the activity of novel molecules on the respiratory system.**

**One of the newest laboratories in the country in suburban campus setting 25 miles south of Philadelphia. Competitive salaries and benefits, including unique investment program. Moving expenses covered. Please submit full CV. Principals only.**

**C.D. Gaito**



**STUART PHARMACEUTICALS**  
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Wilmington, Delaware 19897

*An Equal Opportunity Employer M/F*

## POSITIONS OPEN

### CELL BIOLOGIST/RENAL PHYSIOLOGIST

A Ph.D. research position is available in a newly developing Nephrology Division of a university-affiliated hospital located in a highly desirable area. A major research interest of this position is morphological correlates of epithelial transport. Expertise in the area of transmission electron microscopy and freeze fracture, as well as an interest in epithelial transport is highly desirable. This position is hospital based and not grant dependent. Competitive salary, comprehensive benefit package, and professional working environment. Send curriculum vitae and two letters of recommendation to: **Vincent A. DiScala, M.D., Professor of Medicine, Director, Division of Nephrology, Nassau Hospital, 259 First Street, Mincola, Long Island, New York 11501.**

### CHAIRPERSON DEPARTMENT OF BIOLOGY

**HAMILTON COLLEGE**, a highly selective coeducational liberal arts college with 1625 students and about 135 faculty, seeks a senior biologist to take over the leadership of its eight-person Biology Department ideally by 1 July 1983. Candidates must be devoted to the teaching of talented undergraduates. Other qualifications are a capacity for leadership, and a solid record of research achievement. Future hiring opportunities and strong institutional backing will give the new chairperson an exciting opportunity to build an outstanding small college department. *Hamilton College is an Equal Opportunity Employer. Women and members of minority groups are strongly encouraged to apply.* Applications and nominations should be submitted by 4 April to: **Professor Peter Millet, Associate Dean of the College, Hamilton College, Clinton, N.Y. 13323.**

### MAYO MEDICAL SCHOOL/ MAYO FOUNDATION

#### FACULTY POSITION IN BIOCHEMISTRY

This position can be filled either at a junior or a senior level. The preferred area is eukaryotic molecular biology, but other areas will be considered. An impressive record or great promise in biochemistry research is essential. A strong chemistry background is desirable. Teaching ability is important although teaching duties are not extensive. An unusually attractive research opportunity can be offered; this may include new laboratory facilities, ample setup funds, and significant research support over several years. Submit curriculum vitae and bibliography, and have three referees write to: **Dr. John Penniston, Section of Biochemistry, Mayo Clinic, Rochester, Minnesota 55905. An Affirmative Action/Equal Opportunity Institution.**

### FRED HUTCHINSON CANCER RESEARCH CENTER

The Fred Hutchinson Cancer Research Center (FHRC) conducts a broad-based program of research in basic sciences. The Basic Sciences Division invites applications for **several open faculty positions** at the assistant through full member (professor) level. Applicants must have postdoctoral training and demonstrated research productivity in fields such as cell, molecular or developmental biology, immunology, virology, protein or nucleic acid biochemistry, or carcinogenesis. Submit curriculum vitae and names of three references by 22 April 1983 to: **Associate Director, Basic Sciences, Room C-141, Fred Hutchinson Cancer Research Center, 1124 Columbia Street, Seattle, Wash. 98104. FHRC is an Equal Opportunity/Affirmative Action Employer.**

### FACULTY POSITION IN BIOCHEMISTRY

The Department of Biochemistry and Molecular Biology at The University of Texas Health Science Center at Houston invites applications from qualified individuals with a commitment to excellence in teaching and research in biochemistry and molecular biology for a tenure-track faculty position at the assistant professor level. Responsibilities will include participation in the medical school curriculum and in the graduate training program within the Graduate School of Biomedical Sciences, as well as developing and conducting a high quality independent research program. Applicants should send curriculum vitae, list of publications, and a summary of research interests, and should have three letters of recommendation submitted on their behalf to: **Dr. John A. DeMoss, Department of Biochemistry and Molecular Biology, The University of Texas Medical School at Houston, P.O. Box 20708, Houston, Texas 77225.** Application deadline: 30 April 1983. *An Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.*

## POSITIONS OPEN

Comprehensive Cancer Center and Division of Hematology—Oncology—**FACULTY POSITIONS** available in large research-oriented division for both Board-certified **hematologists and oncologists.** Send inquiries and curriculum vitae to: **Albert F. LoBuglio, M.D., Director, Comprehensive Cancer Center, University of Alabama in Birmingham, University Station, Birmingham, Alabama 35294. Affirmative Action Employer.**

### DEPARTMENT OF NUTRITION AND FOOD SCIENCE MASSACHUSETTS INSTITUTE OF TECHNOLOGY

#### FACULTY POSITION

The Department of Nutrition and Food Science of the Massachusetts Institute of Technology (MIT) invites applications for a tenure-track faculty position in the area of biotechnology. Examples of particular fields of specialization include: industrial genetics, cell technology, bioseparations, drug delivery, biomaterials, and bioorganic chemistry.

Please send curriculum vitae (including a list of publications), a description of research interests and future research plans, and at least three letters of recommendation by 15 May to: **Dr. Gerald Wogan, Head, Department of Nutrition and Food Science, Room 16-333, Massachusetts Institute of Technology, Cambridge, Mass. 02139.**

*MIT is an Equal Opportunity Employer. Members of minority groups are urged to apply.*

### FACULTY POSITION IN STRUCTURAL GEOLOGY

The Department of Earth and Planetary Sciences at Massachusetts Institute of Technology (MIT) is searching to fill a tenure-track faculty position in structural geology with emphasis on metamorphic regions. Areas of particular interest to us include the relations between metamorphic and structural events, and thermal evolution and structural history in their relation to regional tectonics. Detailed subjects of interest could range from kinematics of metamorphic fabrics and dynamic, kinetic development to larger scale regional tectonics of metamorphic terranes. Applicants with a good background in geochemistry are preferred. A Ph.D. in structural geology and 1 to 5 years of postdoctoral experience are necessary. Individual will be expected to teach undergraduate and graduate level structural geology, and help with annual geology field camp.

Interested applicants should submit curriculum vitae, a brief statement of research interests, select reprints, and names of four references to:

**Dr. William F. Brace, Chairman  
Department of Earth and Planetary Sciences  
54-918, MIT  
Cambridge, Mass. 02139**

*MIT is an Affirmative Action/Equal Opportunity Employer.*

The **DEPARTMENT OF IMMUNOLOGY** invites applications for **three staff positions at assistant/associate professor or professor rank.** Salaries for assistant professor (\$27,720 to \$39,820), associate professor (\$35,420 to \$51,658) and professor (current floor—\$46,010) are negotiable, in accordance with the individual's qualifications. The successful candidate must have a Ph.D. and/or M.D. degree(s). Preference will be given to investigators who have already demonstrated outstanding potential for an independent research career in the field of molecular and cellular immunology. The successful candidates will have the responsibility to establish a dynamic research team with an independent program. These positions will be funded through an external agency, but the incumbent will enjoy the privileges of the University academic rank at which the appointment is made. The granting of these awards is by competition and is made on the basis of excellence. Candidates should forward their curriculum vitae, outlines of their research interests, and names of three references to:

**Dr. E. Diener, Chairman  
Department of Immunology  
University of Alberta  
845E Medical Sciences Building  
Edmonton, Alberta, Canada T6G 2H7**

Closing date for receipt of applications: 1 April 1983. *The University of Alberta is an Equal Opportunity Employer, but in accordance with Canada Employment and Immigration regulations, this advertisement is directed to Canadian citizens and permanent residents.*

## POSITIONS OPEN

### FACULTY POSITION IN VIROLOGY

The Department of Microbiology and Immunology announces the reopening of its search for a new faculty member with interests and ability in molecular virology. This is a tenure-track faculty position available in July 1983. An interest in and ability to teach medical and graduate students are required, as is a desire for career development in a medical school setting.

Applicants should submit curriculum vitae, bibliography, and names of three references to: **A. Arthur Gottlieb, M.D., Professor and Chairman, Department of Microbiology and Immunology, Tulane Medical School, 1430 Tulane Avenue, New Orleans, Louisiana 70112.** All responses must be received by 15 April 1983. Those who responded to our prior search after the 1 November 1982 deadline are invited to reapply by indicating their interest in being considered under the present search.

