

ultimately on the recognition of natural stages of geologic evolution, that is, large global geologic cycles each comprising a long period of relative tectonic quiescence and a subsequent shorter period of orogeny. Sixteen such orogenies of varying rank are recognized and tabulated, including the orogenies that set off the main Precambrian divisions. Some special plutonic complexes, for example anorthosite and rapakivi granite, occupy particular niches in this scheme of things. These cycles are considered to occur against a background of directed irreversible evolution of Earth. Precambrian crustal evolution is divided by Salop into five stages: protoplanetary (5 to 4.5 billion years ago), permobile (4.5 to 3.5 billion years ago), protoplatformal-protogeosynclinal (3.5 to 2.6 billion years ago), platformal-geosynclinal (labile platforms) (2.6 to 1.9 billion years ago), and platformal-geosynclinal (stable platforms) (1.9 to 0.6 billion years ago).

Salop contends that no satisfactory general tectonic theory exists to explain the diversity of Precambrian geologic phenomena and that such a theory, when conceived, will probably represent some blend of "mobilism" and "fixism." In this regard he is responding on the one hand to modern plate tectonics, and on the other hand to his perception, which I for the most part share, that many Precambrian tectonic elements are firmly rooted in and dependent upon their predecessors. Salop cites, as an example of tectonic longevity and hence "fixism," the basin of the Pacific Ocean, which, he argues, is clearly outlined by the distribution of 1.9-billion-year-old Neoprotozoic geosynclines (fold belts). Thus he contends that the concept of lithospheric plates will contribute in part to an eventual general Precambrian tectonic theory. Salop flirts with but unfortunately does not pursue the potentially fruitful concept of thickening tectospheric "plates" in explanation of irreversible lithostratigraphic-plutonic trends in the Precambrian. Many of his interpretations are seemingly uninfluenced by the earth science "revolution" of recent decades, hence are dated and in some cases irrelevant. He supports the widely held view that many irreversible lithic-organic trends can be explained by postulating the gradual oxidation of the atmosphere and hydrosphere by photosynthesis.

The text contains numerous spelling and grammatical errors. Fortunately they do not prevent basic comprehension.

In conclusion, this book is the product of a diligent and thoughtful field geolo-

gist with a commendable capacity for fruitful global synthesis across the immense span of Precambrian time. The voluminous stratigraphic data will be of particular interest to all students of Precambrian geology.

ALAN M. GOODWIN

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Books Received

Aging. An Exploration. David P. Barash. University of Washington Press, Seattle, 1983. xii, 240 pp. \$14.95.

The AIDS Epidemic. Kevin M. Cahill, Ed. St. Martin, New York, 1983. xvi, 176 pp., illus. Cloth, \$12.95; paper, \$7.95.

Air Power in the Nuclear Age. M. J. Armitage and R. A. Mason. University of Illinois Press, Urbana, 1983. xvi, 296 pp. \$24.95.

Biochemical and Biological Markers of Neoplastic Transformation. Proceedings of an institute, Corfu, Greece, Sept. 1981. Prakash Chandra, Ed. Plenum, New York, 1983. xvi, 640 pp., illus. \$89.50. NATO Advanced Science Institutes Series A, vol. 57.

Bioelectrochemistry I. Biological Redox Reactions. Proceedings of a course, Erice, Italy, Nov. 1981. G. Milazzo and Martin Blank, Eds. Plenum, New York, 1983. xii, 348 pp., illus. \$52.50. Ettore Majorana International Science Series, vol. 11.

Cataclysmic Variables and Related Objects. Proceedings of a colloquium, Haifa, Israel, Aug. 1982. Mario Livio and Giora Shaviv, Eds. Reidel, Boston, 1983 (distributor, Kluwer Boston, Hingham, Mass.). xii, 352 pp., illus. \$48. Astrophysics and Space Science Library, vol. 101.

Cayman Islands Seashore Vegetation. A Study in Comparative Biogeography. Jonathan D. Sauer. University of California Press, Berkeley, 1982. xiv, 162 pp., illus. Paper, \$14.25. University of California Publications in Geography, vol. 25.

Cell and Muscle Motility. Vol. 4. Robert M. Dowben and Jerry W. Shay, Eds. Plenum, New York, 1983. xiv, 334 pp., illus. \$39.50.

Cell ATP. William A. Bridger and J. Frank Henderson. Wiley-Interscience, New York, 1983. xii, 170 pp. \$59.95. Transport in the Life Sciences, vol. 5.

Environmental Geology. Ronald W. Tank. Oxford University Press, New York, 1983. xvi, 550 pp., illus. Paper, \$16.95.

The Enzymes. Vol. 15, Nucleic Acids, Part B. Paul D. Boyer, Ed. Academic Press, New York, ed. 3, 1982. xiv, 660 pp., illus. \$79.50.

Evolution kosmischer, biologischer und geistiger Strukturen. Albrecht Unsöld. Wissenschaftliche Verlagsgesellschaft, Stuttgart, ed. 2, 1983. 152 pp., illus. DM 25.60. Bücher der Zeitschrift Naturwissenschaftliche Rundschau.

Fourth International Conference on Physicochemical Hydrodynamics. New York, June 1982. Robert Pfeffer, Ed. New York Academy of Sciences, New York, 1983. xiv, 536 pp., illus. Cloth or paper, \$100. Annals of the New York Academy of Sciences, vol. 404.

Frame of the Universe. A History of Physical Cosmology. Frank Durham and Robert D. Purrington. Columbia University Press, New York, 1983. xii, 284 pp., illus. \$24.95.

The Future of Gas and Oil from the Sea. Gerard J. Mangone, Ed. Van Nostrand Reinhold, New York, 1983. xxiv, 216 pp., illus. \$35.

Gas Tables. International Version. Thermodynamic Properties of Air, Products of Combustion and Component Gases, Compressible Flow Functions. Joseph H. Kennan, Jing Chao, and Joseph Kaye. Wiley-Interscience, New York, ed. 2, 1983. xvi, 212 pp. \$37.95.

Gay Men's Health. A Guide to the AID Syndrome and Other Sexually Transmitted Diseases. Jeanne Kassler. Harper and Row, New York, 1983. x, 166 pp. Cloth, \$12.95; paper, \$7.95.

The Gene Business. Who Should Control Biotechnology? Edward Yoxen. Pan Books, London, 1983. 264 pp., illus. Paper, £3.95. Crucible: Science in Society.

Hormones in Blood. C. H. Gray and V. H. T. James, Eds. Academic Press, New York, ed. 3, 1983. Vol. 4. xxiv, 510 pp., illus. \$72. Vol. 5. xxiv, 316 pp., illus. \$50.

Human Sexuality. A Student-Centered Learning Experience. Georgia Witkin-Lanoll. Harper and Row, New York, 1983. vi, 330 pp. Paper, \$13.50.

Hydraulic Structures. M. M. Grishin, Ed. Translated from the Russian edition (Moscow, 1979) by Prem Kumar Dang. Mir, Moscow, 1983 (U.S. distributor, Imported Publications, Chicago). 2 vols. 468 pp., illus., and 264 pp., illus. \$15.45.

Hydrocarbons from Methanol. Clarence D. Chang. Dekker, New York, 1983. viii, 130 pp., illus. \$29.75.

Hypermobility of Joints. Peter Beighton, Rodney Grahame, and Howard Bird. Springer-Verlag, New York, 1983. xiv, 178 pp., illus. \$44.

Imagery. Current Theory, Research, and Application. Anees A. Sheikh, Ed. Wiley-Interscience, New York, 1983. xiv, 582 pp. \$45. Wiley Series on Personality Processes.

Immunological Factors in Human Contraception. Papers from a meeting. Sidney Shulman and Franco Dondero, Eds. Field Educational Italia/Acta Medica. Rome, 1983. vi, 234 pp., illus. Lit. 60,000.

Indian New England before the Mayflower. Howard S. Russell. University Press of New England, Hanover, N.H., 1983. xii, 284 pp., illus. Paper, \$11.95. Reprint of the 1980 edition.

Inorganic Chemistry. Principles of Structure and Reactivity. James E. Huheey. Harper and Row, New York, ed. 3, 1983. xvi, 936 pp., illus., + appendixes. \$33.95.

Minerals, Rocks, and Fossils. R. V. Dietrich and Reed Wicander. Wiley, New York, 1983. viii, 212 pp., illus. Paper, \$9.95. A Self-Teaching Guide.

Mistakes . . . and How to Find Them before the Teacher Does. . . . A Calculus Supplement. Barry Cipra. Birkhäuser, Boston, 1983. xiv, 70 pp., illus. Paper, \$4.95.

Modern Robot Engineering. Translated from the Russian by Grigory Pasechnik. Mir, Moscow, 1982 (U.S. distributor, Imported Publications, Chicago). 100 pp., illus. Paper, \$5.95. Advances in Science and Technology in the USSR, Technology Series.

Nonlinear Deformation Waves. Papers from a symposium, Tallinn, U.S.S.R., Aug. 1982. Uno Nigul and Jüri Engelbrecht, Eds. Springer-Verlag, New York, 1983. xxiv, 454 pp., illus. \$42.50.

Non-Linear Parametric Optimization. B. Bank, J. Guddat, D. Klatte, B. Kummer, and K. Tammer. Birkhäuser, Boston, 1983. 228 pp. \$29.95.

Nuclear Physics. Yu. M. Shirokov and N. P. Yudin. Translated from the Russian edition (Moscow, 1980) by Mark Samokhvalov. Mir, Moscow, 1982 (U.S. distributor, Imported Publications, Chicago). 2 vols. 448 pp. and 304 pp., illus. \$16.95.

Numerical Treatment of Inverse Problems in Differential and Integral Equations. Proceedings of a workshop, Heidelberg, Germany, Aug. 1982. P. Deuflhard and E. Hairer, Eds. Birkhäuser, Boston, 1983. xiv, 358 pp., illus. \$27.50. Progress in Scientific Computing, vol. 2.

Pediatric Liver Disease. Proceedings of a symposium, Toronto, May 1980. M. M. Fisher and C. C. Roy, Eds. Plenum, New York, 1983. x, 296 pp., illus. \$42.50. Hepatology, vol. 5.

Petroleum Processing. V. P. Sukhanov. Translated from the Russian edition (Moscow, 1979) by V. Afanasyev. Mir, Moscow, 1982 (U.S. distributor, Imported Publications, Chicago). 408 pp., illus. \$8.95.

The Physics of Superionic Conductors and Electrode Materials. Proceedings of an institute, Odense, Denmark, Aug. 1980. John W. Perram, Ed. Plenum, New York, 1983. viii, 282 pp., illus. \$45. NATO Advanced Science Institutes Series B, vol. 92.

Retroviruses 1. P. K. Vogt and H. Koprowski, Eds. Springer-Verlag, New York, 1983. vi, 148 pp. \$38. Current Topics in Microbiology and Immunology, 103.

Self-Aligning Mechanisms. L. Reshetov. Translated from the Russian edition (Moscow, 1979) by Leo M. Sachs. Mir, Moscow, 1982 (U.S. distributor, Imported Publications, Chicago). 528 pp., illus. \$12.95.

Shark Repellents from the Sea. New Perspectives. Papers from a symposium, Toronto, Jan. 1981. Bernard J. Zahuranec, Ed. Published for the American Association for the Advancement of Science by Westview, Boulder, 1983. xiv, 210 pp., illus. \$26.50. AAAS Selected Symposium Series, 83.

The Sheep Book. A Handbook for the Modern Shepherd. Ron Parker. Sketches by Ruth Halvorson. Scribner, New York, 1983. xxiv, 344 pp., illus. \$19.95.

Three Phases of Matter. Alan J. Walton. Clarendon (Oxford University Press), New York, ed. 2, 1983. xii, 482 pp., illus. Paper, \$24.95.

Time Series and System Analysis with Applications. Sudhakar M. Pandit and Shien-Ming Wu. Wiley, New York, 1983. xx, 586 pp., illus. \$39.95.

Uniqueness and Non-Uniqueness in the Cauchy Problem. Claude Zuily. Birkhäuser, Boston, 1983. xii, 168 pp. \$14. Progress in Mathematics, vol. 33.

Unnatural Deaths in the USSR, 1928-1954. Iosif G. Dyadkin. Translated from the Russian by Tania Deruguine. Transaction Books (Rutgers University), New Brunswick, N.J., 1983. viii, 64 pp. Paper, \$6.95.

Personnel Placement

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Biostatistician (Ph.D. in mathematical statistics). More than 10 years of experience in biostatistics and 5 years in management. Seeking managerial position in a research oriented organization. Experienced in statistical consulting, statistical research, and computing (SAS, APL, FORTRAN, and so forth). Effective communicator, good interpersonal skills, publications. Box 315, SCIENCE. X

Fish Pathologist/Environmental Toxicologist, Ph.D. Seeking postdoctoral position working with environmental pollution effects on aquatic and marine organisms. Publications and 12 years of experience as fish pathologist and environmental toxicologist. Box 316, SCIENCE. X

Microvascular Surgeon of small rodents. B.S. Ten years of surgical experience in organ (heart, kidney, spleen, thymus, and so forth) transplant in the rat and mouse. Strong research background on prolongation of allograft survival. Publications. Desires industrial or academic research position. Box 319, SCIENCE. 11/25; 12/2

Zoologist (Ph.D.). Former college/university teacher of undergraduate/graduate biology courses desires to return to teaching after 9 years of high-tech and government experience. Wants to teach the subject matter of vertebrate biology using lectures, laboratories, and microcomputers. Box 310, SCIENCE. X

POSITIONS WANTED

Immunologist. Ph.D. 1970. University researcher with extensive background in cellular immunity, lymphocyte cell biology, and lymphokines. Current investigation of interferons in lymphocyte mediated target cell killing. Excellent publications and references. Mature and dedicated individual seeking position in academia or industry. Box 312, SCIENCE. 11/25; 12/2

Industrial Microbiologist/Project Manager/Production Consultant. Ph.D. Nine Years of experience in vaccine manufacturing, tissue culture, sterile processing, product development, process involvement, GMP. Management experience. Desires industrial, government, or academic position. Box 308, SCIENCE. 11/25; 12/2

Laboratory Manager position sought. Fifteen years of experience in medical and research laboratories in TEM/SEM/LM, immunohistochemistry, physiology, and viral oncology (10 years supervisory). Graduate degrees. Prefer technical service position in EM or pathology laboratory in health care firm, medical center, or government. No geographic preference. Available early 1984. Box 306, SCIENCE. X

Microbiology, Ph.D.; general management M.B.A. Industrial biotechnology experience in R & D, market development, licensing. Patents and publications. Box 318, SCIENCE. 11/25; 12/2

NMR Spectroscopist: Looking for an opportunity to work in clinical NMR imaging at medical center, hospital, and other places with NMR imager. Box 314, SCIENCE. X

Physiologist/Computer Science. Ph.D. (1982). Cardiovascular/hemodynamics. Experience: in vivo cardiovascular measurements and models, chronic and acute; 2 years of postdoctoral experience; regional alpha-adrenergic VSM control. Publications. Academic/government/hospital/industry. Box 289, SCIENCE. X

Social Kineticist seeks consulting position with persons or institution interested in finding effective solutions to urgent social problems. Box 309, SCIENCE. 11/25; 12/2, 9

POSITIONS OPEN

ANALYTICAL BIOCHEMIST position available for an individual to be responsible for the management of an analytical laboratory supporting a clinical metabolism and nutrition staff. The individual sought is expected to support protocols utilizing stable isotopes to identify and quantify concentrations of natural products and to examine pharmacokinetics of drugs. Must have proven experience with gas chromatography-mass spectroscopy, liquid chromatography, and separation and derivatization techniques, as well as with standard laboratory methods. Experience with instrumentation development is desired. Candidate should have doctorate in related field or equivalent. Salary is commensurate with experience and training. Please send curriculum vitae and names of three references to:

Dr. Cleon W. Goodwin
Department of Surgery
The New York Hospital—Cornell Medical Center
525 East 68 Street
New York, New York 10021

Cornell University is an Equal Opportunity/Affirmative Action Employer.

