

tionary "dead end." Monaco, Rasch, and Balsano suggest that somatic mutation may be a significant source of new variation in *Poecilia formosa* clones. Moore summarizes the population genetics of asexuality in fishes, with a comparison with lizards and salamanders. His is the only chapter in the book to provide a conceptual framework for the data and a good discussion of the evolutionary causes and consequences, as well as a balanced and critical discussion of the ideas. Of special interest is an examination of the possible advantages of asexuality. Vrijenhoek presents a good discussion (with evidence) of how genetic diversity can be maintained among clones of asexually reproducing *Poeciliopsis*. Clonal diversity may arise through repeated formation of new clones or mutation in existing clones. It can be maintained if the clones are heterotic, live in habitats intermediate between parental habitats, or specialize ecologically.

Bell summarizes the evolutionary genetics of sticklebacks, where there is circumstantial evidence for the effects of predation on many different kinds of traits. Although verbose, this is the only chapter that utilizes a broad approach, including many polymorphic and quantitative morphological traits, allozymes, and ecological factors, as well as dealing with causes of variability in a meaningful fashion.

This book has major gaps in coverage. The work of D. Powers and his associates on the biochemical genetics and associated physiology and ecology of *Fundulus* is unquestionably the best work on allozymes. My own work on predation and sexual selection on color patterns provides one of the few documentations of direct causal relationships. There are superb studies on the evolutionary genetics of life history, physiology, and behavioral traits and their causes in *Gambusia* and *Poecilia* by Stearns, Reznick, and Farr. There is no trace of any these studies in the book, and the pioneering work by Jack Schultz receives only passing mention. Except for Bell's chapter, the morphology and evolutionary genetics of quantitative traits are ignored. There is no discussion of promising methods or avenues for future research. The book is thus not a summary of the state of the art in evolutionary genetics of fishes, though it is a useful reference book on specific issues in fish genetics.

J. A. ENDLER

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University of Utah,
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Books Received

- Advances in Enzyme Regulation.** Vol. 22. George Weber, Ed. Pergamon, New York, 1984. xiv, 564 pp., illus., + plates. \$93.75. From a symposium, Indianapolis, Oct. 1983.
- Advances in Heterocyclic Chemistry.** Vol. 34. Alan R. Katritzky, Ed. Academic Press, Orlando, Fla., 1983. x, 450 pp., illus. \$89.
- Advances in Inorganic Chemistry and Radiochemistry.** H. J. Emléus and A. G. Sharpe, Eds. Academic Press, Orlando, Fla., 1983. Vol. 26. xii, 370 pp., illus. \$64.50. Vol. 27. xii, 331 pp., illus. \$58.
- Advances in Radiation Biology.** Vol. 10. John T. Lett, Ursula K. Ehmann, and Ann B. Cox, Eds. Academic Press, Orlando, Fla., 1983. xviii, 406 pp., illus. \$66.
- Amazon Journey.** An Anthropologist's Year among Brazil's Mekranoti Indians. Dennis Werner. Simon and Schuster, New York, 1984. 296 pp. + plates. \$16.95.
- America's National Parks and Their Keepers.** Ronald A. Foresta. Resources for the Future, Washington, D.C., 1984 (distributor, Johns Hopkins University Press, Baltimore). xiv, 383 pp., illus. \$45; paper, \$11.95.
- Biomedical Research Applications of Scanning Electron Microscopy.** Vol. 3. Gisele M. Hodges and Katharine E. Carr, Eds. Academic Press, New York, 1983. xiv, 252 pp., illus. \$60.
- Bioscope.** Thomas A. Easton and Carl E. Rischer. 2nd ed. Merrill (Bell and Howell), Columbus, Ohio, 1984. xiv, 719 pp., illus., + plates. Paper, \$19.95. Student Guide. Carol A. Welsh. vi, 266 pp., illus. Paper, \$9.95.
- Biostatistics.** Alvin E. Lewis. 2nd ed. Van Nostrand Reinhold, New York, 1984. xvi, 198 pp., illus. \$22.95.
- Birds Sounds and Their Meaning.** Rosemary Jellis. Cornell University Press, Ithaca, N.Y., 1984. 256 pp., illus. Paper, \$14.95. Reprint, 1977 edition.
- Botany in the Field.** An Introduction to Plant Communities for the Amateur Naturalist. Jane Scott. Illustrations by the author. Prentice-Hall, Englewood Cliffs, N.J., 1984. x, 165 pp. \$16.95; paper, \$8.95. Phalarope Books.
- Boussingault.** Chemist and Agriculturist. F. W. J. McCosh. Reidel, Boston, 1984 (distributor, Kluwer Boston, Hingham, Mass.). xviii, 280 pp., illus. \$53.50. Chemists and Chemistry.
- Carbohydrate Metabolism in Plants.** C. M. Duffus and J. H. Duffus. Longman, New York, 1984. xii, 183 pp., illus. Paper, \$13.95.
- Casebook.** International Water Tribunal, Rotterdam, Oct. 1983. International Water Tribunal Foundation, Amsterdam, 1983. Various pages, illus. In looseleaf notebook, Dfl. 145.
- Catecholamines and Behaviour.** Stephen T. Mason. Cambridge University Press, New York, 1984. xvi, 464 pp., illus. \$59.50; paper, \$24.95.
- Cell Cycle Clocks.** Leland N. Edmunds, Jr., Ed. Dekker, New York, 1984. xiv, 616 pp., illus. \$99.75.
- Challenging Man-Made Disease.** The Memoirs of Harriet L. Hardy. Editorial assistance of Emily W. Rabe. Praeger, New York, 1983. xiv, 254 pp. \$24.95.
- Change Your Smile.** Ronald E. Goldstein. Quintessence, Chicago, 1984. xii, 200 pp., illus. \$23.95.
- The Direct Detection of Microorganisms in Clinical Samples.** J. Donald Conrod, Lawrence J. Kunz, and Mary Jane Ferraro, Eds. Academic Press, Orlando, Fla., 1983. xxiv, 374 pp., illus. \$53.
- Diseases of Marine Animals.** Vol. 2, Introduction, Bivalvia to Scaphopoda. Otto Kinne, Ed. Biologische Anstalt Helgoland, Hamburg, Germany, 1983. x pp. + pp. 465-1038, illus. DM 75.
- The Ecology of Freshwater Phytoplankton.** C. S. Reynolds. Cambridge University Press, New York, 1984. x, 384 pp., illus. \$54.50; paper, \$24.95. Cambridge Studies in Ecology.
- The Effects of SO₂ on a Grassland.** A Case Study in the Northern Great Plains of the United States. W. K. Lauenroth and Eric M. Preston, Eds. Springer-Verlag, New York, 1984. xvi, 207 pp., illus. \$29. Ecological Studies, vol. 45.
- Energy Use.** The Human Dimension. Paul C. Stern and Elliot Aronson, Eds. Freeman, New York, 1984. xiv, 237 pp., illus. \$28.95; paper, \$15.95.
- Forestry Handbook.** Karl F. Wenger, Ed. 2nd ed. Wiley-Interscience, New York, 1984. xxii, 1335 pp., illus. \$49.95.
- Foundations of Supply-Side Economics.** Theory and Evidence. Victor A. Canto, Douglas H. Joines, and Arthur B. Laffer, with Paul Evans et al. Academic Press, Orlando, Fla., 1983. xvi, 283 pp., illus. \$37.50.
- Frontiers in Chemical Reaction Engineering.** Vol. 1. L. K. Doraiswamy and R. A. Mashelkar, Eds. Halsted (Wiley), New York, 1984. viii, 699 pp., illus. \$43.50.
- Genes, Organisms, Populations.** Controversies over the Units of Selection. Robert N. Brandon and

Richard M. Burian, Eds. MIT Press, Cambridge, Mass., 1984. xiv, 329 pp., illus. \$29.95. Bradford Books.

La Génétique du Développement. Jean-Claude Beetschen. Presses Universitaires de France, Paris, 1984. 128 pp., illus. Paper, 20.90 F.

The Global Climate. John T. Houghton, Ed. Cambridge University Press, New York, 1984. vi, 233 pp., illus. \$49.50.

The Grammatical Basis of Linguistic Performance. Language Use and Acquisition. Robert C. Berwick and Amy S. Weinberg. MIT Press, Cambridge, Mass., 1984. xviii, 325 pp., illus. \$30. Current Studies in Linguistics Series, 11.

Groundwater Pollution Microbiology. Gabriel Bitton and Charles P. Gerba, Eds. Wiley-Interscience, New York, 1984. xii, 377 pp., illus. \$49.95. Environmental Science and Technology.

Group Representations and Special Functions. Antoni Wawrzynczyk. Reidel, Boston, and PWN (Polish Scientific Publishers), Warsaw, 1984 (U.S. distributor, Kluwer Boston, Hingham, Mass.). xvi, 688 pp. \$119. Mathematics and Its Applications. Translated from the Polish edition (Warsaw, 1978).

Households. Comparative and Historical Studies of the Domestic Group. Robert McC. Netting, Richard R. Wilk, and Eric J. Arnould, Eds. University of California Press, Berkeley, 1984. xl, 480 pp., illus. \$35; paper, \$14.95. From a symposium, Mt. Kisco, N.Y., Oct. 1981.

Introduction to Molecular Immunology. Alfred Nisonoff. 2nd ed. Sinauer, Sunderland, Mass., 1984. xii, 236 pp., illus. Paper, \$14.95.

Isolated Singular Points on Complete Intersections. E. J. N. Looijenga. Cambridge University Press, New York, 1984. xii, 200 pp. Paper, \$22.95. London Mathematical Society Lecture Note Series, 77.

"It's the Water That Makes You Drunk." A Celebration in Geophysics and Oceanography—1982. In Honor of Walter Munk on His 65th Birthday. (La Jolla, Calif., Oct. 1982.) Institute of Geophysics and Planetary Physics, Scripps Institution of Oceanography, La Jolla, Calif., 1984. vi, 118 pp., illus. Paper. Scripps Institution of Oceanography Reference Series 84-5.

Laboratory and Field Investigations in Marine Biology. James L. Sumich and George H. Dudley. 4th ed. Brown, Dubuque, Iowa, 1984. xii, 195 pp., illus. Spiral bound.

Law and Psychiatry. Rethinking the Relationship. Michael S. Moore. Cambridge University Press, New York, 1984. xiv, 527 pp. \$59.50.

Leukotriene Syntheses. A New Class of Biologically Active Compounds Including SRS-A. Feodor Scheinmann and John Ackroyd. Raven, New York, 1984. x, 100 pp., illus. \$24.

Magnetic Oscillations in Metals. D. Shoenberg. Cambridge University Press, New York, 1984. xxiv, 570 pp., illus. \$97.50. Cambridge Monographs on Physics.

Malaria and the Red Cell. John W. Eaton and George J. Brewer, Eds. Liss, New York, 1984. xii, 178 pp., illus. \$36. Progress in Clinical and Biological Research, vol. 155. From a workshop, Ann Arbor, Mich., Oct. 1983.

Man's Glassy Essence. Explorations in Semiotic Anthropology. Milton Singer. Indiana University Press, Bloomington, 1984. xvi, 222 pp. \$25. Advances in Semiotics.

A Manual of Chemical and Biological Methods for Seawater Analysis. Timothy R. Parsons, Yoshiaki Maita, and Carol M. Lalli. Pergamon, New York, 1984. xiv, 173 pp., illus. Paper, \$8.95.

Marine Biology. Harold V. Thurman and Herbert H. Webber. Merrill (Bell and Howell), Columbus, Ohio, 1984. xiv, 446 pp., illus. + plates. \$27.95.

Markers of Colonic Cell Differentiation. Sandra R. Wolman and Anthony J. Mastroianni, Eds. Raven, New York, 1984. xxiv, 431 pp., illus. \$58. Progress in Cancer Research and Therapy, vol. 29. From a workshop, Southwest Harbor, Maine.

Materials Science of the Earth's Interior. Ichiro Sunagawa, Ed. Terra Scientific Publishing, Tokyo, and Reidel, Boston, 1984 (U.S. distributor, Kluwer Boston, Hingham, Mass.). xvi, 653 pp., illus. \$120. Materials Science of Minerals and Rocks.

Naming Systems. Elisabeth Tooker, Ed. American Ethnological Society, Washington, D.C., 1984. viii, 107 pp. Paper, \$12. From a meeting, Ann Arbor, Mich., April 1980.

New Approaches to the Study of Benign Prostatic Hyperplasia. Frances A. Kimball, Allen E. Buhl, and Donald B. Carter, Eds. Liss, New York, 1984. xiv, 398 pp., illus. \$56. Progress in Clinical and Biological Research, vol. 145. From a workshop, Augusta, Mich., Sept. 1983.

New Directions in Guided Wave and Coherent Optics. D. B. Ostrowsky and E. Spitz, Eds. Nijhoff, The Hague, 1984 (U.S. distributor, Kluwer Boston, Hingham, Mass.). Two volumes. xx, 685 pp., illus., + index. \$95. NATO ASI Series E, No. 78 and No. 79. From an institute, Cargèse, Italy, July 1982.

(Continued on page 84)

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BOOKS RECEIVED

(Continued from page 42)

New Directions in Helping. Arie Nadler, Jeffrey D. Fisher, and Bella M. DePaulo, Eds. Academic Press, New York, 1983. Vol. 2, Help-Seeking. xviii, 364 pp. \$37. Vol. 3, Applied Perspectives on Help-Seeking and -Receiving. xx, 373 pp. \$38.

One Medicine. A Tribute to Kurt Benirschke. Oliver A. Ryder and Mary L. Byrd, Eds. Springer-Verlag, New York, 1984. xiv, 373 pp., illus. \$36.50.

Operating Systems Principles. Stanley A. Kurzbach, Thomas S. Heines, and Anthony P. Sayers. 2nd ed. Van Nostrand Reinhold, New York, 1984. xii, 420 pp., illus. \$34.50. Van Nostrand Reinhold Data Processing Series.

Perspectives on Plant Population Ecology. Rodolfo Dirzo and José Sarukhán, Eds. Sinauer, Sunderland, Mass., 1984. xviii, 478 pp., illus. \$45; paper, \$27.50. From a meeting, Oaxtepec, Morelos, Mexico, 1981.

Physical Sciences and History of Physics. R. S. Cohen and M. W. Wartofsky, Eds. Reidel, Boston, 1984 (distributor, Kluwer Boston, Hingham, Mass.). x, 259 pp., illus. \$39.50. Boston Studies in the Philosophy of Science, vol. 82.

Physics at the Royal Society during Newton's Presidency. J. L. Heilbron. William Andrews Clark Memorial Library, University of California, Los Angeles, 1983. xiv, 125 pp., illus. Paper, \$9.50.

The Physics of Welding. J. F. Lancaster, Ed. Pergamon, New York, 1984. xviii, 297 pp., illus. \$25.

Rocky Mountain Acidification Study. J. H. Gibson et al. Eastern Energy and Land Use Team, U.S. Fish and Wildlife Service, Kearneysville, W.Va., 1983. xiv, 138 pp., illus. Paper. Air Pollution and Acid Rain Report No. 17.

Room Temperature Phosphorimetry for Chemical Analysis. Tuan Vo-Dinh. Wiley-Interscience, New York, 1984. xx, 304 pp., illus. \$50. Chemical Analysis, vol. 68.

The Science of the Mind. Owen J. Flanagan, Jr. MIT Press, Cambridge, Mass., 1984. xiv, 336 pp. \$25; paper, \$12.50. A Bradford Book.

The Search for Certainty. Wilford W. Spradlin and Patricia B. Porterfield. Springer-Verlag, New York, 1984. xii, 248 pp. Paper, \$28.50.

Shrimps, Lobsters, and Crabs of the Atlantic Coast of the Eastern United States, Maine to Florida. Austin B. Williams. Smithsonian Institution Press, Washington, D.C., 1984. xviii, 550 pp., illus. \$40. Revision of *Marine Decapod Crustaceans of the Carolinas* (1964).

So You're Thinking of Going to a Chiropractor. Robert Dryburgh. Keats, New Canaan, Conn., 1984. xvi, 158 pp. \$12.95; paper, \$3.95.

Toxic Contaminants in the Great Lakes. Jerome O. Nriagu and Milagros S. Simmons, Eds. Wiley-Interscience, New York, 1984. xvi, 527 pp., illus. \$95. Wiley Series in Advances in Environmental Science and Technology, vol. 14.

Training for Tomorrow. Educational Aspects of Computerized Automation. J. E. Rijnsdorp and Tj. Plomp, Eds. Published for the International Federation of Automatic Control by Pergamon, New York, 1984. xvi, 291 pp., illus. \$69. IFAC Proceedings Series, 1984, no. 4. From a symposium, Leiden, Netherlands, June 1983.

The Understanding of Animals. Georgina Ferry, Ed. Basil Blackwell, New York, and *New Scientist*, London, 1984. xvi, 320 pp., illus. \$19.95; paper, \$8.95. *New Scientist* Guides.

Unlearned Language. New Studies in Xenoglossy. Ian Stevenson. University Press of Virginia, Charlottesville, 1984. x, 223 pp. \$17.50.

Variational and Quasivariational Inequalities. Applications to Free Boundary Problems. Claudio Baiocchi and Antônio Capelo. Wiley-Interscience, New York, 1984. x, 452 pp., illus. \$57.95. Translated from the Italian edition by Lakshmi Jayakar.

VLSI Electronics. Microstructure Science. Vol. 7. Norman G. Einspruch, Ed. Academic Press, Orlando, Fla., 1983. xii, 401 pp., illus. \$59.50.

Web Processing and Converting Technology and Equipment. Donatas Satas, Ed. Van Nostrand Reinhold, New York, 1984. xviii, 537 pp., illus. \$44.50.

White Cell Mechanics. Basic Science and Clinical Aspects. Herbert J. Meiselman, Marshall A. Lichtman, and Paul L. LaCelle, Eds. Liss, New York, 1984. xii, 318 pp., illus. \$68. Kroc Foundation Series, vol. 16. From a symposium, Santa Ynez Valley, Calif., May 1983.

Wind Energy Conversion 1983. Peter Musgrove, Ed. Cambridge University Press, New York, 1984. viii, 375 pp., illus. \$59.50. From a conference, Reading, U.K., March 1983.

X-Linked Mental Retardation. John M. Opitz, Ed. Liss, New York, 1984. iv, 389 pp., illus. \$39. Reprinted from *American Journal of Medical Genetics*, vol. 17, No. 1. From a workshop, Bethesda, Md., April 1983.