*Tulane is an Equal Opportunity/Affirmative Action Employer.*

**FACULTY POSITION:** The Department of Biology, California State University, Fresno, invites applications for a regular tenure-track position in the area of mammalian physiology. Candidates must have teaching competence in human neuroanatomy and neurophysiology and research experience in some area of mammalian physiology. Appointment will be made at the assistant or associate professor level, depending on successful candidate's credentials. Interested individuals should make formal application by letter and include curriculum vitae, bibliography, and future research plans as well as arrange for three letters of recommendation to be sent to: **Dr. Jerrome Mangan, Chair, Department of Biology, California State University, Fresno, Fresno, Calif. 93740.** All application material should be on file by the application deadline: 4 April 1983. *An Equal Opportunity/Affirmative Action Employer.*

### THE UNIVERSITY OF WESTERN ONTARIO DEPARTMENT OF GEOLOGY

The Department of Geology, The University of Western Ontario, London, Canada, invites applications and nominations for a possibly tenured faculty position in the field of mineral deposits. The applicant will be encouraged to do independent research into the genesis of ore deposits and to broaden the scope of this work through collaboration with colleagues in academe and industry. Teaching duties include undergraduate and graduate courses in the geology and mineralogy of ore deposits and graduate student supervision. The appointment is subject to the availability of funds.

The department has a vigorous and balanced faculty of 15 supported by technical staff and modern equipment. It is within a 1-day drive of the Noranda, Sudbury, Timmins, and Elliot Lake mining districts and is a 2-hour drive from Toronto. The department offers a full undergraduate and graduate program.

The Ph.D. and at least 3 to 6 years of direct involvement with field studies of ore deposits are required. Ideally the position is to be filled by 1 July 1983 but date of appointment is negotiable. Rank and salary are dependent on qualifications. Curriculum vitae and names of three referees should be forwarded by 1 May 1983 to: **W. S. Fyfe, Chairman, Department of Geology, The University of Western Ontario, London, Ontario, Canada N6A 5B7. In accordance with Canadian Immigration requirements, this advertisement is directed to Canadian citizens and permanent residents.**

*An Equal Opportunity Employer*

### HEAD Department of Forest Science

**Duties:** Leadership of, and participation in, research, teaching, continuing education, and extension programs of the Forest Science Department, School of Forestry, Oregon State University.

**Qualifications:** Ph.D. and experience in forestry research and administration.

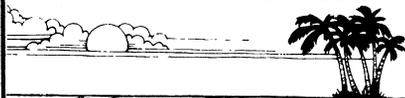
**Applications:** Send résumé and names of five references to:

**Chairman, Forest Science Search Committee  
School of Forestry  
Oregon State University  
Corvallis, Ore. 97331**

All materials must be received by 15 May 1983, the closing date.

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

**RESEARCH ASSISTANT**  
South Florida Beckons You!



Coulter Immunology, a division of Coulter Corporation and a leader in the monoclonal antibody industry, has an immediate opening in Research and Development. As an important member of our tissue culture facilities, the research assistant will be primarily responsible for the analysis of monoclonal antibodies, sorting of specific cell populations and use of the auto-clone in a sterile cloning procedure.

Applicants should have a B.S. in Biology or Microbiology/Immunology plus a minimum of (3) three years experience in the maintenance and operation of the Coulter EPIC's or similar cell analyzer/sorter. Individuals with a M.S. and at least (1) one year experience in cell culture would also be considered.

Coulter Immunology offers an attractive starting salary; excellent benefits package, and is located in sunny Florida.

Interested applicants should immediately contact: **Marsha Cook, Personnel Office, Coulter Corporation, 650 W. 20th Street, Hialeah, FL 33010. (305) 885-0131, Ext. 521. Or Toll-Free 1-800-327-6531, Ext. 521. An Equal Opportunity Employer M/F.**



**COULTER ELECTRONICS, INC.**  
INNOVATING A VITAL TECHNOLOGY.

**Universiteit van Amsterdam**

The interfaculty department Science Dynamics of the University of Amsterdam invites applications for the post of

**full professor (m/f)**

*Tasks:*

- the execution of research and the supervision of the research of the department
- graduate education
- active participation in the administration of the department
- maintaining contacts with other research groups in the field of science dynamics.

*Requirements:*

Applicants should have a PhD and be of international standing in the social studies of science. They should also

- have considerable experience of research on science, preferably in several areas
- have experience of establishing university courses
- possess the organizational and personal capacities necessary for supervision of the research group
- (if necessary) be prepared to acquaint him(her)self with the Dutch situation and learn the Dutch language within one year.

Salary min. Dfl. 6,561.- max. Dfl. 9,283.- per month (Dutch Civil Servants Code).

The research area of the professor to be appointed will be related to the research program of the department. This can be obtained on request, together with further details.

Applications, quoting number 6407 and accompanied by a curriculum vitae, list of publications and the names of three referees can be sent - *within 3 weeks* - to the Secretary of the Appointment committee drs. L.A. Leydesdorff, c/o vakgroep Wetenschapsdynamica, Nieuwe Achtergracht 166, 1018 WV Amsterdam, the Netherlands. Tel. 020-522 3598.

*Women are particularly advised to apply.*

**MICROBIOLOGIST/ ENZYMOLOGIST**

Two challenging career oriented positions are available in the Development Department of the newly formed Miles Scientific Division, located in the Chicago suburb of Lisle, IL. Primary responsibilities will involve the development of new clinical enzymes and the preparation of immunochemicals.

Qualified candidates will have a Ph.D. in microbiology or biochemistry with at least two years of post-doctoral training and demonstrated skills in enzyme purification, fermentation, immunogen isolation and antibody development.

We offer a competitive salary and comprehensive benefits package. Please send resume with salary history and requirements in confidence to:

**Personnel Manager**



**MILES SCIENTIFIC**  
Div. Miles Laboratories, Inc.  
30 W. 475 N. Aurora Road  
Naperville, Illinois 60566

Equal Opportunity Employer M/F/H

**SENIOR RESEARCH SCIENTIST**

**Molecular Biology**

A uniquely demanding and rewarding opportunity has recently become available at Alpha Therapeutic Corporation as a result of continued growth and expansion of the scientific research staff. Recognized as an international leader in the research and manufacture of human plasma products, our current and future projects include development of artificial blood, interferons and monoclonal antibodies.

Reporting directly to the Director of Cell Biology, successful candidate will be responsible for development of protocols, facilities, equipment & supplies, and staffing of a new department to be involved with producing rDNA-derived protein products. Assay development, isolation of gene products and development of nucleotide sequencing capabilities will be performed with aid of a multi-disciplinary team.

Position requires a recent PhD in Molecular Genetics (Molecular Biology, Biochemistry, Bacterial Genetics), as well as knowledge and experience in recombinant DNA methodology, gene isolation, cDNA synthesis, nucleotide sequencing and plasmid or vector manipulation. Post-doctoral experience preferred.

For the individual possessing the creativity and initiative to contribute new ideas and concepts, we offer an excellent compensation and comprehensive benefits. For immediate consideration please send resume or curriculum vitae to **Allan Kydd, Manager of Employee Relations.**



THERAPEUTIC CORPORATION

**5555 Valley Blvd.  
Los Angeles, CA 90032**

Equal Opportunity Employer M/F

## PULMONARY PATHOPHYSIOLOGIST

The Lovelace Inhalation Toxicology Research Institute is seeking an individual with a D.V.M., post graduate training in Physiology or Pharmacology and a strong interest in Pulmonary Pathophysiology. The institute has a strong multi-disciplinary team approach and conducts comparability studies addressing the effects of airborne toxic materials on man.

The applicant should have good oral and written communication skills and should have demonstrated the ability to design, conduct and report independent research. The successful applicant will be expected to design and conduct basic and applied research, both independently and in collaboration with other scientists. Salary and starting date are negotiable.

The institute's staff includes physical, biophysical and biomedical scientist oriented toward comparative animal research involving clinical and pathological assessment. The institute addresses significant problems concerning the effects of airborne toxic materials on man, with emphasis on materials related to energy technologies. Current research includes dose-response relationships of short and long-term effects, mechanisms of pulmonary injury, animal models of human lung disease and structural-functional-biochemical correlates.