University of Toronto
Department of Zoology
ASSISTANT PROFESSOR
ANIMAL PHYSIOLOGY

The Department of Zoology, University of Toronto, invites applications for a tenure-track position in animal physiology at the level of assistant professor. The appointee will be expected to participate in undergraduate courses in animal physiology and to develop an independent research programme. Expertise in sensory physiology would be an advantage. The position is tenable at the Erindale College campus beginning 1 July 1984. Send curriculum vitae and three letters of reference to: W. G. Sprules, Associate Chairman, Department of Zoology, University of Toronto, Erindale College, Mississauga, Ontario, Canada L5L 1C6. Closing date is 15 January 1984 or when position is filled. In accordance with Canadian immigration requirements, this advertisement is directed to Canadian citizens and permanent residents.

POSITIONS OPEN

ASSISTANT DIRECTOR, OPERATING SERVICES. The University of Chicago, Office of Animal Care, is seeking a qualified candidate with a B.S. in laboratory animal science or biology, AA-LAS Animal Technologist Certification, and extensive managerial experience in large laboratory animal facilities. A master's in business or science is preferred. You will be directly responsible for the daily management of our facilities and related administrative/financial activities. Assurance that husbandry and operational functions follow approved schedules meeting applicable federal and university policies is your major responsibility. Please send your résumé, including salary expectations, to: Louis J. Rose, Employment Manager, The University of Chicago, 956 East 58 Street, Chicago, Illinois 60637. An Affirmative Action/Equal Opportunity Employer.

ASSISTANT PROFESSORSHIP. Organic tenure-track position. Applicants for this tenure-track position must be committed to excellence in research and teaching. Areas of research which complement those presently represented in the department would be most desirable. Candidates should send complete curriculum vitae which includes a description of future research plans and a documented summary of past accomplishments, and arrange to have at least three letters of recommendation sent to: Chairman, Search Committee, Department of Chemistry, State University of New York at Buffalo, Buffalo, New York 14214. Interviewing of candidates will begin 1 month after publication of this advertisement and the position will be filled as soon as suitable individuals are identified. The Department of Chemistry is particularly interested in considering applications of women, ethnic minorities, or handicapped persons. State University of New York at Buffalo is an Affirmative Action/Equal Opportunity Employer.

ASSISTANT PROFESSORS. The Department of Anatomy, University of Wisconsin, invites applicants for two tenure-track positions beginning 1 July 1984. Applicants should have a doctoral degree and at least 2 years of postdoctoral training. The department is particularly interested in candidates with research interests and experience in cell biology and developmental neurobiology. Successful candidates will be expected to establish strong, independent research programs and to participate in a portion of a team-taught gross anatomy course for medical students. Send curriculum vitae, list of publications, names and addresses of three references, and a summary of research interests to: Dr. John K. Harting, Chairman, Department of Anatomy, University of Wisconsin, Madison, Wis. 53706. Deadline is 15 January 1984. The University of Wisconsin is an Equal Opportunity/Affirmative Action Employer.

YALE UNIVERSITY DEPARTMENT OF MOLECULAR BIOPHYSICS AND BIOCHEMISTRY ASSISTANT PROFESSOR

Faculty positions are available at the rank of assistant professor, with a 5-year initial appointment beginning January 1984 or July 1984. The department is seeking the most talented individuals it can find, irrespective of their particular area of interest in molecular biology, biochemistry, or molecular biophysics. Successful candidates will participate in the normal departmental teaching responsibilities as well as conduct an active research program. Yale is an Equal Opportunity Employer and applications from women and minority groups are encouraged. The application deadline is 15 December 1983.

Send curriculum vitae, list of publications, names and addresses of three references, and a summary of research interests to: Professor Thomas A. Steitz, Chairman, Faculty Search Committee, Department of Molecular Biophysics and Biochemistry, Yale University, P.O. Box 6666, New Haven, Conn. 06511.

Harvard Medical School, Department of Neurobiology, **ASSISTANT OR ASSOCIATE PROFESSOR**. Applications are invited for the position of assistant or associate professor in the Department of Neurobiology at Harvard Medical School. Candidates should have a strong background in cell biology and the use of biophysical techniques to examine membrane function and mechanisms of cellular transduction in the nervous system. The position will involve active participation in the teaching of neuroscience to medical and graduate students. Applicants should submit curriculum vitae, statement of research interests, and the names of three references to: Search Committee, Department of Neurobiology, Harvard Medical School, Boston, Mass. 02115, by 15 January 1984. Harvard Medical School is an Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

ASSISTANT PROFESSOR YALE UNIVERSITY

Tenure-track position which will contribute to a group of natural and social scientists with interests in the analysis of public and private natural resource policy. The successful candidate will have a Ph.D. with a strong emphasis on management science as well as education and experience in forestry, water resources, or a closely allied field in natural resources.

To apply, candidates should send transcripts, curriculum vitae, and a letter of application explaining interest and skills, and should arrange to have three letters of recommendation sent by 15 January 1984 to: **Clark S. Binkley, Search Committee Chair, School of Forestry and Environmental Studies, Yale University, 205 Prospect Street, New Haven, Conn. 06511.**

Yale University is an Equal Opportunity/Affirmative Action Employer.

Tenure-track ASSISTANT PROFESSORSHIP IN ATMOSPHERIC SCIENCES. A Ph.D. in meteorology or a closely related discipline and research interests dealing with interactions which occur in the hydrosphere, including chemical transports and transformations, are required. Send application to: **G. M. Hornberger, Chairman, Department of Environmental Sciences, Clark Hall, University of Virginia, Charlottesville, Virginia 22903. The University of Virginia is an Equal Opportunity/Affirmative Action Employer.**

The Department of Biochemistry, Duke University Medical Center, invites applications for the position of **ASSISTANT PROFESSOR.** This is a tenure-track position. The person will be expected to establish a strong independent research program and to teach at the graduate level. The field of interest is open, although some preference may be given to candidates interested in the molecular aspects of cell biology. Send résumé, summary of research interest, and names of three references by 15 January 1984 to: **Robert E. Webster, Department of Biochemistry, Duke University Medical Center, Durham, North Carolina 27710. Duke University is an Equal Opportunity/Affirmative Action Employer.**

ASSISTANT PROFESSOR OF BIOLOGY

Applications for a tenure-track position are sought from persons with research experience in **GENETICS, DEVELOPMENT, BIOCHEMISTRY, REPRODUCTIVE PHYSIOLOGY, or POPULATION BIOLOGY.** The person will be required to interact with staff biologists of the J. M. Waddell, Jr., Mariculture Research and Development Center of the South Carolina Wildlife and Marine Resources Department. The successful candidate will be expected to teach an upper-level course in **aquaculture** and to participate in the undergraduate biology curriculum. Ability to secure outside funding and to supervise graduate students are also expected. Please send résumé, recent reprints, statement of research interests and goals, and the names of three references by 15 January 1984 to: **Dr. Duane C. Yoch, Department of Biology, University of South Carolina, Columbia, S.C. 29208. Affirmative Action/Equal Opportunity Employer.**

ASSISTANT PROFESSOR, FLORICULTURE. A Ph.D. is required in horticulture or closely related field. Appointee to this tenure-track position will be involved in 60 percent research and 40 percent teaching. Research area includes floricultural crop production with emphasis on greenhouse studies. Teaching involves advising and two undergraduate courses in floricultural crop production. Position available 21 December 1983. Applicants should send résumé with evidence of teaching and research qualifications, official transcripts, and three letters of reference to: **Professor L. Art Spomer, Chair, Search Committee, University of Illinois, 124 Mumford Hall, 1303 West Gregory Drive, Urbana, Ill. 61801 (telephone: 217-333-7266).**

ASSISTANT PROFESSOR—GENETICS. Tenure-track, Ph.D. required, position to start 1 September 1984. Responsibilities include teaching in genetics and either vertebrate embryology or vertebrate physiology. Teaching excellence, research, and professional activity are essential at Whittier, a private liberal arts college located in suburban Los Angeles. Letter of application and curriculum vitae should be forwarded by 1 February 1984 to: **Biology Search Committee, Dr. Stephen R. Goldberg, Department of Biology, Whittier College, Whittier, Calif. 90608. An Equal Opportunity/Affirmative Action Employer.**

POSITIONS OPEN

ASSISTANT PROFESSOR, CELL BIOLOGY/ IMMUNOLOGY/IMMUNOGENETICS

The Department of Biology, University of California, Riverside, seeks a broadly trained cell or molecular biologist who will provide teaching and technical expertise in immunology or immunogenetics. We seek an individual with demonstrated research potential to complement existing strengths in cell surface phenomena, membranes, reproductive biology, cell motility/cytoskeleton, and molecular genetics. Teaching duties include an undergraduate course in immunology and a graduate course in the candidate's field of interest. The appointment will be at the assistant professor level (tenure track) starting 1 July 1984. Applications, including curriculum vitae, a description of research and teaching interests, reprints of scientific papers, and three letters of recommendation, should be sent by 15 January 1984 to:

**Professor Edward G. Platzter, Acting Chairman
Department of Biology
University of California
Riverside, California 92521**

The University of California is an Equal Opportunity/Affirmative Action Employer. Applications are invited from all qualified individuals.

ASSISTANT PROFESSOR OF MICROBIOLOGY AND IMMUNOLOGY

The Terre Haute Center for Medical Education of Indiana University School of Medicine invites applications for a tenure-track appointment at the assistant professor level. The position is available for July 1984. Applicants must have an earned doctoral degree and at least 2 years of postdoctoral experience. Preference will be given to applicants with expertise in molecular biology who plan to work in the area of medically important problems relating to microorganisms and/or mammalian cells. The appointee is expected to participate in teaching medical microbiology, immunology, and genetics to medical students, and to establish a vigorous research program. Salary is commensurate with education and experience.

Applicants should send curriculum vitae, a summary of future research interests, and the names and addresses of three references to: **Dr. Alvin S. Levine, Assistant Dean and Director, Indiana University School of Medicine, Terre Haute Center for Medical Education, 135 Holmstedt Hall, Indiana State University, Terre Haute, Ind. 47809.** Applications received after 1 February 1984 may not receive full consideration. *Indiana University is an Equal Opportunity/Affirmative Action Employer.*

Mount Allison University. ASSOCIATE AND ASSISTANT PROFESSORSHIPS IN PSYCHOLOGY. The Department of Psychology will be able to make three new appointments during the current academic year. The appointments will be offered to those who have an active research programme concerned with some fundamental aspect of the experimental psychology of perception, learning, or thinking. At least one of them will be at a relatively senior level. It will be of interest to experienced scientists who wish to develop a research unit of their own here, perhaps in concert with one (or even two) of the other new appointments, or with one of the present members of staff. Letters of application, together with curriculum vitae, the names of three referees, and copies of reprints and preprints should be sent to:

**Dr. Henry James
Department of Psychology
Mount Allison University
Sackville, New Brunswick, Canada E0A 3C0
Deadline for applications: 15 December 1983.**

THE UNIVERSITY OF CALIFORNIA, IRVINE. Department of Psychiatry and Human Behavior, under the direction of William E. Bunney, M.D., chairman, is seeking applicants at the **ASSOCIATE OR FULL PROFESSOR** level, for a position in **PSYCHOPATHOLOGY.** Applicants should have a Ph.D. in psychology and research experience in biological psychiatry as related to vulnerability to affective disorders and schizophrenia, measuring of psychopathological dysfunctions, personality assessment, and topographic electroencephalography. Applicants should have a minimum of 8 years of experience in all of the above areas. Salary commensurate with academic rank.

Interested parties should send curriculum vitae and three references to: **Monte Buchsbaum, M.D., Professor, University of California, Irvine, Medical Center, 101 City Drive South, Orange, California 92668.**

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

POSITIONS OPEN

ANTICIPATED POSITION—ASSISTANT PROFESSOR, MOLECULAR BIOLOGY

The Department of Microbiology, Louisiana State University (LSU), Baton Rouge, Louisiana, invites applications for a tenure-track position at the assistant professor level. Candidates must have postdoctoral experience, strong credentials in molecular biology, and a commitment to establish a research program utilizing recombinant DNA techniques to investigate eukaryotic gene expression or genome organization. Applicants having research experience with lower eukaryotic or viral systems are encouraged to apply. Send curriculum vitae, a description of future research interests, and a list of three references by 1 February 1984 to:

**Dr. M. D. Socolofsky, Chairman
Department of Microbiology
508 Life Sciences Building
Louisiana State University
Baton Rouge, La. 70803**

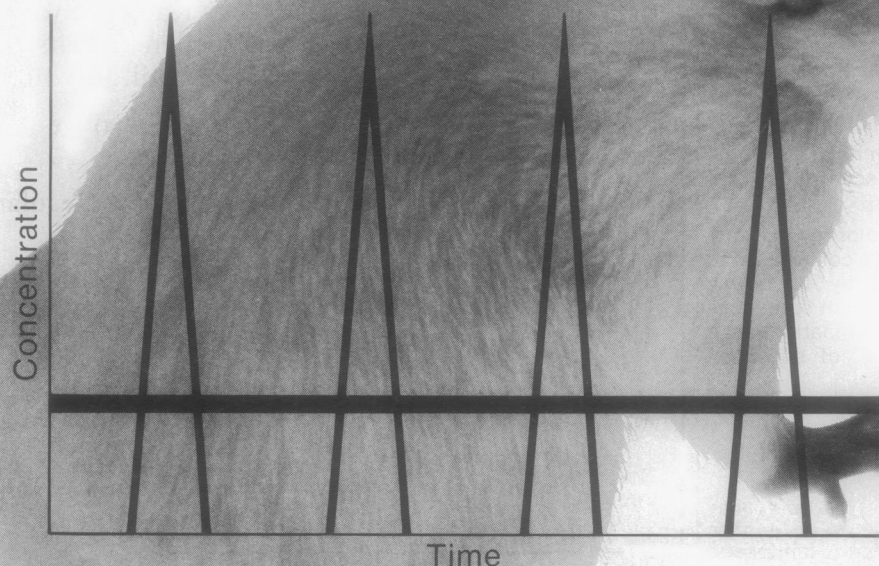
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ASSOCIATE RESEARCHER. Department of Chemistry, full time, federal funds, to begin 1 January 1984. Monthly salary: \$2068 minimum. The duties are to collect and mass culture blue-green algae and other microorganisms, in particular marine prokaryotes; to design assays for screening extracts of cultured microorganisms for bioactivity such as antineoplastic, antitumor promoting, antimicrobial, antiviral, herbicidal, and hemolytic activity; to assist in determining mechanism of action of bioactive compounds; to assist in biosynthesis studies of bioactive compounds; to supervise other professional and technical employees; to prepare detailed reports of experimental results suitable for publication in refereed, first-class journals; and to prepare and/or assist in the preparation of research proposals for extramural funding. Applicant must have a Ph.D. in biology; three or more years of postdoctoral experience in mass culturing blue-green algae and other microorganisms; advanced knowledge of theoretical and practical aspects of algal culture methods and techniques; familiarity with biochemistry and organic chemistry, in particular that dealing with natural products; and working knowledge of microbiological methods and techniques. Applicant should also have experience in designing, building, renovating, altering, operating, and maintaining equipment and facilities necessary for mass cultivation of blue-green algae and other prokaryotic microorganisms; experience in the handling and utilization of radioisotopes; and experience and current certification in SCUBA diving. Send résumé to: **Dr. Richard E. Moore, Department of Chemistry, 2545 The Mall, Honolulu, Hawaii 96822; telephone: 808-948-7232.** Closing date: 15 December 1983.