Personnel Placement

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Editor. M.A. Textbook researcher, editor, writer, indexer. Publications. Seeks freelance assignments: biology/medicine/ecology/environment/energy. 8280 James Avenue, Suite 2A-1700, Woodridge, Illinois 60517. X

Immunochemist/Biotechnologist. Ph.D. 1979. Presently Director, R/D laboratory in biotechnology company. Background: Immunoregulation, idiotypes, chemical modifications, electrofusions. Seeks senior level position/industry, Box 231, SCIENCE. 10/5, 12, 19

Immunologist. Ph.D. 1978. Postdoctoral training. Four years of industrial experience, including biotechnology company start-up. Seeking industrial research position. Training and experience in cellular immunology, hybridoma/monoclonal antibody technology, immunoassay development, parasite immunology, and infectious diseases. Box 232, SCIENCE. 10/5, 12

Immunologist. Ph.D. 1970. University research experience in cellular immunity in infectious disease, lymphocyte mediated target cell killing, lymphokines, and hybridomas in targeted chemotherapy. Excellent publications and references. Mature dedicated individual seeks academic faculty position. Box 233, SCIENCE. 10/5, 12, 19

Molecular/Cell Biologist. Ph.D. 1984. Immunoelectron microscopy. Protein modification, chromatographic, electrophoretic, and immunochemical characterization. Toxicology. Microsurgery. Teaching experience. Publications. Interested in additional modern molecular biology "Know How." Seeks postdoctorate. Box 235, SCIENCE. 10/5, 12, 19, 26

POSITIONS WANTED

Marine Invertebrate Zoologist/Systematist/Benthic Ecologist. Ph.D. 1972. Numerous journal publications; administrative, organizational, editorial, communicatory, and supervisory skills; extensive research, field, teaching, and consulting experience. Seeks teaching and/or research position in academia, museum, private laboratory, or government. Reply: Box 226, SCIENCE. 10/5, 12

Ph.D. 1970—Microbiology, Immunology. Ten good years with present employer. I wish to leave an established research position for an undergraduate, M.S. level, or professional school, teaching position. New duties must be limited to teaching and student advising. Author of invited book chapter in major medical sciences series. Forty manuscripts in the following journals: *American Journal of Veterinary Research*, *American Industrial Hygiene Association Journal*, *Applied Microbiology*, *Infection and Immunity*, *Journal of Invertebrate Pathology*, *Journal of Theoretical Biology*, *Journal of Toxicology and Environmental Health*, *Poultry Science*, *Toxicology and Applied Pharmacology*, *Veterinary and Human Toxicology*. Telephone inquiries only, at (home) 409-846-0682, or (office) 409-260-9302. 1/18

Neuroscientist. Deemed well supported by the literature and termed "revolutionary" following its second presentation series this summer, "Duality Theory" makes use of a single principle to integrate areas of the central nervous system, including the following, into a functional whole: the spinal cord, reticular formation, cerebellum, hypothalamus, amygdala, hippocampus, septal area, thalamus, caudate nucleus, putamen, globus pallidus, substantia nigra, cortex (including "association" and "prefrontal" areas). Many of these are cast in new light. The new mathematical technique of information calculus was invented as a solution to the cortical "addressing" and system integration problems. Duality Theory provides concrete mechanisms for the behavioral phenomena of creativity, curiosity, "consciousness," volition, general attraction/avoidance and abstract decision-making and symbol-manipulation. "Pain" and the phenomenon of decessation are integrated. (Theoretical perspectives: Computer-scientific, abstract-conceptual.) Author seeks further prepublication presentation opportunities; expenses only; available 1 October 1984. Box 236, SCIENCE. 10/5

Pharmacologist. Ph.D. 1971. Former university and now industrial researcher with extensive background in calmodulin, microtubules, and chemotherapeutic agents. Also some experience in endocrine, neuropharmacology, trace metals, enzyme kinetics, and RIA. NIH postdoctorate. Excellent publications and proven high performance thinking ability. Seeks position with university, research institute, or industry. No geographic preference. Box 228, SCIENCE. 10/5, 12, 19, 26

Technical Associate. B.A. in biology with 15 years of experienced (includes basic research in neurophysiology, psychopharmacology, cancer research, animal tumor service, and laboratory administration). Seeks research and/or administrative position in the Washington, D.C. area. Box 237, SCIENCE. X

Writer. Ph.D., publications, teaching, research experience. Seeks free-lance work, books, articles. Biology. Box 185, SCIENCE. 10/5, 11/2, 12/7

Writer/Editor. Ecology doctorate with publications, research, and teaching experience seeks freelance writing and editing in all life science areas. 916 Marsh Street, Mankato, Minn. 56001. 10/5, 12, 19

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The Chemistry Department has an opening for a tenure-track position in ANALYTICAL CHEMISTRY at the assistant professor level. Outstanding candidates requiring a higher level appointment may also be considered. Demonstrated excellence and a strong commitment to innovative research are essential, with separations, surface science, or bioanalytical chemistry as preferred areas of research. Teaching at the graduate and undergraduate levels is necessary. Please send résumé, statement of research and teaching interests, and three letters of recommendation to: Dr. Heinz G. Floss, Analytical Search Committee, Department of Chemistry, The Ohio State University, Columbus, Ohio 43210. An Equal Opportunity/Affirmative Action Employer. Closing date for applications is 30 November 1984.

POSITIONS OPEN

Tulane University School of Medicine is searching for an **ACADEMIC NEUROLOGIST** with interest and training in clinical neurophysiology, epilepsy, and/or sleep disorders. Academic rank and salary dependent on qualifications. Teaching and research both highly valued and research time will be protected. Please send curriculum vitae to: **Joseph B. Green, M.D., Chairman, Department of Psychiatry and Neurology, Tulane Medical School, 1430 Tulane Avenue, New Orleans, La. 70112** by 30 October 1984. *Tulane is an Affirmative Action/Equal Opportunity Employer. Qualified women and minority candidates are encouraged to apply.*

Analytical Chemistry Laboratory of Omaha, Nebraska, is in need of an **ANALYTICAL BIOCHEMIST** with good chemistry background to act as **HEAD SUPERVISOR**, Laboratory Testing and Research. The individual should possess Ph.D. degree with combination of experience in trace chemical analyses of toxic and carcinogenic compounds in environmental and biological systems and in application of these procedures to biology research. Experience in the use of modern chromatographic and spectroscopic techniques in analysis of toxic compounds is required. Should be able to transform laboratory data into project development and to supervise laboratory staff. Proficiency in German language and moderate typing ability is desirable. The position is permanent and the salary is \$19,200 per year with other benefits. The laboratory is well-equipped with good working conditions. Refer to: **Job Order Number 226178** when mailing résumé and three letters of recommendation to: **Bob Powell, Nebraska Job Service, P.O. Box 94600, Lincoln, Nebraska 68509.**

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Applications are invited for a tenure-track position at the **ASSISTANT PROFESSOR** level from persons who will complement one of the existing departmental research programs in structural geology, tectonics, petrology, or sedimentary geology. Applicants must hold the Ph.D. degree by the time of appointment and demonstrate excellence in or strong potential for independent research in one of these fields. In addition to having a strong research orientation the position will involve teaching at the undergraduate and graduate levels and the supervision of graduate student research. Current departmental facilities include VAX 11/750 computer, fully automated JEOL 733 microprobe/SEM, and high pressure and geochemical laboratories.

Letters of application should be accompanied by a résumé that includes a description of research interests and accomplishments and teaching experience, a list of publications, and the names of at least three references. Send to: **S. O. Schlanger, Chairman, Department of Geology Sciences, Northwestern University, Evanston, Illinois 60201.** Closing date for applications is 1 November 1984. We expect to fill the position for fall 1985.

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Department of Pharmacology
Bowen Science Building
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Iowa City, Iowa 52242

ASSISTANT PROFESSOR Behavioral Neuroscience

Applicants with strong research programs in the biological bases of behavior are sought for a tenure-track position in the Department of Psychology at the University of Alabama in Birmingham (UAB). The department co-sponsors a doctoral program in behavioral neuroscience with the Neurosciences Program of the School of Medicine. Send an application and three letters of recommendation to: **Dr. Joan F. Lorden, Department of Psychology, University of Alabama in Birmingham, Birmingham, Ala. 35294.** *UAB is an Affirmative Action/Equal Opportunity Employer.*

POSITIONS OPEN

ASSOCIATE/ASSISTANT PROFESSOR OF MICROBIOLOGY. This position with tenure/on tenure-track is available immediately. Candidates should have an M.D., Ph.D., D.D.S., or an equivalent degree. Preference will be given to applicants with an established research program in molecular immunology; however, candidates with research expertise in related fields also will be considered, especially if they employ recombinant DNA methodology. Teaching experience in medical microbiology is very desirable. Interested persons should send curriculum vitae and brief description of research as well as the names and telephone numbers of three individuals from whom recommendations may 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.** Deadline for receipt of applications is 30 November 1984. *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.*

The Department of Aeronautics and Astronautics, Stanford University, seeks an outstanding person for appointment as a tenure-track **ASSISTANT PROFESSOR** in the field of aerospace structures. The successful candidate should have a strong background in composite materials, expertise in finite element methods, and experience in testing. Candidates should be able to demonstrate clear promise of attaining excellence in both teaching and research. Some experience in industry or in a government laboratory is regarded as desirable.

Applicants are invited to apply for this position by sending a résumé to: **Professor George S. Springer, Department of Aeronautics and Astronautics, Stanford University, Stanford, California 94305; telephone: 415-497-4135.** *Stanford is an Affirmative Action/Equal Opportunity Employer and welcomes applications from women and minority candidates.*

Tenure-track **ASSISTANT OR ASSOCIATE PROFESSORSHIP** in biochemical toxicology starting in August 1985. Teaching and research experience required in mechanisms and receptors of toxic action; metabolism of xenobiotics. Send résumé and five references to: **Dr. Wesley Birge, Director, Graduate Center for Toxicology, Room 202, Medical Center Annex 5, University of Kentucky, Lexington, Kentucky 40536-0078.** Closing date for applications; 31 December 1984. *Equal Opportunity/Affirmative Action Employer.*

ASSISTANT PROFESSOR OF MICROBIOLOGY

Applications are invited for a faculty position at the assistant professor level in the area of microbial physiology and/or pathogenicity, both at the molecular level. Postdoctoral training, a significant record of publication, and a background which qualifies the applicant to teach a graduate course in bacterial physiology are required. Individuals using molecular approaches to study medically relevant bacteria preferred. The appointee will be expected to undertake a vigorous, independent research program and contribute to the departmental teaching effort. *Women and minority candidates are encouraged to apply.* Curriculum vitae and names of three references should be submitted by 1 November 1984 to: **Dr. Jules V. Hallum, Chairman, Department of Microbiology and Immunology, Oregon Health Sciences University, 3181 Southwest Sam Jackson Park Road, Portland, Oregon 97201.**

The Department of Biomedical Sciences, University of Illinois College of Medicine at Rockford, invites applications for two tenure-track appointments (Ph.D. and/or M.D.) as **ASSISTANT PROFESSOR OF PHARMACOLOGY.** At least one of these positions will be filled by an autonomic/cardiovascular pharmacologist. There will be a modest amount of teaching in medical pharmacology as the successful candidates will be expected to establish strong independent research programs. This is a young, multidisciplinary department offering a competitive salary, start-up funding, and new facilities. Applicants should submit curriculum vitae and names of at least three references by 1 December 1984 to:

Chairman, Faculty Search Committee
Department of Biomedical Sciences
University of Illinois College of Medicine
at Rockford, Illinois
1601 Parkview Avenue
Rockford, Ill. 61107

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

POSITIONS OPEN

ASSISTANT PROFESSOR OF PHARMACOLOGY

The Department of Pharmacology of the University of California, San Francisco, seeks a scientist with a background in pharmacology, physiology, or biophysics who will be hired at the rank of assistant professor in the regular academic series. The successful candidate will have strong interests in the effects of drugs on membrane activity in excitable cells (that is, heart, smooth muscle, and neurons) with at least two years of postdoctoral experience in research emphasizing techniques for studying transmembrane currents, ion flux, or intracellular ion transients. Teaching responsibilities are moderate. Anticipated starting date: 1 August 1985. Applicants should send their curriculum vitae, including a description of their research plans, and the names and addresses of three references to: **Dr. Henry R. Bourne, Professor and Chairman, Department of Pharmacology, 1210 Medical Sciences Building, University of California, San Francisco, Calif. 94143.** The deadline for applications is 15 January 1985. *The University of California is an Affirmative Action/Equal Opportunity Employer.*

ASSISTANT PROFESSOR OF PHARMACOLOGY

The University of California, San Francisco, Department of Pharmacology, seeks to fill a tenure-track position in molecular pharmacology at the assistant professor level. Preference will be given to applicants with demonstrated ability to investigate fundamental problems relevant to transmembrane signaling. Successful candidates should also be able to teach pharmacology to professional and graduate students. Anticipated starting date: June 1985. Letters of application should be accompanied by curriculum vitae and bibliography, a narrative description of future directions in research, and the names and addresses of three references. Please send all materials to: **Dr. Henry R. Bourne, Professor and Chairman, Department of Pharmacology, 1210 Medical Sciences Building, University of California, San Francisco, Calif. 94143.** The closing date for applications is 15 January 1985. *The University of California is an Affirmative Action/Equal Opportunity Employer.*

PURDUE UNIVERSITY—Department of Psychological Sciences has a tenure-track **ASSISTANT PROFESSORSHIP IN PSYCHOBIOLOGY** for fall 1985. Area of specialization within psychobiology is open. We expect to fill this position at the assistant professor level but appointment at the associate professor level might be possible if an applicant's credentials warrant. Curriculum vitae, three letters of recommendation, and representative publications should be sent to: **Dr. Terry Powley, Department of Psychological Sciences, Purdue University, West Lafayette, Indiana 47907.** Applications received prior to 15 November 1984 will be given fullest consideration, but applications will be accepted for this position until it is filled. *Purdue University is an Equal Opportunity/Affirmative Action Employer.*

ASSISTANT PROFESSOR—Animal Physiology. Applications are invited for a tenure-track undergraduate teaching position at the level of assistant professor starting September 1985. Responsibilities will include teaching comparative or animal physiology, participating in the department's introductory sequence of courses, and involvement in active research. Closing date for applications will be 9 November 1984. Please send a letter of application, a complete résumé, graduate transcripts, and at least three letters of reference to: **Dr. Dietrich Kessler, Chairperson, Department of Biology, Colgate University, Hamilton, New York 13346.** *Women and minorities are urged to apply. Colgate is an Affirmative Action/Equal Opportunity Employer.*

ASSISTANT PROFESSOR. Applicants must hold Ph.D., preferably in biochemistry, and have postdoctoral training in area of research expertise. Research specialty preferred is **MOLECULAR IMMUNOLOGY.** Other specialties which will be considered include **MEMBRANE BIOCHEMISTRY** and **BIOCHEMICAL REGULATION.** The ability to develop an extramurally funded research program is required. The successful applicant must be qualified to effectively teach biochemical subjects outside his area of research to both medical and graduate students. This 12-month, tenure-track position will be filled on 1 January 1985. Send curriculum vitae, brief summaries of present and proposed research, and names of three people who may be contacted for reference to: **Dr. F. P. Inman, Department of Biochemistry, P.O. Box 19930A, Johnson City, Tenn. 37614.** *East Tennessee State University is an Affirmative Action/Equal Opportunity Employer.*

Telecommunication Technology Has Changed ...

We look different since the Naval Research Laboratory (NRL) developed the Navy's first global HF transmitter in 1923. Today, our Information Technology Division (ITD) is at the forefront of research and development in telecommunication and computer science, providing innovative leadership in a diverse research environment.

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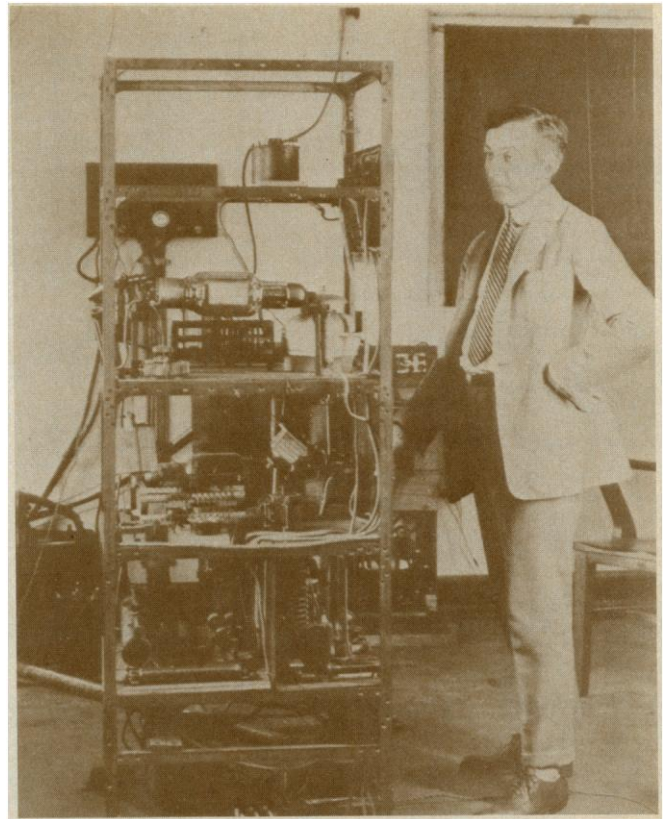
- Advanced Communication Networking
- Communication Security Techniques and Systems
- Advanced Modulation and Coding Techniques
- Advanced Speech Processing Techniques
- Voice Recognition and Synthesis

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- Arctic Communication Investigations
- High Power EHF Studies

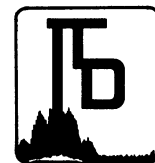
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INFORMATION
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NAVAL RESEARCH LABORATORY
Civilian Personnel Office
Attention: 75-001-11.1
4555 Overlook Avenue, S.W.
Washington, DC 20375

U.S. Citizenship Required

An Equal Opportunity Employer

POSITIONS OPEN

ASSISTANT PROFESSOR. The Department of Anatomy at Harvard Medical School invites applications for three junior positions. Two involve teaching gross anatomy and one, histology. Applicants should have active research programs in the general areas of cell, molecular, and/or developmental biology. Send curriculum vitae, bibliography, and three or four references to: **Dr. Elizabeth D. Hay, Chairperson, Department of Anatomy, Harvard Medical School, Boston, Mass. 02115.** *Harvard is an Equal Opportunity Employer.*

ASSISTANT PROFESSOR. Veterinary physiologist, 1 July 1985. Requirements: D.V.M. and/or Ph.D. degrees with graduate work in veterinary physiology and physiology teaching experience. Responsibilities: teach veterinary physiology and participate in research programs. Send letter of application, résumé, and the names of at least three references to: **Dr. N. E. Hutton, College of Veterinary Medicine, Oregon State University, Corvallis, Oregon 97331,** before 15 February 1985. *An Equal Opportunity/Affirmative Action Employer. Complies with Section 504 of the Rehabilitation Act of 1973.*

ASSISTANT PROFESSOR OF GENETICS—Full time tenures track position. Background should be in population and molecular genetics; training in *Drosophila* work is preferred. The appointee will be expected to set up a research program using genetic approaches to the unique evolutionary aspects of Hawaiian *Drosophila*. Available: 1 July, 1985. Write to: **Dr. Hampton L. Carson, Department of Genetics, University of Hawaii, 1960 East West Road, Honolulu, Hawaii, 96822.** Closing Date: 1 December 1984. *An Equal Opportunity/Affirmative Action Employer.*

A position as **ASSISTANT SPECIALIST** (\$21,624) is available 1 November 1984, to conduct research on ice nucleating compounds. Applicants must have experience with gram negative membrane isolation, physical and chemical characterization, and reconstruction into liposomes. A background in plant pathogen interaction, plant cell membrane techniques, and a Ph.D. or equivalent in plant pathology, microbiology, or related field is required. Deadline: 19 October 1984. Send Curriculum vitae and names of three references to: **Dr. S. E. Lindow, Plant Pathology, University of California Berkeley, Berkeley, Calif. 94720.** *An Affirmative Action/Equal Opportunity Employer.*

ASSOCIATE DIRECTOR NATURAL RESERVE SYSTEM (NRS) University of California

Coordinate and supervise programs and activities directed toward management and use of habitat reserves. Cooperate closely with NRS advisory committee and campuses administering reserves. Ph.D. or appropriate professional degree in a field science or in natural resource management, and administrative experience equivalent to departmental chair or comparable qualifications are required. Contact: **Agriculture and Natural Resources Personnel, University of California, Berkeley, Calif. 94720, Telephone: 415-644-4320.** Closing date: 31 October 1984. Refer to: A-84-193.

