

Books Received

Anatomy, Physiology and Psychology of Erosion. E. G. Hallsworth. Wiley-Interscience, New York, 1987. xii, 176 pp., illus. \$49.95. International Federation of Institutes of Advanced Study Monograph no. 1.

The Ancient Tradition of Geometric Problems. Wilbur Richard Knorr. Birkhäuser Boston, Cambridge, MA, 1986. x, 411 pp., illus. \$69.

Annual Review of Numerical Fluid Mechanics and Heat Transfer. Vol. 1. T. C. Chawla, Ed. Hemisphere (Harper and Row), New York, 1987. xiv, 454 pp., illus. \$149.95.

Antibodies. Structure, Synthesis, Function, and Immunological Intervention in Disease. Andor Szentivanyi, Paul H. Maurer, and Bernard W. Janicki, Eds. Plenum, New York, 1987. viii, 215 pp., illus. \$45. University of South Florida International Biomedical Symposia Series. From a symposium, Clearwater, FL, Feb. 1986.

Anxiety. D. F. Klein, Ed. Karger, Basel, 1987. viii, 195 pp. \$65.50. Modern Problems of Pharmacopsychiatry, vol. 22.

Anxiety Disorders. Psychological and Biological Perspectives. Brian F. Shaw, Zindel V. Segal, T. Michael Vallis, and Frank E. Cashman, Eds. Plenum, New York, 1986. xvi, 252 pp., illus. \$49.50. From a symposium, Toronto, Nov. 1984.

Applications of Harmonic Measure. John B. Garnett. Wiley-Interscience, New York, 1987. x, 69 pp., illus. Paper, \$22.95. University of Arkansas Lecture Notes in the Mathematical Sciences, vol. 8.

Applications of New Mass Spectrometry Techniques in Pesticide Chemistry. Joseph D. Rosen, Ed. Wiley-Interscience, New York, 1987. xiv, 264 pp., illus. \$55. Chemical Analysis, vol. 91.

Applied Geothermics. M. Economides and P. Ungemach, Eds. Wiley-Interscience, New York, 1987. xiv, 238 pp., illus. \$69.95.

Aquatic Surface Chemistry. Chemical Processes at the Particle-Water Interface. Werner Stumm, Ed. Wiley-Interscience, New York, 1987. xx, 520 pp., illus. \$69.95. Environmental Science and Technology.

Astronomy. Dinah L. Moché. 3rd ed. Wiley, New York, 1987. xii, 291 pp., illus., + maps. Paper, \$12.95. Wiley Self-Teaching Guides.

Classical Methods. Vol. 1. Derek Cooper and Chris Doran. Published for Analytical Chemistry by Open Learning by Wiley, New York, 1987. xxii, 373 pp., illus. Paper, \$26.95.

Clinimetrics. Alvan R. Feinstein. Yale University Press, New Haven, CT, 1987. xii, 272 pp., \$25.

Collected Papers. Marston Morse. World Scientific, Singapore, 1987. (U.S. distributor, Taylor and Francis). Six volumes. xc, 3516 pp. + plates. \$322.

Design Theory. Thomas Beth, Dieter Jungnickel, and Hanfried Lenz. Cambridge University Press, New York, 1987. 688 pp., illus. \$79.50.

Development and Diseases of Cartilage and Bone Matrix. Arup Sen and Thomas Thornhill, Eds. Liss, New York, 1987. xx, 455 pp., illus. \$88. UCLA Symposia on Molecular and Cellular Biology, vol. 46. From a symposium, Lake Tahoe, CA, March 1986.

Domestic Tyranny. The Making of Social Policy Against Family Violence from Colonial Times to the Present. Elizabeth Pleck. Oxford University Press, New York, 1987. viii, 273 pp. + plates. \$24.95.

Ecological Simulation Primer. Gordon L. Swartzman and Stephen P. Kaluzny, Macmillan, New York, 1987. xiv, 370 pp., illus. \$39.95. Biological Resource Management.

Ecotoxicology. François Ramade. Wiley, New York, 1987. x, 262 pp., illus. \$48.95. Translated from the 2nd French edition (Paris, 1979) by L. J. M. Hodgson.

Effects of Injury on Trigeminal and Spinal Somatosensory Systems. Lillian M. Poulos and Barry J. Sessle, Eds. Liss, New York, 1987. xxiv, 547 pp., illus. \$86. Neurology and Neurobiology, vol. 30. From a symposium, Timberline Lodge, OR, July 1986.

Eggs. Nature's Perfect Package. Robert Burton. Facts on File, New York, 1987. 158 pp., illus. \$22.95.

VIIIth International Congress on Mathematical Physics. (Marseille, July 1986.) M. Mebkhout and R. Sénéor, Eds. World Scientific, Singapore, 1987. (U.S. distributor, Taylor and Francis, Philadelphia). xviii, 872 pp., illus. \$90.

Encyclopedic Dictionary of Semiotics. Thomas A. Sebeok, Ed. Mouton de Gruyter, Hawthorne, NY, 1986. Vol. 1. xii pp. + pp. 1-592. Vol. 2. Pp. 593-1179. Vol. 3. 452 pp. \$298. Approaches to Semiotics, 73.

Energy Management Systems for Commercial Buildings. Electric Power Research Institute. Hemisphere (Harper and Row), New York, 1987. xiv, 221 pp., illus. \$59.95.