ATMOSPHERIC CHEMISTRY

National Center for Atmospheric Research, Atmospheric Chemistry and Aeronomy Division, seeks experienced Ph.D. researcher with record of sustained productivity in theory and modeling of atmospheric chemistry. Primary interest is in gaseous photochemistry and coupled chemical/meteorological models, but all specialties will be considered along with scientific breadth. Appointment is at scientist III or senior scientist level. Apply with résumé to: **Dr. R. Cicerone, National Center for Atmospheric Research, P.O. Box 3000, Boulder, Colorado 80307, by 20 December 1983. Equal Opportunity Employer, M/F.**

BIOCHEMIST—CELL BIOLOGIST. Position available for investigator with postdoctoral experience to participate in two ongoing areas of study: the study of myocardial metabolic changes during recovery from ischemia and the events that trigger cell proliferation. Independent research interests encouraged. Applicants should be experienced in enzyme assays, chromatography (HPLC), electrophoresis, cell culture, radioimmunoassays, and methods development. Quality NMR collaboration is available. Faculty rank will depend on experience and academic qualifications. Applicants should include a résumé of research interests, curriculum vitae, bibliography, and the names of three references. Submit all application materials by 1 January 1984. **John Foker, M.D., Ph.D., Department of Surgery, Box 495 Mayo, University of Minnesota Hospitals, Minneapolis, Minn. 55455. The University of Minnesota is an Equal Opportunity Educator and Employer and specifically invites and encourages applications from women and minorities.**



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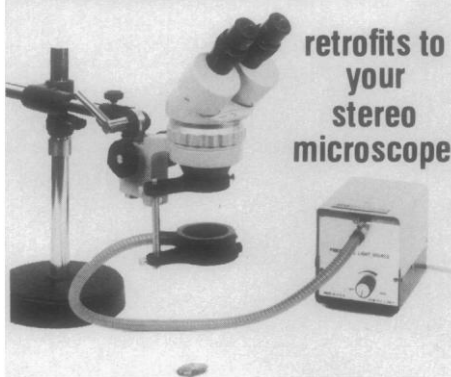
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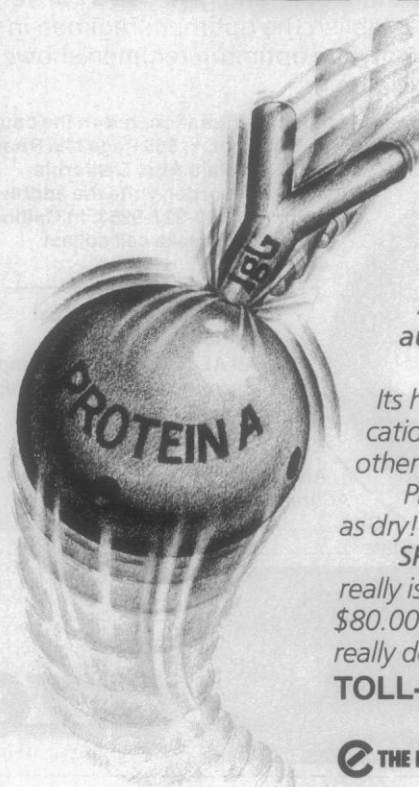
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ASSOCIATE PROVOST FOR RESEARCH TEXAS A & M UNIVERSITY

Texas A & M University is seeking applicants and nominations for a new administrative position. **Associate Provost for Research.** This officer will assume general responsibility, under the direction of the president and provost, for the welfare and quality of the research programs of the University, their future development, and their coordination with research done in other parts of the Texas A & M University System.

Specific duties of the associate provost for research will include, but not be limited to, implementing research policies and recommending new policies, developing a long-range strategy for the University's research mission, representing the University in its relationship with other research programs of the Texas A & M University System and with the Texas A & M University Research Foundation, and supervising the operations of the dean of the Graduate College and of other units of the University as may be assigned by the provost.

Qualifications for this position include an earned doctorate, a record of significant achievement in research, demonstrated academic leadership and administrative ability, an ability to communicate effectively with internal and external constituents, and a commitment to the independence and integrity of research and the interdependence of research and teaching. Knowledge of and participation in the federal grants and contracts peer review process is highly desirable as is knowledge of the promotion of grant and contract work through the private sector.

Candidates must be available to assume the position no later than 1 September 1984. Nominations and applications, with résumés and names of references, must be submitted on or before 15 December 1983 to:

Dr. Charles E. McCarthy
Associate Provost
Texas A & M University
College Station, Texas 77843

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Applications are invited from molecular biologists to join CBI, a rapidly growing biotechnology company located in the Palo Alto area. We currently employ over forty scientists and have recently expanded into new laboratory space. We are developing research projects directed at human therapeutics and other fields and are committed to high scientific standards.

Positions are available at all levels (Ph.D., M.S., and B.S.) for individuals with experience in various aspects of molecular and cell biology especially gene expression, isolation and manipulation; expression of foreign proteins in procaryotes and eucaryotes; protein chemistry; and immunology.

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LOCATION: University of British Columbia.

DATES: 2 to 4 August 1984.

DEADLINE: Deadline for registration and submission of abstracts is 1 May 1984. Registration is \$100 (Canadian); students and postdoctorals, \$50. Meeting will consist of 5 half-day sessions, concurrent poster sessions and workshops, plus an opening mixer and dinner cruise.

CONTACT: INFORMATION, REGISTRATION, and ABSTRACT FORMS:

The Terry Fox Cancer Conference
University of British Columbia
Department of Anatomy
2177 Westbrook Mall
Vancouver, British Columbia
Canada V6T 1W5

Organizing Committee: J. T. Emerman, telephone: 604-228-2969; N. Auersperg, telephone: 604-228-2059; C. J. Eaves, telephone: 604-873-8401.

SPONSORS: The University of British Columbia and The National Cancer Institute of Canada through the Marathon of Hope Research Programs inspired by Terry Fox.

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Applicants must possess at a minimum, a bachelor's degree, preferably higher, in an appropriate physical science or engineering discipline from an accredited college. Applicants must also have a combination of education and experience which demonstrates the ability to provide leadership and direction for complex mining research programs of national scope and significance. In addition, applicants must have at least 3 years of progressively responsible experience in mining research, which demonstrates executive knowledge, ability, and managerial skills and practices. Further, the applicant should have been recognized in his/her field of endeavor as evidenced by publications, patents, awards, and other creative works.

All interested applicants should contact the individual listed below to obtain the appropriate application materials.

Bureau of Mines, Division of Personnel, Branch of Employment, Fifth Floor 2401 E Street, NW, Washington, D.C. 20241, Attention: Judy Craney; telephone: 202-634-4899.

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Washington State University (WSU) College of Agriculture Department of Animal Sciences

Title: ASSISTANT OR ASSOCIATE PROFESSOR OF ANIMAL SCIENCES.

Description: The position is an annual tenure-track research and teaching appointment with 75 percent in Animal Sciences and 25 percent in the Genetics Program. Individuals with strong experience in gamete manipulation, microinjection, and gene transfer technology are preferred. Candidates with experience in recombinant DNA technology, molecular cloning and gene expression in animals and bacteria are also encouraged to apply. Teaching responsibilities will include participation in teaching a course in general genetics, and an advanced course in the individual's area of expertise for graduate students.

Qualifications: Applicants must have an earned Ph.D. or equivalent with postdoctoral experience highly desirable. Applicants must demonstrate potential for excellence in teaching and research with the potential to develop a program which can attract extramural support and contribute to an active group composed of 25 faculty from six separate departments in genetics and cell biology.

Salary: Commensurate with qualifications. To begin prior to 1 July 1984.

Application: Send complete résumé, transcripts, list of publications, a narrative summary of research and teaching experience and how proposed research would address current problems in animal agriculture, and names of three references by 1 February 1984. Send materials to:

Raymond W. Wright, Jr.
Chairperson, Selection Committee
Department of Animal Sciences
Washington State University
Pullman, Wash. 99164-6332

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POSITIONS OPEN

Department of Zoology
University of Hawaii at Manoa

ASSISTANT PROFESSOR OF ZOOLOGY, a tenure-track position in invertebrate biology, available August 1984. Candidates are sought who have demonstrated teaching ability and who present evidence of strong research activity. Ph.D. is required. Field of research is open, but preference will be given to applicants who use marine invertebrates to address fundamental questions in areas such as (but not limited to) biomechanics, developmental, or cell biology. Teaching duties include invertebrate zoology, a course in candidate's specialty, and contributions to core curriculum. Send curriculum vitae, statement of teaching preferences and philosophy, outline of previous and proposed research, copies of representative publications, and three letters of reference to: **Dr. F. I. Kamemoto, Chairman, Department of Zoology, University of Hawaii at Manoa, 2538 The Mall, Honolulu, Hawaii 96822**, by 15 January 1984. *The University of Hawaii is an Equal Opportunity/Affirmative Action Employer.*

ASSOCIATE PROFESSOR OF MICROBIOLOGY. This position with tenure is available 1 June 1984. Candidates should have an M.D., Ph.D., D.D.S., or an equivalent degree, experience in teaching, and expertise in molecular immunology. They must have at least 4 years of research experience and be recognized nationally as independent investigators. Preference will be given to those candidates who utilize recombinant DNA technology in their work. Interested persons should send curriculum vitae, brief description of research interests, and the names and telephone numbers of three individuals from whom recommendations can be obtained to: **Dr. C. John Abeyounis, Department of Microbiology, School of Medicine, State University of New York at Buffalo, 203 Sherman Hall, Buffalo, N.Y. 14214.** *The University is an Equal Opportunity/Affirmative Action Employer. No person in whatever relations with the University will be subject to discrimination on the basis of age, color, national origin, race, religion, sex, or handicap.*

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APPOINTMENT: Professor in the School of Forest Resources, College of Agriculture, for 3 years with possible extension of an additional 3 years.

Please submit names and background information by 15 December 1983 to: **Robert S. Bond, Director, School of Forest Resources, The Pennsylvania State University, 101B Ferguson Building, University Park, Pa. 16802.**

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UNIVERSITY OF QUEENSLAND AUSTRALIA CHAIR OF ENTOMOLOGY

Applications are invited for the chair of entomology. Applicants should be distinguished scholars with a substantial research record. They should be academically well-qualified entomologists, preferably with University experience.

The department is one of only two Departments of Entomology in universities in Australia. It offers undergraduate courses in the Faculties of Science and Agricultural Science, and has a very active research and postgraduate programme.

Salary: A\$46,977 per annum.

The University is a participating institution in the Superannuation Scheme for Australian Universities. Applications, with the names of three referees, should be forwarded to: **The Staff Officer, University of Queensland, St. Lucia, Queensland, 4067, Australia**, as soon as possible and must reach him by 31 December 1983.

POSITIONS OPEN

BIOCHEMIST MEMBRANE BIOCHEMIST

The Agricultural Chemicals Department of E. I. du Pont de Nemours & Company has a Ph.D.-level research position available in the Wilmington, Delaware, area for a membrane biochemist with a strong interest and background in receptor biochemistry, ion channel function, and/or synaptic transmission.

The successful candidate will be expected to develop a fundamental research program and collaborate with physiologists, entomologists, chemists, and other biochemists in designing and developing novel insect control agents.

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Position open for scientist with a chemical or biochemical background to work on radical mechanisms in cancer-related research. The work is conducted in the Radiation Biophysics Laboratory of the Department of Radiation Medicine, Massachusetts General Hospital. Concurrent appointment at Harvard Medical School available for suitably qualified candidate. Research involves studying importance of thiols in radiosensitization of hypoxic and oxygenated mammalian cells in tissue culture. Ph.D. in organic chemistry or biochemistry with research experience required. Send curriculum vitae, including names of three references, to: **Dr. Edward R. Epp, Head, Division of Radiation Biophysics, Massachusetts General Hospital, Boston, Massachusetts 02114.** *An Affirmative Action/Equal Opportunity Employer.*

CELL BIOLOGIST

The C. V. Whitney Laboratory of the University of Florida invites applications to fill a 12-month, tenure-track, full-time research position. The Whitney Laboratory is dedicated to the use of marine organisms for solving basic problems in biology and medicine; its major research interests are in neurobiology and cell and developmental biology. We are seeking applicants who will complement these areas and will also provide expertise in biochemistry. Potential candidates using marine models are especially encouraged to apply. All members of the Laboratory hold regular faculty appointments in academic departments at the University of Florida. The present position is at the rank of assistant professor; salary is competitive. Letters of application, together with curriculum vitae, a statement of research interests and plans, and the names of three referees, should be sent to:

**Dr. Michael J. Greenberg, Director
C. V. Whitney Laboratory
University of Florida
Route 1, Box 121
St. Augustine, Fla. 32086**

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CELL BIOLOGY/MOLECULAR BIOLOGY of the vessel wall. Pre- and postdoctoral fellowships in growth control, protein biochemistry, molecular genetics, ultrastructure, and pharmacology as applied to hypertension and atherosclerosis. Send applications to: **The University of Washington, Department of Pathology, SM-30, Seattle, Wash. 98195.** *The University of Washington is an Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

BIOLOGY: Tenure-track position, assistant professor level, beginning September 1984. Principle teaching responsibilities in developmental biology. Other areas of teaching include microbiology, anatomy, and general biology. Ph.D. required and recent postdoctoral experience in some aspect of gene expression desirable. Send curriculum vitae, three letters of recommendation, and graduate and undergraduate transcripts to: **Dr. Richard Sherwin, Chairman, Department of Biology, Emory & Henry College, Emory, Va. 24327**, by 20 January 1984. *Equal Opportunity Employer.*

BIOPHYSICIST—MATERNAL-FETAL MEDICINE

The Georgetown University Medical Center, Department of Obstetrics and Gynecology, is seeking a biophysicist with experience in analytic chemistry. The position will work under the aegis of The Kennedy Foundation, Inc., perinatal grant. Candidates will be an integral part of a multifaceted research team of senior clinicians and basic scientists interested in biochemical evaluation of serum and amniotic fluid and membrane potentials as well as other aspects of perinatal medicine. Applicants will be expected to have a Ph.D. and/or M.D./Ph.D. with at least 2 years of postdoctoral experience with demonstrated ability to organize and develop an analytical laboratory for biochemical sciences related to perinatal medicine. Opportunities for development of own research programs will be available. Collaborative arrangements with other research groups in close proximity to the Georgetown University Medical Center campus are encouraged.

Interested applicants should send curriculum vitae and three letters of reference to:

**James Berardo, Administrator
Department of Obstetrics and Gynecology
Georgetown University Medical Center
3800 Reservoir Road, NW
Washington, D.C. 20007**

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BOTANIST

Assistant professor to teach general and specialized courses in botany beginning fall 1984. To complement Ph.D. training and research conducted by 13 faculty members in Molecular Biology and Radiation Biology programs. Ph.D. degree required; postdoctoral experience, specialization in radiation and/or molecular biology preferred. Mail applications, curriculum vitae, three letters of recommendation, and copies of transcripts by 2 January 1984 to: **Dr. F. Schwalm, Chairman, Search Committee, Texas Woman's University, P.O. Box 23971, Denton, Texas 76204.** *Texas Woman's University is an Equal Opportunity Employer.*

UNIVERSITY OF TASMANIA Hobart, Australia CHAIR OF ZOOLOGY

Applications are invited for this chair in the Faculty of Science from candidates in any field of zoology though they should have an interest in or sympathy with whole animal biology. The present professorial salary is A\$46,977 per annum, which is expected to be increased by 4.3 percent as a result of the recent national wage decision. Conditions of appointment and application forms are available from: **The Association of Commonwealth Universities (Appointments), 36 Gordon Square, London WC1H 0PF, England.** Applications close with: **The Registrar, University of Tasmania, Box 252C GPO Hobart, Tasmania, Australia 7001**, on 31 December 1983.