An Affirmative Action/Equal Opportunity Employer

BIOCHEMISTRY—Assistant Professor, Bowling Green State University. Applicants are encouraged in areas which complement the research activities of the existing faculty: Specifically in nucleic acid chemistry, structural chemistry of biological molecules (NMR), or in photochemistry/photobiology. Recent department instrument acquisitions include a high field NMR, and Hewlett Packard 5987 GC/MS/DS system. Bowling Green chemistry moved into new research laboratories in May 1984. Arrange for three letters of recommendation, transcripts, and a short synopsis of research plans to be sent by 1 November 1984 to: **SEARCH/D.C. Neckers, Chemistry Department, Bowling Green State University, Bowling Green, Ohio 43403.** *Equal Opportunity/Affirmative Action Employer.*

BIOCHEMISTRY FACULTY POSITION. Full-time tenure-track teaching and research position in the Department of Physiological Chemistry, College of Medicine, The Ohio State University. Candidates should hold a Ph.D. or M.D., have a minimum of 2 years of postdoctoral research experience, and show clear potential to sustain a viable, independent research program. Send curriculum vitae, names of three references, and a statement of research plans to: **Search Committee, Department of Physiological Chemistry, 5166 Graves Hall, The Ohio State University, Columbus, Ohio 43210.** Applications should be received by 1 December 1984.

POSITIONS OPEN

A high-energy physics research establishment invites applications for the position of

ASSOCIATE SCIENTIST

to pursue original research in applied quantum field theory as related to problems in high energy elementary particle physics. The successful applicant will be expected to make novel contributions to theoretical applications of perturbative quantum chromodynamics, super-symmetry, and related areas of fundamental research. Minimum qualifications required are a Ph.D. in theoretical physics with one year of post-doctoral research in theoretical elementary particle physics or one year of experience in such an original research position. Normal work hours are 40 per week from 8:30 a.m. to 5:00 p.m. each workday. Salary offered is \$29,700 per annum. Applicants should direct their résumés to the attention of: **Joan Sykstus, Illinois Job Service, 910 South Michigan Avenue, (Third Floor), Chicago, Ill. 60605** and quote Reference Number 3633-T. An employer paid ad.

Position available immediately for Ph.D. in **BIOCHEMISTRY OR CELL BIOLOGY** to investigate mechanisms of hormone action involving adenylate cyclase and protein dephosphorylation. Experience in protein isolation, membrane metabolism, and tissue culture techniques desirable. Candidates should have postdoctoral research experience and capacity to function as a collaborative and independent investigator. Salary and rank commensurate with experience and qualifications. Please send curriculum vitae, a brief statement of research experience and interests, and names of three references to: **Dr. James B. Field, Baylor College of Medicine, St. Luke's Hospital, P.O. Box 20269, Houston, Texas 77225.**

BIOCHEMICAL ENGINEERS: The University of Minnesota seeks Ph.D.'s with a strong background in biochemical engineering for two tenure-track positions as assistant professor, one in the Department of Chemical Engineering and Materials Science and the other in the Institute for Advanced Studies in Biological Process Technology. Candidates should have a distinguished academic record, outstanding potential for creative research in biochemical engineering, and a commitment to both undergraduate and graduate instruction in chemical and biochemical engineering. Nominations or applications with résumé should be submitted by 30 November 1984 to: **Professor A. G. Frederickson, 151 Amundson Hall, University of Minnesota, 421 Washington Avenue SE, Minneapolis, Minn. 55455.**

BIOPROCESS TECHNOLOGY SCIENTISTS: The University of Minnesota is also seeking Ph.D.'s with superior academic backgrounds in microbial physiology, genetic engineering, bioseparations, bioanalytical chemistry, and protein engineering for tenure-track faculty positions as assistant professor in the Institute for Advanced Studies in Biological Process Technology. Postdoctoral and/or industrial experience and a strong publication record are desirable. Teaching responsibilities will include basic and advanced instruction in the area of primary disciplinary affiliation. Applications and nominations (including curriculum vitae, names of references, and a list of publications) should be sent to: **Regents' Professor Stanley Dagley, Biotechnology Research Center, 140 Gortner Laboratory, University of Minnesota, 1479 Gortner Avenue, St. Paul, Minn. 55108** by 30 November 1984.

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

BIOCHEMISTRY FACULTY POSITION University of California, Los Angeles (UCLA)

The Department of Chemistry and Biochemistry plans to make a tenure-track appointment in biochemistry effective fall 1985. Potential candidates are expected to have a solid record of accomplishment in research and have or show promise of developing a vigorous independent research program. Teaching responsibilities will be at both the undergraduate and graduate level. Applications should include curriculum vitae, list of publications, a short statement of research interests, and the names of three references and should be submitted to:

**Professor Paul Boyer
Chairman, Search Committee
Department of Chemistry and Biochemistry
UCLA
Los Angeles, Calif. 90024**

UCLA is an Equal Opportunity/Affirmative Action Employer, and we encourage applications from women and minority candidates.

POSITIONS OPEN

CANCER RESEARCH SCIENTIST—Two positions are available immediately to work on the development of idiotype-based cancer vaccines. One project deals with the molecular biology (DNA sequence) of internal image anti-idiotypic hybridomas. Respond to: **Dr. Heinz Kohler, Director, Department of Molecular Immunology, Roswell Park Memorial Institute, 666 Elm Street, Buffalo, New York 14263.** *Equal Opportunity Employer.*

CELL BIOLOGISTS. Positions available in cell biology or immunology for research scientists with M.S. and Ph.D. degrees. Research involves establishment of normal epithelial cell cultures from human and experimental animal tissues (trachea, colon, prostate) and in vitro transformation of these cell cultures. Experience in these areas desirable. Send curriculum vitae to: **Ms. D. D. Johnson, Biochemistry Department, SOUTHERN RESEARCH INSTITUTE, P.O. Box 55305, Birmingham, Ala. 35255-5305.** *An Equal Opportunity Employer.*

CHAIR OF ANESTHESIOLOGY

The College of Medicine of the University of California at Irvine seeks a person of exceptional ability to occupy the chair of the Department of Anesthesiology. Candidates should hold the M.D. degree, be Board-certified in anesthesiology, have an excellent record of research accomplishments, and have demonstrated academic leadership ability. The chair is expected to build a department with strong research programs without sacrificing quality in the clinical service and teaching programs. We hope to fill the position by April 1985. Persons who wish to be considered for the position should send curriculum vitae and the names of three referees to:

**Professor Stephen H. White, Chairman
Department of Physiology and Biophysics
University of California
Irvine, California 92727**

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

CHAIRPERSON DEPARTMENT OF PSYCHIATRY

The University of Nebraska, College of Medicine, is conducting an active search for a chairperson of psychiatry. Applications are sought from Board-certified physicians with established credentials in research and demonstrated leadership in medical education. Interested applicants should submit curriculum vitae by 1 December 1984 to: **Michael F. Sorrell, M.D., Professor of Internal Medicine, Chairman of Advisory Committee, Office of the Dean, University of Nebraska College of Medicine, 42nd Street and Dewey Avenue, Omaha, Nebraska 68105.** *The University of Nebraska is an Equal Opportunity/Affirmative Action Employer.*

THE SCHOOL OF MEDICINE, UNIVERSITY OF WASHINGTON invites applications and nominations for the position of **CHAIRPERSON** of the Department of Biochemistry. The School of Medicine seeks a scientist with an outstanding research program who is committed to the education of students in biochemistry and the health professions. Letters of application should be received by 1 November 1984, and should contain at least five references. The application should be accompanied by current curriculum vitae and bibliography. Address replies to: **Dr. Russell Ross, Professor and Chairman, Department of Pathology SM-30, Chairman, Biochemistry Search Committee, University of Washington, Seattle, Wash. 98195.** *The University of Washington is an Affirmative Action/Equal Opportunity Employer.*

CALIFORNIA INSTITUTE OF TECHNOLOGY (CALTECH) COORDINATOR OF UNDERGRADUATE LABORATORIES

The position of coordinator of undergraduate laboratories is open on the professional staff of the Biology Division at Caltech. This is a good opportunity for an individual who:

- (i) has good organizational skills,
- (ii) has technical skill in the laboratory,
- (iii) likes to teach.

Prior training (M.S. or Ph.D.) in biochemistry or molecular biology is required.

Send résumés to: **Laboratory Coordinator Position, c/o Mike Miranda, Biology Division Manager, Division of Biology 156-29, California Institute of Technology, Pasadena, Calif. 91125.**

An Affirmative Action/Equal Opportunity Employer. Women and minorities are encouraged to apply.

POSITIONS OPEN

CHAIRPERSON, DEPARTMENT OF PHYSIOLOGY COLLEGE OF MEDICINE THE OHIO STATE UNIVERSITY

The Department of Physiology, College of Medicine, The Ohio State University, invites nominations and applications for the position of department chairperson. The department is a comprehensive unit within the College of Medicine with teaching responsibilities at the undergraduate, graduate, and professional levels. The present faculty number nineteen full-time members with diverse research interests in basic and medically oriented physiology.

Candidates should hold the Ph.D. or M.D. degree and be committed to a balanced vigorous teaching and research program. The successful applicant will have demonstrated excellence in research and scholarly activities with proven leadership qualities.

Applications, due by 1 November 1984, should include curriculum vitae with bibliography and the names of at least three references. Salary is negotiable.

Address applications to:

Dr. A. John Merola
Chairman, Physiology Search Committee
Department of Physiological Chemistry
College of Medicine
The Ohio State University
333 West 10th Avenue
Columbus, Ohio 43210

The Ohio State University is an Equal Opportunity Employer.

COMPARATIVE ANIMAL PHYSIOLOGIST. Tenure-track assistant professor position in rapidly developing biology department. Preference for systems-level comparative physiologist specializing in respiratory, cardiovascular, renal, or regulatory physiology. Ph.D. and postdoctoral experience required. Expected to develop strong, externally-fundable research program. Teaching will include undergraduate human anatomy-physiology, advanced and graduate courses in specialty. To be assured of consideration, applications must be received by 1 December 1984. Send curriculum vitae, statement of research interests, and names and addresses of at least three references to: Dr. Henry O. Wernitz, Physiology Search Committee, Biology Department, Northeastern University, 360 Huntington Avenue, Boston, Mass. 02115.

Northeastern University is an Affirmative Action/Equal Opportunity Employer.

COLLEGE OF GEOSCIENCES UNIVERSITY OF OKLAHOMA

Applications and nominations are invited for the position of **DIRECTOR** of the School of Geology and Geophysics. The director is expected to have a Ph.D. or equivalent, a strong, ongoing research program, and administrative experience. Industrial experience helpful; field of geological specialization open. To begin 1 July 1985; salary to be negotiated. In 1986, the school will move into the new 300,000 square foot Energy Center along with other elements of the College of Geosciences; the Oklahoma Geology Survey; and the School of Petroleum and Geological Engineering and the School of Chemical Engineering and Materials Sciences, both from the College of Engineering.

Applications with curriculum vitae, names and addresses of three references, and/or nominations should be sent to:

Francis G. Stehli, Dean
College of Geosciences
University of Oklahoma
601 Elm Street, Room 438C
Norman, Okla. 73019

Consideration of applications will begin 1 January 1985.

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

The Department of Chemistry of the University of Chicago invites applications from outstanding individuals for **FACULTY POSITIONS** in experimental physical chemistry. Only persons with exceptional promise and accomplishment in research should apply. Qualified applicants should submit curriculum vitae, a list of publications, a succinct outline of their research activities and future plans, and should arrange for three letters of recommendation to be sent to: Professor Donald H. Levy, Chairman, Department of Chemistry, The University of Chicago, 5735 South Ellis Avenue, Chicago, Illinois 60637. An *Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

Applications are invited for the position of **DEAN OF BASIC MEDICAL SCIENCES** at the New York College of Podiatric Medicine. We seek a medical scientist/educator (Ph.D. and/or M.D.) with a distinguished record in basic science teaching and research, as well as demonstrated ability in the management of finance, instruction, personnel, and research. The Division has fifteen doctoral faculty who instruct students during the first two years of the podiatric medical curriculum. The successful candidate should be able to promote the integration of basic sciences with clinical subjects and practice in a dynamic manner. A letter of application, detailing qualifications, research plans, grant history, and names of three references, along with curriculum vitae, should be received by 31 December 1984 for full consideration. Please direct all responses to: **Basic Science Search Committee, NEW YORK COLLEGE OF PODIATRIC MEDICINE, 53 East 124th Street, New York, N.Y. 10035.**

An Equal Opportunity/Affirmative Action Employer.

Medical College seeks DIRECTOR OF MINORITY AFFAIRS who will

- initiate and coordinate efforts to increase the number of minority students, faculty, and staff,
- participate in the development of educational, counselling, and administrative programs for minority and disadvantaged students,
- supervise staff,
- coordinate relevant college initiatives and programs with the community and with external agencies.

Applicants should possess a Masters degree or equivalent and have appropriate experience in biomedical education, education administration, student personnel, and counselling.

Competitive salary and comprehensive benefits program offered.

Application Deadline: 19 October 1984.

Please send résumé and salary requirements to:

Employment Office
ALBANY MEDICAL COLLEGE
47 New Scotland Avenue
Albany, New York 12208

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

EMINENT SCHOLAR IN SCIENCE: Applications and nominations are invited for the Glenwood and Martha Creech Eminent Scholar Chair in Science at Florida Atlantic University. This position is supported by a one-million-dollar endowment and will be filled at the senior level in the College of Science, which consists of Departments of Physics, Mathematics, Chemistry, Psychology, Biology, and Geology. Individuals with broad interdisciplinary research interests among the traditional science areas as well as computer science are encouraged to apply.

Applicants and nominees should have a distinguished academic and research reputation that includes a successful record in obtaining contract and grant support. The primary responsibilities of the successful candidate will be to significantly contribute to the expansion of the research program in the College of Science and to provide graduate level training in his or her field of expertise.

Completed applications must be received by 31 January 1985. Applications should be sent to: Ian Watson, Chairperson, Eminent Scholar Search Committee, Department of Geology, Florida Atlantic University, Boca Raton, Fla. 33431-0991.

Florida Atlantic University is an Affirmative Action/Equal Opportunity Employer.

FACULTY POSITION IN MICROBIOLOGY. Applications are invited for a tenure-track position in molecular virology, molecular immunology, or molecular biology of pathogenic microorganisms. While primary recruiting for the level of assistant professor, the department would also welcome applicants at the level of associate and full professor. Applicants should have demonstrated research capabilities in molecular genetics and a serious commitment to establishing an independent research program. Please send curriculum vitae, including names of three references and statement of research interests and goals, before 15 December 1984, to: David B. Kaback, Ph.D., Chairman of the Search Committee, Department of Microbiology, University of Medicine and Dentistry of New Jersey-New Jersey Medical School, 100 Bergen Street, Newark, N.J. 07103. *Equal Opportunity/Affirmative Action Employer, M/F/H/V.*

POSITIONS OPEN

THE UNIVERSITY OF ALBERTA DEAN FACULTY OF EXTENSION

The University of Alberta is seeking an experienced academic and administrative leader for its Faculty of Extension.

The university is a major institution with 18 faculties, having an enrollment of approximately 24,000 full-time students. It is located in a region of economic growth, and in an economically sound province with a strong commitment to education. With 30,000 noncredit registrations annually and responsibility for spring, summer, and off-campus credit courses, the extension faculty provides an important and vital link between the university and community. The faculty has 135 full-time staff, 30 of whom are in academic positions.

The appointment will take effect 1 July 1985 or when a candidate selected by a search committee and approved by the Board of Governors is available.

Written nominations or applications for the position, accompanied in the latter case by a résumé of qualifications and experience and the names of three referees, should be submitted by 15 January 1985 to:

The Vice-President (Academic)
University of Alberta
Edmonton, Alberta, Canada, T6G 2J9

The university is an Equal Opportunity Employer.

THE HORMEL INSTITUTE OF THE UNIVERSITY OF MINNESOTA

invites applications and nominations from qualified individuals

for the position of **EXECUTIVE DIRECTOR**

The Hormel Institute is located in Austin, Minnesota. The executive director is responsible for overall administration of an institute with 80 to 90 employees, including 8 to 10 of whom hold faculty rank at the University of Minnesota. Candidates for this position must be recognized authorities in fields related to lipid research and must have at least eight years of research experience in the field. The director is expected to maintain an active research program. In addition to pursuing individual grant support, the director actively solicits and administers external support for institute-wide research activities. Closing date for receipt of nominations and applications is 15 November 1984. Send curriculum vitae and names of three referees to: Dr. Richard Hanson, Chairman, Search Committee, Gray Freshwater Biological Institute, P.O. Box 100, County Roads 15 and 19, Navarre, Minn. 55392.

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

The University of Michigan Medical School, Department of Radiology, has on occasion open **FACULTY POSITIONS** within the department and its affiliated hospitals. Physicians filling these positions will take part in the programs of patient care, teaching, and research in the Department of Radiology. They will supervise the activities of house officers and aid in the teaching of house officers and medical students. Qualified applicants must be American Board of Radiology-certified or Board-eligible. Previous training or work experience in an academic institution as well as demonstration of previous academic research and teaching experience are desirable. Academic rank will depend on qualifications and experience. Interested applicants should contact: William Martel, M.D., Chairman, Department of Radiology, The University of Michigan Medical School, Ann Arbor, Michigan 48109. A *Nondiscriminatory, Affirmative Action Employer.*

WORCESTER POLYTECHNIC INSTITUTE. TWO FACULTY POSITIONS. Fall 1985. The Department of Chemistry invites applications for two tenure-track positions from candidates in the fields of organic and physical chemistry, including those with interests in analytical and organometallic areas. One of these appointments may be at a senior level. Applicants should have a Ph.D. degree, a strong experimental program, and a vigorous interest in undergraduate and graduate education. To apply, submit complete résumé, including research plans and teaching interests, and three letters of recommendation to: Dr. James W. Pavlik, Worcester Polytechnic Institute, Worcester, Mass. 01609. An *Affirmative Action/Equal Opportunity Employer.*

POSITIONS OPEN

FACULTY POSITION IN THEORETICAL EVOLUTIONARY ECOLOGY UNIVERSITY OF CALIFORNIA, IRVINE (UCI)

The Department of Ecology and Evolutionary Biology, University of California, Irvine, announces a tenure-track (assistant professor) or tenured (associate professor) position for a quantitative evolutionary theorist. We are seeking a person with a highly theoretical and quantitative approach to evolutionary studies of either plant or animal systems, who can interact effectively with two more empirically oriented, recent appointments in quantitative genetics and coevolutionary ecology. An individual with an established reputation is desired, but more recent graduates of special promise will be considered. Postdoctoral experience required. *UCI is an Equal Opportunity/Affirmative Action Employer.*

Please send letter of application, curriculum vitae, reprints (published) or manuscripts (in press) of key publications, statement of research interests, and names, addresses, and telephone numbers of at least four references to:

Search Committee
Department of Ecology and Evolutionary Biology
University of California
Irvine, California 92717

Deadline for receipt of application is 15 November 1984.