From Children to Citizens. Vol. 3, Families, Schools, and Delinquency Prevention. James Q. Wilson and Glenn C. Loury, Eds. Springer-Verlag, New York, 1987. xiv, 340 pp. \$46. Based on a conference, Cambridge, MA, Nov. 1985.

Frost Survival of Plants. Responses and Adaptation to Freezing Stress. A. Sakai and W. Larcher, Eds. Springer-Verlag, New York, 1987. xii, 321 pp., illus. \$110. Ecological Studies, vol. 62.

A Fuller Explanation. The Synergetic Geometry of R. Buckminster Fuller. Amy C. Edmondson. Birkhäuser Boston, Cambridge, MA, 1986. xvi, 302 pp., illus. \$37.50. Design Science Collection.

Fundamental Mechanisms of Human Brain Function. Surgical Treatment of Epilepsy as an Investigative Resource. Jerome Engel *et al.*, Eds. Raven, New York, 1987. xxvi, 288 pp., illus. \$36. Based on a conference, Palm Desert, CA, Feb. 1986.

Fuzzy Sets and Applications. Selected Papers by L. A. Zadeh, R. R. Yager *et al.*, Eds. Wiley-Interscience, New York, 1987. 684 pp., illus. \$49.95.

Genetic Epidemiology. Applications and Comparisons of Methods. D. Timothy Bishop, Catherine T. Falk, and Jean W. MacCluer, Eds. Liss, New York, 1987. xx, 406 pp. \$60. From a workshop, Snowbird, UT, Oct. 1985. Also published as *Genetic Epidemiology*, Supplement 1, 1986.

Genetic Risk, Risk Perception, and Decision Making. Gerry Evers-Kiebooms *et al.*, Eds. Liss, New York, 1987. xvi, 333 pp., illus. \$70. Birth Defects, Original Article Series, vol. 23, no. 2. From a conference, Leuven, Belgium, July 1986.

Genetics and Alcoholism. H. Werner Goedde and Dharan P. Agarwal, Liss, New York, 1987. xvi, 353 pp., illus. \$60. Progress in Clinical and Biological Research, vol. 241. From a symposium, Titisee, F.R.G., Sept. 1986.

How To Find Chemical Information. A Guide for Practicing Chemists, Educators, and Students. Robert E. Maizell. 2nd ed. Wiley-Interscience, New York, 1987. xx, 402 pp., illus. \$44.95.

Human Activity and Environmental Processes. K. J. Gregory and D. E. Walling, Eds. Wiley, New York, 1987. xvi, 466 pp., illus. \$69.95. Revision of *Man and Environmental Processes*.

Human Development and Learning. Robert D. Strom, Harold W. Bernard, and Shirley K. Strom. Human Sciences Press, New York, 1987. 315 pp. \$29.95.

Human Structure. Matt Cartmill, William L. Hylander, and James Shafland. Harvard University Press, Cambridge, MA, 1987. xvi, 444 pp., illus. \$40.

Hypercarbon Chemistry. George A. Olah *et al.* Wiley-Interscience, New York, 1987. xviii, 311 pp., illus. \$49.95.

Image Understanding, 1985-86. Whitman Richards and Shimon Ullman, Eds. Ablex, Norwood, NJ, 1987. xviii, 356 pp., illus. \$29.50.

Immunology. A Synthesis. Edward S. Golub. Sinauer, Sunderland, MA, 1987. xxii, 551 pp., illus. \$32.95.

In Situ Experiments with High Voltage Electron Microscopes. Hiroshi Fujita, Ed. Research Center for Ultra-High Voltage Electron Microscopy, Osaka University, Osaka, Japan, 1987. (U.S. distributor, ISBS, Portland, OR). xxx, 507 pp., illus. \$95. From a symposium, Osaka, Japan, Nov. 1985.

In Vitro Methods for Studying Secretion. A. M. Poisner and J. M. Trifaro, Eds. Elsevier, New York, 1987. xxii, 347 pp., illus. \$120. The Secretory Process, vol. 3.

Learning about Risk. Consumer and Worker Responses to Hazard Information. W. Kip Viscusi *et al.* Harvard University Press. Cambridge, MA, 1987. xiv, 197 pp., illus. \$27.50.

Life. The Science of Biology. William K. Purves and Gordon H. Orians. 2nd ed. Sinauer, Sunderland, MA, 1987. xxii, 1271 pp., illus. \$39.95.

Linear B and Related Scripts. John Chadwick. University of California Press, Berkeley, CA, and British Museum, London, 1987. 64 pp., illus. Paper, \$6.95. Reading the Past.

Literature of Analytical Chemistry. A Scientometric Evaluation. Tibor Braun, Ernő Bujdosó, and András Schubert. CRC Press, Boca Raton, FL, 197. 259 pp., illus. \$90.

Lithic Studies Among the Contemporary Highland Maya. Brian Hayden, Ed. University of Arizona Press, Tucson, AZ, 1987. xii, 387 pp., illus. \$35.

Living High. Daily Marijuana Use Among Adults. Herbert Hendin *et al.* Human Sciences Press, New York, 1987. 183 pp., illus. \$24.95.

Male and Female Homosexuality. Psychological Approaches. Louis Diamant, Ed. Hemisphere (Harper and Row), New York, 1987. xvi, 292 pp. \$37.50. Series

in Clinical and Community Psychology.