FACULTY POSITION IN EXPERIMENTAL APPLIED SOLID-STATE PHYSICS

The Department of Physics and Astronomy of the University of Pittsburgh invites applications for a tenure-track assistant professor position in experimental, applied solid-state physics. The position involves teaching and research. Candidates with backgrounds in materials-related areas of applied physics will be considered. Existing programs include semiconductor materials, ion beams and involve university-industry cooperation. Research includes the study of quantum-well structures and the physics of novel semiconductor devices. Letters of application, résumés, statements of research plans, and the names of three professional references should be sent to: **Chairman, Department of Physics and Astronomy, University of Pittsburgh, Pittsburgh, Pa. 15260.** *The University of Pittsburgh is an Affirmative Action/Equal Opportunity Employer.*

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Position requires thorough familiarity with research in program cellular basis of globin synthesis, cell differentiation and regulation, tumor promoters, and globin gene transcription. Individual must be thoroughly familiar with current techniques and technology in molecular and cellular biology. Prefer degree in Molecular Biology at MS level; BS with at least 3 years experience considered.

We offer a competitive salary, comprehensive benefits and outstanding growth potential. Send resume with salary history in confidence to: E. L. Kleinert, Personnel Department



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The Amherst Campus of the University of Massachusetts enrolls approximately 20,000 undergraduates and 5,000 graduate students. A faculty of 1,400 offers a full range of Arts and Sciences plus programs in Education, Engineering, Management, Physical Education, Food and Natural Resources, and Health Sciences. Doctoral degrees are offered in 55 disciplines, Master's in 80. The Vice Chancellor for Academic Affairs (Provost) is the chief academic officer who reports directly to the Chancellor and is responsible for all academic programs and budget matters relating to them. Demonstrated academic, scholarly, and administrative abilities as well as experience with budgetary management are necessary. Applications and nominations should be submitted by December 31, 1983 to: **Professor Richard Stein, c/o Office of the Chancellor, Whitmore Administration Building, University of Massachusetts, Amherst, MA 01003.** An Affirmative Action/Equal Opportunity Employer.



**University of
Massachusetts
Amherst**

Cell and Molecular Biology FACULTY POSITIONS

Faculty level positions are becoming available at the Worcester Foundation for Experimental Biology. The major criteria in this search are scientific excellence and collegial qualities.

At present, the faculty and their areas of interest are:

Earl Baril—Enzymology of eukaryotic DNA replication
Edward Berger—Cell-cell recognition and control of gene expression by cell-cell contact in *Dictyostelium*
William Crain—Structure and developmental expression of sea urchin actin genes
Charles Glabe—Gamete interactions and sperm adhesion
Grant Fairbanks—Membrane proteins, regulation of erythrocyte shape and volume
Jay Greenberg—Messenger RNA-binding proteins and control of protein synthesis
Thoru Pederson—Nuclear ribonucleoproteins and messenger RNA processing
Harriet Robinson—Avian retroviruses; oncogenes
Greenfield Sluder—Timing and molecular control of mitotic events during early development

David Steffen—Murine leukemia virus gene expression and oncogenicity
Richard Vallee—Microtubule-associated proteins; mitosis, neuronal cytoskeleton, monoclonal antibodies
Samuel Wadsworth—Gene expression during development in *Drosophila*
Robert Wehling—Actin and actin-associated proteins in relation to cytoskeleton organization
David Wolf—Control of lateral organization and motion of membrane components
George Witman—Mechanism and control of flagellar motility in *Chlamydomonas*
Paul Zamecnik—Nucleotide-enzyme interactions involved in DNA replication
Carol Ziomek—Membrane structure and cell polarity in early mouse development

We hope to make at least two appointments in the next 18 months. These positions can be filled at either junior or senior faculty rank. Send C.V. and description of research interests to Dr. Thoru Pederson, Cell Biology Group, C/O PERSONNEL OFFICE, Worcester Foundation for Experimental Biology, 222 Maple Avenue, Shrewsbury, MA 01545

An Equal Opportunity/Affirmative Action Employer



**WORCESTER FOUNDATION
FOR EXPERIMENTAL BIOLOGY**

POSITIONS OPEN

MORRIS COLLEGE, a private and predominately black, 4-year liberal arts college in Sumter, South Carolina, is seeking a person to **teach general chemistry, organic chemistry, and general science** effective 1 January 1984. Ph.D. preferred, master's degree acceptable. Salary and rank commensurate with qualifications and experience. Submit letter of application, personal résumé, letters of recommendation, and academic transcripts to: **The Personnel Officer, Morris College, Sumter, S.C. 29150**, no later than 9 December 1983. *An Equal Opportunity/Affirmative Action Employer.*

DIRECTOR OF RESEARCH AND EDUCATION

A position is available in the Department of Reproductive Biology at Case Western Reserve University School of Medicine, at the associate professor or professor level, for a person to direct research and graduate education (pre- and postdoctoral) in reproductive biology. The candidate should have a firmly established record of research accomplishments, should be a good teacher, and should be unqualifiedly committed to continuing a research career. Although the candidate's specific field of interest in reproduction will not be a determining factor, it will be of crucial importance that the candidate be able and eager to attract others to the program whose specialties complement his or her own. If interested, please send a cover letter and curriculum vitae to: **Dr. I. Rothchild, MacDonald House, University Hospitals of Cleveland, 2065 Adelbert Road, Cleveland, Ohio 44106**. *Case Western Reserve University is an Equal Opportunity Employer.*

ENZYMOLOGIST/MOLECULAR BIOLOGIST

Sought to carry out independent research relating enzyme action and human disease. Opportunity to participate in teaching and research. Salary negotiable up to mid-\$20,000's, New England Region. Please send curriculum vitae and three letters of reference to:

Box 313, SCIENCE

FACULTY POSITION FOR PHYSICIAN IN OCCUPATIONAL MEDICINE/OCCUPATIONAL EPIDEMIOLOGY

Tenure-track faculty position available in the Department of Community and Environmental Medicine, California College of Medicine, and in the University of California Southern Occupational Health Center at the University of California, Irvine. Qualifications should include eligibility for medical licensure in California and certification by the Board of Preventive Medicine. Experience should include research productivity in an area relevant to occupational medicine, preferably emphasizing epidemiologic methods. Experience in instruction of medical students and occupational medicine residents is highly desirable. Responsibilities will include continued development of existing occupational medicine residency program, medical student instruction in occupational medicine, and development of a research program relevant to occupational medicine. Send curriculum vitae, statement of current research support, and names of three references to:

James L. Whittenberger, M.D.
Professor and Chair
Department of Community and
Environmental Medicine
College of Medicine
University of California, Irvine
Irvine, California 92717

An Affirmative Action/Equal Opportunity Employer

FACULTY POSITION IN PARASITOLOGY

The Department of Microbiology, The University of Texas Health Science Center at San Antonio (UTHSCSA), has a tenure-track position for an outstanding candidate in parasitology. Individuals having primary interest in mechanisms of parasitic disease pathogenesis and employing molecular biology-genetics, immunology, and/or biochemistry are encouraged to apply. The applicant should be prepared to establish and maintain a high-quality independent research program and to participate in teaching at the graduate level. The department is an actively growing, research-oriented component of a major health science center located in a desirable geographical setting. Applicants should send their curriculum vitae and a statement of accomplishments and future goals, and arrange for three letters of reference to be sent by 15 March 1984 to: **Dr. Joel B. Baseman, Chairman, Department of Microbiology, The University of Texas Health Science Center at San Antonio, San Antonio, Texas 78284**. *UTHSCSA is an Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

The Department of Veterinary Microbiology and Pathology at Washington State University invites applications for a **FACULTY POSITION IN VETERINARY BACTERIOLOGY** at the level of assistant professor or above. An opportunity for a progressive scientist to join an interdisciplinary department with rigorous research programs in infectious diseases of domestic animals. Qualifications include a Ph.D. degree with evidence of research productivity during the past 5 years and a D.V.M. degree (or equivalent) or research experience in the area of bacterial diseases of domestic animals. Duties include teaching veterinary bacteriology, independent and collaborative research, as well as minor involvement in diagnostic bacteriology. Participation in training graduate students in the area of bacterial pathogenesis or immunity to bacterial infections of domestic animals is expected. The position is available 1 July 1984. Applications will be accepted until 1 February 1984. Rank and salary commensurate with experience and qualifications. Applicants should send a letter of application with current curriculum vitae and the names of three referees to: **Dr. L. B. Corbell, Department of Veterinary Microbiology and Pathology, Washington State University, Pullman, Wash. 99164-7040; telephone: 509-335-6661**. *Washington State University is an Affirmative Action/Equal Opportunity Employer. Women and candidates from minority groups are encouraged to identify themselves as such.*

FACULTY POSITIONS IN BIOTECHNOLOGY AT RUTGERS UNIVERSITY

The Waksman Institute of Microbiology and the Department of Chemical and Biochemical Engineering at Rutgers University announce the establishment of two joint tenure-track faculty positions in biotechnology. One full professor and one assistant professor to collaborate in teaching and research in biotechnology and to develop a cooperative university program in association with industry.

The applicant for the senior position should have a Ph.D. in microbiology or biochemical engineering, experience in fermentation biotechnology, and a distinguished publication record. The applicant for the assistant professor position should have a Ph.D. in biochemical engineering or biotechnology, familiarity with modern molecular genetics, and an excellent academic record.

Applicants should send résumé and names of three references to:

Professor A. Constantinides, Chairman
Biotechnology Search Committee
Department of Chemical and
Biochemical Engineering
Rutgers University—P.O. Box 909
Piscataway, N.J. 08854

Rutgers University is an Equal Opportunity/Affirmative Action Employer.

FACULTY POSITION—PATHOGENIC MICROBIOLOGY

Search reopened. The Department of Microbiology at The Ohio State University (OSU) has a tenure-track position open at the assistant professor level. Candidates with research interests in mechanisms of pathogenesis of bacterial, viral, or protozoan diseases will be given preference. The department, with a faculty of 20, has a strong commitment to research and therefore the successful candidate must show evidence of the ability to develop a high-quality research program and also to teach at the undergraduate and graduate levels. Please send curriculum vitae and the names of three references by 1 February 1984 to: **Dr. Robert M. Pfister, Chairman, Department of Microbiology, The Ohio State University, 484 West 12 Avenue, Columbus, Ohio 43210**. *OSU is an Affirmative Action/Equal Opportunity Employer.*

IMMUNOLOGIST. Assistant professor, tenure-track, 12-month appointment starting 1 July 1984 to teach immunology and medical microbiology in medical curriculum, establish independent research program in immunology, direct graduate student research, and present an advanced graduate course in immunology. Applicants should have Ph.D. degree and postdoctoral experience in the fields of immunology and medical microbiology. Salary commensurate with experience. Submit curriculum vitae, a summary of research interests, and names of three references by 1 February 1984 to: **Dr. Albert G. Moat, Professor and Chairman, Department of Microbiology, Marshall University School of Medicine, 1542 Spring Valley Drive, Huntington, W. Va. 25704-2901**.

Marshall University, a state university of West Virginia, is an Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

TENURE-TRACK FACULTY POSITION IN NUTRITIONAL BIOCHEMISTRY: rank depends on qualifications. The successful applicant will be expected to develop a vigorous, innovative research program in nutritional biochemistry or metabolism, to work with faculty in the Colleges of Agriculture and Medicine, and to teach a graduate-level course. Send curriculum vitae, complete list of publications, a copy of official transcript if degree was obtained within the last 3 years, and names of three references to: **Darrel E. Goll, Nutrition and Food Science, University of Arizona, Tucson, Ariz. 85721**. *Equal Opportunity/Affirmative Action Employer.*

FACULTY POSITION. The Department of Oral Biology at the Northwestern University Dental School invites applications for a tenure-track position at the assistant or associate professor level, beginning 1 September 1984. The department's primary focus is on connective tissue biology. We wish to add an individual with a background in the molecular biology of connective tissue components and/or immunology. The successful candidate will be expected to establish an independent research program and participate in dental student, M.S., and Ph.D. educational programs. Applications should be submitted as soon as possible, but no later than 15 January 1984. Send résumés, statement of research interests and support, and the names of three references to: **S. J. Leibovich, Chairman, Search Committee, Department of Oral Biology, Northwestern University, 303 East Chicago Avenue, Chicago, Ill. 60611**. *Northwestern University is an Affirmative Action/Equal Opportunity Employer.*

FACULTY OPENINGS

Massachusetts Institute of Technology (MIT), Whitaker College of Health Sciences, Technology, and Management, announces openings for junior and/or senior faculty in neurobiology. Successful candidates will be engaged in research related to neuroscience, for example, molecular neurobiology, the genetic specifications of neural development and behavior, or membrane biophysics. New faculty will receive a joint appointment within the Whitaker College and within another appropriate MIT department such as Biology, Electrical Engineering, Nutrition and Food Science, or Psychology.

Requires a Ph.D. with substantive research in one or more of the above areas. Ability to teach undergraduate and graduate-level courses and to develop a strong research program.

Interested applicants should send curriculum vitae, a short statement of proposed research, and the names of at least three references to: **Dr. Emilio Bizzzi, Chairman, Neurobiology Search Committee, Building E25-526, Massachusetts Institute of Technology, 77 Massachusetts Avenue, Cambridge, Mass. 02139**.

MIT is an Affirmative Action/Equal Opportunity Employer. Qualified minorities and women are encouraged to apply.

FOREST GENETICIST. Postdoctoral position available 1 January 1984 at the University of California (UC), Berkeley. Project involves transformation by microinjection of custom-made plant transposons into tree cells. Cooperative effort of the Freeling laboratory (UC) and the Institute of Forest Genetics, Berkeley (USDA). Requires Ph.D. in forest genetics or related field, steady hands, and commitment to forest tree improvement. Salary commensurate with experience, equivalent to NIH Postdoctoral Fellowship. Deadline for application: 1 January 1984. Send curriculum vitae and have three letters of reference sent to: **M. Freeling, Department of Genetics, UC Berkeley, Berkeley, Calif. 94720**. *The University of California is an Equal Opportunity/Affirmative Action Employer.*

POSITION IN HUMAN ANATOMY

Applications are invited for a faculty position in the Department of Human Anatomy. Ability to establish an independent research program and attract extramural funding in the area of cellular biology essential. Primary teaching responsibilities will be in microscopic anatomy. One or two years of postdoctoral experience required. Appointment at the assistant professor level. Send complete curriculum vitae, including a statement of research interests and five letters of reference, to: **Dr. Barry F. King, Search Committee Chair, Human Anatomy, School of Medicine, University of California, Davis, Calif. 95616**. Application deadline is 31 December 1983. Only complete applications will be considered.