Applicants should submit curriculum vitae and summary of research interest to: **Personnel Unit, LOVELACE INHALATION TOXICOLOGY RESEARCH INSTITUTE, P.O. Box 5890, Albuquerque, NM 87185 or call 505-844-9431.**

*We Are An Equal Opportunity/  
Affirmative Action Employer*

## Veterinary Pathologist

Opportunity available for individual with a professional degree (D.V.M. or M.D.), well-trained in anatomic pathology (board certified or board eligible) with research experience as evidenced by publications or Ph.D. degree to contribute to the experimental pathology efforts of the LOVELACE INHALATION TOXICOLOGY RESEARCH INSTITUTE. The institute has a strong multi-disciplinary team research effort involving scientists in physical, biophysical and medically-related fields including D.V.M. and M.D. pathologists and D.V.M.s in other areas.

The institute, which is heavily oriented to compare these animal experimentations, is addressing problems concerning the effects of airborne toxic materials on man and his environment. The successful candidate will be expected to design and implement both independent and collaborative research on inhaled toxicants and to conduct histopathologic examinations of a wide range of species and organ systems with primary emphasis on evaluation of respiratory disease.

Outstanding employee benefits and competitive salaries. Salary and starting date are negotiable.

Interested candidates are invited to call (collect) **Dr. Fletcher F. Hahn, at (505) 844-4040** or submit curriculum vitae and list of publications to **Dr. Hahn, LOVELACE INHALATION TOXICOLOGY RESEARCH INSTITUTE, P.O. Box 5890, Albuquerque, NM 87185.**

*We Are An Equal Opportunity/  
Affirmative Action Employer*

## POSITIONS OPEN

### FACULTY POSITION BIOCHEMISTRY/CELL PHYSIOLOGY OBERLIN COLLEGE

The Departments of Biology and Chemistry seek to fill a 1-year replacement position for the academic year 1983-1984. Teaching responsibilities include a cellular physiology course with laboratory in the fall, a shared biochemistry course with laboratory in the spring, and one section of general chemistry laboratory in the spring. Candidates with the Ph.D. degree and some postdoctoral experience are preferred but those confident of completing the Ph.D. by September will be considered. Academic rank and salary are dependent upon background and experience. Openings are normally filled at the assistant professor level.

Applications should include curriculum vitae and transcripts of both undergraduate and graduate work. Three letters of recommendation should be sent by the respondents directly to: **Dr. Anna Ruth Brummett, Chairman, Department of Biology, Oberlin College, Oberlin, Ohio 44074.** To be assured of consideration, complete applications should be received by 8 April 1983.

*Oberlin College is an Affirmative Action/Equal Opportunity Employer.*

### IMMUNOLOGY

**IMREG, INC.**, a biotechnology company engaged in R & D of immunoregulators affecting the human immune system, has newly available openings for Ph.D.-level scientists.

1) Ph.D. with postdoctoral training and experience in cell-mediated immunity. This is a challenging position in the rapidly developing field of human lymphokines.

2) Ph.D. with postdoctoral training and experience in analytical and synthetic aspects of peptide biochemistry.

We offer a competitive salary and fringe benefit package in a attractive, well-equipped setting in one of America's most interesting cities. Send curriculum vitae and names of three references in confidence to: **John L. Carlton, Vice-President for Operations and Finance, IMREG, INC., P.O. Box 56643, New Orleans, La. 70156.**

### INSTRUCTOR/ASSISTANT PROFESSOR OF NEUROLOGY

The Department of Neurology of the University of Michigan is seeking applicants for tenure-track faculty positions at the instructor through assistant professor levels. Individuals with expertise in clinical electroencephalography and epilepsy are encouraged to apply. *The University of Michigan is a nondiscriminatory, Equal Opportunity Employer.* Code 02.

Curriculum vitae and three letters of recommendation should be sent to:

**J. Chris Sackellares, M.D.**

**Department of Neurology**

**University of Michigan Medical School**

**B4906 Clinical Faculty Office Building, M056  
Ann Arbor, Mich. 48109**

**LIMNOLOGIST/ECOSYSTEM MODELER:** The Great Lakes Environmental Research Laboratory of National Oceanic and Atmospheric Administration (NOAA) in Ann Arbor, Michigan, seeks a research scientist to augment their program in ecosystem modeling and analysis. Incumbent will design and carry out research in simulation and analysis of nutrient dynamics and plankton succession in aquatic ecosystems with particular emphasis on the Great Lakes. Incumbent must have experience in: (i) aquatic ecology or limnology and (ii) the development and use of mathematical models of process-level ecosystem dynamics. An interdisciplinary team approach is encouraged. This is a part-time, permanent (32 hours/week) position in the Competitive Service and may be filled at the GS-13, GS-12, or GS-11 level. GS-13, GS-12, and GS-11 full-time salary ranges are \$34,930 to \$45,406, \$29,374 to \$38,185, and \$24,508 to \$31,861, respectively, based upon both superior or unique qualifications and existing rate of pay. For application information contact: **NOAA/NTIA, Personnel Services (R/E562), Attention: Jack Camenga, 325 Broadway, Boulder, Colo. 80303. Telephone: 303-497-6586 or FTS 320-6586. Reference Vacancy Number NOAA/ERL 83-07.** Appropriate application materials, INCLUDING LIST OF PUBLICATIONS, must be received by this office by 15 April 1983. *An Equal Opportunity/Affirmative Action Employer.*

## POSITIONS OPEN

**INVERTEBRATE ZOOLOGIST,** Ph.D. preferred. Emphasis on developmental biology or comparative physiology; 2-year nonrenewable appointment, beginning fall 1983; to teach one course each semester plus participate in introductory biology course. A research program which can include senior undergraduates is expected. Send curriculum vitae, including statement of research activities, as soon as possible, but no later than 15 April, to: **Dr. C. Thomas Settlemire, Biology Department, Bowdoin College, Brunswick, Maine 04011. Affirmative Action/Equal Opportunity Employer.**

### UNIVERSITY OF HONG KONG LECTURERS IN PHYSIOLOGY (two posts)

The appointees will be required to participate in the teaching of physiology to dental and medical students. Applicants with higher degrees in physiology or medical degrees or dental degrees will be given preference. Applicants should have some research and teaching experience and a special interest in one of the following areas: cardiovascular physiology, gastroenterological physiology, neurophysiology.

Annual salary (superannuable) is on an 11-point scale: HK\$129,840 to \$217,380 (U.S.\$1=HK\$6.60 approximately). Starting salary will depend on qualifications and experience.

At current rates, salaries tax will not exceed 15 percent of gross income. Housing benefits at a rental of 7½ percent of salary, children's education allowances, leave, and medical benefits are provided.

Further particulars and applications forms may be obtained from: **The Association of Commonwealth Universities (Appointments), 36 Gordon Square, London WC1H 0PF, England,** or from: **The Appointments Unit, Secretary's Office, University of Hong Kong, Hong Kong.** Closing date for applications is 15 May 1983.

**MICROBIOLOGY POSITION.** Starting 1 September 1983, a 1-year replacement position will be available to teach each semester an introductory course in molecular (cell) biology or a nonmajor introductory biology course. In addition, each semester an advanced undergraduate course will be taught, preferably immunology and some other area of microbiology. Also, weekly participation in a senior seminar is expected. Please send curriculum vitae and three letters of recommendation by 25 March to: **Dr. R. K. Pettegrew, Chairman, Biology Department, Denison University, Granville, Ohio 43023. Denison is an Equal Opportunity/Affirmative Action Employer.**

**MOLECULAR BIOLOGY.** Department of Biology seeks to fill two assistant professorships effective academic year 1983-1984. One is a tenure-track position, the other is nonprobationary.

**Molecular Biology** with research interest in aspects of cell biology, biochemistry, and recombinant DNA technology. Department is especially interested in applicants showing strong experience in nucleic acids and proteins in eukaryotic systems.

Candidates appointed to these positions are expected to develop and contribute to an instructional program in biomedical science, to teach appropriate undergraduate and graduate courses and establish an active, independent research program. Postdoctoral experience is desirable. Please submit, by 18 April 1983, curriculum vitae, a description of research work, and three references to: **Chairperson of the Search Committee, Biology Department, College of Arts and Sciences, University of Massachusetts at Boston, Harbor Campus, Boston, Mass. 02125.** Appointments are subject to the availability of funds. *Affirmative Action applications are encouraged. An Equal Opportunity/Affirmative Action Employer.*

### MOLECULAR/CELLULAR BIOLOGIST

Department of Biology, Vassar College, seeks applicants as assistant professor, 3 years, beginning August 1983. Ph.D. required, training in molecular biology, genetics and/or development. Send curriculum vitae, statement of teaching experience and research interests, and three letters of recommendation by 4 April 1983 to: **Chairman, Department of Biology, Box 377, Vassar College, Poughkeepsie, N.Y. 12601. Affirmative Action/Equal Opportunity Employer.**

## PENNSYLVANIA COLLEGE OF OPTOMETRY

### Faculty Positions in Vision Rehabilitation

The Pennsylvania College of Optometry is seeking qualified applicants for tenure-track faculty positions in its new Master of Science Degree Program in Vision Rehabilitation. In cooperation with the William Feinbloom Vision Rehabilitation Center, this unique interdisciplinary program focuses on the College's expanding activities in vision rehabilitation/low vision education and research. Salary and rank commensurate with experience. Applications are invited for the following positions:

#### Vision Scientist

An eye care specialist (O.D., M.D.) with graduate research degree or equivalent and eligibility for Pennsylvania State Licensure is being sought. Requirements include research experience in low vision or visual science and eagerness to work in an interdisciplinary environment. Teaching experience and a record of extramurally funded research preferred. Responsibilities include a mixture of research, teaching and patient care in the William Feinbloom Vision Rehabilitation Center.