The Man with a Shattered World. The History of a Brain Wound. A. R. Luria. Harvard University Press, Cambridge, MA, 1987. xxii, 165 pp. Paper, \$7.95. Translated from the Russian edition by Lynn Solotaroff. Reprint, 1972 edition.

Manuel Technique de Génétique par Electrophorèse des Protéines. Nicole Pastuer *et al.* Lavoisier Technique et Documentation, Paris, 1987. x, 217 pp., illus. Paper, 250 F.

Marine Petroleum Source Rocks. J. Brooks and A. J. Fleet, Eds. Published for the Geological Society by Blackwell Scientific Publications, Palo Alto, CA, 1987. viii, 444 pp., illus. \$88. Geological Society Special Publications, no. 26.

Mathematical Modeling and Digital Simulation for Engineers and Scientists. Jon M. Smith. 2nd ed. Wiley-Interscience, New York, 1987. xvi, 430 pp., illus. \$36.95.

Neurobiology of Acetylcholine. Nac J. Dun and Robert L. Perlman, Eds. Plenum, New York, 1987. xii, 595 pp., illus. \$97.50. From a symposium, Maywood, IL, June 1985.

Neuroplasticity, Learning, and Memory. N. W. Milgram, Colin M. MacLeod, and Ted L. Petit, Eds. Liss, New York, 1987. xii, 334 pp., illus. \$50. Neurology and Neurobiology, vol. 29. Based on a symposium, Scarborough, Ontario, March 1986.

New Concepts in Cerebellar Neurobiology. James S. King, Ed. Liss, New York, 1987. xii, 435 pp., illus. \$110. Neurology and Neurobiology, vol. 22. Based on a symposium, Toronto, May 1986.

New Directions in Behavioral Pharmacology. Leslie L. Iversen, Susan D. Iversen, and Solomon H. Snyder, Eds. Plenum, New York, 1987. xvi, 642 pp., illus. \$85. Handbook of Psychopharmacology, vol. 19.

New Ways of Knowing. The Sciences, Society, and Reconstructive Knowledge. Marcus G. Raskin *et al.* Rowman and Littlefield, Totowa, NJ, 1987. x, 293 pp., illus. \$34.95; paper, \$15.95.

The Obsolete Self. Philosophical Dimensions of Aging. Joseph L. Esposito. University of California Press, Berkeley, CA, 1987. vi, 245 pp. \$25.

100 Years of Pyrazolone Drugs. An Update. K. Brune, Ed. Birkhäuser Boston, Cambridge, MA, 1986. 355 pp., illus. \$39. Agents and Actions Supplements, vol. 19. From a meeting, Erlangen, F.R.G., Oct. 1984.

Operator Algebras and Quantum Statistical Mechanics 1. C*- and W*-Algebras, Symmetry Groups, Decomposition of States. Ola Bratteli and Derek W. Robinson. 2nd ed. Springer-Verlag, New York, 1987. xiv, 505 pp. \$79. Texts and Monographs in Physics.

Optical Mineralogy. Vol. 1, Theory and Technique. Ernest G. Ehlers. Blackwell Scientific, Palo Alto, CA, 1987. xiv, 158 pp., illus. \$39.95.

Orbits for Amateurs with a Microcomputer. Vol. 2. D. Tattersfield. Wiley, New York, 1987. xii, 159 pp. \$36.95.

Progress in Space-Time Physics 1987. James Paul Wesley, Ed. Benjamin Wesley, Blumberg, F.R.G., 1987. x, 280 pp., illus. Paper, \$32.

Proceedings of the Fifth International Congress on Mathematical Education. (Adelaide, Australia, Aug. 1984.) Marjorie Carss, Ed. Birkhäuser Boston, Cambridge, MA, 1986. xii, 399 pp., illus. \$65.

Programming and Metaprogramming in the Human Biocomputer. Theory and Experiments. John C. Lilly. 2nd ed. Julian (Crown), New York, 1987. xxxii, 160 pp. Paper, \$10.95.

Reproductive Rights and Wrongs. The Global Politics of Population Control and Contraceptive Choice. Betsy Hartmann. Harper and Row, New York, 1987. xv, 368 pp. \$24.95; paper, \$10.95.

Rescue Archeology. Rex L. Wilson, Ed. Southern Methodist University Press, Dallas, TX, 1987. (distributor, Texas A&M University Press, College Station, TX). xxxii, 231 pp., illus. Paper, \$9.95. From a meeting, Dallas, TX, Nov. 1984.

Risk and Society. Studies of Risk Generation and Reactions to Risk. Lennart Sjöberg, Ed. Allen and Unwin, Winchester, MA, 1986. xx, 246 pp., illus. \$24.95. Risks and Hazards Series, vol. 3.

Sand and Sandstone. F. J. Pettijohn, P. E. Potter, and R. Siever. 2nd ed. Springer-Verlag, New York, 1987. xx, 553 pp., illus. \$85.

Science, Computers, and People. From the Tree of Mathematics. Stanislaw M. Ulam. Birkhäuser Boston, Cambridge, MA, 1986. xxii, 264 pp., illus. \$39.

The Secretory and Endocytic Paths. Mechanism and Specificity of Vesicular Traffic in the Cell Cytoplasm. Alan Michael Tartakoff. Wiley-Interscience, New York, 1987. xviii, 235 pp., illus. \$55. Cell Biology, vol. 6.