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

NATIONAL INSTITUTE ON AGING NATIONAL INSTITUTES OF HEALTH

The Biomedical Research and Clinical Medicine Program is seeking applicants for the position of Health Scientist Administrator (Biological Sciences) to serve as a program director for the molecular biology research grants program with contributing responsibilities to genetics and theoretical biology. Specific responsibilities include developing, managing, coordinating and monitoring a program of research grants, training grants, fellowships and contracts. Applicants should have completed all requirements for a Ph.D. (or equivalent doctoral degree) in the biological or allied health sciences. Additionally, applicants must have experience which clearly demonstrates ability to work independently in planning, organizing, and conducting molecular biological research as well as to administer a research program. The position will be filled through the Civil Service or Commissioned Corps of the U.S. Public Health Service. The grade of the position is a GS-12/13/14 with a salary range of \$29,374-\$41,277, depending on the qualifications of the applicant selected. Benefits include a retirement plan, health and life insurance, sick and annual leave. Duty Station — Bethesda, Maryland. U.S. Citizenship required.

Any applicant not currently employed in the Federal Government as a Health Scientist Administrator will be required to obtain an eligible notice of rating. Submit application (SF-171), curriculum vitae and bibliography to: Ms. Sara Benesch, Personnel Office, National Institute on Aging, Building 31, Room 2B63, National Institutes of Health, Bethesda, Maryland 20205. Applications must be received or postmarked by December 15, 1983. Call Ms. Benesch at (301) 496-5347 for further information.

NIH IS AN EQUAL OPPORTUNITY EMPLOYER

INSTITUTE OF COGNITIVE SCIENCE UNIVERSITY OF COLORADO, BOULDER

Positions in Artificial Intelligence

The Institute of Cognitive Science has two tenure track positions in the area of artificial intelligence that begin September 1, 1984. The first position is open with respect to rank and salary, the second is a beginning assistant professor level tenure track position. We seek individuals in any area of artificial intelligence but will give preference to individuals who are interested in interacting with the cognitive psychologists and linguists at the Institute. We would be interested in receiving applications from senior individuals who will have the opportunity to become the Director of the Institute in the next two to five years.

The Institute and the Psychology Department share a VAX 11/780 and will have three Xerox LISP machines. We view these two positions as forming the nucleus of a new group of members to the Institute. In future years we will have positions open in Psychology, Linguistics, and an additional position in the area of artificial intelligence.

Applicants should send a vita, names of at least three references, a statement of research interests in the areas of artificial intelligence and cognitive science, and a statement of teaching interests. This material should be sent to Professor Peter G. Polson, Institute of Cognitive Science, Campus Box 345, University of Colorado, Boulder, Colorado 80309. This position can be filled after February 1, 1984. Inquiries about these positions can be directed to Peter Polson (POLSON@SUMEX-AIM, (303) 492-6991) or Professor Walter Kintsch, Director of the Institute (KINTSCH@SUMEX-AIM, (303) 492-8086). The University of Colorado is an Affirmative Action/Equal Opportunity Employer.

Dean

College of Natural Sciences Colorado State University

Colorado State University invites applications and nominations for the position of **DEAN** of the College of Natural Sciences. The dean is the chief administrator of the second largest college of the University, enrolling approximately 2,500 undergraduate and graduate students in the departments of Biochemistry, Botany/Plant Pathology, Chemistry, Computer Science, Mathematics, Physics, Psychology, Statistics and Zoology/Entomology. There are 185 faculty members in the college.

Colorado State University is the land-grant institution in the State of Colorado and consists of 9 colleges and the graduate school, with approximately 18,000 full-time students enrolled in 82 bachelor's, 61 master's, and 36 doctoral degree programs housed in 56 departments with 1,120 full-time faculty. The main campus of Colorado State University is located in Fort Collins, approximately 60 miles north of Denver. Fort Collins is a growing community with a population of approximately 80,000 and offers a wide range of cultural resources and recreational advantages.

The Dean of the College of Natural Sciences provides leadership within the college and promotes the goals of the departments of the college to the upper administration of the university and to both governmental and private sectors. Candidates should have successful administrative experience and an established record of excellence in both teaching and research.

BEGINNING DATE: Applicants should be available to assume the position on approximately June 1, 1984.

CLOSING DATE: Applicants must submit all application data by December 15, 1983.

APPLICATIONS: Applications and nominations should include a detailed resume and a list of references and should be addressed to:

**D. W. Dobler, Chairman
Dean's Search Committee, C.N.S.
College of Business
Colorado State University
Fort Collins, Colorado 80523**

CSU is EEO/AA employer. E.O. Office: 314 Student Serv. Bldg.

The Office of Naval Research is seeking a highly qualified individual to plan and manage a contract research program in cell biology, biophysics, and, potentially, toxicology. The research sponsored is conducted principally at universities and industrial laboratories. This is a Civil Service position at the GM-13 (\$34,930-\$45,406) or GM-14 (\$41,277-\$53,661) level, depending on individual qualifications.

The responsibilities of the incumbent will include formulating, implementing and monitoring a research program in cell biology, biophysics and, potentially, toxicology with a particular emphasis at the cellular and molecular levels. The incumbent will define new research opportunities, communicate ONR interest to the technical community, evaluate research proposals, manage available resources, and represent the program to Navy management.

Applicants must have a Ph.D. or equivalent in biology or related field and at least 3 years of progressively responsible professional experience. At least one year of experience must be comparable in difficulty and responsibility to the next lower level in the Federal Service. Equivalent combinations of professional experience and graduate education may be acceptable.

Interested persons should submit a Standard Form 171, Personal Qualifications Statement (available at Federal Job Information Centers or from the address below), to:

OFFICE OF NAVAL RESEARCH
Civilian Personnel Division, Code 791SC
Attn: Announcement #83-53 (S)
800 North Quincy Street • Arlington, VA 22217

Applications will be accepted through 2 January 1984 and must be received by that date. For further information and supplemental forms, please call (202) 696-4705.

An Equal Opportunity Employer • U.S. Citizenship Required

BIOLOGIST

POSITIONS OPEN

FACULTY POSITION IN MOLECULAR GENETICS. Department of Microbiology, University of Medicine and Dentistry of New Jersey (UMDNJ)—New Jersey Medical School.

Applications are invited for a tenure-track position in molecular genetics, at the level of assistant professor. Applicants should have demonstrated research capabilities in molecular genetics and a serious commitment toward establishing an independent research program. Application deadline: 31 December 1983.

Please send curriculum vitae, including the names of three references and a statement of research interests and goals, to:

David B. Kaback, Ph.D.
Chairman of the Search Committee
Department of Microbiology
UMDNJ—New Jersey Medical School
100 Bergen Street
Newark, New Jersey 07103

The New Jersey Medical School is an Equal Opportunity/Affirmative Action Employer.

BASIC STUDIES OF GROWTH HORMONE-RELEASING FACTOR. Ph.D. Research associate (or postdoctoral) position available immediately to investigate the regulation of hypothalamic growth hormone-releasing factor secretion and anterior pituitary growth hormone secretion. Experience in receptor coupling, phospholipid and/or cyclic AMP metabolism, or secretion coupling mechanisms is desirable. Competitive salary. Apply before 1 January 1984 with curriculum vitae and request three letters of reference to be sent to: Dr. M. J. Cronin, Department of Physiology, Box 449, University of Virginia School of Medicine, Charlottesville, Va. 22908.

The College of Pharmacy at the University of Illinois at Chicago seeks candidates with outstanding scholarly, academic, and administrative accomplishments for the position of **HEAD, DEPARTMENT OF PHARMACODYNAMICS**. Functions of the head include executive, teaching, and research leadership of a department presently comprised of ten full-time faculty persons. Candidates must have a doctoral level degree with experience in pharmacology, toxicology, and/or pharmacokinetics. A good understanding of the practice of pharmacy, experience in an academic health care center, a demonstrated commitment to quality teaching, and an established research program are highly desirable. A letter of interest in becoming a candidate, accompanied by curriculum vitae and the names of five professional references, should be submitted to: Hemendra N. Bhargava, Ph.D., Chairman of Search, Department of Pharmacodynamics, College of Pharmacy, University of Illinois at Chicago, P.O. Box 6998, Chicago, Ill. 60680. All applications postmarked on or before 31 January 1984 will be considered. Preferred starting date: 1 July 1984. Salary will be commensurate with qualifications and experience. *Equal Opportunity/Affirmative Action Employer.*

HISTOLOGIST/CYTOLOGIST. Visiting assistant professorship (nontenure-track) for Ph.D. trained in histology or related field. Teaching responsibilities in electron microscopy and histology. Initial appointment: 3 January 1984 through 30 May 1984. Subsequent appointments on an academic year basis may be made. Send curriculum vitae and names of three references to: Dr. Everett C. Short, Professor and Head, Department of Physiological Sciences, College of Veterinary Medicine, Oklahoma State University, Stillwater, Oklahoma 74078. *An Equal Opportunity/Affirmative Action Employer.*

RESEARCH AND DEVELOPMENT IMMUNOLOGIST

BioStar Medical Products, Inc., a young, aggressive and well-financed biotechnology firm, is currently offering an excellent career opportunity for an R & D immunologist. The successful candidate will have a Ph.D. in immunology, immunochemistry, or closely related science with at least 4 to 6 years of postdoctoral hands-on development of immunodiagnostic products as well as hybridoma/monoclonal antibody development. Experience with a variety of clinical immunological techniques is essential; commercial experience is highly desirable.

BioStar is located in Boulder, Colorado, a beautiful community nestled in the Front Range of the Rocky Mountains. Salary, benefits, and career growth potential are excellent. Send résumé/transcript/curriculum vitae to: Tim Starzl, CEO, BioStar Medical Products, Inc., 1995 North 57 Court, Flatirons Industrial Park, Boulder, Colorado 80301.

POSITIONS OPEN

IGNEOUS/METAMORPHIC PETROLOGIST or STRUCTURAL GEOLOGIST HOBART AND WILLIAM SMITH COLLEGES

The Department of Geoscience of these private, coordinate, liberal arts colleges seeks applicants for a full-time, tenure-track position for September 1984. We need a field-oriented igneous or metamorphic petrologist or structural geologist, a person committed to excellence in teaching and to stimulation of undergraduate research. Ph.D. required and teaching experience desirable. Teaching includes introductory courses, mineralogy, petrology and structure plus participation in the Colleges' general curriculum. Research encouraged and supported. Submit curriculum vitae and three letters of recommendation to: Donald L. Woodrow, Department of Geoscience, Hobart and William Smith Colleges, Geneva, N.Y. 14456. *Applications from women and members of minority groups encouraged.*

New York University (NYU) hopes to fill a tenure-track position in **INDUSTRIAL/ORGANIZATIONAL PSYCHOLOGY** starting September 1984 at the assistant or associate professor level. Applicants should demonstrate a strong record of research in any specialty of I/O. Send curriculum vitae, copies of recent papers, and three letters of reference to: Professor Madeline E. Heilman, Department of Psychology, New York University, 6 Washington Place, New York, N.Y. 10003. *NYU is an Affirmative Action/Equal Opportunity Employer.*

INHALATION TOXICOLOGIST/AEROSOL SPECIALIST

Bushy Run Research Center (BRRC), jointly operated by Mellon Institute and Union Carbide Corporation, is seeking a Ph.D. toxicologist whose primary responsibilities will include the design, implementation, analysis, interpretation, and technical supervision of aerosol inhalation studies.

BRRC is located 25 miles east of Pittsburgh in beautiful rolling countryside. The Laboratory has recently undergone a multimillion-dollar renovation and has some of the most modern facilities available. BRRC is accredited by AALAS and by the Toxicology Laboratory Accreditation Board. Send résumé and references to: Daniel L. Geary, Bushy Run Research Center, R.D. #4, Mellon Road, Export, Pa. 15632.

BRRC is an Equal Opportunity/Affirmative Action Employer.

TWO POSITIONS available at the **INSTRUCTOR OR ASSISTANT PROFESSOR** level in the Division of Hematology/Oncology, Department of Pediatrics, University of Washington, and the Pediatric Oncology Program, Fred Hutchinson Cancer Research Center. One individual will participate in an autologous bone marrow transplantation program for treatment of acute nonlymphocytic leukemia and the second will be involved in research on mechanisms of autoimmune hematologic diseases. The applicants are expected to generate their own support for the bulk of their activities. Please respond to: Irwin Bernstein, M.D., Program Head, Pediatric Oncology, Fred Hutchinson Cancer Research Center, 1124 Columbia Street, Seattle, Wash. 98104. *Equal Opportunity Employer.*

MARINE/ESTUARINE ECOLOGIST

Applications are invited for a permanent position in marine or estuarine ecology. The position is at the assistant or associate level and involves full-time research. Candidates must have a Ph.D. in ecology, fisheries biology, or a related area, preferably with postdoctoral experience. They should also have a demonstrated excellence in experimental field research, be competent in statistics and the mathematical aspects of ecology, and have experience and a continuing interest in the ecology and population dynamics of fish. Duties include participation in interdisciplinary environmental studies, supervising a small staff of fisheries biologists, and developing an active independent research program. The position is at the Benedict Estuarine Research Laboratory, a research facility of the Academy of Natural Sciences. It is located 30 miles south of Washington, D.C., on the Patuxent River Estuary, a subestuary of the Chesapeake Bay. All applications received prior to 1 February 1984 are guaranteed full consideration. Applicants should submit curriculum vitae, a statement of research interests, and the names, addresses, and telephone numbers of three referees to: Richard W. Osman, Chairman, Ecologist Search Committee, Benedict Estuarine Research Laboratory, Benedict, Maryland 20612.

POSITIONS OPEN

The Department of Psychology at New York University (NYU) hopes to fill a **JUNIOR-LEVEL, TENURE-TRACK POSITION** starting in fall 1984. Preference will be given to candidates with interest in human factors, computer-human interaction, or artificial intelligence, and combining basic theoretical and applied concerns. Applicants should demonstrate excellence in and commitment to an active program of research. Applications, including curriculum vitae, three letters of reference, and copies of relevant publications, should be sent to: Professor Murray Glazer, Department of Psychology, New York University, 6 Washington Place, 8th Floor, New York, N.Y. 10003. *NYU is an Affirmative Action/Equal Opportunity Employer.*

The University of California at Davis is seeking a full-time organic-analytical assistant research **MASS SPECTROMETRIST** for the central instrumentation facility. Applicants must be proficient in mass spectrometry with a Ph.D. in an applicable science or an equivalent combination of education and experience. The incumbent will be responsible for the operation and maintenance of a state-of-the-art medium resolution GC/MS with EI, CI, and FAB. He/she will collaborate in research projects with University staff and aid in the interpretation of data and assist campus researchers in the use of mass spectrometry. The ability to interact well with researchers in various subdisciplines of chemistry and the biological sciences is essential. This is a permanent, nontenure-track research position with a salary range of \$22,900 to \$30,100 (range adjustment due in 1983-1984), commensurate with experience. Send résumés and references before 6 January 1984 to:

J. Pangborn, Director
Facility for Advanced Instrumentation
9-Hutchinson Hall
University of California
Davis, California 95616

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

MICROBIOLOGIST

Assistant professor of biology to teach general and specialized courses in microbiology, beginning fall 1984. Ph.D. degree is required. The specialty of the appointee should contribute to research and doctoral programs in radiation biology and/or molecular biology. The department currently has 13 faculty members. Send a letter describing research interests, curriculum vitae, three letters of recommendation, and transcripts to: Dr. F. Schwalm, Chairman, Microbiology Search Committee, Texas Woman's University, P.O. Box 23971, Denton, Texas 76204. Deadline for applications: 9 January 1984. *Texas Woman's University is a state-supported, Equal Opportunity/Affirmative Action Employer.*

MOLECULAR GENETICS. The University of Illinois announces the current availability of two tenured or tenure-track positions at the assistant or associate professor level in the Department of Veterinary Pathobiology. Qualified individuals are expected to have a Ph.D. or equivalent, and clear evidence of research capability in one of the areas of eukaryotic, viral, or bacterial molecular genetics with an interest and commitment to problems of importance in veterinary medicine. In addition to developing an active, independent, and collaborative research program, duties will include teaching veterinary and graduate students in an area of microbiology and guiding graduate student research. Salary is competitive and negotiable based on experience and qualifications. Applications will be accepted until 15 March 1984, or until acceptable candidates are identified. Send résumé and three letters of reference to: Dr. Wayne A. Tompkins, Department of Veterinary Pathobiology, College of Veterinary Medicine, University of Illinois, 2001 South Lincoln Avenue, Urbana, Ill. 61801, telephone: 217-333-7825. Starting date: as soon as possible after 15 March 1984.