Case Western Reserve University Center for the Environmental Health Sciences Tenure-Track Faculty Positions at the Assistant Professor Level

The recently established Center for the Environmental Health Sciences of Case Western Reserve University School of Medicine has several tenure-track FACULTY POSITIONS available at the assistant professor level. The center is recruiting applicants interested in environmental toxicology, environmental chemistry, and molecular biology of cancer, including tumor promotion and molecular epidemiology.

The center is multidisciplinary and is dedicated to the pursuit of basic research and its application to environmental problems. Successful candidates will be expected to establish a strong independent research program and to participate in the graduate education program and the teaching of graduate and medical students.

Candidates with at least 2 years of postdoctoral experience are invited to send curriculum vitae, a brief statement of research goals, and the names of three references by 15 November 1984 to:

Chairman, Search Committee
Center for the Environmental Health Sciences
Case Western Reserve University
School of Medicine
Cleveland, Ohio 44106

The university is an Equal Opportunity/Affirmative Action Employer.

FACULTY POSITIONS IN BIOLOGICAL SCIENCES IMMUNOLOGY MICROBIAL GENETICS MOLECULAR SYSTEMATICS (ZOOLOGY) PLANT DEVELOPMENTAL BIOLOGY PLANT GENETIC ENGINEERING

The Department of Biological Sciences at Texas Tech University invites applications for four tenure-track faculty positions to be selected from the five areas indicated above. All professorial ranks will be considered. Candidates are expected to develop independent research programs in their field of expertise, demonstrate a strong commitment to obtaining extramural grant support, and participate in departmental graduate and undergraduate teaching programs. All candidates must possess a Ph.D.; at least 1 year of postdoctoral training is highly preferred. Texas Tech University is one of four major multipurpose universities in Texas. The department consists of 30 full-time faculty with research emphasis in the areas of evolutionary biology, cell and molecular biology, microbiology, developmental biology, and biotechnology. Several of the faculty participate in joint research projects with the School of Medicine, the College of Agriculture and the museum. All candidates should submit curriculum vitae, copies of recent publications, a description of research plans and three letters of recommendation to: Dr. John Burns, Chairman of Search Coordinating Committee, Department of Biological Sciences, Texas Tech University, Lubbock, Texas 79409. Deadline for applications is 1 December 1984.

Texas Tech University is an Affirmative Action/Equal Opportunity Employer.

POSITIONS OPEN

The University of North Carolina at Chapel Hill invites applications for two junior or senior FACULTY POSITIONS in the Department of Anatomy and Laboratories for Cell Biology. Applicants should have postdoctoral research experience and demonstrated excellence in any area of cell biology. Preference will be given to research in cell surface or membrane biology, cellular neurobiology, or biology of the cytoskeleton. Teaching opportunities will be in medical histology, neurobiology, human gross anatomy, or cell biology.

Women and minorities are encouraged to voluntarily identify themselves. Send curriculum vitae, a brief description of research plans, and the names of three references by 1 December 1984 to: Dr. Charles R. Hackenbrock, Chairman, Department of Anatomy, School of Medicine, 111 Swing Building, 217H, University of North Carolina at Chapel Hill, Chapel Hill, N.C. 27514. *An Equal Opportunity/Affirmative Action Employer.*

TENURE-TRACK FACULTY POSITION IN BIOCHEMISTRY

The Department of Biochemistry at the University of Wisconsin-Madison invites applications for a position as assistant, associate, or full professor in the areas of fermentation biochemistry, microbial physiology, cell physiology, and/or chemical engineering. Candidates must have demonstrated excellence and independence in biochemical research, and have a strong background of training in biochemistry. The university is developing a biotechnology center, and this position can be expected to involve strong interactions with that center as well as with departments such as bacteriology, genetics and chemical engineering. The facilities of the Biochemistry Department include a pilot plant which we wish to develop into a state-of-the-art facility for growing organisms. The successful candidate will be expected to take a leading role in the development and administration of this facility. Applications, including complete curriculum vitae and plans for future research, should be sent to: Dr. H. F. DeLuca, Department of Biochemistry, University of Wisconsin-Madison, Madison, Wis. 53706, and candidates should have letters sent from three people familiar with them and their work. Applications should be received by 31 December 1984 in order to guarantee consideration. *The university is an Affirmative Action/Equal Opportunity Employer, and applications are encouraged from women and minorities.*

FACULTY POSITIONS—BIOCHEMISTRY

New tenure-track positions are available in the Department of Biochemistry, Schools of Medicine, Dentistry, and Pharmacy at the State University of New York (SUNY) at Buffalo. Responsibilities include teaching graduate, undergraduate, and professional students; training Ph.D. candidates; and developing a productive research program with extramural funding. Talented biochemists are encouraged to submit curriculum vitae, a statement of long-term research objectives, and reprints or pre-prints. Applicants should have three letters of reference sent to:

Dr. Alexander C. Brownie, Chairman
Department of Biochemistry
102 Cary Hall
SUNY at Buffalo, New York 14214

Deadline for applications is 1 November 1984.

An Equal Opportunity/Affirmative Action Employer

FACULTY POSITIONS IN CELL BIOLOGY

Applications are invited for several tenure-track positions in the newly reorganized Department of Cell Biology and Anatomy at the Northwestern University Medical and Dental Schools. These positions are for assistant professors and, in exceptional cases, for associate professors. Applicants must have a Ph.D., M.D., or D.D.S. degree with research experience in cell-molecular biology, cellular neurobiology, structural biology, developmental biology, or related areas. Applicants should be able to demonstrate excellence or the potential for excellence in their respective fields. Successful applicants will be expected to carry on vigorous research programs and to participate in the teaching of graduate, medical, and dental students. Send complete curriculum vitae, brief description of previous and future research and teaching interests, and recommendations from at least three referees by 15 November 1984 to: Dr. Robert D. Goldman, Chairman, Department of Cell Biology and Anatomy, Northwestern University Medical and Dental Schools, 303 East Chicago Avenue, Chicago, Illinois 60611. *Northwestern University is an Equal Opportunity/Affirmative Action Employer and invites applications from all qualified individuals.*

POSITIONS OPEN

FACULTY POSITIONS: The Department of Biochemistry, College of Biological Sciences, University of Minnesota, invites applications for up to three tenure or tenure-track positions at the level of assistant professor or higher. Rank and tenure status will be decided based on professional qualifications. Preference will be given to individuals with research accomplishment and interests in the biological and/or chemical aspects of molecular biology. The application deadline is 15 November 1984. Submit curriculum vitae, list of publications, a two- to three-page statement of research interests, and have three letters of recommendation sent to: Search Committee, Attention: SM, Department of Biochemistry, University of Minnesota, 1479 Gortner Avenue, St. Paul, Minn. 55108. *The University of Minnesota is an Equal Opportunity Employer and Educator and specifically invites and encourages women and minorities to apply.*

FACULTY POSITION: CONNECTIVE TISSUE MOLECULAR BIOLOGY AND/OR IMMUNOLOGY. The Department of Oral Biology, Connective Tissue Biology Laboratories, Northwestern University, Dental and Medical Schools, invites applicants for a tenure-track position at the assistant or associate professor level. Applicants should have a strong background in molecular biology and/or immunology and an interest in some aspect of connective tissue biology. The successful candidate will be expected to establish an independent research program and to participate in dental and medical student, M.S., and Ph.D. educational programs. Applications should be submitted as soon as possible, but no later than 15 November 1984. Send résumés, statement of research interests, research support, and 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 Equal Opportunity Employer.*

ROSWELL PARK MEMORIAL INSTITUTE Department of Human Genetics

FACULTY POSITIONS are open at the assistant or associate professor levels in the fields of molecular genetics of human cancer and molecular genetics of human inherited disorders. Applicants should have a Ph.D. or M.D. degree, be actively engaged in human molecular genetics research, have appropriate postdoctoral experience, and have current grant support or show evidence of productive work sufficient to compete for federal grant support. Candidates will be expected to develop a vigorous and independent research program, participate in a graduate training program, and interact with faculty members. Roswell Park Memorial Institute is a comprehensive cancer hospital and research institute. Graduate education is through the Roswell Park Graduate Division of the State University of New York. Send curriculum vitae, a short description of research plans, and names of three references to: Dr. Thomas B. Shows, Ph.D., Department of Human Genetics, Roswell Park Memorial Institute, Buffalo, New York 14623. *An Equal Opportunity/Affirmative Action Employer.*

FACULTY POSITIONS IN PHARMACOLOGY

The Department of Pharmacology and the Cancer Center at the University of Rochester invites applications for two faculty positions, one a tenure-track assistant professor and the other an associate or full professor. The successful applicants may hold a joint primary appointment in the Department of Pharmacology and in the Cancer Center or may be appointed in the Department of Pharmacology alone. Applicants should have a Ph.D. in pharmacology or a related field, an M.D., or both, postdoctoral research training, the potential to attract research support and to establish or maintain an independent research program, and an interest in professional and graduate training. Individuals with research interests in the areas of cellular regulatory mechanisms, receptor-mediated mechanisms, neuropharmacology, endocrine pharmacology, cancer chemotherapy, chemical carcinogenesis, or tumor biology and who apply the techniques of modern biochemistry and cell and molecular biology to pharmacological investigations are sought in particular. The deadline for applications is 1 December 1984. Applicants should forward curriculum vitae, a list of publications, three letters of reference, and a summary of current and future research interests to: Search Committee, Department of Pharmacology, Box Pharmacology, School of Medicine and Dentistry, 601 Elmwood Avenue, Rochester, New York 14642. *Equal Opportunity Employer, M/F.*

The Illinois Department of Energy and Natural Resources (ENR), Water Survey Division, is developing a Hazardous Waste Research and Information Center (HWRIC). The Center is the focus of hazardous waste research information and industrial assistance in Illinois state government. Its role is to provide information and technical support to industry, the public and government officials towards a comprehensive hazardous waste management strategy for the state.

DIRECTOR

Responsibilities

The Director will be responsible for the management and implementation of Center activities aided by group leaders in the research, information and technical assistance programs. The Director will report to the Chief of the Illinois State Water Survey and the HWRIC Governing Board. Initial tasks include: the evaluation of related activities at the State and Federal level, the development of efficient information clearinghouse and industrial assistance program, supervision of research and facilities planning activities and acting as the principal spokesperson for the program.

Qualifications

The successful candidate will be an accomplished scientific professional with demonstrated experience in the management of a scientific research or service program with an advanced degree in an appropriate discipline is preferred. Salary of \$40,000 to \$55,000 per year will be commensurate with experience and qualifications.

RESEARCH PROGRAM COORDINATOR

Responsibilities

The Research Program Coordinator will be responsible for the development and implementation of Center research programs directed towards a clear definition of the extent and severity of the related problems in Illinois. He/She will be expected to be well aware of the corresponding environmental and economic consequences of HW management and disposal operations and to pursue both industrial and government sponsorship of research activities. The Coordinator will report to the Director of the Center, will directly supervise a small staff of research professionals and direct contract research support (> \$0.5M) activities with internal and external groups.

Qualifications

The successful candidate will be an experienced scientist with demonstrated research project management skills. An advanced degree (Ph.D.) in a relevant environmental discipline is preferred. The salary range starts at \$30,000 to \$45,000 per year depending upon the needs of the program.

RESEARCH SCIENTISTS (2)

Responsibilities

Applications are sought to fill two research staff positions in support of HWRIC problem assessment and problem solving research activities. Each position is under the direct supervision of the Research Program Coordinator. Initial tasks will include an assessment of the extent, magnitude and areal concentration of HW generation, treatment and disposal activities in Illinois, with an emphasis on environmental and economic impacts. Industrial, economic and environmental data must be evaluated from a variety of sources to provide an overview and assess the status of research findings in diverse scientific research efforts in the U.S., of HW related problems towards the development of an effective waste management strategy. In-depth assessments of major waste streams, disposal and treatment practices in regional to local settings will be conducted to better assess the research and technical needs of the state. This will entail the development of relational data bases to integrate existing regulatory and natural resource data pertaining to waste management activity in the past, present and the future.

Qualifications

It is anticipated that each candidate will have at least three years experience and an advanced degree (M.S. preferred) in a basic science (hydrology, chemistry) or engineering (civil, sanitary, environmental) discipline. Research contract involvement particularly in management and cooperative participation would be useful. The successful candidates would be expected to have proven experience in scientific and engineering data base manipulation and solid writing/communication skills. The salary range is \$22,000–\$27,000 per annum negotiable on experience and how closely the candidate meets the needs of the program. Each applicant should provide a summary of relevant experience and a statement of professional goals.

INFORMATION PROGRAM COORDINATOR

Responsibilities

Applications are sought for the position of Information Program Coordinator. The Coordinator will be responsible for the planning and implementation of HW information clearinghouse and data base development activities of the Center. He/She will report to the Director and actively cooperate with the staff of the research and technical assistance programs. The successful candidate will supervise the information and data management activities of the Center.

Qualifications

Familiarity and experience with bibliographic, information transfer and computer-aided reference needs of an advanced scientific group are essential. Microcomputer literacy would be useful. Technical writing and issue analysis experience are preferred with adequate scientific experience. Salary level for this position is \$24,000–\$28,000 per annum, negotiable according to experience.

INDUSTRIAL ASSISTANCE COORDINATOR

Responsibilities

Applications are sought for the position of Industrial Assistance Coordinator. The Coordinator will be an integral part of the management team of the Center, responsible for the development of a comprehensive program of industrial and technical assistance. Initial tasks will include: establishing contact with industry and trade groups involved in HW reduction and alternative treatment programs; preparing reliable procedures for the analysis of materials' flow and auditing to encourage waste reduction, product substitution, process modification and alternatives to HW landfilling. The Coordinator will report directly to the Director of the Center and will be expected to integrate program activities with repeated research and information efforts.

Qualifications

The successful candidate will be an experienced chemical process or treatment engineer, motivated towards an effective HW management strategy for Illinois' industry. He/She will have demonstrated experience in the management of waste research or service programs which addresses environmental and economic constraints effectively. Salary is \$40,000–\$50,000 per annum according to experience and the needs of the program.

INDUSTRIAL ASSISTANCE ENGINEER

Responsibilities

Applications are sought for the position of Industrial Assistance Engineer to aid in the development and execution of the technical assistance program of HWRIC. This position is under the responsibility of the Industrial Assistance coordinator, who is responsible for overall program coordination. Initial tasks include a thorough review of the literature on HW stream generation, characteristics and management options with an emphasis on the options of Illinois' industry for alternatives to landfilling. The successful candidate will develop materials' flow estimates, self-audit and direct assistance procedures, as well as an updated data base on Illinois' HW generation in cooperation with Center research and information core staff.

Qualifications

Proven experience in the design and implementation of waste treatment or process engineering schemes are preferred. Excellent communications and writing skills are essential. An advanced degree in civil, chemical or environmental engineering, or a closely related discipline, is required. Salary range is \$35,000–\$40,000 per year, negotiable according to experience.

TECHNICAL INFORMATION SPECIALIST

Responsibilities

Applications are sought for the position of Technical Information Specialist to aid in the development of a comprehensive hazardous waste information clearinghouse and HW Hotline in the Center. The position involves the collection of published materials on HW issues, as well as technical information for the use of Center research and technical assistance staff. Initial tasks also include the development of a bibliographic data base on HW and the preparation of issue papers for the public and legislature on various issues related to HW management. The position is under the direct supervision of the Information Program Coordinator.

Qualifications

The successful candidate should have experience in the data management and information transfer activities of a high level scientific group. Technical writing and communications skills are essential. A degree in library, computer science, or closely related discipline is required. The salary range is \$20,000–\$25,000 per annum, negotiable according to experience.

APPLICATIONS: Qualified applicants should submit their resumes and three letters of reference to: **Stanley A. Changnon, Jr., Chief, Illinois State Water Survey, P.O. Box 5050, Station A, Champaign, IL 61820**

CLOSING DATE: November 30, 1984

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

POSITIONS OPEN

FACULTY RESEARCH POSITION IN THE DEPARTMENT OF MEDICINE, DIVISION OF NEPHROLOGY

Full-time position in established laboratory. Preference given to individuals with Ph.D., M.D., or equivalent degree; demonstrated ability in the design and use of modern tools for studying membrane transport in epithelia, especially kidney; and a capacity for productive original research. Applicant will work in a research group, under the direction of Dr. Grantham, on problems related to transport of water and solutes in isolated renal tubules, renal cells, and membranes. Salary commensurate with training and experience. Send curriculum vitae and the names and addresses of three references by 19 October 1984 to: Dr. Jared J. Grantham, Division of Nephrology, Department of Medicine, 4015 Sudler, University of Kansas Medical Center, Kansas City, Kansas 66103. An Equal Opportunity Employer.

IMMUNOLOGY FACULTY POSITION

Tenure track, at either assistant, associate, or full professor, Department of Microbiology, Southwestern Medical School, Dallas.

Areas of particular interest include molecular genetics, cellular immunology, and cell cloning. Rank and salary open. Current members of immunology faculty are: Drs. Capra, Forman, Kettman, Lipsky, Sullivan, Tucker, Uhr, Vitetta, and Wasserman. Applicants should submit curriculum vitae, description of research interests, and names of four references to: Dr. J. W. Uhr, Department of Microbiology, Southwestern Medical School, 5323 Harry Hines Boulevard, Dallas, Texas 75235.

The University of Texas Health Science Center is an Equal Opportunity/Affirmative Action Employer.

CHEMICAL INDUSTRY INSTITUTE OF TOXICOLOGY

The Chemical Industry Institute of Toxicology (CIIT), an innovative leader in toxicology research, is seeking individuals to fill the following positions:

INHALATION TOXICOLOGIST—To establish and maintain ongoing, original, and innovative research program, preferably in pulmonary toxicology. Will supervise the generation and analysis of test atmospheres in chronic inhalation bioassays and provide advice to other investigators whose research requires inhalation exposure. Should have a Ph.D. in toxicology or related discipline in addition to several years of experience in inhalation toxicology.

LABORATORY ANIMAL VETERINARIAN—RESEARCH TOXICOLOGIST—Applicant will have a D.V.M. degree with postdoctoral training in laboratory animal medicine with several years of experience in managing a multi-species laboratory animal colony. A Diplomate of the American College of Laboratory Animal Medicine is preferred. Duties will include the professional management of the animal colony with responsibility for independent research in basic mechanisms of toxicity.

Please apply and send complete resume to:

Employment Office
CIIT
P.O. Box 12137
Research Triangle Park, N.C. 27709
Telephone: 919-541-2070

An Equal Opportunity/Affirmative Action Employer

MICROBIOLOGY AND IMMUNOLOGY Faculty Positions

The Department of Microbiology and Immunology of the University of Oklahoma Health Sciences Center announces two tenure-track position openings in the following areas:

IMMUNOLOGY, molecular immunology, immunogenetics, immune regulation, or cellular immunology.

MICROBIAL PHYSIOLOGY OR GENETICS, metabolism, regulation, gene structure or function.