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Products & Materials

Preparative HPLC System

The VERSA Prep is a benchtop preparative high-performance liquid chromatography system that may be automated with either an IBM PC or a Commodore C-128 computer. Methods development, preparative-scale separation, isolation, purification, and analysis of collected fractions are all performed on a single modular instrument. Preparative-scale purification ranges from milligrams to grams per injection. The control software acquires, stores, and displays data. Varex. Circle 567.

Benchtop Bioreactor

The Cell Raiser is a bioreactor that can hold batch sizes of 2 to 10 liters. The system is designed for both batch and continuous perfusion operation, allowing the use of microcarriers, sodium alginate encapsulation, or external hollow-fiber cartridges. Interactive software with a self-diagnostic mode can monitor and control four gases, a heating system, one pump, and an interactive pH-dissolved oxygen control loop. Flow Laboratories. Circle 575.

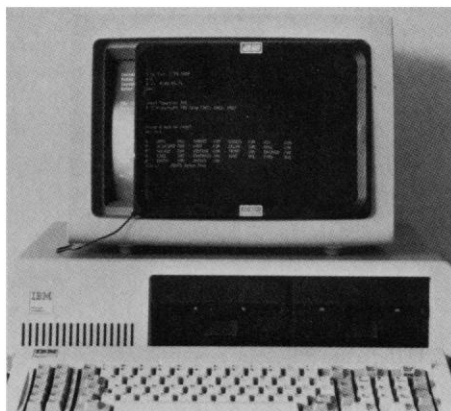
Chromatography Gradient Systems

The 7600 series of gradient formers can create either single-pump low-pressure gradients or multiple-pump high-pressure gradients. The low-pressure system offers ternary capability. The user operates, by means of either a hand-held unit or a personal computer, a control interface module, which in turn controls the systems. As many as 15 systems may be operated if a computer is used. The accompanying software allows multiple methods and steps with as many as six external events per step; five methods may be linked together and ten different gradient methods may be stored. The system is designed for use with autosamplers and RS-232C-based remote control. Micromeritics Instrument. Circle 592.

Newly offered instrumentation, apparatus, and laboratory materials of interest to researchers in all disciplines in academic, industrial, and government organizations are featured in this space. Emphasis is given to purpose, chief characteristics, and availability of products and materials. Endorsement by *Science* or AAAS is not implied. Additional information may be obtained from the manufacturers or suppliers named by circling the appropriate number on the Readers' Service Card and placing it in a mailbox. Postage is free.

Radiation Shield for Computer Monitors

The dB60 radiation screen blocks 99.99% of the electromagnetic radiation emitted from computer displays and terminals. Also, the screen eliminates glare, reflection, and



static electricity, and contrast is increased. Because the screen is available in several sizes, it is compatible with many color and monochrome video-display terminals. NoRad. Circle 580.

Multiple-User Gamma Counter

The GammaTrac 1193 is an automatic gamma counter that allows more than one person to analyze samples at the same time. Two simultaneous counting channels allow counting of single-label, dual-label, or intermixed samples. The counter's sample changer has a 300-sample capacity with repeat count and repeat cycle capability. Any sample tube smaller than 16 by 150 mm may be used. Duplicate or triplicate samples can be averaged. The GammaTrac 1193 has a 7.6-cm sodium iodide detector, a preset time terminator, a digital display, a touch-pad control panel, and RS-232C and multichannel analyzer output ports. Optional features include a built-in radioimmunoassay data processor and a readout device for programming. TM Analytic. Circle 590.

Nonradioactive Labeling of DNA Probes

The Photobiotin Labeling System can label DNA probes without the use of radiation. Instead, exposure to a strong light source links biotin groups to DNA. The system comes with reagents for preparing biotinylated DNA probes, control DNA to monitor performance, protocols for labeling

with Photobiotin, and procedures for probe hybridization. Researchers can label 50 μ g of DNA with the components provided. Bethesda Research Laboratories. Circle 581.

Multitasking Open-Architecture Computer

The Amiga 2000 is a multitasking open-architecture personal computer with the option for MS DOS-compatibility. Not only may more than one application be operating at once, but also the user may cut and paste between two or more simultaneously operating programs. MS DOS and AmigaDOS can operate at the same time. The Amiga 2000 bus contains eight expansion slots, one of which can accommodate an XT-compatible board for operating MS DOS software. Commodore Business Machines. Circle 593.

Automated AA Spectrometer

The Model 5100 PC atomic absorption spectrometer can perform both multielement flame atomic absorption (AA) and Zeeman-corrected graphite furnace analyses. A graphic software interface on an IBM PC-compatible computer can control the 5100 PC. Turning a knob switches the instrument from flame AA to Zeeman-corrected graphite furnace analysis and back again. As many as 12 elements may be determined automatically with a single method. The user interface features high-resolution graphics, windows, drop-down menus, and on-line help and prompting. Perkin-Elmer. Circle 599.

Literature

Power Sources is a catalog of alternating and direct current power supplies and dc-dc converters. AAK. Circle 583.

Gas Chromatography Supplies & Accessories is a 192-page catalog of capillary and packed columns, injector systems, phases and supports, adsorbents, syringes, flow controllers, valves, tubing, fittings, gas purifiers, solvents, standards, and extractors. Anspec. Circle 585.

Research Reagents is a catalog featuring fluorochrome-conjugated antisera, enzyme-conjugated antisera, unconjugated antisera and immunoglobulin G fractions, affinity-purified antibodies and antibody conjugates, forensic-grade antisera, and other immunological reagents. Organon Teknika, Cappel. Circle 588.