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

MOLECULAR GENETICS. Assistant professor, tenure-track, fall 1984. Candidate expected to develop strong research program in molecular genetics. Ph.D. molecular/cellular biology, or genetics required, postdoctoral research preferred. Forward curriculum vitae, three letters of reference, and statement of research plans, needs, and teaching interests to: Search Committee, Department of Biology, Building 31, Lehigh University, Bethlehem, Pa. 18015. Applications received after 15 January 1984 cannot be assured consideration. *Lehigh University is an Affirmative Action/Equal Opportunity Employer.*

**2nd International Symposium
MOLECULAR GENETICS OF THE
BACTERIA-PLANT INTERACTION**

June 4-8, 1984
Cornell University, Ithaca, New York/U.S.A.

Organizers:

A.A. SZALAY

Boyce Thompson Institute, Cornell University

F.M. AUSUBEL

Massachusetts General Hospital
Harvard Medical School

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APPLICATIONS should be sent to:

A.A. SZALAY, Boyce Thompson Institute, Cornell University,
Tower Road, Ithaca, NY 14853/U.S.A.

RESEARCH TRIANGLE UNIVERSITIES

PLANT MOLECULAR BIOLOGY

Graduate and Postdoctoral Fellowships

Duke University, North Carolina State University at Raleigh, and the University of North Carolina at Chapel Hill together with the North Carolina Biotechnology Center have formed a Consortium to advance studies in plant molecular biology. With support from CIBA-GEIGY, R. J. Reynolds Industries, and the Biotechnology Center, the Consortium will provide graduate and postdoctoral fellowships in 1984 for study and research in plant molecular biology at the three Triangle universities. Each fellow will be based at one of the institutions, but will participate in activities involving faculty and students at all three institutions. The goal of the Consortium is to enhance the community of plant molecular biologists among the three institutions and participating companies.

The graduate student stipend is \$8,000 plus tuition, with an allowance for supplies and travel. The award is renewable for up to three years. The postdoctoral stipend is \$21,500 with an allowance for supplies and travel, renewable for up to two years.

Candidates should apply directly to the departments of their choice for admission and postdoctoral positions. Applications for a fellowship or inquiries about the program should be sent to the Biotechnology Center. Applications are due by February 15, 1984 and should include curriculum vitae, a summary of research interests, and the departments (graduate students) or faculty members (post-doctoral fellows) to whom you have applied. Applicants also should have three letters of reference and undergraduate and graduate transcripts sent to the Center.



NORTH CAROLINA BIOTECHNOLOGY CENTER
BOX 12235 · RESEARCH TRIANGLE PARK, NC · 27709

**RESEARCH
ASSISTANTS**

The Cambridge Research Laboratory is located adjacent to the MIT campus and offers an unusually sophisticated research environment. A member of the Johnson & Johnson family of companies, we are a major center for long term basic research in medical diagnostic methods.

These three openings are at the BS or MS level and will involve working with our senior investigators in a variety of multidisciplinary programs.

Over the next few months a variety of interesting opportunities will be available for research scientists to the Ph.D. level in these and associated disciplines. Candidates are invited to submit exploratory resumes in anticipation of these openings.

These positions require a minimum of 2 years of experience.

IMMUNOLOGY

Experience is required in human hybridoma development, in vitro immunization. Additional experience in cell biology and biochemistry would be desirable.

MOLECULAR BIOLOGY

Strong experimental skills coupled with an extensive background in recombinant DNA methodology are necessary. This includes DNA sequencing and the screening of cDNA and genomic libraries.

BIOCHEMISTRY

We prefer an MS level Biochemist with extensive experience in all aspects of protein purification and modification and immunoassay development. Familiarity with techniques in cell culture and molecular biology would be helpful.

At Cambridge Research Labs you'll be in the heart of America's cultural, educational and medical community. You can choose an urban or suburban life-style within easy commuting distance and you're close by all of New England's renowned recreational areas.

You are invited to forward your resume to Bob King, Cambridge Research Laboratory, 195 Albany Street, Cambridge, MA 02139. All inquiries will be held in confidence. Our company is an equal opportunity employer.



**CAMBRIDGE RESEARCH
LABORATORY**

Ortho Diagnostic Systems Inc.

POSITIONS OPEN

MEDICAL TECHNOLOGY; 1 September opening (fall 1984). Assistant professor, undergraduate. Ph.D. or M.S., M.T. with certification ASCP or equivalent, in clinical speciality (immunology/immunohematology, microbiology, histology, and parasitology). Applicants with interest in research are strongly encouraged to apply. Experience in teaching and in clinical field required. Salary: \$21,650 plus, depending on experience. *An Equal Opportunity/Affirmative Action Employer.* Résumé and three references by 31 January 1984 to: Dr. Michael Chouda, Coordinator, Medical Technology, York College, City University of New York, 150-14 Jamaica Avenue, Jamaica, New York 11451.

MOLECULAR BIOLOGIST/ GENETICIST

Senior research scientists are invited to participate in the formation of a group in one or more areas of molecular biology and genetics at Wayne State University School of Medicine. Five tenure-track positions will be available with levels of appointment and administrative arrangements being flexible depending on the qualifications and wishes of the candidate. The projected starting date is 1 July 1984. Substantial evidence of current research activity as indicated by competitive funding awards and publications is required. All subareas will be considered. The closing date for applications is 1 February 1984. Prospective candidates should send their curriculum vitae, a brief statement of their plans for future research direction, and the names of three references to:

Dean Henry L. Nadler
Wayne State University
School of Medicine
540 East Canfield
Detroit, Mich. 48201

Wayne State University is an Equal Opportunity Employer.

TWO POSITIONS: MOLECULAR GENETICIST; QUANTITATIVE GENETICIST

Department of Botany and Plant Sciences, University of California, Riverside, announces two positions, available 1 July 1984. One position to be filled at assistant professor level and one at assistant, associate, or full professor level. Eleven-month tenure-track appointments in the College of Natural and Agricultural Sciences and in the Agricultural Experiment Station. Ph.D. required. The successful candidates will be expected to develop vigorous, innovative, independent research programs. Experience will determine the rank and level of the position. **PLANT QUANTITATIVE GENETICIST.** Quantitative geneticist with a research commitment to basic research and its application to plant improvement. Must contribute to the department undergraduate teaching program and offer an upper-division/graduate course in quantitative genetics in relation to plant improvement. **PLANT MOLECULAR GENETICIST.** Research involving molecular genetic approaches to plant biology and plant improvement. Must contribute to the department undergraduate teaching program and participate in teaching an upper-division/graduate course in plant molecular genetics.

Send curriculum vitae and official transcripts and arrange to have at least three letters of recommendation sent to: Dr. R. K. Soost, Search Committee Chairman, Department of Botany and Plant Sciences, University of California, Riverside, Calif. 92521. Application deadline is 15 January 1984 or later, if suitable candidates have not been selected.

An Affirmative Action/Equal Opportunity Employer

SCRIPPS CLINIC AND RESEARCH FOUNDATION LA JOLLA, CALIFORNIA

TWO POSTDOCTORAL POSITIONS available immediately to study molecular mechanisms of pathogenesis of arenaviruses and coronaviruses. Background in molecular biology or virology is essential and salary level will be determined by qualifications and prior experience.

Applicants should submit curriculum vitae and names of three references to: Michael J. Buchmeier, Department of Immunology (IMM 6), Scripps Clinic and Research Foundation, 10666 North Torrey Pines Road, La Jolla, Calif. 92037.

POSITIONS OPEN

NEUROBIOLOGY FACULTY

The Division of Biology at the California Institute of Technology has a position open in the area of molecular and cellular neurobiology. Interested persons should send, by 15 December 1983, curriculum vitae, statement of research interests, and the names of three referees to:

Bernita Larsh
Molecular Neurobiology Search Committee
Division of Biology, 156-29
California Institute of Technology
Pasadena, Calif. 91125

Equal Opportunity/Affirmative Action Employer

NEUROBIOLOGY AND BEHAVIOR CORNELL UNIVERSITY

The Section of Neurobiology and Behavior, consisting of 19 faculty with interests ranging from molecular neurobiology to social behavior, seeks two new tenure-track faculty members, preferably at the rank of assistant professor. Appointment can begin September 1984. We will search broadly within neurobiology and behavior, with emphasis on candidates having research interests in one or more of the following areas: molecular biophysics, neurodevelopment, integrative functions of the CNS, neurogenetics, neuroethology, and physiological bases of behavior. Applicants should have a doctorate and an outstanding record of achievement. They should send their curriculum vitae, a statement of research and teaching interests, and selected reprints, and have three letters of recommendation sent to: Search Committee, Section of Neurobiology and Behavior, Cornell University, Seeley G. Mudd Hall, Ithaca, New York 14853. Screening will begin 15 January 1984 and continue until suitable candidates are found. *Cornell is an Affirmative Action/Equal Opportunity Employer.*

NEUROLOGIST—Assistant/associate professor, Emory University School of Medicine. The Department of Neurology is seeking candidates for academic positions. Preference given to candidates with clinical and research experience in a subspecialty area such as neuromuscular disease, epilepsy, movement disorders, motor control, genetics, or the rehabilitation aspects of neurology. Excellent opportunities available for collaboration with neuroscientists in the basic science departments. *The University is an Equal Opportunity/Affirmative Action Employer.* Reply to: Robert F. Kibler, M.D., Chairman, Department of Neurology, Emory University School of Medicine, 401 Woodruff Memorial Building, Atlanta, Georgia 30322. Telephone: 404-329-5804.

WASHINGTON UNIVERSITY SCHOOL OF MEDICINE

The Department of Psychiatry, Washington University Medical School, invites applications for tenure-track positions in our Neuroscience Program. Candidates should have demonstrated interests in general neurobiology, but expertise in the following areas is preferred: receptor mechanisms, CNS active peptides, neuroendocrinology, neuropharmacology, psychopharmacology, and/or electrophysiology. Joint appointments in preclinical departments will be available, depending upon area of expertise. We are looking for candidates with proven track records, but very strong newer investigators are also encouraged to apply. Psychiatrists are preferred, but we are principally interested in excellent neuroscientists, regardless of degree. Applicants should submit, prior to 1 February 1984, updated curriculum vitae, a concise statement of research interests, and the names of three references to: Dr. Theodore J. Cicero, Department of Psychiatry, Washington University School of Medicine, 4940 Audubon Avenue, St. Louis, Missouri 63110. *Washington University is an Equal Opportunity/Affirmative Action Employer.*

PHYSICAL OCEANOGRAPHER: The Graduate School of Oceanography at the UNIVERSITY OF RHODE ISLAND invites applications for an assistant or associate research professor position. We are particularly interested in candidates with theoretical or numerical modeling experience in one or more of the following areas of research: geophysical fluid dynamics, dynamics of equatorial oceans, oceanic transport processes, and climate and the oceans. Only limited start-up funds are available so candidates must have a demonstrated ability to raise their own funding. Please send application, including a statement of research interests and names of three references, by 15 December 1983 to: Professor Melvin Stern, Graduate School of Oceanography, UNIVERSITY OF RHODE ISLAND, Kingston, Rhode Island 02881. *An Affirmative Action/Equal Opportunity Employer, M/F.*

POSITIONS OPEN

PHYSIOLOGIST—Tenure-track position available 1 February 1984. The Division of Life Sciences, University of New England, is seeking a physiologist with background in biochemistry. Teaching duties: general physiology and anatomy/physiology course. Candidates should have a Ph.D., teaching experience, and an interest in undergraduate education. Send curriculum vitae, with reference addresses by 9 December, to: Dr. David Bernstein, Division of Life Sciences, University of New England, 11 Hills Beach Road, Biddeford, Maine 04005.

PHYSIOLOGIST

Assistant professor. To teach physiology and pathophysiology courses at the Houston Center of Texas Woman's University. Qualifications: Ph.D. with emphasis in physiology. Participation in research programs and graduate training of master's students in biology and health sciences expected. Have curriculum vitae, three letters of recommendation, and transcripts, postmarked no later than 2 January 1984, mailed to: Dr. F. Schwalm, Chairman, Biology Search Committee, Texas Woman's University, P.O. Box 23971, Denton, Texas 76204. *Texas Woman's University is an Equal Opportunity Employer.*

POSTDOCTORAL FELLOW OR RESEARCH ASSOCIATE position available immediately to study mechanisms involved in the therapy of tumor dormant states in animal models. Applicants should have a background in immunology and cell biology. Salary: \$17,000 per annum. Send curriculum vitae and names of references to: Dr. E. Fredrick Wheelock, Department of Pathology, HAHNEMANN UNIVERSITY, Broad and Vine, Philadelphia, Pa. 19102. *Affirmative Action Employer.*

POSTDOCTORAL POSITIONS available immediately for studies in various aspects of cancer research. The areas of investigation include studies on metabolic activation and detoxication of carcinogenic compounds, chemical and biological characterization of the involved enzymes, the molecular basis of chemical toxicity, interactions of heavy metals with DNA and chromatin, tumor-specific cytochromes, immunology and biochemistry of chromosomal proteins, including monoclonal antibodies, molecular carcinogenesis, growth factors, mechanisms of action of retinoids, cellular interactions and extracellular matrix, cell differentiation, DNA cloning, and transcription. Salary negotiable. Applicants should submit curriculum vitae and have three letters of recommendation sent either to: Dr. F. Peter Guengerich (Center in Environmental Toxicology), or Dr. Lubomir S. Hnilica (Cancer Center), Department of Biochemistry, Vanderbilt University School of Medicine, Nashville, Tenn. 37232. *An Affirmative Action/Equal Opportunity Employer*

FOX CHASE CANCER CENTER HAS AVAILABLE POSTDOCTORAL POSITIONS IN NMR AND PHYSIOLOGY

Clinical Proton Imaging
Advanced NMR Imaging Techniques
Metabolic Studies of Animals and
Isolated Organs

A comprehensive research group, under the direction of Dr. Truman Brown, has postdoctoral positions available for candidates interested in any of the above areas. Equipment consists of three NMR instruments: 1.5T clinical imager, 4T 33-cm unit, 400 WB spectrometer. Salary commensurate with background and experience. Send résumé and three references to: Personnel Department, FOX CHASE CANCER CENTER, 7701 Burholme Avenue, Philadelphia, Pa. 19111. *Equal Opportunity Employer.*

VISITING PROFESSORSHIP. New College has been honored by an endowment from the MacArthur Foundation. The position will be in the Division of Natural Sciences, which includes mathematics, physics, chemistry, biology, experimental psychology, and computer science. We seek a scholar who is committed to teaching motivated undergraduates. Although we particularly solicit applications broadly based in computer science, we do encourage applications from any discipline listed above or related to them. One- or two-year appointment. Applications should be sent by 30 January 1984 to: P. A. Kazaks, Chairman, Natural Sciences, New College of University of South Florida, Sarasota, Fla. 33580.