#### Clinical Psychologist

An individual with a doctorate in clinical psychology with a minimum of three years field experience in rehabilitation psychology. Clinical experience with visually impaired patients and research, and teaching background is preferred. Responsibilities include teaching, patient care in the William Feinbloom Vision Rehabilitation Center, and low vision research.

#### Non Tenure-Track Researchers

The College seeks excellence in its developing research activities and will provide opportunities for extramurally funded investigators in terms of space, equipment allowance and laboratory support services.

Applicants should submit *curriculum vitae*, summary of academic accomplishments, future research plans, and at least three references prior to May 1, 1983 to:

**Anthony F. DiStefano, O.D., M.P.H.**  
Assistant Dean of Academic Development  
Pennsylvania College of Optometry  
1200 West Godfrey Avenue  
Philadelphia PA 19141  
215/424-5900 Ext. 277

An Equal Opportunity/Affirmative Action Employer

## KING FAHD RESEARCH INSTITUTE JEDDAH, SAUDI ARABIA

NEEDED ARE RESEARCHERS AND RESEARCH TECHNICIANS

As a result of continuing expansion of research activities, we can offer challenging opportunities at both Research Fellows and medical technology levels in the areas of:

**Haematology** — haemoglobinopathies, leukemia

**Cancer** — Epidemiology

**Immunoassay methodology**

**Chemical Analysis**

**Physiology** — respiratory and determination of normal physiological parameters in Saudis

**Pharmacology** — isolation and characterization of certain plant extracts.

Primary consideration will be given to applicants with research experience in the specified fields.

Salary will depend upon experience and qualifications. There is no income tax in the Kingdom and no restrictions on transfer of exchange.

Forty-five days paid annual leave with airline tickets for appointee and up to three dependants, furnished housing also free medical care will be provided.

Applicants are to include detailed curriculum vitae, credentials and two references with addresses.

Applications should be sent to:

Director  
King Fahd Medical Research Center  
King Abdulaziz University  
P.O. Box 6615  
Jeddah, Saudi Arabia

## Plant Molecular Biologist

Molecular Genetics, Inc. an innovative leader in the application of biotechnology to the agricultural sciences, is seeking a plant molecular biologist with expertise in recombinant DNA technology to join our Plant Sciences Division. Preference will be given to applicants with a Ph.D. degree in plant molecular biology, plant genetics, or a related area, such as yeast genetics or yeast molecular biology, and one to three years of postdoctoral experience. However, candidates with extensive experience in recombinant DNA technology and a commitment to the development of plant host/vector systems are also encouraged to apply.

The successful candidate will have the opportunity to interact closely with other members of the plant molecular biology group and with an excellent plant tissue culture group. In addition, we strongly encourage collaboration with scientists in our Animal Health Sciences Division, which includes nucleic acid and protein chemists, immunologists, molecular biologists and a recombinant DNA group concentrating on prokaryotic, yeast and mammalian cloning systems.

Molecular Genetics, Inc. offers excellent, highly competitive salaries and fringe benefits. The Minneapolis-St. Paul area provides outstanding cultural, educational and recreational opportunities. Please send a detailed resume and a list of three references in confidence to:

**William J. DeLorbe, Ph.D.**  
Molecular Genetics, Inc.  
10320 Bren Road East  
Minnetonka, MN 55343



Molecular Genetics Inc

## AUSTRALIA

**DIRECTOR—MATERIALS RESEARCH LABORATORIES**  
A\$52,350 per annum (plus A\$1,250 allowance per annum)

As a consequence of the impending retirement of Dr. L. E. Samuels, the Australian Department of Defence Support requires an outstanding scientist to head its Materials Research Laboratories.

**The Laboratories:** The Materials Research Laboratories (MRL) occupy extensive facilities in Melbourne but also include the Armed Forces Food Science Establishment in Tasmania, the Joint Tropical Trials and Research Establishment in Queensland, and the Materials Testing Laboratory in New South Wales. The Laboratories provide research and development support to all branches of the Australian Defence Force, the Department of Defence, and the Australian Defence Industry by establishing and maintaining scientific and technical expertise in fields relevant to the supply and operation of defence material. These include materials aspects of armaments and defence equipment, explosives and ammunition, and the protection of personnel and equipment. MRL is one of six Laboratories within the Department's Defence Research and Development Organisation. Other elements include the Aeronautical Research Laboratories, the Advanced Engineering Laboratory, the Electronics Research Laboratory, the Royal Australian Navy Research Laboratory, and the Weapons Systems Research Laboratory. MRL has a total staff of some 700, including 230 professional staff.

**The Position:** The director is responsible for the management and scientific direction of the Materials Research Laboratories. In particular the director is required to:

- Direct the implementation of the approved research and development program and initiate and develop proposals for new items or activities for inclusion in the program;
- Accept responsibility for the scientific direction of major projects;
- Provide an advisory, consultative, and representational service to the Australian Defence Forces, other elements of the defence organisation, the Australian defence industry, Commonwealth/State and Territory Government departments, and the industrial sector, and direct the conduct of research and investigations in support of this service.

**The Person:** We are looking for an outstanding person with proven ability to provide leadership and manage scientific laboratories and to develop research programs to match defence needs. Notable achievements in at least one of the scientific fields are desirable. The successful applicant will be expected to have an appropriate degree in science or engineering combined with extensive experience in scientific research and development.

**The Location:** The Melbourne facilities of the Materials Research Laboratories are located at Maribyrnong, a western suburb of Melbourne, the capital city of the State of Victoria. Melbourne has a population of more than 3 million and is located on Port Phillip Bay.

**Conditions:** The tenure arrangements for this position will be negotiated with the successful applicant. He or she may be either permanently appointed to the Australian Public Service or engaged for a fixed term of employment. Conditions of service include 4 weeks' annual leave, cumulative paid sick leave, and, in the case of permanent appointees, long service leave and superannuation benefits. Additional benefits include business class air travel to Australia for the successful applicant and dependants and assistance with removal expenses. A short-term accommodation allowance on arrival in Australia may be payable in certain circumstances.

Detailed information relating to these conditions may be obtained from: **The Australian Public Service Recruitment Representative, Australia House, The Strand, London, WC2B 4LA**, (telephone: London 4388000).

Further information regarding the position can be obtained from: **The Defence Science Representative, Dr. John Tregellas-Williams, Australia House, London (telephone: 01-438 8265)**, or from: **C. C. Halton, CBE, Secretary, Department of Defence Support, Anzac Park West Building, Canberra ACT 2600, Australia**.

Applications detailing educational qualifications and experience, together with the names of at least three referees, should be forwarded to: **Management Services Branch, Australian Embassy, 1601 Massachusetts Avenue, NW, Washington, D.C. 20036-2273**.

Closing date: 8 April 1983.

## POSITIONS OPEN

**MICROBIOLOGY:** The West Virginia School of Osteopathic Medicine (WVSOM) invites applications for two tenure-track positions available 1 July 1983. Though preference will be given to those applicants whose background is in virology and/or immunology, successful candidates will be expected to teach in the general microbiology course (including parasitology), participate in the committee structure of the School, and take part in a developing research program. Rank and salary will be commensurate with experience. Applications, including current curriculum vitae and the names of three references, should be sent to: **Elizabeth Blatt, Ph.D., Associate Dean for Academic Affairs/Basic Science, West Virginia School of Osteopathic Medicine, Lewisburg, West Virginia 24901.** Deadline for applications is 1 May 1983.