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Solving Hazardous Waste Problems. Learning from Dioxins. Jurgen H. Exner, Ed. American Chemical Society, Washington, DC, 1987. x, 397 pp., illus. \$79.95. ACS Symposium Series, 338. Based on a symposium, New York, April 1986.

Soviet Space Programs, 1980-1985. Nicholas L. Johnson. Published for the American Astronautical Society by Univelt, San Diego, CA, 1987. x, 288 pp., illus. \$55; paper, \$45. Science and Technology Series, vol. 66.

Space 2000. Meeting the Challenge of a New Era. Harry L. Shipman. Plenum, New York, 1987. x, 431 pp., illus. \$19.95.

Speech Perception by Ear and Eye. A Paradigm for Psychological Inquiry. Dominic William Massaro. Erlbaum, Hillsdale, NH, 1987. vi, 320 pp., illus. Paper, \$19.95.

Stability Theory. An Introduction to the Stability of Dynamic Systems and Rigid Bodies. Horst Leipholz. 2nd ed. Teubner, Stuttgart, and Wiley, New York, 1987. x, 359 pp., illus. \$62.95.

Stable Isotope Geochemistry. Jochen Hoefs. 3rd ed. Springer-Verlag, New York, 1987. x, 241 pp., illus. \$49.50. Minerals and Rocks, 9.

States of Mind. Configurational Analysis of Individual Psychology. Mardi J. Horowitz. 2nd ed. Plenum Medical, New York, 1987. xxii, 270 pp., illus. \$39.50. Critical Issues in Psychiatry.

Stellar Pulsation. A. N. Cox, W. M. Sparks, and S. G. Starrfield, Eds. Springer-Verlag, New York, 1987. xiv, 422 pp. \$40.60. Lecture Notes in Physics, 274. From a conference, Los Alamos, NM, Aug. 1986.

Strategic Defenses and Soviet-American Relations. Samuel F. Wells, Jr., and Robert S. Litwak, Eds. Ballinger (Harper and Row), Cambridge, MA, 1987. xvi, 219 pp., illus. \$29.95; paper, \$16.95.

String Theory, Quantum Cosmology and Quantum Gravity, Integrable and Conformal Invariant Theories. H. J. de Vega and N. Sánchez, Eds. World Scientific, Singapore, 1987 (U.S. distributor, Taylor and Francis, Philadelphia). xii, 511 pp., illus. \$74. From a colloquium, Meudon, France, Sept. 1986.

Superstrings, Anomalies and Unification. M. Martinis and I. Andric, Eds. World Scientific, Singapore, 1987 (U.S. distributor, Taylor and Francis, Philadelphia). xii, 571 pp., illus. \$60. From a meeting, Dubrovnik, Yugoslavia, June 1986.

Superstrings, Unified Theories and Cosmology. G. Furlan *et al.*, Eds. World Scientific, Singapore, 1987 (U.S. distributor, Taylor and Francis). x, 454 pp., illus. \$79. ICTP Series in Theoretical Physics, vol. 3. From a workshop, Trieste, Italy, June-Aug. 1986.

Surfactants in Solution. Vol. 4. K. L. Mittal and P. Bothorel, Eds. Plenum, New York, 1986. xx, 562 pp., illus., + index. \$97.50. From symposia, Lund, Sweden, June 1982, and Bordeaux, France, July 1984.

Synaptic Function. Gerald M. Edelman, W. Einar Gall, and W. Maxwell Cowan, Eds. Wiley, New York, 1987. x, 789 pp., illus. \$149.95. Neurosciences Institute Publications Series. Based on a symposium, New York, 1984.

Theory of Multiphoton Processes. Farhad H. M. Faisal. Plenum, New York, 1987. xvi, 408 pp., illus. \$65. Physics of Atoms and Molecules.

Topics in Fourier Analysis and Function Spaces. Hans-Jürgen Schmeisser and Hans Triebel. Wiley-Interscience, New York, 1987. 300 pp. \$44.95.

Transport Phenomena Data Companion. L. P. B. M. Janssen and M. M. G. M. Warmoeskerken. Arnold, Baltimore, MD and Delftse Uitgevers Maatschappij, Delft, the Netherlands, 1987. 160 pp., illus. \$24.95.

Treatise on Clean Surface Technology. Vol. 1. K. L. Mittal, Ed. Plenum, New York, 1987. xvi, 331 pp., illus. \$59.50.

Tunable Lasers. L. F. Mollenauer and J. C. White, Eds. Springer-Verlag, New York, 1987. xiv, 404 pp., illus. \$65.50. Topics in Applied Physics, vol. 59.

U.S.-Soviet Cultural Exchanges, 1958-1986. Who Wins? Yale Richmond. Westview, Boulder, CO, 1986. xvi, 170 pp. Paper, \$26.50. Westview Special Studies on the Soviet Union and Eastern Europe.

Work and Industry. Structures, Markets, and Processes. Arne L. Kalleberg and Ivar Berg. Plenum, New York, 1987. xvii, 244 pp., \$24.95. Plenum Studies in Work and Industry.

Workers, Managers, and Technological Change. Emerging Patterns of Labor Relations. Daniel B. Cornfield, Ed. Plenum, New York, 1987. xxii, 362 pp. \$37.50. Plenum Studies in Work and Industry.