Rank for each position will depend on qualifications, but should include postdoctoral training and an excellent publication record. Candidates will be expected to develop a strong independent research program. Other responsibilities will include instruction of medical, dental, and graduate students. Send curriculum vitae, a statement of research interests, and the names of three references to: Roderick E. McCallum, Ph.D., Department of Microbiology and Immunology, University of Oklahoma Health Sciences Center, P.O. Box 26901, Oklahoma City, Okla. 73190. The University of Oklahoma is an Equal Opportunity/Affirmative Action Employer. Deadline for applications is 1 January 1985.

POSITIONS OPEN

GENETICIST/MOLECULAR GENETICS

The Genetics Department at Iowa State University welcomes applications for two tenure-track 12-month faculty positions which require both teaching and research. Rank and salary (\$35,000 minimum) will be commensurate with qualifications and experience. Preference will be given to candidates with both a strong background in eukaryotic genetics and competence in recombinant DNA techniques. Send curriculum vitae, names of three referees and a summary of research interests by 1 December 1984 to: Alan Atherly, Department of Genetics, Iowa State University, Ames, Iowa 50011.

An Affirmative Action/Equal Opportunity Employer.

UNIVERSITY OF CALIFORNIA, SANTA BARBARA. Tenure-track position in **GEOGRAPHY-OCEANOGRAPHY**, available 1 July 1985. Salary and rank are dependent upon qualifications, however, preference will be given to the assistant professor level. The Geography Department seeks applicants with backgrounds in physical oceanography and/or air/sea interaction with an interest in remote sensing. Applicants must have a Ph.D., substantial qualifications in marine research, and a strong commitment to teaching and research. Submit résumé and names of three referees to: Chairman, Search Committee; Department of Geography; University of California; Santa Barbara, Calif. 93106. Closing date: 10 December 1984. Equal Opportunity/Affirmative Action Employer.

JET PROPULSION LABORATORY (JPL) Geophysicist/Nuclear Chemist

The Jet Propulsion Laboratory of the California Institute of Technology has an immediate opening at the Ph.D. level for an experimental chemist or physicist with experience in nuclear techniques and instrumentation to participate in experiments for the remote gamma-ray spectroscopic observation of Mars, the Moon, asteroids, and comets by means of interplanetary spacecraft. The research program emphasizes the design, development, and performance of the requisite instrumentation and includes accelerator bombardments and balloon flights. Experience in the areas of planetary surface properties and processes, computer techniques of data analysis, and gamma-ray/x-ray space instrumentation is desirable. Please submit résumé and references to:

Professional Staffing, Department M51.
Jet Propulsion Laboratory
California Institute of Technology
4800 Oak Grove Drive
Pasadena, Calif. 91109

Equal Opportunity Employer

MASS SPECTROSCOPIST—RICE UNIVERSITY. The Department of Biochemistry announces the availability of a scientific staff position for an experienced bioorganic mass spectroscopist to operate the GC-MS unit, to participate in research on steroid biosynthesis and the chemistry of complex lipids, and to assist in teaching an advanced experimental biochemistry laboratory course. Salary is dependent on qualifications and experience. Position available immediately. Interested persons should send résumé and names of three references to: G. J. Schroepfer, Jr., Department of Biochemistry, Rice University, P.O. Box 1892, Houston, Texas 77251. Rice University is an Equal Opportunity/Affirmative Action Employer.

MEDICAL BIOCHEMIST. Assistant/associate professor for a tenure-track position in an interdisciplinary division of preclinical sciences which currently consists of eight Ph.D. faculty. Major responsibility will be participating in the instruction of biochemistry and pharmacology to medical students. Applicants with formal training or teaching experience in both medical biochemistry and pharmacology will be given preference. Faculty currently present in the division have developed an active cardiovascular research program and applicants with active grants in this area are encouraged to apply. State funds are available for research equipment, supplies, and technicians. To apply, send curriculum vitae and arrange for three letters of recommendation to be sent to: Robert C. Ritter, Ph.D., Associate Dean for Preclinical Education, The Oklahoma College of Osteopathic Medicine and Surgery, 1111 West 17th Street, Tulsa, Oklahoma 74107. Deadline for receipt of curriculum vitae and supporting letters of recommendation is 1 November 1984. Successful applicant can assume position anytime between 1 January 1985 and 1 July 1985. Affirmative Action/Equal Opportunity Employer.

POSITIONS OPEN

INSTRUCTOR/POSTDOCTORATE RESEARCH ASSOCIATE. A highly qualified Ph.D. is sought to teach undergraduate biochemistry and/or introductory chemistry and do collaborative research with one of our faculty members. Position is available for 1 year with a possibility of a further 1-year extension. Salary competitive. Position available February 1985. Candidates should send a complete curriculum vitae, transcripts, and arrange for three letters of recommendation to be sent to: Dr. George Axelrad, Chairman, Department of Chemistry, Queens College-City University of New York, Flushing, N.Y. 11367. An Affirmative Action/Equal Opportunity Employer.

MEDICAL VIROLOGIST/IMMUNOLOGIST. Assistant/associate professor for a tenure-track position in an interdisciplinary division of preclinical sciences which currently consists of eight Ph.D. faculty. Major responsibility will be participating in the instruction of virology and immunology to medical students. Applicants with formal training or teaching experience in both medical virology and immunology will be given preference. Faculty currently present in the division have developed an active research program. Preference will be given to applicants with active research grants. State funds are available for research equipment, supplies, and technicians. To apply send curriculum vitae and arrange for three letters of recommendation to be sent to: Robert C. Ritter, Ph.D., Associate Dean for Preclinical Education, The Oklahoma College of Osteopathic Medicine and Surgery, 1111 West 17th Street, Tulsa, Oklahoma 74107. Deadline for receipt of curriculum vitae and supporting letters of recommendation is 1 January 1985. Successful applicant can assume position anytime between 1 February 1985 and 1 July 1985. Affirmative Action/Equal Opportunity Employer.

NEUROSCIENCE—challenging advanced postdoctoral position at Harvard Medical School for a period of 2 to 4 years. Investigations are related to cholinergic systems, behavior, neurochemistry and neuroanatomy of human and animal brains, especially with respect to memory, aging, dementia, and brain transplants. Beginning time is very flexible. U.S. citizenship not required. Prior research experience in relevant areas is required. A limited number of interviews during the Anaheim Neuroscience Meetings can be arranged by calling Dr. M. Mesulam, telephone: 617-735-2075 or Dr. E. Mufson, telephone: 617-735-2064. Letters of application with curriculum vitae and names of references should be sent to: Dr. Mesulam or Dr. Mufson, Section of Neuroscience and Behavioral Neurology, Beth Israel Hospital, 330 Brookline Avenue, Boston, Mass. 02215.

PLANT COMMUNITY ECOLOGIST. Assistant professor/assistant ecologist in the University/Agricultural Experiment Station. Research on factors influencing the structural and functional properties of grassland communities using demographic and/or genetic techniques. Teaching and advising at the undergraduate and graduate levels. Send a statement of research interests, curriculum vitae, list of publications, transcripts, and names and addresses of three referees by 1 November 1984 to: D. A. Phillips, Search Committee Chairman, Department of Agronomy and Range Science, University of California, Davis, Calif. 95616. The University of California is an Affirmative Action/Equal Opportunity Employer.

PLANT MOLECULAR BIOLOGY UNIVERSITY OF CALIFORNIA, LOS ANGELES

The Department of Biology at UCLA invites applications for a faculty appointment in plant molecular biology to begin 1 July 1985. The appointment will preferably be made at the assistant professor level, but more advanced candidates will also be considered for a higher level appointment. Candidates must have research interests and experience in molecular aspects of the development/biochemistry/regulation of higher plants as well as a commitment to teaching both undergraduate and graduate students. Please send curriculum vitae, list of three referees, and a statement of research interests to:

Dr. E. M. Tobin, Chair
Plant Molecular Biology Search Committee
Biology Department
UCLA
Los Angeles, Calif. 90024

Applications should be received by 15 November 1984 to be considered. UCLA is an Equal Opportunity/Affirmative Action Employer and we welcome applications from women and minorities.

Stanford University

Plasma Physics, EM Waves, Space Physics

We are seeking a senior person who has demonstrated scientific, managerial, and leadership qualifications in one or more of the following disciplines: Space Plasma Physics, electromagnetic waves, and solar-terrestrial physics. We expect the successful candidate to have established an outstanding reputation documentable through professional writings or other evidence of personal technical creativity, letters of reference from recognized research leaders in the disciplines mentioned above, and/or awards and other recognition from appropriate professional societies.

It is expected that this individual will develop a research program in one of the disciplines given above working in coordination with ongoing programs within the STAR Laboratory and, possibly, with other activities within the Stanford Center for Space Science and Astrophysics. It is expected that this individual will have a strong background in experimental techniques, either in the laboratory or in the field, including the environment of space; experimental activities in either laboratory or space plasma physics would be regarded as good qualifications. However, close association with theoretical developments in plasma physics and/or electromagnetic theory will clearly be desired. It is also expected that the individual will have a demonstrated capability for securing federal or other research grant support, or be deemed by the selection committee of being capable of securing such funds.

It is anticipated that the person chosen will devote the major part of his or her time to research activities. However, there is an opportunity for participation in academic responsibilities of the Electrical Engineering Department, including, when time permits, teaching graduate and undergraduate classes, serving on various committees of the department, School of Engineering, and the university. It is expected that the person chosen will participate actively in the training of graduate students.

The Chairman of the selection committee for this position is **Professor Robert A. Helliwell, Professor of Electrical Engineering, Space, Telecommunications, and Radioscience Laboratory, Stanford University, Stanford, California 94305**. Other members of the selection committee include Professor P. M. Banks, Professor R. N. Bracewell, Professor L. R. O. Storey, and Professor L. Tyler.

POSTDOCTORAL RESEARCH APPOINTMENTS IN SCIENCE AND ENGINEERING LOS ALAMOS NATIONAL LABORATORY

The Los Alamos National Laboratory is seeking candidates for our Postdoctoral Research Program. Appointments are considered in many areas of theoretical and experimental physics, chemistry, engineering, biology, materials science, environmental health, medical research, mathematics, and geoscience.

Applicants should have received their doctoral degree within the past three years. The appointments are for one year, renewable for a second year. The annual stipend range is \$26,220 - \$27,600 per year; employee benefits and moving expenses are provided.

Postdoctoral appointments are awarded in a Laboratory-wide competition. The Selection Committee meets four times a year in December, February, May, and August. Applications are accepted any time during the year.

Send resume or employment application (usually available from your placement office), graduate and undergraduate transcripts, and a statement of research interest and goals to:

Madeline Lucas, DIV 84-CK-PD
Personnel Administration Division, MS P280
Los Alamos National Laboratory
Los Alamos, New Mexico 87545

University
of California



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Sales & Scientific Liaison Manager -U.S.A.

Huntingdon Research Centre plc is one of the world's foremost contract research organisations specialising in the field of biological safety evaluation based in Huntingdon, England and employing some 900 scientific and administrative staff in the U.K.

We are looking for a Sales & Scientific Liaison Manager based in Washington to represent the company in North America. A self starter of smart appearance and manner, a graduate, preferably in the biological sciences with some experience of selling or business development in the chemical, pharmaceutical or life science industries would be desirable.

Familiarity with the registration requirements of both the FDA and EPA would be a distinct advantage.

Salary negotiable, performance related bonus, company car and benefits associated with a major employer.

If you think that you have got what it takes to fill this important appointment please forward your C.V. and present salary details without delay to: J West,

Director of Human Resources & Administration,
Huntingdon Research Centre, Huntingdon,
Cambridgeshire, England PE78 6ES.

HRC

Huntingdon Research Centre plc

POSITIONS OPEN

MICROBIOLOGY FACULTY POSITION

Tenure-track position at the assistant professor level. Starting date: January 1985 or deferrable to August 1985. Ph.D. with postdoctoral training and publications required. Candidates will be expected to develop an externally-funded research program, direct Ph.D. and M.S. students, and participate in the microbiology curricula and freshman biology. Preference will be given to applicants who can contribute to a diverse graduate program with focal points in microbiology and aquatic biology. Application deadline to ensure consideration: 15 November 1984. Position may be filled as a temporary appointment if a qualified applicant is not identified. Submit letter of application, curriculum vitae, and transcripts, and have three letters of recommendation forwarded to: **Dr. Harold L. Drake, Chairman, Microbiology Search Committee, Department of Biology, University of Mississippi, University, Miss. 38677.** An Affirmative Action/Equal Opportunity Employer.

MOLECULAR GENETICIST

Assistant or associate professor, 90 percent research, 10 percent teaching. Research will focus on one or more areas of gene structure and function, vector development, or molecular genetics of plants. Candidates with research experience in eukaryotic or prokaryotic genetic systems are encouraged to apply. A Ph.D. degree is required; postdoctoral experience is preferred. Send résumé and transcripts, and have three letters of reference sent by 1 November 1984 to: **Dr. Bikram Gill, Search Committee Chairman, Department of Plant Pathology, Throckmorton Hall, Kansas State University, Manhattan, Kans. 66506; telephone: 913-532-6176.** Equal Opportunity/Affirmative Action Employer.

NEUROANATOMIST

Applications are invited for a position immediately in the Biology Department at the University of California, San Diego, within a multidisciplinary cellular neurobiology laboratory headed by Dr. Silvio Varon. The position is available for 2 to 3 years and will involve the investigation of in vivo models for CNS and PNS regeneration and potential influences on them by trophic and neurite-promoting agents. Applicants must have an M.D. or Ph.D. degree with strong background/experience in two or more of the following: Histology, microsurgery, tracing techniques, and morphometry. Title and salary will be commensurate with experience: Postgraduate research biologist (\$18,564 to \$23,136) or assistant research biologist (\$27,300). Send curriculum vitae, reprints, and three letters of recommendation by 31 October 1984 to: **Marilee Bateman, Biology Department M-001, University of California, San Diego, La Jolla, Calif. 92093.**

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

NEUROCHEMIST

Applications are invited for a position immediately in the Biology Department at the University of California, San Diego, within a multidisciplinary cellular neurobiology laboratory headed by Silvio Varon. The period of this position will be for 2 to 3 years, and will involve the purification and characterization of molecules which influence the survival and axonal regeneration of peripheral and central neurons using tissue culture microassays to monitor factor biological activity. Applicants must have Ph.D. Strong experience required with the latest technologies in protein or peptide fractionation. Position will be commensurate with experience at levels of either postgraduate research biologist (\$18,564 to \$23,136) or assistant research biologist (\$27,300). Send curriculum vitae, reprints, and three letters of recommendation by 31 October 1984 to: **Marilee Bateman, Biology Department M-001, University of California, San Diego, La Jolla, Calif. 92093.**

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

PLANT CELL BIOLOGIST. Tenure-track assistant professor in plant cell biology or plant cellular and developmental biology. Applicant should provide evidence that he/she will develop a strong independent research program. Send curriculum vitae, reprints of publications, a 1-page statement of research plans, and have four letters of recommendation sent by 1 December 1984 to: **Plant Cell Biology Search Committee, Department of Biology, Coker Hall 010A, University of North Carolina, Chapel Hill, N.C. 27514.** An Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

NEUROBIOLOGY FACULTY POSITION

The Department of Anatomy, Georgetown University, invites applications for a tenure-track appointment at the assistant, associate, or full professor level in the area of neurobiology. The applicant must have an M.D. or Ph.D. degree and postdoctoral experience, and must demonstrate the ability to develop a strong and independent research program in neurobiology. The successful candidate will be expected to teach in the human neuroanatomy portion of a team-taught course in neurobiology. Extensive experience teaching human neuroanatomy is required. Deadline for applications is 30 November 1984. Send curriculum vitae, a letter stating research and teaching experience, and the names of at least three referees to:

**Martin Dym, Ph.D., Chairman
Department of Anatomy
Georgetown University
School of Medicine-School of Dentistry
3900 Reservoir Road, NW
Washington, D.C. 20007**

Georgetown University is an Equal Opportunity/Affirmative Action Employer.

PHARMACOLOGY

The Department of Pharmacology, Division of Functional Biology, of the West Virginia School of Osteopathic Medicine (WVSOM), seeks two assistant or associate professors of pharmacology. Applicants must have a good background in general physiology and pharmacology, with experience in one or more of the following areas: Cardiovascular, pharmacology, neuropharmacology, and chemotherapy and antibiotics. Significant teaching experience and a demonstrated ability to conduct independent research are also required.

Rank and salary will be commensurate with qualifications. Send current curriculum vitae and three letters of recommendation to: **Michael Cope, Ph.D., Associate Dean for Academic Affairs, WVSOM, 400 North Lee Street, Lewisburg, W.Va. 24901** by 16 November 1984; the position is available immediately.

PLANT ECOLOGIST—The Institute of Arctic Biology, University of Alaska, invites applications for a 9-month tenure-track position as assistant professor. Applicants must have a Ph.D. degree and a broad background in chemical, physiological, or population responses to herbivores. The appointee will develop a strong program in individual and collaborative research, advise graduate students, and teach one or more courses annually. Submit résumé, statement of research interests, and names of three referees to: **Terry Chapin, Institute of Arctic Biology, University of Alaska, Fairbanks, Alaska 99701.** Application deadline: 1 December 1984. *The University of Alaska is an Equal Opportunity/Affirmative Action Employer and Educational Institution.*

PLANT POPULATION ECOLOGIST

Continuing appointment beginning September 1985 for individual with strong background in community and/or population plant ecology. Additional background in evolutionary and quantitative biology is highly desirable. The Ph.D. degree must be completed. Successful candidate will teach courses in ecological principles, field ecology, and mathematical biology, and assist, when needed, in the introductory courses. Successful candidate should pursue research in some area of plant ecology which can involve undergraduate student participation. St. Olaf is a coeducational liberal arts college affiliated with the American Lutheran Church. Submit letters of application, résumé, and names of three referees (not letters) by 15 November 1984 to: **Dr. Marland L. Madson, Chairman, Biology Department, St. Olaf College, Northfield, Minnesota 55057.**

Equal Opportunity Employer

PLANT SCIENTIST—TISSUE CULTURE

Crop Genetics International, a plant biotechnology company located in Dorsey, Maryland, in close proximity to the United States Department of Agriculture Beltsville facilities, is seeking B.S. and M.S. personnel to add to its scientific team. Individual with skills and experience in plant tissue culture manipulations and systems are encouraged to apply. Cellular selection experience is highly desirable. Please forward curriculum vitae and a statement of professional experience and objectives to: **M. Sander, Crop Genetics International N.V., 7170 Standard Drive, Dorsey, Maryland 21076.**

An Equal Opportunity/Affirmative Action Employer

POSITIONS OPEN

A major producer of skin care products is seeking a highly qualified **POSTDOCTORAL CANDIDATE** to initiate a basic research program concerning the molecular mechanism of growth, differentiation, and aging of human epidermal tissues. The appropriate individual should be a recent Ph.D. recipient in cellular or molecular biology with direct experience in cell and organ culturing techniques, preferably with epidermal cells. Histology and SEM experience are a plus. This position is in the form of a research fellowship and is renewable on a yearly basis. Send résumé in confidence to: **Box MK 1152, 71 Fifth Avenue, Fifth Floor, New York, N.Y. 10003.** We are an Equal Opportunity Employer.