WVSOM is an Affirmative Action/Equal Opportunity Employer

**PATHOLOGIST.** Applications are invited for a tenure-track position in pathology at Brown University. Candidates (M.D., D.V.M., and/or Ph.D.) must have a minimum of 2 years of postdoctoral or residency training and be capable of teaching systemic and general pathology to medical and graduate students. The successful candidate is expected to establish an independent research program oriented to the study of disease pathogenesis at the cellular or molecular level. Part-time appointment in anatomic or clinical pathology can be arranged at a Brown University-affiliated hospital for suitable candidates. Please send curriculum vitae, a description of research plans and career objectives, and the names of three references to: **Dr. Nelson Fausto, Chairperson, Section of Pathology, Division of Biology and Medicine, Brown University, Providence, R.I. 02912.** We encourage applications from women and minority candidates. Brown University is an Equal Opportunity/Affirmative Action Employer. Deadline for applications: 15 May 1983.

**PHARMACOLOGY/TOXICOLOGY.** A tenure-track assistant professor position, joint with the College of Pharmacy and the College of Veterinary Medicine, is available for summer/fall 1983. Applicants in any field of modern pharmacology or toxicology are invited to apply. Ph.D. or equivalent degree is required. Duties include teaching professional and graduate courses and establishment of a vigorous, independent research program. Closing date is 1 May 1983. Send letters of application, curriculum vitae, three references, and a summary of research interests to:

**Dr. John O. Dickinson, Chairman, Search Committee  
College of Veterinary Medicine  
Washington State University  
Pullman, Wash. 99164-7012**

Washington State University (WSU) is an Equal Opportunity/Affirmative Action Employer. In order to assist WSU's effort to meet its Affirmative Action goals, minority and/or women candidates are encouraged to identify themselves as such in their applications.

### ADVANCED GENETIC SCIENCES, INC.

Advanced Genetic Sciences, Inc. (AGS) is seeking a Ph.D. level research associate or research scientist and B.S./M.S. level research technologists to work at our Manhattan, Kansas, laboratory in the area of **PLANT SOMATIC HYBRIDIZATION**. AGS, with a basic research facility in Berkeley, California, as well as Manhattan, is a biotechnology company engaged in the improvement of crop plants through development and application of modern technologies.

Persons interested in joining a strong research team should send a résumé, three letters of reference, academic transcripts, and a statement of research interests to:

**ADVANCED GENETIC SCIENCES  
c/o Dr. Dennis Bidney  
P.O. Box 1373  
Manhattan, Kansas 66502**

**POSTDOCTORAL POSITION** available at UCLA School of Medicine to study transduction in photoreceptors or synaptic mechanisms in retinal cells using patch clamp techniques on isolated cells in tissue culture. No previous experience with these techniques is necessary, but extensive background in membrane biophysics is required. Applicant must be U.S. citizen or permanent resident. Send inquiries to: **G. L. Fain, Laboratoire de Neurobiologie, Ecole Normale Supérieure, 46 rue d'Ulm, 75005 Paris, France.**

## POSITIONS OPEN

### POSTDOCTORAL ASSOCIATES (TWO) IN TRANSPORT PHYSIOLOGY

Positions for recent Ph.D. graduates in cellular physiology, biochemistry, or related discipline to carry out studies on mechanism and regulation of sodium pump using reconstituted red cell ghosts or purified renal enzyme. Experimental approaches include isotopic transport and biochemical reaction initiated by photo-released (caged) substrates. Experience in radioisotope flux studies and/or biochemical techniques desirable. Available from spring 1983, for up to 3 years. Salary at appropriate NIH level. Send application with curriculum vitae and names of three references to: **Dr. Jack H. Kaplan, University of Pennsylvania, Department of Physiology, Philadelphia, Pa. 19104.** Equal Opportunity/Affirmative Action Employer.

**POSTDOCTORAL FELLOW/RESEARCH ASSOCIATE.** Position available immediately for M.D. or Ph.D. (pharmacology or pharmaceuticals) to join a team studying receptor regulation in respiratory disease. Background in receptor pharmacology and/or cell biology desirable. Send curriculum vitae and references to: **Dr. Stanley J. Szeffer, Director of Pediatric Clinical Pharmacology, National Jewish Hospital and Research Center, 3800 East Colfax Avenue, Denver, Colorado 80206.**

**POSTDOCTORAL FELLOW** to join established multidisciplinary research team in cardiovascular section, Medical Research Service, VA Medical Center at Little Rock, Arkansas. One position is available immediately for recent Ph.D. biochemist to study Na<sup>+</sup>-Ca<sup>2+</sup> channels in isolated sarcolemmal membrane vesicles from ischemic myocardium. Experience with quantitative determination of phospholipid composition and analysis of phospholipase with specialized techniques is necessary. Familiarity with subcellular organelle isolation and functional aspects desirable but not mandatory. Stipends range from \$17,000 to \$20,000, depending on the qualifications. Send curriculum vitae and names of references to: **Dr. Marvin L. Murphy, Chief, Cardiology Section, VA Medical Center, 300 East Roosevelt Road, Little Rock, Arkansas 72206.** An Affirmative Action/Equal Opportunity Employer.

**TWO POSTDOCTORAL POSITIONS**, one available immediately, for ongoing program in molecular biology of mammalian spermatogenesis and fertilization. Experience in biochemical methodology required. Send curriculum vitae to: **Dr. Toby C. Rodman, Department of Cell Biology and Anatomy, Cornell University Medical College, 1300 York Avenue, New York, N.Y. 10021.**

**POSTDOCTORAL POSITION** available immediately for an individual with a Ph.D. in molecular genetics, molecular immunology, or related field to study the molecular mechanisms of resistance to retrovirus-induced leukemogenesis in the mouse. Send curriculum vitae and names of three references to: **Dr. Kenneth Blank, Department of Pathology/G3, University of Pennsylvania School of Medicine, Philadelphia, Pa. 19104.** University of Pennsylvania is an Affirmative Action/Equal Opportunity Employer.

**POSTDOCTORAL/RESEARCH ASSOCIATES.** Prominent research laboratory affiliated with Yale University has two positions immediately available in environmental health sciences. Project deals with indoor air pollution and effect on health and comfort. Send curriculum vitae and names of three references to: **Dr. William S. Cain, John B. Pierce Foundation Laboratory, 290 Congress Avenue, New Haven, Conn. 06519.** An Equal Opportunity/Affirmative Action Employer.

### POSTDOCTORAL RESEARCH ASSOCIATE UNIVERSITY OF CALIFORNIA SAN FRANCISCO

The Drug Delivery Research Group is seeking a Ph.D. to carry out independent and collaborative research on in vivo drug carriers. Areas of research include liposomes, polymers, modified proteins, and synthetic membranes. A Ph.D. and background in physical chemistry, organic chemistry, pharmaceuticals, biophysics, or biochemistry are required. Salary range: \$18,000 to \$24,000 per year. Send curriculum vitae and names of two references by 30 April 1983 to: **Dr. C. Anthony Hunt, Drug Delivery Research Group, S-926, University of California, San Francisco, Calif. 94143.** An Affirmative Action/Equal Opportunity Employer.

## POSITIONS OPEN

A **POSTDOCTORAL POSITION** is available immediately for a Ph.D. in biochemistry or related field to study the influence of diabetes mellitus on arachidonic acid metabolism by rat cerebral microvessels. Applicants should have experience in a broad range of lipid techniques including the isolation and radio-labeling of animal tissues, lipid extraction, and quantitation by thin-layer and paper chromatography, high-pressure liquid chromatography, and radioimmunoassay. Send résumé to: **Personnel Department, Number 2034, Boston University Medical Center, 80 East Concord Street, Boston, Mass. 02118.** An Equal Opportunity Employer, M/F.

A **POSTDOCTORAL POSITION** is available in September 1983 in a group which is isolating genes coding for cAMP phosphodiesterase and adenylate cyclase. Our intention is to use the genes to control cAMP mediated events in several types of transformable cell. Experience in molecular biology or biochemistry is desirable. The work will be carried out in the Department of Anatomy and Cell Biology of The College of Physicians and Surgeons of Columbia University in New York City. Until May 1983, applications including curriculum vitae and the names and addresses of three referees, should be sent to: **Dr. Richard H. Kessin, Department of Cellular and Developmental Biology, The Biological Laboratories, Harvard University, 16 Divinity Avenue, Cambridge, Mass. 02138.** Columbia University is an Affirmative Action/Equal Opportunity Employer.