Zinc Enzymes. I. Bertini *et al.*, Eds. Birkhäuser Boston, Cambridge, MA, 1986. xxii, 640 pp., illus. \$130. Progress in Inorganic Biochemistry and Biophysics, vol. 1.

Personnel Placement

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The Department of Biological Sciences, University of Southern Mississippi, invites applications for two full-time, tenure-track positions at the assistant/associate level:

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2) **MARINE INVERTEBRATE ZOOLOGIST:** Applications from marine biologists working in any area of invertebrate zoology are welcome. Teaching responsibilities will include courses in invertebrate zoology and marine ecology.

In addition to participation in the departmental teaching program, successful candidates must develop a vigorous, externally funded research program. Please send a letter of application which includes a statement of research and teaching interests, curriculum vitae, and names of at least three references. Applications for position 1 should be directed to: **Dr. Fred G. Howell, Aquatic Ecology Search Committee;** for position 2 to: **Dr. James B. Larsen, Invertebrate Zoology Search Committee,** both at the following address: **Department of Biological Sciences, University of Southern Mississippi, Hattiesburg, MS 39406-5018.** Deadline for receipt of applications is 30 November 1987. *Affirmative Action/Equal Opportunity Employer.*

ASSISTANT CHEMIST AND INSTRUCTOR OF DIAGNOSTIC RADIOLOGY

The University of Texas System Cancer Center M. D. Anderson Hospital and Tumor Institute has an opening for a chemist in the Division of Diagnostic Imaging to participate in a research project on microencapsulation. The position requires a Ph.D. degree in chemistry, physical chemistry, biochemistry, or pharmacology.

Interested applicants should send a current curriculum vitae to:

Sidney Wallace, M.D.
Diagnostic Radiology, Box 57
UT M. D. Anderson Hospital
1515 Holcombe Boulevard
Houston, TX 77030

Equal Opportunity Employer M/F/H.

WASHINGTON UNIVERSITY DEPARTMENT OF PHARMACOLOGY

Seeking an outstanding scientist for a tenure-track **ASSISTANT PROFESSOR** position. The individual must be capable of developing a strong, independent research program which will complement existing programs in cellular, molecular and neurobiology. Send curriculum vitae and a summary of research interests and plans to: **E. M. Johnson, Jr., Department of Pharmacology, Washington University Medical School, 660 South Euclid Avenue, St. Louis, MO 63110. Washington University is an Equal Opportunity Employer.**

POSITIONS OPEN

BOSTON UNIVERSITY BIOLOGY

As part of a program of continuing faculty and facility development in the natural sciences, Boston University seeks applicants for three tenure-track positions in biology at the **ASSISTANT PROFESSOR** level. Two years of postdoctoral experience is required. Successful candidates are expected to develop an active, funded research program, supervise graduate students, and to teach at the undergraduate and graduate levels. Competitive start-up funds are available. Positions to be filled for September 1988.

COMPARATIVE PHYSIOLOGY. Candidates are sought whose research interests include an integrative systems approach using modern methods in an area of study that complements existing faculty in neuroendocrinology, comparative reproductive endocrinology, behavioral endocrinology, and neurophysiology. Undergraduate teaching in general or systems physiology plus upper division course in specialty.

MOLECULAR CELL BIOLOGY. Candidates are sought whose research interests involve molecular aspects of cellular regulation and development, neurobiology, and/or membrane structure and function. The successful applicant will be expected to complement existing faculty in cell development, cell-cell recognition, membrane transport, nucleic acid biochemistry, and cell regulation at the molecular level. Undergraduate teaching in Cell Biology plus upper division course in specialty.

EVOLUTIONARY BIOLOGY. Candidates are sought whose research interests are in organismic evolution using molecular, biochemical, and/or cytogenetic approaches. The successful applicant will be expected to complement existing faculty in the areas of behavioral ecology, population biology, biochemical ecology, and physiological ecology. Undergraduate teaching at introductory level plus upper division course in evolutionary biology.

Send curriculum vitae, a summary of research interests, and names of three references to: **Chair (specify which position) Search Committee, Department of Biology, Boston University, Boston, MA 02215.** Deadline for completed applications is 15 November 1987.

Boston University's policies provide for Equal Opportunity and Affirmative Action in Employment, and admission to all programs of the university.

ASSISTANT PROFESSOR. Tenure-track, starting 1 September 1988. **PLANT MOLECULAR BIOLOGIST** to teach courses in plant tissue culture, plant physiology, and course in specialty in undergraduate biotechnology program. Opportunity for research. Résumé and three letters of reference by 15 December 1987 to: **Tom Frederick, Head, Biology Department, Rochester Institute of Technology, 1 Lomb Memorial Drive, Rochester, NY 14623. AA/EOE**

ASSISTANT PROFESSOR PHYSIOLOGY

The Department of Zoology invites applications for a full-time, tenure-track position for teaching and research involving graduate and undergraduate students. Applicants must have a Ph.D., postdoctoral experience preferred, and potential to develop an independent extramurally funded research program in areas of comparative, cellular, or endocrine physiology. Outstanding candidates in other areas of physiology will be considered. Application deadline: 25 November 1987, or until position is filled. Submit curriculum vitae with transcripts, statement of research and teaching interests, and letters from three references direct to: **Dr. C. F. Bailey, Chairman Search Committee, Zoology Department, SE 632, University of Arkansas, Fayetteville, AR 72701.** *Affirmative Action/Equal Opportunity Employer.*