POSTDOCTORAL RESEARCH AWARDS

Sponsored by the
BALLISTIC RESEARCH LABORATORY
in association with
THE NATIONAL RESEARCH COUNCIL

The National Research Council will make awards in April, July and November of 1984 under the Resident Associateship Program, which provides awardees with opportunities to conduct experimental and theoretical research as visiting scientists and engineers in the fields of

Applied Computer Sciences
Applied Mathematics
Probability Theory and Stochastic Processes
Combustion Research
Fluid Mechanics
Continuum Mechanics
Materials Sciences
Nuclear and Radiation Physics
Physical Chemistry
Quantum Chemistry

in the Ballistic Research Laboratory complex located in the beautiful Chesapeake Bay country of Maryland, within easy driving distance of the metropolitan centers of Baltimore, Philadelphia, and Washington, D.C.

Some programs are open to senior investigators as well as recent doctorates. Most programs require U.S. citizenship.

Further details on research programs can be obtained from Dr. L. J. Puckett, (301) 278-6246, at the Ballistic Research Laboratory, Aberdeen Proving Ground, MD 21005.

For application materials and details on specific research opportunities, write promptly giving areas of interest to:

Associateship Office (JH-610-E-15)
NATIONAL RESEARCH COUNCIL
2101 Constitution Avenue, NW
Washington, DC 20418

Postmark deadlines for application are January 15, April 15 and August 15, 1984, respectively.

Diagnostics Program

Allied's Corporate Research and Development Laboratories has an opportunity for a PhD graduate in Bio-organic chemistry or Biochemistry, preferably with some postdoctoral experience. Detailed knowledge of biochemical methods including familiarity with protein/enzyme purification, characterization, functionalization and immobilization techniques a must. Previous experience in the development of non-isotopic immunoassays would be a definite advantage. Hands-on experience working with DNA would also be helpful.

Position is located at our Corporate Headquarters in Northwestern New Jersey. You will enjoy an excellent starting salary, comprehensive benefits, and opportunities for professional advancement. Relocation assistance will be provided. For prompt consideration, send your resume and salary history to: Mrs. E. V. Lord, Employment Supervisor, Dept. DP, Allied Corporation, P.O. Box 1021R, Morristown, New Jersey 07960.



We mean business.

An equal opportunity employer. Women, Minorities, the Handicapped and Veterans are urged to apply.

STAFF FELLOWS

The National Institute of Allergy and Infectious Diseases, National Institutes of Health, Public Health Service, is actively recruiting applications for the Medical Staff Fellowship Program to train in its intramural facilities at the Rocky Mountain Laboratories (RML) in Hamilton, Montana. This recruitment is specifically for junior level Staff Fellows, those with initially less than 3 years of professional level research experience. Candidates for the Staff Fellowship must be U.S. Citizens or resident aliens who would be eligible for citizenship within 4 years. They must either have been awarded their doctoral degrees in a biomedical science or have been certified by a university as meeting *all* the requirements leading to such a doctorate. The starting salary for Staff Fellows is in the range of \$17,000 to \$23,000 depending on research experience.

At the present time we are recruiting for training in three laboratories at RML.

The Laboratory of Persistent Viral Diseases is studying several models of chronic or persistent virus infections including retroviruses (Friend leukemia virus), rabies virus, Aleutian disease virus of mink, scrapie and the slow virus agents responsible for kuru and Jakob-Creutzfeldt disease, to understand the mechanisms of host immunity and to clarify the mechanisms of virus persistence.

The Laboratory of Microbial Structure and Function is concerned

with structure, function and genetics of pathogenic bacteria with regard to the virulence, pathogenicity and immunochemical properties of agents such as gonococci, chlamydiae, spirochetes causing relapsing fever and Lyme disease and spotted fever rickettsiae.

The Laboratory of Molecular Pathobiology addresses the application of molecular biology, molecular genetics and immunochemistry to investigation of the pathogenesis of and immunity to disease-producing microorganisms.

The research programs are supported by excellent facilities for large and small animals. Isolation facilities are available for work with hazardous or unknown pathogens. A well equipped and staffed electron microscope section is also available.

The Rocky Mountain Laboratories are in Hamilton, Montana, a small community serving 9,000 people, 45 miles from Missoula, home of the University of Montana. The climate is pleasant, moderate in comparison to cities such as Chicago.

For further information on research programs and application forms, please contact Dr. Kenneth Sell, Scientific Director, National Institute of Allergy and Infectious Diseases, National Institutes of Health, Bethesda, Maryland 20205, who will arrange contact with the Chiefs of the respective laboratories and research programs.

NIH is an Equal Opportunity Employer.

POSITIONS OPEN

POSTDOCTORAL—NUTRITION AND METABOLISM. Available immediately through 30 June 1984 to study nutritional and physiological aspects of obesity in animals and man, protein turnover with weight loss or nutritional rehabilitation in man, glucose metabolism in varying clinical states plus other areas. U.S. citizen. M.D. or Ph.D. (nutrition, physiology, biochemistry). Public Health Service Training Grant. Contact program director: J. A. Brasel, M.D., Harbor-UCLA Medical Center, 1000 West Carson Street, Torrance, Calif. 90509.

POSTDOCTORAL POSITION: The Dana-Farber Cancer Institute is seeking to fill one **RESEARCH POSITION** at the postdoctoral level to work in areas of DNA sequence analysis and in vitro and in vivo studies of mechanisms of leukemogenesis. Experience in molecular biology or virology preferred. Joint appointment will be held in an appropriate department of Harvard Medical School. Send curriculum vitae and names of three references to: Dr. William Haseltine, DANA-FARBER CANCER INSTITUTE, 44 Binney Street, Boston, Mass. 02115. An Affirmative Action/Equal Opportunity Employer.

POSTDOCTORAL POSITION. Available immediately. To develop and use in situ hybridization techniques in plant cell studies. Molecular biology or cell biology experience required. Plant biology experience is not necessary. Send curriculum vitae and three letters of reference to: Dr. Robert Turgeon, Section of Plant Biology, Cornell University, Ithaca, N.Y. 14853. Cornell University is an Affirmative Action/Equal Opportunity Employer.

POSTDOCTORAL POSITION

Available now for projects related to reactivity of blood vessels in vitro. Stipend: \$16,000 to \$17,000, depending on postdoctoral experience. Send curriculum vitae and references to: Dr. Gordon Ross, Department of Physiology, University of California, Los Angeles, School of Medicine, Center for the Health Sciences, Los Angeles, Calif. 90024.

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

POSTDOCTORAL POSITIONS supported by NIH/NIA training grant available immediately for recent Ph.D.'s or M.D.'s interested in research on normal aging or Alzheimer's disease. A background in molecular biology, chemistry, or cell biology is preferred. Experience in some of the following helpful: tissue culture, receptor biology, neuropharmacology, or monoclonal antibodies. Successful candidates will join a multidisciplinary study of Alzheimer's disease and aging and will be expected to work independently as members of the research team. Ample opportunity exists to pursue original interests or ideas. Spacious modern laboratory facilities available. Please send résumé and names of three references to: F. Marott Sinex, Ph.D., Section on Biomedical Gerontology, Department of Biochemistry, Boston University School of Medicine, 80 East Concord Street, Boston, Mass. 02118. An Equal Opportunity Employer, M/F.

POSTDOCTORAL RESEARCH ASSOCIATE position available immediately. To work with group investigating the biophysical aspects of insulin action. Exact background less important than resourcefulness, self-starting abilities, and enthusiasm for a holistic approach to cell regulation. See review BBA (1983). Contact:

Richard D. Moore, M.D., Ph.D.
Department of Physiology and Biophysics
Given Building
University of Vermont School of Medicine
Burlington, Vermont 05405

RESEARCH ASSOCIATE AND SENIOR RESEARCH ASSOCIATE

Research associate or senior research associate positions available with the City College of New York Experimental High Energy Physics Group which is engaged in Glueball production investigations and instrumentation developments at the Brookhaven National Laboratory Alternating Gradient Synchrotron. Staff will be based at Brookhaven National Laboratory. Candidates experienced in proportional wire chambers, drift chambers, or other detector hardware areas are particularly desired. The salary will take into account experience and ability. Please send résumé to: Professor S. J. Lindenbaum, Principal Investigator, City College of New York Group, c/o Department of Physics, Building 510A, Brookhaven National Laboratory, Upton, New York 11973. The Research Foundation, CUNY, City College, is an Equal Opportunity Employer.

POSITIONS OPEN

POSTDOCTORAL POSITION available to study molecular genetics and biochemistry of RNA polymerase II in *Drosophila*, using techniques of protein and nucleic acid biochemistry, genetics, gene transfer, in vitro transcription, and immunochemistry. Experience in one or more of these areas and interest in others required. Send curriculum vitae and letters of recommendation to: Dr. Arno L. Greenleaf, Biochemistry Department, Duke Medical Center, Durham, N.C. 27710. Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL POSITION available immediately for recent Ph.D. U.S. citizen or permanent resident. Emphasis on nutritional biochemistry, lipid and lipoprotein metabolism of rabbit, and equine animal models. Experience in GLC, HPLC, TLC, protein purification, and so forth, desirable. NIH supported for 1 year at \$14,000 to \$17,000. Send curriculum vitae and three letters of reference to: J. E. Bauer, Department of Physiological Sciences, Box J-144, JHMH, University of Florida, Gainesville, Fla. 32610. Telephone: 904-392-0921.

POSTDOCTORAL POSITION available immediately to work on role of lipids in synaptic transport of neurotransmitters. Ph.D. in biochemistry or related discipline required. Candidates with background in lipid biochemistry, membrane structure/function, or transport will be considered. Salary range: \$15,000 to \$17,000 for the first year. Send résumé and references to: Dr. E. Raghupathy, University of California, Brain Behavior Research Center, El-dridge, Calif. 95431. The University of California is an Affirmative Action/Equal Opportunity Employer. Women and minorities are encouraged to apply.

PROGRAM LEADER IN AGRONOMIC RESEARCH—California-Egypt Rice Research and Training Project, Egypt. One-year appointment beginning 1 February 1984. Individual will work with Egyptian scientists on all aspects of agronomic research in evaluating crop management practices and environmental constraints related to rice production. A Ph.D. in agronomy, soil or plant science is required along with experience relating to rice production or related field crop research. Laboratory experience in soil, plant, and water analyses is desirable. Application deadline is 1 January 1984 or until a suitable candidate is selected. Send résumé with full record of employment since graduation, including any special assignments, bibliography of scientific and popular publications, and the names and addresses of three references, to: Dr. D. S. Mikkelsen, Chairman, Search Committee, Department of Agronomy and Range Science, University of California, Davis, Calif. 95616. Telephone: 916-752-1708.

An Affirmative Action/Equal Opportunity Employer

PROJECT DIRECTOR Study on Meat and Poultry Inspection

The National Academy of Sciences (NAS) has an immediate opportunity to organize and manage a study on meat and poultry inspection and minimizing risks to public health. The incumbent will also collect and analyze relevant scientific data, draft background reports, and supervise staff.

Applicants should have a Ph.D. or equivalent in public health, toxicology, epidemiology, microbiology, food science, or a related discipline plus at least 5 years of experience in one of these fields of which 2 years must have been in a managerial position. Experience in risk assessment and knowledge of USDA programs preferred. Please submit résumés as soon as possible to: Dr. Sushma Palmer, Commission on Life Sciences, NAS, 2101 Constitution Avenue, NW, Washington, D.C. 20418.

National Academy of Sciences

An Equal Opportunity Employer

SMITHSONIAN INSTITUTION. The Conservation Analytical Laboratory (CAL) needs two people, a **Scientist, History of Materials** (GS 12-13), and a **Microanalyst** (GS 11). The scientist, history of materials, must have considerable experience and a record of publication in materials science applied to the history of technology. The microanalyst will identify the materials of museum objects. Samples are diverse, sometimes very small, and often degraded. For further information and application forms, which must be returned by 30 December, contact: Alan Postlethwaite, Acting Director, CAL, Museum Support Center, Smithsonian Institution, Washington, D.C. 20560. The Smithsonian Institution is an Equal Opportunity Employer.

POSITIONS OPEN

POSTDOCTORAL OR RESEARCH ASSOCIATE POSITION available at the University of Arizona Cancer Center Division. Experimental therapeutics of human tumor stem cells; biological regulation or electromagnetic current alterations. Training in cell biology or electrophysiology necessary. Send curriculum vitae and three reference letters to: Dr. Frank Meyskens, University of Arizona, Cancer Center, Tucson, Arizona 58724. Closing date: 9 December 1983. University of Arizona is an Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL RESEARCH ASSOCIATE. Position available immediately to study recessive mutations in cultured mouse and human cells. Background in molecular biology desirable. Send application with curriculum vitae and the names of three references to: Dr. Rosann A. Farber, The University of Chicago, 920 East 58 Street, Chicago, Ill. 60637. The University of Chicago is an Affirmative Action/Equal Opportunity Employer.

PSYCHOPHYSICIST—CLINICAL ELECTROPHYSIOLOGIST (recent Ph.D.) with computer skills needed in newly established Retinitis Pigmentosa Center, Bascom Palmer Eye Institute, Miami, Florida. NIH training grant salary available. Write or call:

Dr. S. G. Jacobson
Bascom Palmer Eye Institute
P.O. Box 016880
Miami, Florida 33101
Telephone: 305-326-6305, -6319

RENAL PHYSIOLOGIST (Ph.D.) to join active, well-funded Ph.D./M.D. research group. Start January to July 1984. Micropuncture or perfusion expertise required. Research areas: renal kallikrein, acute renal failure, kidney and hypertension. May be at faculty rank or postdoctoral fellow, as qualified. Send curriculum vitae to: Dr. N. G. Levinsky, Renal Unit, Boston University Medical Center, 75 East Newton Street, Boston, Mass. 02118. An Equal Opportunity Employer.

RESEARCH ASSOCIATE

Postdoctoral position available immediately to study the enzymology of DNA replication in mammalian cells. Applicants should have a background in enzymology and preferably in the biochemistry of DNA replication. Send curriculum vitae and names of three references to: Dr. Earl Baril, c/o Personnel Office, Worcester Foundation for Experimental Biology, 222 Maple Avenue, Shrewsbury, Mass. 01545.

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

RESEARCH ASSOCIATE

Immediate opening for a postdoctoral bioorganic chemist to work on enzyme purifications in connection with studies on enzyme stereochemistry in the laboratory of Dr. John Aberhart. Send curriculum vitae and three letters of reference to: Dr. John Aberhart, c/o Personnel Office, Worcester Foundation for Experimental Biology, 222 Maple Avenue, Shrewsbury, Mass. 01545.

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

RESEARCH ASSOCIATE POSTDOCTORAL POSITION for ongoing studies on the biosynthesis, regulation and gene organization of acute-phase and serum complement proteins. Ideal candidate will be well motivated and versed in the fundamental techniques of biochemistry and molecular biology. Salary: \$16,000 plus. Send curriculum vitae and names of three references to: Dr. John E. Mole, Department of Biochemistry, University of Massachusetts Medical Center, Worcester, Mass. 01605.

SCIENCE EDITOR

Cornell University Press intends to expand its scientific publications and seeks an acquisitions editor to acquire and develop a list of books in the sciences with a primary emphasis on the biological sciences. Candidates should have at least a bachelor's degree in one of the scientific disciplines and no less than 2 years of experience in publishing as an acquisitions editor in textbook, professional, or scholarly publishing. Alternatively, a candidate must have a Ph.D. in a scientific discipline, some teaching experience, and a strong desire to start a career in publishing. Salary commensurate with experience. Reply by letter and résumé to: Director, Cornell University Press, 124 Roberts Place, Ithaca, New York 14851. An Equal Opportunity Employer.