**POSTDOCTORAL RESEARCH ASSOCIATE** to join group working on application of monoclonal antibodies in enzymology. Send curriculum vitae and names of three references to: **Dr. Harry Harris, Department of Human Genetics, University of Pennsylvania School of Medicine, 195 Medical Laboratories/G3, 37th and Hamilton Walk, Philadelphia, Pa. 19104.** Equal Opportunity/Affirmative Action Employer.

**POSTDOCTORAL RESEARCH ASSOCIATE** position available immediately to study protoplast isolation, culture, production of cytoplasts, and their use to transfer cytoplasmic male sterility in crop plants. The initial appointment is for 2 years with opportunity for extension. Interested candidates should hold a Ph.D. degree in plant breeding, genetics, or biology. Training in plant tissue culture is required and experience in the isolation, culture, and fusion of plant protoplasts and a working knowledge of molecular biology techniques is desired. Salary is commensurate with experience and qualifications. Send curriculum vitae and name of three references to: **Dr. K. C. Sink, Department of Horticulture, Michigan State University, East Lansing, Mich. 48824-1112.** An Equal Opportunity/Affirmative Action Employer.

**POSTDOCTORAL STAFF FELLOW** research positions available in virology on the NIH reservation in spring and fall 1983. Prerequisite M.D. or Ph.D. equivalent. Two-year appointment. Experience with hepatitis viruses, molecular biology, or virology/immunology desirable. Send curriculum vitae, statement of research goals, and names of references to:

**Gerald V. Quinman, M.D.  
Food and Drug Administration  
National Center for Drugs and Biologics  
Office of Biologics  
Division of Virology, HFN-840  
3800 Rockville Pike  
Bethesda, Maryland 20205  
Telephone: 301-496-3144**

### UNIVERSITY OF CALIFORNIA, IRVINE (UCT) POSTDOCTORAL TRAINING IN NEUROBIOLOGY OF AGING

Postdoctoral scholar stipends are available for students interested in the neurobiology of aging particularly as related to Alzheimer's disease, the restoration of function after CNS injury, and the neural basis of behavioral plasticity in the aged. Participating faculty include Drs. C. Cotman and J. Marshall (synaptic plasticity and aging, Alzheimer's disease); H. Killackey and J. Fallon (neuroanatomy of aging); G. Lynch, J. McGaugh, and L. Stein (learning and memory); and A. Starr and M-L. Kean (cognitive processes, Alzheimer's disease and aging). Positions available immediately. Candidates should address inquiries to:

**Dr. Carl Cotman  
Department of Psychobiology  
University of California, Irvine  
Irvine, California 92717**

UCI  
An Equal Opportunity/Affirmative Action Employer

# DIRECTOR PHARMACEUTICAL DEVELOPMENT

Travenol Laboratories, Inc., a diversified manufacturer of medical care products, is currently recruiting for an experienced R & D professional to direct all research efforts for pharmaceutical drug development and product improvement. This individual will be headquartered at our research facility in north suburban Chicago and will have significant managerial responsibility both in terms of direct reporting relationships and budgetary control.

A Ph.D. in Physical Pharmacy or related field with 8-10 years demonstrated experience in pharmaceutical research is required. We are seeking an accomplished manager of technical resources who has a proven track record in building and motivating successful R & D efforts. A background in parenteral formulation development is desirable.

Travenol provides an attractive salary and fringe benefit package and outstanding opportunity for career enhancement. For consideration, please respond in confidence with resume and salary requirements to:



Equal Opportunity Employer

Executive Staffing  
Dept. PBS  
Travenol Laboratories, Inc.  
One Baxter Parkway  
Deerfield, IL 60015

## RESEARCH ASSOCIATES

AMGen, an established biotechnology company with a broad capabilities base, is seeking Research Associate level scientists for our Thousand Oaks Laboratory. Qualified candidates will have a BS or MS degree and recent laboratory experience in one of the following areas.

- Protein Chemistry
- Protein Purification
- Bio-Organic Chemistry

Research activities at AMGen will lead to health care and industrial chemical products based on recombinant DNA and hybridoma technologies. Our staff currently includes 100 employees in two locations—Thousand Oaks, California and Boulder, Colorado. We are also building a pharmaceutical pilot plant in Chicago's High Technology Park, with completion slated for summer, 1984.

We offer an excellent salary and benefits package, as well as equity participation. Please send your resume and a cover letter stating your qualifications for a position. Equal Opportunity Employer M/F/H



PERSONNEL (FS)  
AMGen  
1900 Oak Terrace Lane  
Thousand Oaks, CA 91320

## KING FAISAL UNIVERSITY COLLEGE OF MEDICINE DAMMAM, SAUDI ARABIA 1983-1984 Academic Year



King Faisal University, College of Medicine, invites applications from qualified men and women for the 1983-1984 academic year in the following disciplines:

<b>CHEMISTRY</b>	<b>ANATOMY</b>	<b>MICROBIOLOGY</b>
<b>BIOLOGY</b>	<b>BIOCHEMISTRY</b>	<b>PHYSIOLOGY</b>
<b>PHYSICS</b>	<b>EPIDEMIOLOGY</b>	<b>IMMUNOLOGY</b>
	<b>PATHOLOGY</b>	

Doctorate and minimum of 2 years teaching experience (medical school) required. Language of instruction is English. Interviews will be held in London and Houston.

Salaries are highly competitive and negotiable. Benefits include free furnished housing, educational allowances, air tickets to and from Saudi Arabia once each year for family of four, 60-day paid vacation, and liberal overweight baggage allowance. No Saudi income tax.

Send curriculum vitae with day and evening telephone numbers and the names and addresses of three references to:

**Dr. Tawfik Tamimi**  
Dean, College of Medicine  
c/o U.S. Recruiting Office  
2425 West Loop South, Suite 540  
Houston, Texas 77027

or

c/o U.K. Recruiting Office  
29 Belgrave Square  
London, S.W.1X, 8QB, England

## Assistant Director

Key role in research, development and regulatory processes of new pharmaceutical products.

Pfizer International, one of the world's largest multinational pharmaceutical companies, seeks a scientist for a challenging opportunity as Assistant Director of Scientific Affairs in our Medical Division. Working with a multidisciplinary team of medical, scientific and marketing personnel, you will have an important role in the planning, design and implementation of worldwide programs in clinical and pharmacological research.

Applicants must have a doctoral degree in a physical or life science with experience in pharmacology, and at least 1 year of experience in clinical research. Strong written and oral communication skills are essential. The ability to organize and summarize preclinical and clinical data or other documents for regulatory submissions is important. Prior involvement in protocol design and the analysis and interpretation of data from clinical research programs is a definite asset.

Qualified candidates interested in taking advantage of this career opportunity should send resume in confidence to: **Mr. John R. Toler, Pfizer International, 235 East 42nd Street, New York, NY 10017.**



An equal opportunity  
employer

## DIRECTOR

### University of Illinois College of Medicine at Urbana-Champaign

The University of Illinois College of Medicine at Urbana-Champaign (UICOM-UC) is seeking candidates and/or nominations for the position of Director. The Director will be responsible for the program at UICOM-UC and will report to the Dean of the College, who has overall administrative responsibility for the College's programs at Urbana-Champaign and three other state locations.

The program at Urbana-Champaign admits approximately 130 students into the first year, of which 25 continue their four years of medical education at this site. A high percentage of the students remaining at Urbana-Champaign are in the Medical Scholars Program, a program in which medical training and graduate education are pursued simultaneously.

Candidates must have the M.D. degree and additional research experience with preference given to those with M.D. and Ph.D. degrees. He or she should have developed a significant reputation in a given field, be qualified for professorial rank in that field, and have demonstrated a high capacity for achievement. Interested persons should submit their curriculum vita to:

**Dr. Ivens A. Siegel, Chair  
Search Committee for Director  
190 Medical Sciences Building  
506 South Mathews Avenue  
Urbana, IL 61801.**

Applications submitted to the University which are postmarked before April 15, 1983 will be given preference. Starting date and salary subject to negotiation.

*THE UNIVERSITY OF ILLINOIS IS AN AFFIRMATIVE ACTION/  
EQUAL OPPORTUNITY EMPLOYER.*

## RESEARCH AND DEVELOPMENT OPPORTUNITIES

Norwich Eaton Pharmaceuticals, Inc., a wholly owned subsidiary of the Procter and Gamble Company, has two attractive position openings for individuals interested in a challenging and satisfying career. These opportunities are located at our Research and Development facility in Upstate New York.

**Unit Leader/Urologic Section**—Will participate in planning and provide leadership and direction for staff conducting studies on the mechanisms of immunoregulation. We require a PhD in Immunology or the equivalent combination of education and experience. Supervisory experience of PhD scientists is desired.