ASSISTANT PROFESSORSHIP HARVARD UNIVERSITY

Applications are invited for assistant professorships in any field of chemistry, including organic, organometallic, physical, structural, theoretical, biological, and solid state. Applicants should arrange to have three letters of recommendation sent independently, and should include curriculum vitae and a short statement of research interests. *Harvard University is an Affirmative Action/Equal Opportunity Employer. Applications from female and minority group members are welcome.* Applications and supporting material should be sent no later than 30 November 1987 to: **Chairman, Search Committee, Office of the Director, Department of Chemistry, Harvard University, 12 Oxford Street, Cambridge, MA 02138.**

POSITIONS OPEN

ASSISTANT PROFESSOR OF GENETICS MARQUETTE UNIVERSITY GENETICIST

The Department of Biology at Marquette University invites applications for a tenure-track faculty position at the level of assistant professor beginning August 1988. The successful applicant must have postdoctoral research experience and must be able to attract extramural support for an independent research program in genetics. Teaching responsibilities include a one-semester undergraduate genetics laboratory course annually and a graduate specialty course in alternate years. Application deadline is 1 January 1988.

Send curriculum vitae, names, and addresses of three references, and a one-page statement of current research interests to: **Dr. Peter Abramoff, Department of Biology, Marquette University, Milwaukee, WI 53233.** *Equal Employment Opportunity/Affirmative Action Employer.*

ASSISTANT PROFESSOR: Applications are invited for a position at the level of assistant professor (tenure track) in the Department of Chemistry at Stanford University with primary research and teaching interests in the general area of inorganic chemistry. Applicants must be strongly motivated toward creative research and have a commitment to teaching at the undergraduate and graduate levels. In applying, please send curriculum vitae, list of publications, a brief statement of research interests (three pages or less), and, in addition, have three letters of recommendation sent to: **Professor John Ross, Chairman, Department of Chemistry, Stanford University, Stanford, CA 94305.** *Stanford is committed to Equal Opportunity through Affirmative Action in Employment, and we are especially eager to identify minority persons and women with appropriate qualifications.* Applications should be received by 6 November 1987.

ASSISTANT PROFESSORS OF MICROBIOLOGY AND IMMUNOLOGY UNIVERSITY OF ILLINOIS COLLEGE OF MEDICINE

The Department of Microbiology and Immunology, as part of a process of growth and increase in activity, is seeking to fill two positions at the level of assistant professor (tenure track; associate professor candidates will also be considered) in prokaryotic molecular biology, broadly defined. Candidates involved in protein engineering would be particularly welcome. Each individual will be expected to develop a strong independent research program with external funding. Adequate space and start-up funds are available. Participation in teaching and graduate student training is expected.

Applicants should provide the search committee with curriculum vitae, at least three letters of recommendation, and a brief statement of future research interests and plans. The first series of candidates will be considered after 1 November 1987 and applications will be accepted until the positions are filled. Starting dates can be September 1988 or thereafter.

Send applications to: **Drs. A. M. Chakrabarty, Philip Matsumura, Simon Silver, and Karl Volz, Prokaryote Molecular Biology Search Committee, Department of Microbiology and Immunology, University of Illinois College of Medicine at Chicago, P.O. Box 6998, Chicago, IL 60680.**

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

One, possible two, academic year positions as **ASSISTANT/ASSOCIATE PROFESSOR IN BIOCHEMISTRY**, tenure-track, to begin September 1988. Appointee will be expected to participate in undergraduate and graduate teaching, and to initiate a high quality research program which will complement present programs in the Department and the College. Qualifications: Applicants must have Ph.D., postdoctoral experience, and additional experience commensurate with the rank sought. Teaching and research experience in the areas of protein structure and function analysis and in the molecular biology of higher organisms strongly desired. Successful candidate will have joint appointment with the New Hampshire Agricultural Experiment Station. Please send curriculum vitae, a statement of research and teaching interests, and arrange to have letters from three references sent by 20 November 1987 to: **Dr. Clyde L. Denis, Chairman, Search Committee, Department of Biochemistry, Spaulding Life Sciences Building, University of New Hampshire, Durham, NH 03824.** *University of New Hampshire is an Affirmative Action/Equal Employment Opportunity.*

POSITIONS OPEN

ASSISTANT OR ASSOCIATE PROFESSOR OF ANATOMY

The Department of Anatomy, The Ohio State University, is seeking candidates for a tenure-track position at the assistant or associate professor level. The department has strong research programs in cell biology and neuroscience. We are seeking an individual who could contribute to these programs. Candidates must have a Ph.D. or M.D., a strong independent research program in cell, molecular, or developmental biology, and at least 2 years of postdoctoral experience. Teaching responsibilities will be in histology/cell biology. Send curriculum vitae and three letters of reference by 1 December 1987 to: **James S. King, Ph.D., Professor and Chairman, Department of Anatomy, 333 West 10th Avenue, Columbus, OH 43210.** *An Equal Opportunity/Affirmative Action Employer.*

ASSISTANT/ASSOCIATE PROFESSOR IN NEUROCHEMISTRY

Applications are invited for a tenure-track position available spring, 1988. Candidates should have a demonstrated ability to conduct independent research. Preference will be given to those working in sensory systems. Rank and salary will be commensurate with qualifications. Send curriculum vitae, statement of research interests, representative reprints, and names of three references by 1 December 1987 to: **Dr. Robert B. Barlow, Jr., Institute for Sensory Research, Syracuse University, Syracuse, NY 13244.** *Syracuse University is an Affirmative Action/Equal Opportunity Employer.*