POSTDOCTORAL FELLOW

Postdoctoral positions available immediately to study (i) protein and lipid kinases and phosphorylation in tumor lines whose growths and morphology are modulated by cyclic AMP and (ii) oncogene expression in cAMP responsive cancer cells. A Ph.D. with experience in either biochemistry, chemistry, and cell biology, or recombinant DNA technology and cell culture is necessary. Send curriculum vitae and three letters of reference to: **Ms. Brenda Stewart, Administrative Assistant, Korman Research Pavilion, ALBERT EINSTEIN MEDICAL CENTER, NORTHERN DIVISION, York and Tabor Roads, Philadelphia, Pa. 19141.** An Equal Opportunity Employer.

POSTDOCTORAL FELLOW/RESEARCH ASSOCIATE POSITIONS AVAILABLE, in cDNA and genomic cloning, DNA sequencing, recombinant DNA technology, mutagenesis studies, and DNA protein interactions applied to regulation of gene expression in the exocrine pancreas. Candidates should have Ph.D. degree and experience in genetic engineering and protein and nucleic acid biochemistry. Applications including curriculum vitae, bibliography, one letter of reference, and names of two additional references should be sent to: **Dr. George Scheele, Laboratory of Cell and Molecular Biology, The Rockefeller University, New York, N.Y. 10021.**

POSTDOCTORAL POSITION available in fall 1984 for individual with background in molecular biology to study molecular details of receptor binding, channel formation, and polypeptide transport for the colicin E1 molecule, using the combined approaches of directed mutagenesis and membrane biochemistry/biophysics. Send résumé and three letters of reference to: **Dr. W. A. Cramer, Department of Biological Sciences, Purdue University, West Lafayette, Ind. 47907.** An Equal Opportunity/Affirmative Action Employer.

ROCKEFELLER UNIVERSITY POSTDOCTORAL POSITIONS

Design and chemical synthesis of new proteins containing binding or catalytic sites. Experience in organic or peptide synthesis, protein purification, or enzymology will be useful. Please send résumé, publication list, and three letters of recommendation to: **Dr. Bruce W. Erickson, The Rockefeller University, New York, N.Y. 10021.** An Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL POSITION for recent Ph.D. or M.D. who has experience in recombinant DNA technology and genetics to pursue studies of gene amplification and expression in human cancer and in the establishment and maintenance of the multidrug-resistant phenotype in mammalian cells. Knowledge of cell culture will be helpful. Send curriculum vitae and references to: **Peter W. Melera, Ph.D., Sloan-Kettering Institute for Cancer Research, Walker Laboratory, 145 Boston Post Road, Rye, N.Y. 10580.** The institute is an Equal Opportunity Employer.

POSTDOCTORAL POSITION available for NIH-funded project studying ion transport by liver plasma membrane vesicles. Applicant must have recent Ph.D. and a strong background in membrane transport. Salary support will be provided for 2 years. Send curriculum vitae and names of three references to: **Bennett L. Blitzer, M.D., Director, Liver Study Unit, University of Cincinnati College of Medicine, 231 Bethesda Avenue (Room 6560), Cincinnati, Ohio 45267.**

POSTDOCTORAL POSITION available to examine the regulation of the induction of cytochrome P-450 in primary monolayer cultures of adult rat hepatocytes. Background in cell biology and the regulation of protein turnover desirable. Send résumé and names and addresses of three references to: **Dr. Philip S. Guzelian, Division of Clinical Toxicology and Environmental Medicine, Box 267, Medical College of Virginia, Richmond, Virginia 23298-0001.**

POSITIONS OPEN

POSTDOCTORAL POSITIONS AVAILABLE IMMEDIATELY

- (i) Isolation, nutrition, mass culture, and growth physiology of unicellular marine algae.
- (ii) Qualitative and quantitative characterization of agar from the red alga *Gracilaria* spp., including variability resulting from extraction technology, genetic differences, and environmental influences.
- (iii) Development of mass culture technology for certain seaweeds, including pelagic *Sargassum* spp., and unattached, benthic *Gracilaria* spp., this work to be carried out at a field station in the Florida keys. Stipend: \$22,000 plus relocation allowance. Renewable for second year.

Send résumé and three references to: **Dr. J. H. Ryther, Harbor Branch Institution, RR 1, Box 196-A, Fort Pierce, Florida 33450.**

Harbor Branch is an Equal Opportunity Employer.

POSTDOCTORAL POSITION IN CNS NEUROPHYSIOLOGY to study the ionic mechanisms underlying chemical and electrical excitability in mature and developing CNS neurons. Primary cultures of vertebrate CNS neurons and several types of electrophysiological recordings techniques will be used, with the emphasis on single channel recording techniques. Aspects of the study will involve an examination of ion channel function after acute and chronic drug treatment. Previous experience with electrophysiological techniques is required. The position is available through the Alcohol Research Center of the Scripps Clinic, under a multidisciplinary neuropsychopharmacology training grant from the National Institute of Alcoholism and Alcohol Abuse. The Alcohol Research Center is a multidisciplinary group of scientists studying all aspects of vertebrate CNS function. Please send curriculum vitae and the names of three references to: **Dr. Donna Gruol, Division of Preclinical Neuroscience and Endocrinology, Research Institute of Scripps Clinic, 10666 North Torrey Pines Road, La Jolla, Calif. 92037. An Equal Opportunity/Affirmative Action Employer, M/F/H.**

POSTDOCTORAL POSITION IN IMMUNOLOGY/INFECTIOUS DISEASES to study host defense mechanisms in a mouse model of cutaneous candidiasis. Strong background in cellular immunology and murine immunological assays desired. Beginning salary approximately \$16,000. Send curriculum vitae and names and addresses of three references to: **Dr. Peter G. Sohnle, Department of Medicine, The Medical College of Wisconsin, Research Service/151, Veterans Administration Medical Center, Wood, Wisconsin 53193. The Medical College of Wisconsin is an Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL POSITIONS IN IMMUNOLOGY AND MOLECULAR BIOLOGY OF INFECTIOUS DISEASES. Several positions are immediately available with no deadline for applications. Research involves study of host interactions with the surface antigens of several different infections including those caused by retroviruses, rickettsia, protozoa, and other parasites. Research also includes immunodeficiency diseases, autoimmunity, and regulation of the immune response. Experience with recombinant DNA technology, protein biochemistry, or basic immunology is preferred. Positions are supported by an NIH postdoctoral training program. Send curriculum vitae and the names and addresses of three references to: **Dr. Travis McGuire, Department of Veterinary Microbiology and Pathology, Washington State University, Pullman, Wash. 99164.**

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

POSTDOCTORAL RESEARCH ASSOCIATE position in immunology and virology available immediately to study cellular and molecular mechanisms of virus-induced autoimmune disorders. Experience in either immunology or virology is desirable. Send curriculum vitae and names of three references to: **S. A. Huber, Ph.D., Department of Pathology, University of Vermont, Burlington, Vermont 05405.**

POSTDOCTORAL RESEARCH ASSOCIATE. Position available immediately for a Ph.D. with experience in mammalian cytogenetics and/or molecular biology and an interest in the mechanisms of DNA replication and induction of chromosome rearrangements and SCE. Salary starts at \$17,600 per annum. Send curriculum vitae, statement of research experience and interests, and names of three references to: **Dr. John Hozier, Medical Genetics Laboratory, Florida Institute of Technology, Melbourne, Florida, 32901, or telephone: 305-723-3701, extension 7162.**

COLLEGE / UNIVERSITY FACULTY AND STUDENT PROGRAMS

Argonne National Laboratory, one of the U.S. Department of Energy's major research and development centers, announces College/University Faculty and Student Research Participation Programs for Summer 1985. Opportunities exist for faculty, graduate students and undergraduates to participate in Argonne's extensive program of basic and applied energy-related research. Financial assistance is available to research participants and is provided by the U.S. Department of Energy.

Additional information and application forms may be obtained from: **ARGONNE DIVISION OF EDUCATIONAL PROGRAMS, 9700 South Cass Avenue, Argonne, IL 60439. Or Call: (312) 972-3365**



An Affirmative Action/Equal Opportunity Employer. Women, Minorities, the Handicapped, and Veterans Urged to Apply

MARINE GEOTHERMAL RESEARCH

Applications are invited for a staff position in a geothermal research group in the Department of Geology and Geophysics, Woods Hole Oceanographic Institution. Ongoing research includes field programs and modelling of oceanic hot spots, hydrothermal circulation, continental rifting, and development of passive continental margins. Opportunities for participation in the MIT-WHOI joint education program are available.

Qualifications include a Ph.D or equivalent in Geophysics or Earth Sciences, with some experience in marine geothermal research. An orientation to field programs and experimentation is preferred, although theoretical/analytical expertise is also desirable. A successful candidate is expected to develop his/her own research programs and support, although some support is available from ongoing research programs over the first year. Salary dependent on background and experience.

Send resumes and names of at least 3 professional references to:

**Personnel Manager
Box 54 P**

**WOODS HOLE
OCEANOGRAPHIC
INSTITUTION**

Woods Hole, MA 02543

An equal opportunity employer M/F/H

EXPERIMENTAL TOXICOLOGY

Postdoctoral Fellow Scientific Research Program

The Bristol-Myers Pharmaceutical Research and Development Division has an excellent opportunity for a one-year appointment (with potential for renewal of an additional year) in its Experimental Toxicology Department.

The individual we seek needs a PhD in Pharmacology or Toxicology, a strong background in biochemical pharmacology/toxicology, plus research experience involving cellular and subcellular mechanisms of drug action or toxicology. Demonstrated ability to perform research of high quality and creativity utilizing cellular or subcellular techniques a must. Experience with mammalian cell culture desirable.

The successful candidate will be responsible for performing basic and applied research involving mechanisms of drug toxicity, as well as evaluating IN VITRO systems to assess the toxic potential of drugs.

We offer an excellent salary, comprehensive benefits and exceptional opportunity for professional achievement. For prompt, confidential consideration, forward your resume to: **EMPLOYMENT MANAGER**



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

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

An equal opportunity employer M/F

POSITIONS OPEN

POSTDOCTORAL POSITION for recent Ph.D. or M.D., U.S. citizen or permanent resident, available immediately, supported by NIH training grant (National Research Service Awards), in the area of basic cancer chemotherapy, clinical cancer chemotherapy, cancer biology (including radiation biology), or cancer drug development (organic synthesis). Application deadline: 12 November 1984. Send résumé indicating area(s) of interest and two or more letters of reference to: **Dr. Sungman Cha, Brown University, Box G, Providence, R.I. 02912; telephone: 401-863-3114. An Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL RESEARCH ASSOCIATE

Postdoctoral position for NIH-funded research and training in the molecular aspects of eukaryotic RNA virus replication (vesicular stomatitis) with emphasis in the regulation of virus-coded polymerase activities and attenuation by defective interfering particles. Strong background in recombinant DNA technology and/or protein chemistry is preferred. San Diego offers highly desirable living conditions as well as excellent growth opportunities for biological research. Starting salary: \$18,000 to \$20,000 per year based on experience. Earliest starting date, on or about 1 January 1985. Please send résumé and three letters of reference to: **Dr. Jacques Perrault, Department of Biology and Molecular Biology Institute, San Diego State University, San Diego, Calif. 92182. An Equal Opportunity/Affirmative Action Employer.**

VANDERBILT UNIVERSITY

POSTDOCTORAL RESEARCH ASSOCIATE POSITION available 1 January 1985 or sooner. Preference will be given to a recent graduate in biochemistry or physiology with interests in molecular endocrinology. The ideal candidate will have had experience in protein purification and antibody (polyclonal/monoclonal) development. The position will involve studies on the structure-function relationships of androgen-binding protein (ABP) and on the involvement of ABP in the regulation of sperm maturation and epididymal function. Send curriculum vitae and the names of three references to: **Benjamin J. Danzo, Ph.D., Department of Obstetrics and Gynecology, Vanderbilt University, Nashville, Tenn. 37232. An Affirmative Action/Equal Opportunity Employer.**

Harvard University: The Department of Psychology and Social Relations is soliciting applications, or nominations, for a **TENURED PROFESSORSHIP** in the general area of **PSYCHOPATHOLOGY OR PERSONALITY**. Inquiries and current curricula vitae, including the names of up to five referees familiar with the candidate's work, should be directed to: **Sheldon H. White, Chair, Psychology and Social Relations, 33 Kirkland Street, Cambridge, Mass. 02138. We are an Equal Opportunity Employer.**

Harvard University: The Department of Psychology and Social Relations is soliciting applications, or nominations, for a **TENURED PROFESSORSHIP** in the area of **PHYSIOLOGICAL OR BIOLOGICAL PSYCHOLOGY**. Inquiries and current curricula vitae, including the names of up to five referees familiar with the candidate's work, should be directed to: **Sheldon H. White, Chair, Psychology and Social Relations, 33 Kirkland Street, Cambridge, Mass. 02138. We are an Equal Opportunity Employer.**

NATIONAL SCIENCE FOUNDATION (NSF)

NSF's Division of Materials Research is seeking a qualified applicant for the position of **PROGRAM DIRECTOR** for the Metallurgy Program located in the Metallurgy, Polymers, and Ceramics Program. The position is exempted from the competitive civil service and will be filled on a 1- or 2-year rotational or temporary basis. The per annum salary ranges from \$40,000 to \$66,400. Normally, the candidate selected receives a leave of absence from his/her employer and salary is set in accordance with NSF Circular 167, Rotator Program. Otherwise, salaries for temporary employees are set at NSF's GG/GH schedule (equivalent to the GS schedule). Candidates should have a Ph.D. or equivalent experience in metallurgy/materials science or scientific/research publications. In addition, six to eight years of scientific experience beyond the Ph.D. in directing/managing basic research in an academic, industrial, or governmental institution. Résumés should be sent to: **National Science Foundation, Personnel Administration Branch, Room 212, 1800 G Street NW., Washington, D.C. 20550. Attention: Catherine Hande, EX 84-55. For further information telephone: 202-357-7840. NSF is an Equal Opportunity Employer.**

POSITIONS OPEN

POSTDOCTORAL RESEARCH ASSOCIATE. A postdoctoral position is available to study the mechanisms and applications of liquid secondary ion mass spectrometry (LSIMS). A Ph.D. in organic, or physical organic chemistry or a closely related discipline with emphasis or interest in mass spectrometry is required. Salary range \$16,000 to \$18,000 depending on experience and qualifications. Send curriculum vitae and three letters of recommendation by 19 October 1984 to:

**Drs. Max Deinzer or Douglas Barofsky
Department of Agricultural Chemistry
Oregon State University
Corvallis, Ore. 97331**

An Affirmative Action/Equal Opportunity Employer. Complies with Section 504 of the Rehabilitation Act of 1973.

POSTDOCTORAL/RESEARCH ASSOCIATE positions (i) **Electron Microscopist** and (ii) **Membrane Biophysicist/Biochemist** are available immediately in the area of cryobiology with emphasis on the effects of freezing on the structure and function of the plasma membrane. Send résumé and three letters of recommendation to: **Dr. Peter L. Steponkus, Department of Agronomy, Cornell University, Ithaca, N.Y. 14853. Cornell University is an Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL/RESEARCH ASSOCIATE position available immediately to study the immunobiology of gonococcal infection in human mucosal tissue. Research involves immunocytochemical analysis and functional capabilities of immunocompetent cells. Please send curriculum vitae and names of three references by 15 November 1984 to: **M. D. Cooper, Department of Medical Microbiology and Immunology, Southern Illinois University School of Medicine, Springfield, Ill. 62708. Southern Illinois University is an Equal Opportunity/Affirmative Action Employer.**

Minneapolis—University of Minnesota—Department of Psychiatry seeks a **PSYCHIATRIST** to fill a faculty position as assistant professor with an annual appointment. The position entails commitment to research and teaching. The successful applicant will share with other faculty members responsibility for one of several teams which treat hospitalized and non-hospitalized general psychiatric patients. Each team, in addition to treating patients, has the responsibility of training residents, medical students, and psychology interns. The teams may develop specialized treatment and research programs for particular psychiatric disorders. Applicants should be Board-eligible, with demonstrated interest and ability to do psychiatric research. Preference will be given to persons with fellowship experience and research publications. Last date for receipt of applications is 30 November 1984. *The University of Minnesota is an Affirmative Action Employer and specifically invites and encourages women and minority applicants.* Send résumé to: **Elke Eckert, M.D., Box 393 Mayo, University of Minnesota Hospitals, 420 Delaware Street, S.E., Minneapolis, Minn. 55455.**

THE PSYCHOLOGY DEPARTMENT AT INDIANA UNIVERSITY—BLOOMINGTON anticipates for fall 1985 at least one tenure-track or tenured opening at a junior or senior level in each of the following three areas: **DEVELOPMENTAL, COGNITIVE, and PHYSIOLOGICAL PSYCHOLOGY**. Outstanding applicants in other areas will also be considered, especially if their interests extend beyond traditional area boundaries. To be sure of consideration, please send curriculum vitae, (p)reprints, and three letters of reference by 1 November 1984 to: **Professor I. J. Saltzman, Department of Psychology, Indiana University, Bloomington, Ind. 47405. An Affirmative Action/Equal Opportunity Employer.**

RESEARCH ASSISTANT: Perform research on understanding structure-function relationships of cell nucleus and nucleolus proteins. Prepare nuclei, nucleoli, chromatin, and isolate proteins and nucleic acids from experimental tumor cells. Examine fractions by light/electron microscopy. Perform protein/nucleic acid analyses/enzyme digestions on isolated cellular fractions. Prepare synthetic oligonucleotides; perform nucleic acid hybridizations experiments and recombinant DNA techniques. Must have a master's degree in biochemistry and a strong background in: (i) eukaryotic cell and protein fractionation and (ii) analysis by spectrophotometry, electrophoresis, and isoelectric focusing. Must have some background in ultracentrifugation and electron microscopy. 40 hours per week. \$9.90 per hour. Apply at: **The Mississippi Employment Security Commission, 502 Yazoo Street, Jackson, Mississippi 39215-1848. Refer to Job Order Number 1068941.**

POSITIONS OPEN

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

PROJECT ASSOCIATE

A project associate position will be available 15 November 1984, for a Ph.D. in biochemistry to carry out mechanistic studies of enzyme-catalyzed reactions. Candidate should have a relevant background in organic synthesis including the use of isotopically labeled compounds and chromatographic techniques. Experience in handling light and oxygen-sensitive compounds and experience in membrane-bound enzyme purification are required. Candidate should have the ability to interpret scientific data and prepare manuscripts for publication. Beginning salary: \$16,500 per year. Submit curriculum vitae and the names/addresses of three references to: **William Janek, Wisconsin Job Service, 206 North Broom Street, Madison, Wis. 53703, by 4 November 1984. An Equal Opportunity Employer. This ad not paid for by Job Service funds.**

SOUTHERN ILLINOIS UNIVERSITY (SIU) SCHOOL OF MEDICINE, SPRINGFIELD, ILLINOIS

An expanding program of the Department of Psychiatry has created seven faculty positions for Board-eligible or Board-certified **PSYCHIATRISTS** who demonstrate an interest in clinical and research aspects of mental illness. Positions include Director of Outpatient Services, Division Chief of Child Psychiatry, Director of the Inpatient Schizophrenia Research Unit, two Inpatient Services psychiatrists, Chief of the Consultation-Liaison Service and a psychiatrist to direct gerontology and dementia research. A faculty position is also open in biochemistry research which may be filled by an M.D. or Ph.D.

Appointment level for these positions will be commensurate with qualifications. Both tenure-track and non-tenure-tracking positions are included. Some positions are currently open and available; other positions will be available in the near future or await funding approval for the next fiscal year.