**Unit Leader/Calcium Regulation Section**—Will supervise, design, and direct research projects related to CNS-Neuropharmacology, with a focus on calcium. We require a PhD in Pharmacology or Neuropharmacology or the equivalent combination of education and experience. Supervisory experience of PhD scientists is desired.

A comprehensive salary and benefits package is provided. Send resume and salary requirements, in confidence, to Richard K. Zinicola/Personnel Representative

**NORWICH EATON PHARMACEUTICALS, INC.  
17 Eaton Avenue  
Norwich, N.Y. 13815**

*An Equal Opportunity Employer M/F*

## POSITIONS OPEN

Open full-time position for a **RESEARCH ASSISTANT** in protein chemistry with an emphasis on organic or analytical chemistry to commence June 1983. Qualified applicants should have a B.S. or M.S. in chemistry or biochemistry. Experience with HPLC, peptide synthesis or sequencing, and micro-purification methodology is preferred. Salary commensurate with experience. Employment will also include liberal fringe benefits. Interested applicants should send résumé with three letters of reference and transcripts to: **Personnel Office, W. Alton Jones Cell Science Center, Old Barn Road, Lake Placid, New York 12946.**

*An Affirmative Action/Equal Opportunity Employer*

**RESEARCH ASSOCIATE.** A full-time research position is available in theoretical molecular biology. The research involves the mathematical and computer analysis of molecular mechanisms for the regulation of gene expression in the evolutionary process. Requires a Ph.D. in biology and at least 1 year of research experience in theoretical molecular biology, including computer programming. Applicant's prior research should have focused on the evolution of gene regulation at the molecular level; \$16,000 per year. Send résumé to: **MESC, 7310 Woodward Avenue, Room 415, Detroit, Mich. 48202; refer to number 5583 (ad paid by employer).**

**RESEARCH ASSOCIATE**—Conduct research on the basic mechanisms of blood coagulation and thrombosis with emphasis on the pathophysiology of the final stages of the coagulation process, particularly fibrin formation and degradation and the interaction of other molecules with fibrin.

Requirements include M.D. or Ph.D. in biochemistry; 3 years of research experience in the above area; detailed knowledge and experience in the biochemistry of fibrinogen and other molecules which interact with it, fibronectin, factor XIII, and coagulation pathophysiology; thorough knowledge of the basic techniques of protein biochemistry.

Forty hours per week; \$20,000 per year.

Send résumé to: **W. Healey, Job Order Number 3209, Division of Employment Security, Hurley Building, Government Center, Boston, Mass. 02201.**

**RESEARCH ASSOCIATE OR POSTDOCTORAL POSITION** in the Laboratory of Developmental Neurobiology. Candidate for this long-term position should have extensive experience with axoplasmic tracer techniques and an interest in neuroembryology. Salary negotiable, depending on experience. Send inquiries and curriculum vitae to: **Dr. Joseph Altman, Department of Biological Sciences, Purdue University, West Lafayette, Indiana 47907. An Equal Opportunity/Affirmative Action Employer.**

**RESEARCH ASSOCIATE POSITION: MICROMETEOROLOGY AND TURBULENCE.** Available immediately. M.S. level training in micrometeorology, atmospheric turbulence, or related areas needed. Experience with turbulence instrumentation and analytical techniques desirable. Employment on 0.75 time basis to allow for Ph.D. study. Send curriculum vitae, transcripts, and names of references by 15 April 1983 to: **Dr. S. B. Verma, Center for Agricultural Meteorology and Climatology, University of Nebraska, Lincoln, Neb. 68583.**

### RESEARCH ASSOCIATES TUMOR IMMUNOLOGY/VIROLOGY

Study exciting tumor immunology system. Experience with cellular immunology, immunochemistry, retrovirology, T cell culture, lymphokines desirable. Recent Ph.D. Send curriculum vitae, graduate transcript, three references, and statement of interests to: **Dr. S. Silagi, Cornell University Medical College, 515 East 71 Street, New York, N.Y. 10021. Equal Opportunity Employer.**

### RESEARCH ENGINEER

Our research division is seeking a qualified candidate to develop new technology and products related to a broad range of air, fuel, and oil filtration applications with special emphasis on aerosol technology. Ph.D. in mechanical engineering and 2 years of experience in filtration research and product development, including familiarity with advanced laboratory apparatus such as particle counters, aerosol generators, and specialized filtration test stands, are required. Full-time position. Salary is \$27,000 per annum. Send inquiry to: **Sath Menon, Wisconsin Job Service, 206 North Broom Street, Madison, Wisconsin 53703. Telephone: 608-266-3678. This ad not paid for by Job Service funds.**

## POSITIONS OPEN

### RESEARCH ASSOCIATE—LIPOPROTEIN METABOLISM

Full-time position; available 1 April 1983.

We are seeking a person in our laboratory to participate in studies of nutritional effects on HDL metabolism in nonhuman primates. Candidates must have a Ph.D. or M.D. Prior research experience in protein, lipid, or lipoprotein metabolism is needed. Salary: \$20,000 per year. Send résumé and references to: **Dr. Lawrence L. Rudel, Professor of Comparative Medicine, Bowman Gray School of Medicine, Winston-Salem, N.C. 27103. Bowman Gray is an Equal Opportunity/Affirmative Action Employer.**

**RESEARCH POSTDOCTORAL POSITION** available immediately for 2 years for applicant with Ph.D. and interest in developmental immunobiology, thymic hormones, lymphokines, and aging. Working knowledge of hybridoma technology and ELISA is desired. Send curriculum vitae and three letters of recommendation to: **Dr. Genevieve S. Incefy, Memorial Sloan-Kettering Cancer Center, New York, N.Y. 10021.**

## SCIENTIFIC ASSISTANT

Maintain reference collection of recent mollusks including accessioning, cataloguing, identifying, and incorporating specimens into the collection. Also assists curators, answers general inquiries, and attends to loan requests.

**QUALIFICATIONS:** B.A./B.S. in biology with a concentration or specialization in invertebrate zoology, and knowledge of systematics and taxonomy of recent mollusks. Light typing required. Reading knowledge of French, German, or Russian and skills in preparation techniques for hard and soft tissue are desirable.

Starting salary: \$13,878 per annum. Benefits include major medical/dental coverage, 4 weeks of vacation, and tuition reimbursement. Send résumé to:

### DEPARTMENT 312577

**1501 Broadway, New York, N.Y. 10036  
An Equal Opportunity/Affirmative Action  
Employer, M/F/H**

**SCIENTIFIC DIRECTOR.** Immediate opening for a part-time scientific director in a nonprofit research organization. Earned doctorate in a scientific field, and recent experience in research a must. Salary open; excellent fringe benefits. Complete position announcement can be received by writing or calling: **Ms. O'Reilly, RIC, Drake Creekside Two, Number 200, 2629 Redwing Road, Fort Collins, Colo. 80526. Telephone: 303-226-6003.**

**SENIOR SOFTWARE ENGINEER**—Responsibilities: designing and developing computer programs to analyze x-ray images for diagnostic purposes; collaborating with physicists, physicians, and engineers to develop algorithms for computer applications; analyzing data to validate techniques for the improvement of medical imaging systems; applying knowledge of medical image processing to investigate cardiac functions and cardiovascular system parameters. Requirements are: a Ph.D. in biomedical engineering and 2 years of experience in medical computer image programming, with practical experience in biomedical applications in radiology, cardiology research, and clinical testing; experience in programming of FORTRAN and ASSEMBLY languages on minicomputers and microprocessors also required. Starting salary: \$30,000. Refer résumé to: **Ohio Bureau of Employment Services, 3135 Euclid Avenue, Cleveland, Ohio 44115, Order Number 0221277, Mildred McGill.**

**SYSTEMS SCIENCE/CYBERNETICS.** Cybernetic Systems Program is seeking applicants for two full-time positions: (i) assistant/associate professor (probationary tenure-track) and (ii) lecturer/visiting professor (temporary). Applicants should have advanced degrees and at least 5 years of experience in the teaching and application of systems skills. Apply directly or contact: **Norman O. Gunderson, Cybernetic Systems Program, San Jose State University, San Jose, California 95192, for full details by 1 May 1983. Affirmative Action/Equal Opportunity/Title IX Employer.**

# Genetic Systems is expanding.

Genetic Systems is engaged in the research and development of products for the diagnosis and treatment of human diseases.