Senior Scientist Drug Metabolism

Leading pharmaceutical company located in an attractive Philadelphia suburb has a challenging position available in the field of drug metabolism. Responsibilities include the design and implementation of studies in animals and man as well as cellular and subcellular preparations. The disposition of novel drugs and the mechanisms responsible for their bio-transformation and transport will be investigated.

The position requires a Ph.D. in Biochemistry with a minimum of 3 years postdoctoral experience. Demonstrated ability to pursue independent creative research and excellent verbal and written communication skills are prerequisites. Expertise in modern bioanalytical methods and supervisory ability are essential.

This position offers an excellent opportunity for a scientist with the above qualifications to join an innovative and highly productive research group.

If interested send resume including salary history in strict confidence to Personnel Manager,

Wyeth Laboratories, Inc.



P.O. BOX 8299
Philadelphia, PA 19101

Equal Opportunity Employer, M/F/H



BioTechnica International, Inc.

85 Bolton St., Cambridge, Massachusetts 02140 (617) 864-0040

Ph.D. Scientist

BioTechnica International, Inc., a company specializing in agricultural and industrial applications of recombinant DNA technology, has a position available for a highly motivated and productive Ph.D. with experience in microbial genetics and physiology and familiarity with techniques of modern molecular biology. The project involves microbial production of chemicals and metabolites of commercial interest. The successful candidate will step into a key position in an expanding program to bring biotechnology to the chemicals marketplace. Please send a letter of application with curriculum vitae, list of publications, and names of three references to:

Director of Administrative Services
BioTechnica International, Inc.
85 Bolton Street
Cambridge, MA 02140

AAAS MASS MEDIA SCIENCE AND ENGINEERING FELLOWS PROGRAM

The American Association for the Advancement of Science (AAAS) invites outstanding students in the natural and social sciences and engineering, preferably those at the graduate level, to apply for the 1984 Mass Media Science and Engineering Fellows Program. Students majoring in English, journalism, or other nontechnical fields are not eligible for these fellowships.

Fellows will work as reporters, researchers, production assistants, and script consultants for 10 weeks during the summer at newspapers, news magazines, and radio and television stations across the country. Fellows will have the opportunity to participate in the news-making process, to increase their understanding of editorial decision-making, and to develop skill in conveying to the public a better understanding and appreciation of science and technology.

AAAS pays a \$250 weekly stipend and travel expenses. Deadline for receipt of applications is 1 February 1984. *Minorities and handicapped persons are especially encouraged to apply.*

For further information and applications, write:

**MASS MEDIA SCIENCE AND ENGINEERING
FELLOWS PROGRAM**
AAAS, 6th floor
1776 Massachusetts Avenue, NW
Washington, D.C. 20036

Veterinary Pathologist

The Department of Pathology, Smith Kline & French Laboratories, is seeking a Veterinary Pathologist for its greatly expanded Pathology/Toxicology facility located 17 miles west of central Philadelphia in Upper Merion, Pennsylvania.

The successful candidate will be responsible for the investigation of pathological changes arising in drug toxicity studies with emphasis on elucidating pathogenetic mechanisms.

Candidates for this challenging position must have a DVM or equivalent, and demonstrated ability in experimental pathology with an MS or PhD, or through published work. Experience in diagnostic and/or laboratory animal pathology is desirable. Preference will be given to those who also have ACVP board eligibility.

We offer an excellent compensation and benefits program including an attractive relocation package, along with opportunities for personal and professional growth. Please send your resume in confidence to: Mr. Walter B. Flagg, SMITHKLINE BECKMAN CORPORATION, 1590 Spring Garden Street, Philadelphia, PA 19101. We are an equal opportunity employer, M/F/H/V.

SK&F

A SmithKline Beckman Company

POSITIONS OPEN

RESEARCH ASSOCIATE OR FELLOW position available immediately for Ph.D. chemist with research experience in natural products chemistry, preferably the organic chemistry of peat. Fixed-term position (1 to 2 years) with research group investigating chemical composition of peat and extraction of useful chemicals. Salary range: \$17,000 to \$22,000. Position open until filled. Send letter of application, résumé, official transcripts, three letters of recommendation submitted directly by referees, and representative publications to: **Dr. S. A. Spigar-elli, Director, Center for Environmental Studies, Bemidji State University, Bemidji, Minnesota 56601. Equal Opportunity/Affirmative Action Employer.**

RESEARCH SPECIALIST III EMORY UNIVERSITY ATLANTA, GEORGIA

Position available in Leukemia Research Laboratory for conducting research in normal and abnormal hematopoiesis in vivo and in vitro at the cellular and molecular level. Individual would assume supervisory role involving several research projects involved in the selective effects of drugs and monoclonal antibodies on leukemic cells, studies of the interaction of cell population and products of cells on hematopoiesis, and the in vitro effects of biologicals and drugs on leukemic cell growth and differentiation. Applicant must have a master's degree in a field related to research area and 2 years of related experience or a bachelor's degree in a field related to research area and 4 years of related experience. One year of experience must have been in a supervisory or lead capacity. Tissue culture, biochemical, and cell biology experience highly preferred. Ph.D. desirable. To apply, send résumé to: **The Employment Center, Emory University Personnel Department, Atlanta, GA. 30322. An Equal Opportunity/Affirmative Action Employer.**

RESEARCH STAFF OFFICER AGRICULTURE (Part-Time)

The National Academy of Sciences is seeking to augment its board on agriculture with a part-time (50 percent time) staff officer. This position will provide staff support for two projects: (i) Trends in competency needs in agricultural research personnel and (ii) bioscience research in agriculture. Duties include organization of meetings, report preparation, literature search, budget review, and other related responsibilities. Candidates should possess a Ph.D. or equivalent in the agricultural sciences and 4 years of experience related to the administration of research projects and committees plus demonstrated oral and written communication ability.

Interested applicants should forward résumé/curriculum vitae with salary requirements to: **P. Ross, Board on Agriculture,**

**National Academy
of Sciences
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Washington, D.C. 20418
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STAFF SCIENTIST NUTRITION-BIOCHEMISTRY

The National Academy of Sciences has an immediate opportunity as the staff officer for a study on nutrition education in medical schools, involving data collection, analysis, and background papers. The incumbent will also provide assistance on a separate study on meat and poultry inspection.

Applicants should have a Ph.D. or equivalent in nutrition/biochemistry, food science, or nutrition education and at least 2 years of related experience. Knowledge of nutrition curricula in medical schools and risk assessment is preferred. Please submit résumé as soon as possible to: **Dr. Sushma Palmer, Commission on Life Sciences, National Academy of Sciences, 2101 Constitution Avenue, NW, Washington, D.C. 20418. An Equal Opportunity Employer.**

TOXICOLOGY. Postdoctoral appointment in biochemical toxicology available 1 January 1984. Ph.D. in toxicology or pharmacology. Position involves participation in an active research program as well as some teaching. Send curriculum vitae and three references to: **Dr. R. Craig Schnell, Department of Pharmacodynamics and Toxicology, College of Pharmacy, University of Nebraska Medical Center, Omaha, Nebraska 68105. An Equal Opportunity/Affirmative Action Employer.**

FELLOWSHIPS

POSTDOCTORAL FELLOWSHIP

Postdoctoral fellowship experience in neurology of aging available through Tarbox Parkinson's Disease Institute at Texas Tech University Health Sciences Center. Fellowship is for up to 3 years in duration for study of Alzheimer or Parkinson disease. Contact: **J. Thomas Hutton, M.D., Ph.D., Department of Medical and Surgical Neurology, Texas Tech University Health Sciences Center, Lubbock, Texas 79430.**

GRADUATE FELLOWSHIPS IN BIOMEDICAL AND PHYSICAL SCIENCES

Physics	Physiology	Molecular Cell Biology
Anatomy	Biochemistry	Computer Sciences
Biology	Oral Biology	Biophysical Sciences
Genetics	Pharmacology	Biomathematics
Chemistry	Biostatistics	Physiological Optics
Pathology	Neurosciences	Biomedical Engineering
Virology	Immunology	Medical Psychology

Well-funded faculty with diverse interests. Good postgraduate placement record. Above average stipends include full payment of tuition. Contact: **The Graduate School (A), University of Alabama in Birmingham, Birmingham, Ala. 35294; telephone: 205-934-8227. Equal Opportunity/Affirmative Action Institution.**

MARINE POLICY AND OCEAN MANAGEMENT RESEARCH FELLOWSHIPS

The Woods Hole Oceanographic Institution offers fellowships to individuals in social sciences, law, or natural sciences to apply their training to problems that involve the use of the oceans. Present themes in the program include marine policy problems and opportunities in developing countries, policy and management issues concerning fisheries, marine minerals, and coastal zone use, implications of the Law of the Sea Treaty for ocean activities, Arctic and Antarctic resource issues, and use of scientific information in decision-making and policy-planning. Other research topics may also be appropriate. Previous policy fellows have been trained in fields such as law, economics, anthropology, political science, international relations, engineering, marine science, and geography. Recipients of awards are selected on a competitive basis with primary emphasis placed on research promise.

Applicants must have completed a doctoral-level degree or possess equivalent professional qualifications through career experience.

Fellowship stipend is \$22,600. Recipients are encouraged to pursue their own research interests independently or in association with resident staff. Completed applications must be received by 1 March 1984 for 1984-1985 awards. (A second year's appointment may be possible.) Awards announced in April. Write for application forms to:

Dean of Graduate Studies, P.O. Box MP, Woods Hole Oceanographic Institution, Woods Hole, Massachusetts 02543.

Equal Opportunity/Affirmative Action Institution

POSTDOCTORAL FELLOWSHIP available immediately to study mechanics and/or pharmacology or arteriolar smooth muscle as part of a multidisciplinary study of the vascular smooth muscle cell. Graduate-level background in pharmacology of biophysics is desirable. Excellent opportunity for hard-working, bright Ph.D. Send curriculum vitae, GRE scores, and names of three references to: **Dr. Brian R. Duling, Department of Physiology, University of Virginia School of Medicine, Box 449, Charlottesville, Va. 22908. The University of Virginia is an Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL FELLOWSHIP available in December for study of polyamine function in cell proliferation and the potential of polyamine metabolism and function in anticancer chemotherapy. A background in biochemical pharmacology or biochemistry is preferred. *An Equal Opportunity Employer, M/F.* Send curriculum vitae and two letters of recommendation to:

**Carl W. Porter, Ph.D.
Grace Cancer Drug Center
Roswell Park Memorial Institute
666 Elm Street
Buffalo, New York 14263
Telephone: 716-845-3002**

FELLOWSHIPS

CLINICAL PHARMACOLOGY FELLOWSHIP available July 1984. M.D. plus at least 2 years of clinical postdoctoral training required. Combined hospital program provides thorough clinical experience. Basic and clinical research will be emphasized. Interested individuals should send curriculum vitae and arrange to have three letters of recommendation sent to: **Director, Harvard Program in Clinical Pharmacology, Department of Pharmacology, Harvard Medical School, 250 Longwood Avenue, Boston, Mass. 02115.**

MOLECULAR CELL BIOLOGY

PREDOCTORAL FELLOWSHIPS. The Graduate Program in Molecular Cell Biology invites applications from highly qualified students interested in an interdisciplinary Ph.D. program. Major areas of emphasis include molecular genetics, nucleic acid biochemistry, connective tissue and protein biochemistry, membrane biochemistry, microbial pathogenesis, immunology, and molecular virology. Students receive stipends of \$7500 plus tuition and fees. Contact: **Dr. Brian Johnson, Department of Microbiology, University of Alabama in Birmingham, Birmingham, Alabama 35294. Equal Opportunity/Affirmative Action Employer.**

FELLOWSHIPS: One-semester awards to faculty writing on how new feminist scholarship potentially affects teaching/curriculum in science, technology, and all minority studies fields; \$10,000 maximum stipend. Deadline: 16 January 1984. Stipended year-long New England faculty seminar series on same subject; maximum stipend: \$500. Deadline: 15 March 1984. For application forms, write: **Irene Perry, Faculty Development Program, Wellesley College Center for Research on Women, Wellesley, Mass. 02181.**

GRADUATE STUDY

GRADUATE STUDY AND RESEARCH IN LASER AND PLASMA PHYSICS

The Department of Applied Science of the University of California, Davis, in collaboration with the inertial confinement fusion program at Lawrence Livermore National Laboratory, offers support for Ph.D. students in laser and plasma physics and fusion technology. The curriculum is directed towards students in physics, applied science, and technology. Research areas include free electron lasers, crystal lasers, optical properties of materials, nonlinear optics, stimulated scattering processes, physics of optical damage, interaction of laser radiation with plasmas, and laser-pumped x-ray lasers. For information, contact: **Professor Roger A. Haas, Department of Applied Science, University of California at Davis, Livermore, Calif. 94550, telephone: 415-422-9787.**

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ANALYTICAL CHEMISTRY Deputy Group Leader

The Analytical Chemistry Group of the Los Alamos National Laboratory is seeking an effective leader and manager to assume responsibilities of Deputy Group Leader. The position involves providing significant technical and administrative leadership as well as direction of the group's diverse support and research activities.

The group, consisting of approximately one hundred scientists, technicians, and support personnel, provides analytical chemical services and expertise to the scientific/engineering programs at the Laboratory. The group also conducts basic and applied research. Support activities are in the area of inorganic materials characterization with emphasis on analytical spectroscopy, radioanalysis, mass spectrometry, classical wet chemical methods, surface science, separations, and combustion techniques. Particular capabilities exist for analysis of actinides and other radioactive substances. Addressing problems associated with the Laboratory's wide-ranging programs, new analytical chemistry techniques and the development of analytical technology are being explored vigorously.

Qualifications:

Ph.D. with demonstrated excellence and professional achievement in field of analytical chemistry. Effective written and oral communication skills are a prerequisite. U.S. citizenship required.

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To apply, send resume and three letters of reference to:

Madeline Lucas
 Personnel Administration Division—DIV-84-C
 Los Alamos National Laboratory
 Los Alamos, New Mexico 87545

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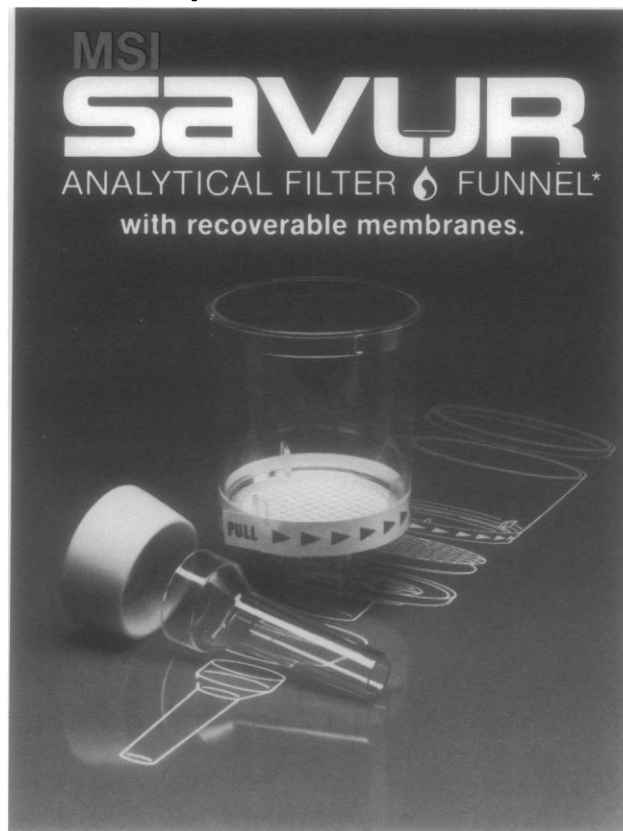
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