Interested applicants should submit curriculum vitae and statement of clinical and research interests to: **Robert E. Becker, M.D., Professor and Chairman, Department of Psychiatry, SIU School of Medicine, P.O. Box 3926, Springfield, Ill. 62708. Closing date is 15 November 1984 or until filled. SIU is an Affirmative Action/Equal Opportunity Employer.**

RESEARCH IMMUNOLOGIST

The Eye Research Institute invites application for a faculty-level position. The individual should have a good track record in ocular immunology, preferably immunology of uveitis, and should be independently funded. Appointment would include independent space, and faculty and institute privileges. This is a good opportunity for an individual who is able to support himself or herself by his or her research, who is seeking a creative life in investigative work, and who is looking for the company of colleagues who are successfully performing this task in an exciting environment. Send curriculum vitae and names of at least three references to:

**Mathea R. Allansmith, M.D.
Eye Research Institute
20 Staniford Street
Boston, Mass. 02114
Equal Opportunity Employer**

RESEARCH/SURGICAL NUTRITION

Conduct study and surgical experiments involving effects of perenteral and enteral nutrition on inflammatory bowel disease. Analyze data and prepare written reports for publication. M.D. plus 1 year of experience surgical research in nutrition and working knowledge of in vivo perfusion of intestinal tract in experimental animals. Salary \$26,000 per year. Send curriculum vitae to: **Philadelphia Job Bank Office, 444 North Third Street, Philadelphia, Pa. 19123. Job Order Number: 3798170.**

J. ROBERT OPPENHEIMER RESEARCH FELLOWSHIPS LOS ALAMOS NATIONAL LABORATORY

Los Alamos National Laboratory announces the competition for the J. Robert Oppenheimer Postdoctoral Fellowships. The appointments are designed to foster continuing contacts between the Laboratory and recent recipients of doctoral degrees who show clear and definite promise of becoming outstanding leaders in scientific research areas.

Appointments are considered in many areas of experimental and theoretical physics, chemistry, mathematics, computer science, biology, materials science, environmental health, medical research, geoscience, and engineering.

Candidates may be persons completing their doctoral work or finishing a current post doctoral appointment, as well as junior faculty members seeking support for a period of concentrated research.

Appointments are for two years, with the possibility of renewal for a third year. We provide a stipend of \$41,820 per year (12 months). Fringe benefits are also provided including incoming travel and moving expenses.

Applications submitted for this fellowship are referred to appropriate technical groups for review. Particularly outstanding candidates are selected for sponsorship by Laboratory Staff Members. A detailed research proposal reflecting the candidates creativity, interest, and abilities is developed in consultation with the sponsor. Final selection is determined in a Laboratory-wide competition based on the proposed research project, in addition to previous academic and research excellence.

To insure timely consideration, a resume or employment application (usually available from Placement Office), graduate and undergraduate transcripts, and a statement of research interest and goals should be submitted by mid-December to:



Madeline Lucas, DIV 84—CL-JRO
Personnel Administration Division, MS P280
Los Alamos National Laboratory
Los Alamos, New Mexico 87545

An Affirmative Action/Equal Opportunity Employer

The Evergreen State College Faculty Positions for 1985-1986

The Evergreen State College invites applications for the positions listed below. Evergreen is a public, liberal arts college emphasizing intensive interdisciplinary study and team teaching, in the graduate and undergraduate curriculum. No departments, no faculty ranks, no tenure system, but faculty affiliate with interdisciplinary specialty areas. Retention based on quality of teaching judged by annual evaluations including peer evaluation. Salary based upon years of experience.

All positions are dependent upon legislative appropriation. Approximately half will be one-year appointments and half will be renewable three-year contracts. Masters degree minimal degree requirement; Ph.D.'s preferred. Preference is for junior level applicants. All positions are based at the Olympia campus unless otherwise noted. Preference is for broadly trained faculty with a deep interest in undergraduate interdisciplinary education, and strength in collaborative, team-teaching environments.

Masters Program in Environmental and Energy Studies

We are seeking a constellation of backgrounds in three positions for this new program. Rather than specifying a precise range of knowledge for each position, we will select among the candidates those who, in conjunction with the others, offer the greatest strength to the College as a whole. Candidates should have excellent backgrounds in one of the following areas and substantial strength in at least one other area.

Closing date: **December 1**

- ... Geology, particularly groundwater hydrology, economic geology, surficial geology, and/or physical geography
- ... Natural resource policy and/or economics, particularly energy and/or aquatic resources
- ... Land use planning, including work with local communities and governments, demography, resource planning and/or satellite imagery
- ... Anthropology, sociology or psychology with demonstrated commitment to work on environmental problems and their solutions
- ... Computer analysis of ecosystems, population dynamics, and/or economics and policy problems in the environmental field
- ... International studies with a strong commitment to work on the problems of global resources, international trade, and international environmental policy

Computer Science

Two positions. Both require interdisciplinary competence, and ability to teach beginning formal subjects in computer science. First position requires interest/experience in cognitive science or artificial intelligence. Second position requires experience in development of large-scale applications systems (systems design, analysis, databases); additional competence in mathematics or philosophy desirable.

Closing date: **October 22**

Experimental Biologist

Strong background in vertebrate biology, e.g. in physiology or developmental biology, broad background in laboratory technique including microscopy. Interdisciplinary competence in history of science, science and society issues, philosophy or history of ideas preferred. In accordance with our approved corrective employment policy, this position is selectively certified for women and minority applicants.

Closing date: **November 15**

Applied Physics

Ability to teach junior/senior level applied physics/mathematics subjects; especially energy studies, optics/waves, or electronics; experimentalist or applied experience preferred. Interdisciplinary competence in such areas as science and society, history and philosophy of science or other area preferred.

Closing date: **December 1**

Applications must be complete and postmarked by specified closing date. Notification of interview schedule will be sent to all applicants shortly thereafter.

To apply, send resume, two letters of recommendation from colleagues and two letters from students, and any standardized teaching evaluation forms available plus a statement of educational philosophy and a syllabus exhibiting your approach to teaching to:

Dean Barbara Leigh Smith
The Evergreen State College
Olympia, WA 98505

All materials should specifically address teaching ability, disciplinary and interdisciplinary competence, excellence in undergraduate teaching, collaborative abilities, and abilities to work with people of diverse ages, abilities, ethnicity, and socioeconomic backgrounds.

Evergreen is committed to equal opportunity and affirmative action. We encourage all qualified individuals to apply. In accordance with our approved affirmative action policy, preference points are given for applications that will enhance our efforts to employ members of the protected classes, to assure that we have as culturally diverse a campus as possible.

PATHOLOGIST

The Toxicology Research and Testing Program of the National Institute of Environmental Health Sciences, Research Triangle Park, North Carolina has a permanent position for a comparative pathologist with a salary range of \$42,928 to \$55,807 per annum. The successful candidate will be expected to:

- Evaluate toxic and carcinogenic potential of chemicals through interpretation of pathologic changes found in rodent studies. These studies will be performed in contract laboratories.
- Develop and validate classification methods for toxicologic and carcinogenic lesions in rodents.

Candidates are required to have the following:

- M.D. or D.V.M. degree with advanced training and board certification in pathology.
- Two to five years of research experience in rodent pathology in the area of toxicology or carcinogenesis.
- A thorough knowledge of naturally occurring and induced cancer in rats and mice.
- Ability to communicate effectively both orally and in writing.
- Relevant publications in peer reviewed scientific journals.

U.S. Citizenship is required. Applicants must be found to be eligible on a Civil Service Register.

A curriculum vitae and names of three persons we can contact for references should be sent to Ms. Lou Rozier, NIEHS Personnel Office, P.O. Box 12233, Research Triangle Park, NC 27709. Further information can be obtained from Ms. Rozier by calling (919) 541-7513.

The NIEHS is an Equal Opportunity Employer.



MATHEMATICS CHAIR AND LECTURESHIP

Applications are invited for appointment to a Chair of Mathematics. The successful applicant will be expected to assume the duties of a Professor, and possibly of Head of the Department of Mathematics at some time in the future. As such the incumbent will be expected to provide leadership in teaching and research.

A lectureship is also available. The appointee will be expected to undertake research, as well as teaching in accordance with needs of the department.

All Academic salaries are currently under review. Details are obtainable on request.

Benefits: an annual bonus • housing subsidy (if eligible) • generous leave • pension • medical aid • remission of fees for dependants attending the University • sports facilities • clubs • removal, travel and settling-in allowances may be payable.

Applications should be lodged by 31 October 1984.

For detailed information contact the Deputy Registrar, (Academic Staffing.)

UNIVERSITY OF THE WITWATERSRAND
1 Jan Smuts Avenue, Johannesburg 2001,
South Africa

The policy of the University is not to discriminate on grounds of sex, race, colour or national origin.

POSITIONS OPEN

PSYCHIATRIST-INVESTIGATOR needed by Department of Psychiatry and Neurology to direct a research program in psychopharmacology. Substantial resources in space and equipment are available at Tulane University School of Medicine and New Orleans Veterans Administration Medical Center. Joint appointment available in Department of Pharmacology. Candidate must be capable of initiating own research at both clinical and bench levels. Curriculum vitae should be sent to: **Joseph B. Green, M.D., Chairman, Department of Psychiatry and Neurology, Tulane Medical School, 1430 Tulane Avenue, New Orleans, La. 70112** by 30 October 1984. *Tulane is an Affirmative Action/Equal Opportunity Employer. Qualified women and minority candidates are encouraged to apply.*

NORTH CAROLINA-ORAL AND MAXILLOFACIAL SURGERY

Full-time, non-tenure-track position as **RESEARCH ASSISTANT PROFESSOR** available 1 November 1984. Qualifications include Ph.D. and at least 3 years of postdoctoral experience in developmental biology. There should be experience in the biochemistry of development with congenital and acquired cranio-facial anomalies, wound-healing in soft tissues and bone; experience with isolation and quantitation of proteins, peptides, especially biologically active factors as well as nucleic acids from cultured cells and organs. Technical expertise should include using one- and two-dimensional gel electrophoresis; immunological identification and HPLC techniques and the ability to perform morphological studies using transmission and scanning electron microscopy. Salary is based on qualifications. *Affirmative Action/Equal Opportunity Employer. Minorities and women are encouraged to identify themselves voluntarily.* Send curriculum vitae no later than 15 November 1984 to: **Dr. Ronald Baker, Chairman, Department of Oral and Maxillofacial Surgery, University of North Carolina School of Dentistry, Chapel Hill, N.C. 27514.**

RESEARCH ASSOCIATE/POSTDOCTORAL CELL BIOLOGY/BIOCHEMISTRY

Applications are invited from Ph.D.-level persons for a position involving research on fibrinolytic mechanisms in wound healing. The candidate should, preferably, have experience with such mechanisms and be trained in protein purification and protease biochemistry, enzyme kinetics, and immunochemical techniques. Experience in tissue culture and fine structure are desirable, but not necessary. The goal of the program is to study the regulation of plasminogen activators in corneal ulceration.

The position is available 19 October 1984, for a minimum of 4 years and has a starting salary of \$25,000 per year. Applications should be directed to:

**Dr. Michael Berman
Woods Research Building, Room 179
The Wilmer Eye Institute
The Johns Hopkins Hospital
600 North Wolfe Street
Baltimore, Md. 21205**

The Johns Hopkins University is an Affirmative Action/Equal Opportunity Employer.

RESEARCH BIOLOGIST—HAZARDOUS WASTES

Assistant or Associate Professional Scientist

Ecological physiologist with expertise an experience in the effects of hazardous wastes in the environment; Ph.D. in related field; will identify biological research needs as related to problem assessment and problem solving; will conduct research in these topical areas. Salary competitive.

Send letter of application, résumé, and the names of three references by 30 November 1984 to: **Dr. Robert W. Gorden, Illinois Natural History Survey, 607 East Peabody Drive, Champaign, Ill. 61820; telephone: 217-333-6889.** Starting date will be 1 November 1984.

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

RESEARCH WRITER: Requires degree in science, communication, or related field; graduate degree preferred; extensive writing about science for public news media; ability to identify and produce science news and features for lay readers. Send application letter, résumé of training and experience, science writing samples, and names, addresses, and telephone numbers of three professional references by 31 October 1984 to: **Research Screening Committee, Information Service, UMC 5, Utah State University, Logan, Utah 84322.**

POSITIONS OPEN

RESEARCH ASSOCIATE CELL BIOLOGY/BIOCHEMISTRY

A cell biologist/biochemist is needed to spend at least 2 years studying the role of contractile protein phosphorylation in regulation of cardiac muscle contraction [see *J. Biol. Chem.* 257, 2111 and *J. Gen. Physiol.* 83, 563] and oversee the operation of my laboratory while I am on sabbatical for 9 to 12 months. The laboratory is fully equipped for a variety of biochemical, electrophysiology, and structural techniques and is staffed by one technician and two postdoctoral fellows. Requirements: Ph.D. in biochemistry, pharmacology, cell biology, or a related discipline. Prior research experience and/or thorough knowledge of the literature in the area of contractile proteins, protein phosphorylation, or muscular contraction. Starting date is negotiable. Applicants should submit curriculum vitae, copies of publications, and names of three references to: **Dr. H. Criss Hartzell, Department of Anatomy, Emory University School of Medicine, Atlanta, Ga. 30322.**

Emory University is an Affirmative Action/Equal Opportunity Employer.

THE UNIVERSITY OF SYDNEY RESEARCH ASSISTANT/ POSTDOCTORAL FELLOW Reference number 35/03 NEUROBIOLOGY RESEARCH CENTRE

The appointee should have at least an honours degree or equivalent and have expertise in tissue culture as well as in ancillary immunological techniques. Appointment to 31 December 1985 in the first instance with possibility of renewal to a total of 3 years.

Salary according to qualifications and experience in one of the ranges; A\$17,657 to A\$23,903 per annum.

Applications, quoting reference number, including curriculum vitae, and giving the names of two referees, to: **The Registrar, University of Sydney, Sydney, N.S.W. 2006 Australia** by 29 October 1984.

SABBATICAL REPLACEMENT

The Department of Biochemistry has a 1-year position open starting 1 January 1985. An extension may be possible. Teaching responsibility will consist of one or two courses. Research may be pursued in any faculty member's laboratory. Write or call for current faculty listing. Submit curriculum vitae, a brief statement of interests and goals, and three letters of reference to: **Ivan I. Kaiser, Chairman, Department of Biochemistry, University of Wyoming, Laramie, Wyoming 82071. Equal Opportunity Employer.**

SEDIMENTARY GEOLOGIST Wesleyan University

The Department of Earth and Environmental Sciences invites applications for a tenure-track faculty position to commence with the 1985-1986 academic year at the assistant professor rank. The successful candidate will be responsible for regularly teaching an accelerated undergraduate course in sedimentology/sedimentary petrology. Applicants should also have research experience and teaching interests in one or more of the following: seismic stratigraphy, mathematical geology, mechanics of sediment transport, marine geology, and coastal processes. All requirements for the Ph.D. should be completed by the time of appointment. *Women and minority candidates are encouraged to apply for this position.* Letters of application should be accompanied by a statement of research/teaching interests, recent curriculum vitae, the names and addresses of at least three referees, and be forwarded to: **Gregory A. Horne, Chairman, Department of Earth and Environmental Sciences, Wesleyan University, Middletown, Conn. 06457. Wesleyan University is an Affirmative Action/Equal Opportunity Employer.**

SENIOR FACULTY, Multiyear contract positions available for Ph.D., D.O., or M.D.:

NEUROPHARMACOLOGY NEUROPHYSIOLOGY GENERAL (CARDIO) PHYSIOLOGY MICROBIOLOGY

Responsibilities include teaching medical students and **RESEARCH.** Interested candidates should send curriculum vitae and all supportive evidence (teaching experience and current grant support information, and grant track record) to: **Search Committee, Dr. Arnold L. Nagler, Associate Dean, Preclinical Medical Education, New York College of Osteopathic Medicine, Old Westbury, Long Island, New York 11568.**

POSITIONS OPEN

RESEARCH ASSISTANT II. Immediate opening in the genetics laboratory for individual with M.Sc. degree in chemistry, biochemistry, or related fields or B.Sc. with appropriate experiences. Responsibilities include operation and maintenance of routine laboratory equipment and original investigations in methodology development. Experiences in operation of automatic amino acid analyzer and high performance liquid chromatography are required. There is ample opportunity of carrying out independent research on metabolic disorders in humans and polyamine metabolism in mammalian system. Send résumé and names of three references to: **Wai-Yee Chan, Ph.D., Department of Pediatrics, Oklahoma Health Sciences Center, P.O. Box 26901, Oklahoma City, Oklahoma 73190.**



NSERC INDUSTRIAL RESEARCH FELLOWSHIPS (CANADA) SCIENTISTS AND ENGINEERS

ALCAN, the major international aluminum company, is looking to the future; come and share the excitement with us. If you are a graduate student close to obtaining your Ph.D. degree and can qualify for an NSERC Industrial Fellowship, talk to us.

Currently we are interested in electronic materials, molten salts, lasers, light metals, advanced ceramics, surfaces, advanced structural materials, energy systems, transportation, and electrochemical systems. At Kingston we are over 350 people dedicated to making research and development pay.

Successful candidates will be working in our new project groups charged with exploring new strategic areas.

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

**John Smythe
ALCAN INTERNATIONAL LIMITED
Kingston Laboratories
P.O. Box 8400
Kingston, Ontario, Canada
K7L4Z4**

SOLID EARTH GEOPHYSICIST. Faculty position at the Graduate Department of Scripps Institution of Oceanography and the Institute of Geophysics and Planetary Physics. Applications are invited for a tenure-track faculty position in the field of solid earth geophysics, including its theoretical and observational aspects. The position will involve graduate-level teaching and the supervision of graduate student research. Qualifications include a Ph.D. in one of the sciences and demonstrated excellence and independence in research. Weight will be given to evidence of superior teaching ability. An appointment at the assistant professor level is envisaged but qualified applicants at all levels will be considered. Associate or professional level candidates must demonstrate a strong research record in their specialty; assistant level candidates will be expected to show evidence of their potential by means of a publication record appropriate for their experience and in their letters of recommendation. Salary commensurate with qualifications and experience. Send letter of application, curriculum vitae, including research interests, and the names of three references to: **Chairman, Graduate Department A-008, Scripps Institution of Oceanography, University of California, San Diego, La Jolla, Calif. 92093.** Responses must be received by 30 November 1984. *An Equal Opportunity/Affirmative Action Employer.*

SYNTHETIC ORGANIC CHEMIST

Design, synthesize, test, and use new fluorescent dyes as probes to elucidate the structure, function, and health of biological cells and tissues. Work with a research group acknowledged to be at the forefront in the development of this exciting new technology. Skills with heterocyclic dyes and reactive chemical groups would be valuable. Knowledge of optical spectroscopic properties of organic chromophores will be useful. Enthusiasm is essential. Experienced B.A., recent postdoctoral, or experienced postdoctoral will be considered. Write to:

**Center for Fluorescence Research in
Biomedical Sciences
Carnegie-Mellon University
4400 Fifth Avenue
Pittsburgh, Pa. 15213**

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SCIENCE Introduces "The Four-Day Close"

We now offer our recruitment advertisers the convenience formerly found only in daily newspapers. We call it "**The Four-Day Close.**" Instead of reserving space a month or more in advance, you now have until just four days before the issue is mailed to its 160,000-plus subscribers.