Research areas include:

Diagnosis and Treatment of Infectious Diseases

Diagnosis and Treatment of Immune Disorders

Tissue and Cell Typing

We seek innovative professional and technical persons with expertise in:

IMMUNOLOGY

MONOCLONAL ANTIBODIES

RECOMBINANT DNA

BIOCHEMISTRY

MICROBIOLOGY

REGULATORY AFFAIRS

Genetic Systems offers competitive salary and excellent benefits.

Apply to:

Dr. Robert Nowinski,  
Scientific Director



Genetic Systems  
CORPORATION

3005 First Avenue, Seattle, WA 98121  
An Equal Opportunity Employer

Nominations and applications are invited for the position of **DEAN OF THE GRADUATE SCHOOL** at Colorado State University (CSU). Position is a 12-month appointment; applicants must qualify for tenure in an academic department.

**DEADLINE FOR RECEIPT OF COMPLETED APPLICATIONS:** 15 April 1983.

**POSITION AVAILABLE:** 1 July 1983.

**RESPONSIBILITIES:** The Dean of the Graduate School is responsible for administrative support and leadership of graduate education at Colorado State University. Other areas of responsibilities include student admissions, program review and evaluation, participation in faculty recruiting, and enforcement of appropriate standards. In addition, the dean has responsibility for coordinating interdisciplinary programs at the graduate level and for administering six institutes and centers. The dean is responsible to the academic vice president and works with the vice president for research, the Graduate Council, academic deans, department heads, and faculty to coordinate, promote, and improve graduate education. The dean serves as a member of the Council of Deans, Graduate Council, and Faculty Council.

**QUALIFICATIONS:** Earned doctorate; demonstrated accomplishment in college teaching at the undergraduate and graduate levels and scholarly/creative endeavor; substantial experience in graduate advising and service on graduate committees; administrative experience at the department or college level; experience with or interest in interdisciplinary programs; commitment to academic excellence; familiarity with program evaluation procedures and processes; and ability to work harmoniously with students and faculty in program development and improvement.

Complete application consists of statement of interest, résumé, and three letters of reference. Send nominations or applications, résumé, and letters of reference to:

Dean William B. Cook  
College of Natural Sciences  
Colorado State University  
Fort Collins, Colo. 80523  
Telephone: 303-491-6865

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## SCIENCE

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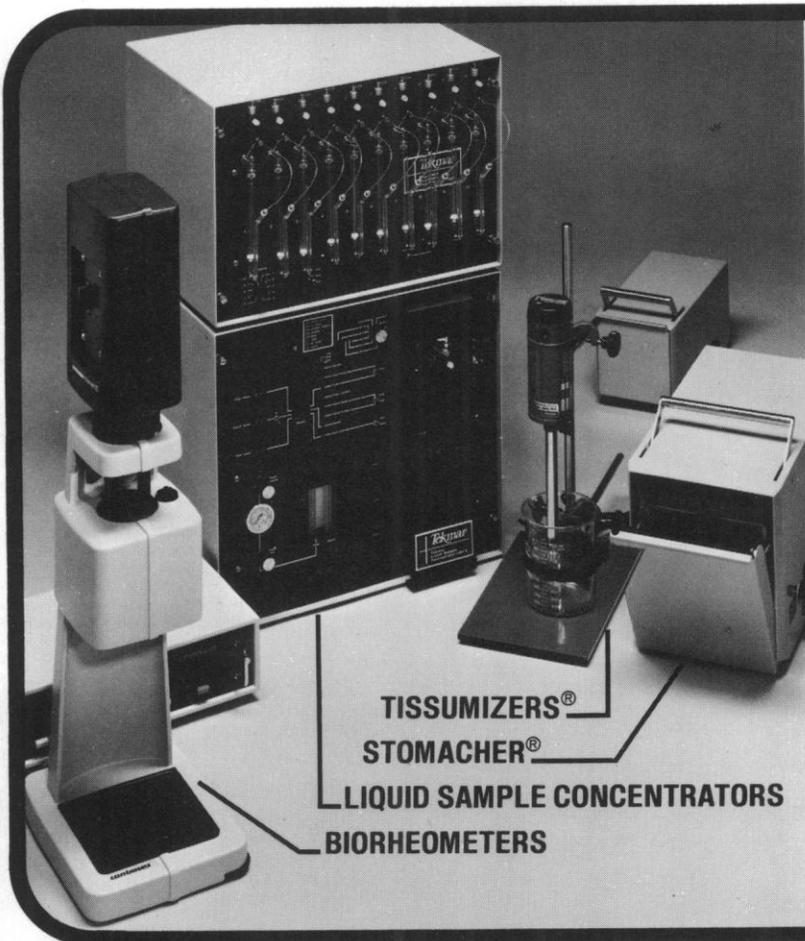
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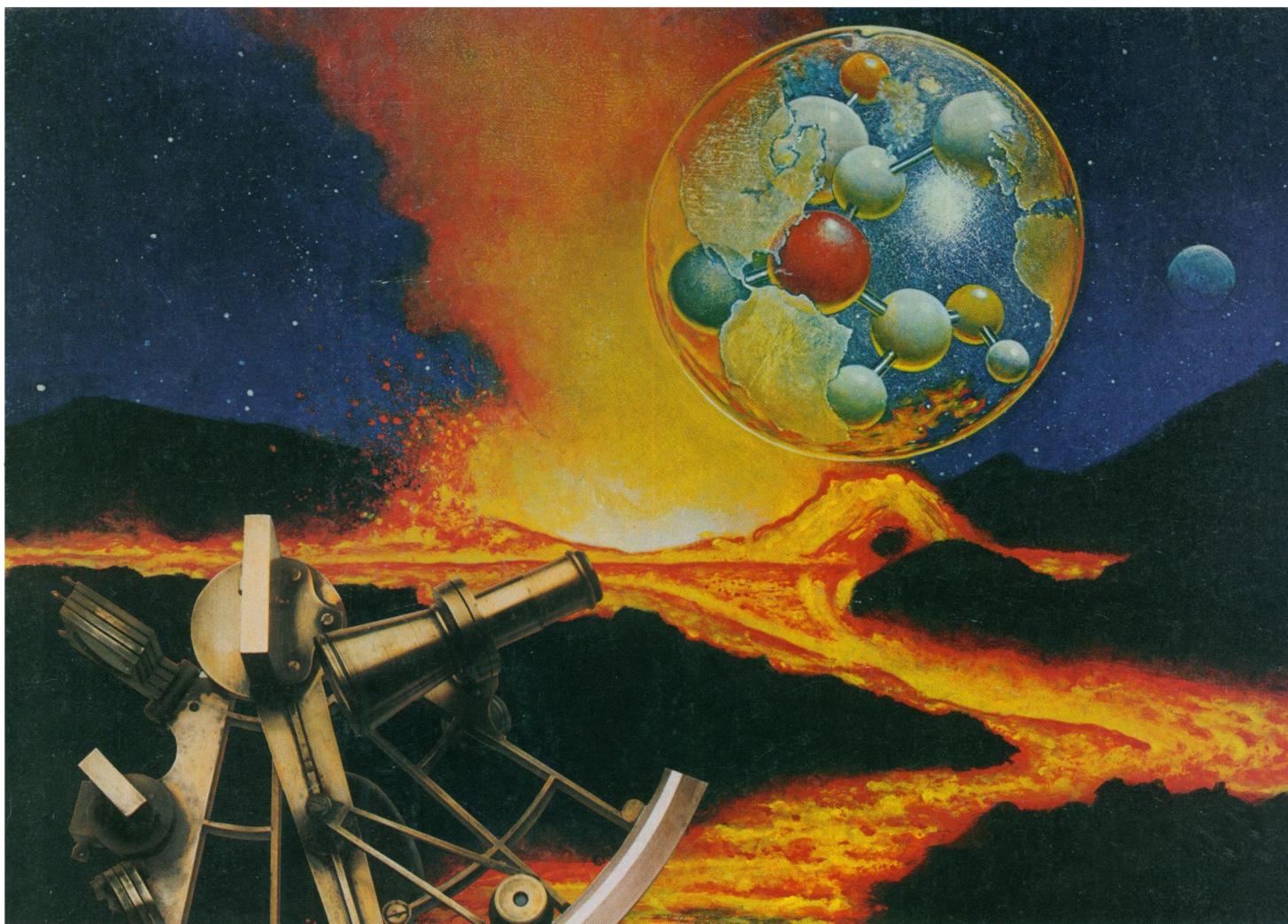
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