Film (right-reading, emulsion face down, 1/4 or 1/2 page size only) and insertion order must reach: **SCIENCE, Room 107, 1515 Massachusetts Avenue, N.W., Washington, D.C. 20005**, by 3 p.m. Mondays (except for legal holidays when material must reach Washington by 3 p.m. Fridays). Because space is limited, the four-day close page will be reserved on a first-come, first-served basis.*

Now you don't have to wait for the professional you need **as soon as possible**. Nor must you advertise in a Sunday paper that pans a lot of sand, but not much gold. Scientific employers know that **SCIENCE** ads fill the job better. Now they fill it faster, too.

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For further information, **telephone Dick Charles at SCIENCE: 212-730-1050, or write: 1515 Broadway, New York, N.Y. 10036.**

*At a 15% premium.

SCIENCE

News Department Reprint Series

European Missile Deployment

No defense decision has so strained the Western alliance and awakened the average citizen to the risks of nuclear destruction as the decision made by NATO in 1979 to install new nuclear missiles in Western Europe. Although the initial phase of the deployment has been successfully carried out, it has left in its wake an unforeseen series of painful and potentially lasting military and political consequences.

In a compelling 4-part series in *Science*, R. Jeffrey Smith describes the genesis of the deployment decision, the course of arms negotiations that followed, and the choices that lie ahead for NATO—choices that may influence the direction of future U.S. military expenditures as well as the potential risk of a superpower conflict. This reprint collection is available now.

Single copies \$2.00; twenty or more \$1.00 each.
Orders must be prepaid.

Write to AAAS, Dept. EMD, 1515 Massachusetts Ave., N.W., Washington, D.C. 20005.

SCIENCE

News Department Reprint Series

Catalysis

"There is no area in chemistry today more exciting than catalysis." [George Pimentel, chairman of the National Academy of Sciences/National Research Council Committee to Survey Opportunities in the Chemical Sciences]

This survey of the most active areas of catalysis conveys that excitement while explaining some of the unusual forces that have combined to drive studies of catalysis forward. Among the topics covered: Heterogeneous catalysis, cluster chemistry, activation of carbon-hydrogen bonds, asymmetric synthesis, photocatalytic production of fuels and electricity, modification of enzymes, and immobilization of enzymes.

This collection of recent articles from *Science* by Thomas Maugh II is now available for use by professionals, teachers, researchers, and anyone interested in this field.

Single copies \$2.00; twenty or more \$1.00 each.
Orders under \$10.00 must be prepaid.

Write to AAAS, Dept. CAT, 1515 Massachusetts Ave., N.W., Washington, D.C. 20005.

POSITIONS OPEN

RESEARCH BIOCHEMIST. Postdoctoral research fellow sought to participate in ongoing research projects on bone biology, including studies of connective tissue biochemistry, HPLC, monoclonal antibody, immunoassay, amino acid sequencing, and DNA recombinant technology. Salary: \$20,000 to \$30,000. Contact: **Lois Erlanger, University of California, Los Angeles, Bone Research Laboratory, 1000 Veteran Avenue, Room A3-34 Rehabilitation Center, Los Angeles, Calif. 90024.**

RESEARCH POSITION MICROBIOLOGY/BIOCHEMISTRY INFECTIOUS DISEASES

The Veterinary Infectious Disease Organization (VIDO), University of Saskatchewan, has a research position for a microbiologist with a strong interest in bacterial biochemistry and physiology to participate in research programs on economically important diseases of food-producing animals. Major projects are in the areas of *Pasteurella* and *Haemophilus* pneumonias of cattle and swine and viral/bacterial synergism. Applicants should have a degree in microbiology or veterinary medicine, together with a Ph.D., and preferably some postdoctoral experience in at least one of the following areas: host-parasite interactions and bacterial mechanisms of virulence, bacterial biochemistry, physiology, or genetics. An interest in the application of modern microbiological techniques to the solution of problems related to the diagnosis and control of infectious diseases of animals is essential.

Inquiries and applications should be directed to:

S. D. Acres, D.V.M., M.P.V.M., Ph.D.
Deputy Director (Research)
VIDO
124 Veterinary Road
Saskatoon, Saskatchewan, Canada S7N 0W0
Telephone: 306-343-3155

SALES REPRESENTATIVES HOEFER SCIENTIFIC INSTRUMENTS

We seek bachelors or masters of science currently working in a laboratory or in sales. Candidates must have 2 years of experience with gel electrophoresis. Chicago and St. Louis territories are available. We will interview at the ASCB Meeting in Kansas City in November. Please send résumés with cover letters to: **Philip Snodgrass, Hoefer Scientific Instruments, Box 77387, San Francisco, Calif. 94107.**

UNIVERSITY OF COLORADO. VISTING FACULTY AND POSTDOCTORAL FELLOWSHIPS FOR RESEARCH IN ATMOSPHERIC AND CLIMATE DYNAMICS, ENVIRONMENTAL AND ATMOSPHERIC CHEMISTRY, ENVIRONMENTAL BIOCHEMISTRY AND GEOCHEMISTRY. One-year awards offered by the Cooperative Institute for Research in Environmental Sciences (CIRES). CIRES is supported by NOAA and the University of Colorado. Awards may be made to senior scientists, including those on sabbatical leave, or to recent Ph.D. recipients. Stipends average \$25,000 for twelve months. The program is open to scientists of all countries. CIRES is supported by NOAA and the University of Colorado. Selection of awardees is made in part on the likelihood of active interaction with CIRES scientists and other research groups in Boulder. Senior CIRES-affiliated scientists working in these fields include James Avery, Susan Avery, Ben Balsley, Roger Barry, John Birks, R. Ray Fall, Lang Farmer, Fred Fehsenfeld, William Hay, Murray Johnston, Bruce Koel, Eric Kraus, Uwe Radok, Robert Sani, Robert Sievers, and Harold Walton. Applications for the 1985-1986 academic year awards should be sent to: **Professor R. Sievers, Director of CIRES, Visiting Fellows Program, Campus Box 449, University of Colorado, Boulder, Colo. 80309.** Include curriculum vitae, publications list, and a brief outline of the proposed research. In addition, applicants should request that three persons familiar with their qualifications send letters of recommendation. Junior applicants should submit undergraduate and graduate transcripts. First consideration will be given to applications received by 1 December 1984. Final application deadline is 15 February 1985. *The University of Colorado is an Affirmative Action/Equal Opportunity Employer.*

DOCTORAL PROGRAM

DOCTORAL PROGRAM IN TOXICOLOGY HARVARD UNIVERSITY SCHOOL OF PUBLIC HEALTH

Interdisciplinary program leading to Ph.D. or D.S. degree offers graduate training in environmental, cellular, biochemical, and molecular toxicology. Faculty research interests include receptor-mediated toxicity, chemical carcinogenesis and tumor promotion, molecular mechanisms of growth factor and hormone action, prostatic steroid biochemistry, genetics and biochemistry of microbial degradation of toxic chemicals, and development and use of animal and human cell culture models. Stipends and tuition assistance available. *Expression of interest is particularly invited from women and minority candidates.* Contact: **R. Siebens, Laboratory of Toxicology, Harvard School of Public Health, 665 Huntington Avenue, Boston, Mass. 02115.**

TRAINING PROGRAMS

ENVIRONMENTAL ONCOLOGY: PRE- AND POSTDOCTORAL TRAINING. The Institute of Environmental Medicine invites applications for its pre- and postdoctoral training program in environmental oncology. Molecular and cellular approaches to the study of chemical and radiation carcinogenesis in vivo and in vitro are emphasized. Stipends are available. Curriculum vitae and two letters of recommendation should be submitted by 1 February 1985 to: **Dr. Roy E. Albert, Institute of Environmental Medicine, New York University Medical Center, 550 First Avenue, New York, N.Y. 10016.** *An Affirmative Action/Equal Opportunity Employer, M/F.*

POSTDOCTORAL TRAINING IN THE NEUROSCIENCES

Postdoctoral training positions are available in basic and clinical neuroscience including positron emission tomography studies of neurologic disease. Applicants must have the M.D. or Ph.D. degree and must be U.S. citizens, non-resident U.S. nationals, or have a permanent residence visa. Application deadline is 1 December 1984. Send curriculum vitae, three letters of recommendation, and a statement of research interests to: **Sid Gilman, M.D., Professor and Chairman, Department of Neurology, The University of Michigan, 1103 East Huron, Ann Arbor, Mich. 48104, Attention: Dr. George W. Dauth.** *Non-discriminatory/Affirmative Action Employer.*

TRAINEESHIP

POSTDOCTORAL TRAINEESHIPS IN ENVIRONMENTAL TOXICOLOGY AND PATHOLOGY

Positions available in NIEHS-funded interdisciplinary program. Research areas include pharmacology and pathobiology of chemically induced disease (morphological and biochemical effects of chemicals, carcinogenesis, teratology, immunotoxicology, cytogenetics); food-borne disease (biochemistry and mechanisms of action of microbial toxins, food additives, naturally occurring toxicants); epidemiology; behavioral toxicology; fate of pesticides in the environment. U.S. citizenship or permanent residence required. To apply, identify area of interest and send résumé, transcripts, and three letters of recommendation to: **Director, Environmental Toxicology Center, University of Wisconsin, 309 Infirmary, Madison, Wis. 53706; telephone: 608-263-4580.** *Equal Opportunity/Affirmative Action Employer.*

FELLOWSHIPS

Myasthenia Gravis Foundation \$25,000 Plus

1985 POSTDOCTORAL FELLOWSHIPS FOR MYASTHENIA GRAVIS RESEARCH

Full-time postdoctoral (M.D./Ph.D.) MG or MG-related research, preceptor supervised. \$25,000 award plus support services grant (for unavailable equipment) up to \$10,000. Send seven copies: Letter giving reason for applying, curriculum vitae, two sponsor recommendations, proposed program, and requested budget for support services funding by 31 October 1984 to: **Dr. E. Lambert, MG Foundation, 15 East 26th Street, Suite 1603, New York, N.Y. 10010.**

FELLOWSHIPS

FELLOWSHIPS

National Research Council Postdoctoral Fellowships at the United States Army Medical Research Institute of Infectious Diseases to study (i) cellular biology of viral infections; (ii) mechanisms of action and antiviral activity of immunopotentiating compounds.

Research on cellular biology of viral infections focuses on adsorptive phagocytosis and translocation of viral RNA across cellular membranes. Research on immunopotentiating compounds focuses on evaluation of immunopotentiators as antivirals and their effects on the immune system. Annual stipend for regular research associates is \$25,300.

Interested individuals should contact: **Dr. P. G. Canonico, Chief, Department of Antiviral Studies, Virology Division, USAMRIID, Ft. Detrick, Maryland 21701, or telephone: 301-663-2290.** Obtain applications from: **The National Research Council, JH 608-N4, 2101 Constitution Avenue, NW, Washington, D.C. 20418.** Deadline for application submission is 15 January 1985 for spring awards.

POSTDOCTORAL FELLOWSHIPS. NIH-funded postdoctoral fellowships are available in the areas of immunology and molecular biology applying monoclonals, T cell clones, and cDNA technologies to neurological disorders. Send curriculum vitae and three references to: **Leslie P. Weiner, M.D., Department Chairman, Department of Neurology, University of Southern California School of Medicine, MCH 142, 2025 Zonal Avenue, Los Angeles, Calif. 90033.** *An Equal Opportunity Employer.*

C. H. BEST FOUNDATION POSTDOCTORAL FELLOWSHIP

In diabetes research, molecular endocrinology, molecular biology, differentiation, immunology, structure and function of membranes, or lipid metabolism. Tenable for two years after 1 July 1985 with a competitive stipend. Available to new Ph.D.'s or candidates with less than two years postdoctoral training by 30 June 1985. Send curriculum vitae, transcripts and three letters of reference preferably before 1 November 1984 to: **Dr. C.-H. Siu, Fellowship Committee Chairman, Banting and Best Department of Medical Research, University of Toronto, Toronto, Canada, M5G 1L6.**

POSTDOCTORAL FELLOWSHIP

Postdoctoral position available immediately to study the neurochemical correlates of spinal cord injury, with particular reference to polyunsaturated fatty acids and neuropeptides. Candidate should have training in neurochemistry and experience with HPLC. Send curriculum vitae and three letters of reference to:

Dr. Alan I. Faden
Department of Neurology
University of California
San Francisco, Calif. 94143

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

PREDOCTORAL/POSTDOCTORAL FELLOWSHIPS in American history and material culture, anthropology, biological sciences, earth sciences, history of art, history of technology and science. Tenable at Smithsonian's museum, laboratory, field, and research facilities for 6 to 12 months. Deadline: 15 January 1985 Contact: **Office of Fellowships and Grants, Smithsonian Institution, L'Enfant Plaza 3300, Washington, D.C. 20560.** Awards are based upon merit, without regard to race, color, religion, sex, national origin, age, or condition of handicap of any applicant.

POSTDOCTORAL RESEARCH FELLOWSHIP available immediately in an interdisciplinary cancer research group which includes a biochemist, an immunologist, and a pathologist. Study involves investigating the basic mechanisms related to tumor growth and metastasis. The research program includes protein purification of tumor-derived and host-derived growth factors by HPLC techniques, protein analysis by tissue culture, flow cytometry, and acrylamide gel preparations. Appointments for up to three years. Salary commensurate with experience with \$15,000 minimum.

Send résumé, summary of research interest, and three letters of recommendation to:

C. G. Pantazis, M.D.
Department of Pathology
Medical College of Georgia
Augusta, Georgia 30912

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The expansion and application of mankind's knowledge of recombinant DNA technology is one of today's most exciting scientific challenges. And at International Minerals and Chemical Corporation our new research facilities in suburban Chicago represent a multi-million dollar corporate commitment to the continued exploration of basic genetic engineering. As a result, IMC is actively searching for creative research scientists with expertise in the following fields:

MOLECULAR BIOLOGY

Due to the expansion of our ongoing molecular biology program, we have openings for scientists who will study the control of expression of prokaryotic, eukaryotic and cloned eukaryotic genes. These positions require experience in the delineation of the mechanisms of control of gene expression and in the construction of novel expression vectors.

As a Ph.D. RESEARCH SCIENTIST, you should have experience in construction and regulation of vectors for the expression of cloned genes to final gene products. You will need to generate all necessary constructs and have a working knowledge of DNA sequencing techniques.

As a Masters level RESEARCH ASSOCIATE, you should have demonstrated skills in RNA isolation, DNA cloning, nucleic acid sequencing, phage preparation, and gene mapping.

IMMUNOLOGY

At the core of IMC's aggressive research team are openings for scientists who will participate in an active program investigating immune modulation, the control of immune response, and the control of the development of the immune system in livestock animals.

As a Ph.D. RESEARCH SCIENTIST, you should have experience in the development and regulation of cellular components of the immune system and the regulation of cellular immune response.

At the Masters level, you should have a background in the regulation of immune response networks and the soluble factors involved in the control of cellular and humoral responses.



Probing the inner limits of living matter

BIOCHEMISTRY

In addition to expanding our basic research capability, IMC is adding expertise in the area of applied process development, including protein engineering, interactions of protein and nucleic acids, and the large-scale purification of biologically active polypeptides and proteins.

Ph.D. RESEARCH SCIENTISTS should have a strong background in contemporary protein chemistry techniques and the ability to develop your own research program while contributing to team research efforts.

PARASITOLOGY

We are developing a basic research program to study the interaction of helminths and protozoa with their hosts and to understand the mechanisms by which parasites colonize the host animal utilizing both in vitro and in vivo models.

Ph.D. RESEARCH SCIENTISTS should have a strong background in experimental molecular parasitology, including a working knowledge of the immunology, life cycle, metabolism, and structure of helminths and/or protozoa.

Ph.D. applicants should have several years of postdoctoral research experience in a directly related field. Masters level applicants should have a minimum of 2 years of directly related experience.

Due to this expansion, we also have a number of openings for experienced Research Technicians with B.S. degrees in molecular biology, immunology, parasitology, biochemistry, analytical chemistry and cell biology.

In addition to excellent technical resources and the opportunity for independent research, you will find IMC offers extremely competitive compensation, full benefits, and excellent potential for professional recognition and advancement.

For confidential consideration and an immediate reply, please forward your curriculum vitae with salary requirements to James E. Moore, Manager Corporate Human Resources, IMC, 421 E. Hawley, Mundelein, IL 60060.

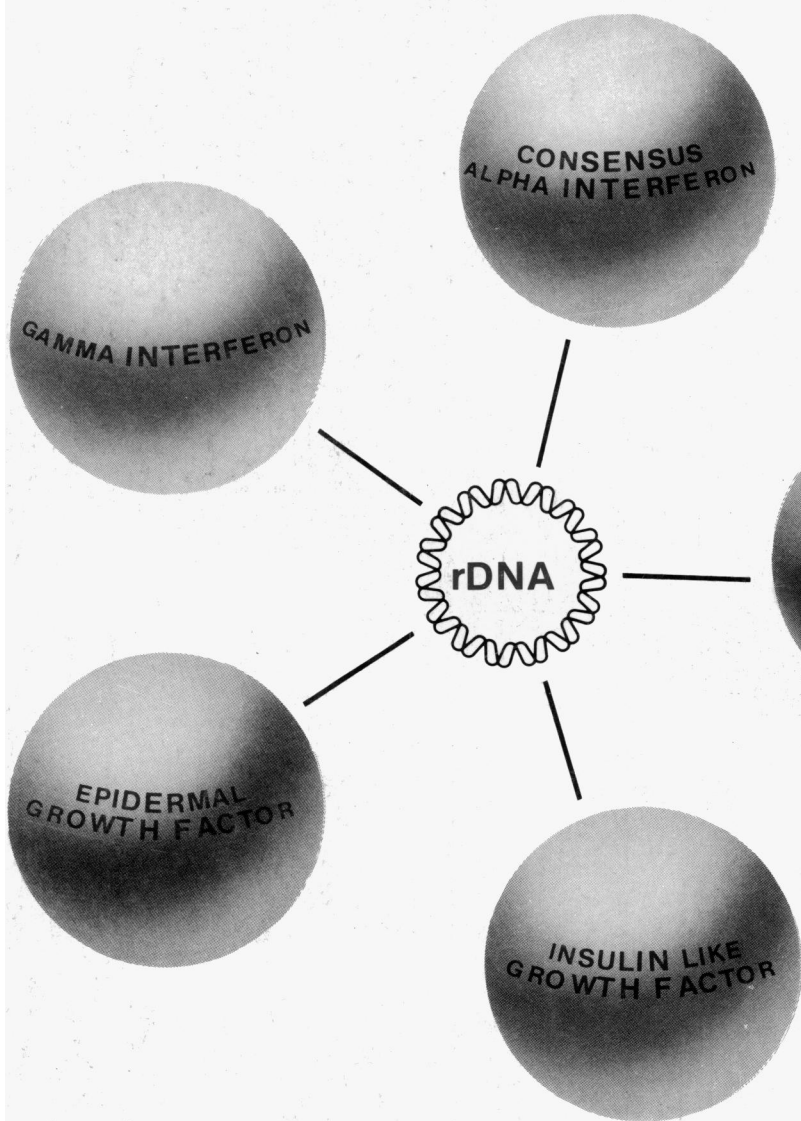


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