Tulane University School of Medicine—Seeking **ASSOCIATE PROFESSOR OR PROFESSOR** of Medicine in the Endocrine Section of the Department of Medicine to fill the newly established Tullis-Tulane Alumni Chair of Diabetes. The individual selected must be Internal Medicine Board-certified and Endocrine/Metabolic Board-certified. The position involves teaching, patient care, and research responsibilities. Apply to: **C. Y. Bowers, M.D., Tulane University School of Medicine, 1430 Tulane Avenue, New Orleans, LA 70112.** Include updated curriculum vitae. *Tulane University is an Affirmative Action/Equal Employment Opportunity Employer.*

DEPARTMENT OF BIOCHEMISTRY MICHIGAN STATE UNIVERSITY

The Department of Biochemistry seeks applications for tenure-track positions at the **ASSISTANT and ASSOCIATE PROFESSOR** level. One position will be filled with a **BIOCHEMICAL TOXICOLOGIST**, but additional positions are available for qualified investigators working in other areas of contemporary biochemistry; our primary interest is in attracting outstanding people.

The Department of Biochemistry has a large faculty conducting research in a wide variety of areas, affording its members both a stimulating scientific atmosphere and opportunities for research collaboration. The Department maintains state-of-the-art technical facilities to support research approaches requiring protein chemistry, molecular biology, immunology, and quantitative analysis.

Applicants should have demonstrated productivity and evidence of potential for independent research. To assure consideration, applications should be received by 1 December 1987. Applicants should send curriculum vitae and description of research accomplishments and future interests, and solicit three letters of recommendation to be sent to: **Dr. Jack Preiss, Chairperson, Department of Biochemistry, Michigan State University, Box S, East Lansing, MI 48824.** To assure consideration, applications should be received by 1 December 1987. (Amended Announcement). *Michigan State University is an Equal Opportunity/Affirmative Action Employer.*

ASSOCIATE RESEARCH SCIENTIST: Postdoctoral position immediately available for individual to work in the laboratory of **Dr. Peter Elsbach.** Candidate should have solid training and proven experience in recombinant DNA technology, and should wish to join productive program concerned with the molecular biology of a potent membrane-perturbing bactericidal protein, purified from neutrophils, that is specific for Gram-negative bacteria. Excellent salary and benefits. Interested candidates are requested to send résumé, publications, and names of two references to: **Joan Harmon, Personnel Department, NYU Medical Center, 317 East 34 Street, 7th Floor, New York, NY 10016.** *An Affirmative Action/Equal Opportunity Employer M/F.*

POSITIONS OPEN

ASSISTANT PROFESSOR/ASSOCIATE PROFESSOR (two positions). The Department of Microbiology, Immunology, and Parasitology at Louisiana State University Medical Center invites applications for two tenure-track positions at the assistant or associate professor level. Applicants must have a Ph.D. or M.D. degree, and three or more years of postdoctoral research experience, with an interest in molecular parasitology/bacterial pathogenesis. The individuals hired will be involved in teaching medical as well as graduate students. Applicants must send curriculum vitae to: **Dr. Ronald B. Luftig, Head, Department of Microbiology, Immunology and Parasitology, Louisiana State University Medical Center, 1901 Perdido Street, New Orleans, LA 70112.** An Equal Opportunity/Affirmative Action Employer.

ASSOCIATE DIRECTOR MICHIGAN AGRICULTURAL EXPERIMENT STATION (AES) MICHIGAN STATE UNIVERSITY

Associate director/professor (full year, full-time, tenure system). Shared responsibility for administration of AES and specific responsibilities in areas to be designated. Ph.D. degree in some field of agriculture or natural resources; proven record of research accomplishments and demonstrated interest and potential for administration. Send letter of application and complete résumé to: **Dr. Larry Tombaugh, Chairperson, Search Committee, Agricultural Experiment Station, 109 Agricultural Hall, Michigan State University, East Lansing, MI 48824,** by 15 December 1987. References may be requested at a later date. *MSU is an Equal Opportunity/Affirmative Action Employer. Women and minorities are encouraged to apply.*

AVIAN BIOLOGIST

The Department of Zoology, University of Florida, invites applications for a 9-month tenure-track position, beginning August 1988, at the assistant professor level. Applicants' research should involve the behavior, ecology, evolution, or physiology of birds. The successful candidate will maintain a productive research program, teach an undergraduate course in avian biology, and develop a course in his/her specialty. Applicants should submit curriculum vitae; a succinct statement of research and teaching interests, including a course outline for avian biology; representative publications; and names, addresses, and telephone numbers of four references by 30 November 1987 to: **Dr. Peter Feinsinger, Chair, Avian Biology Search Committee, Department of Zoology, University of Florida, Gainesville, FL 32611.** The University of Florida is an Equal Opportunity/Affirmative Action Employer.

BIOLOGY FACULTY POSITIONS ILLINOIS STATE UNIVERSITY

Four full-time tenure-track positions at the assistant/associate professor level starting in fall 1988. Postdoctoral experience preferred. The appointees will be expected to establish strong research programs capable of attracting extramural funding. Teaching responsibilities will include training M.S. and Ph.D. candidates, a graduate course in the appointees' specialty, and involvement in the undergraduate program.

EUKARYOTIC GENETICIST applying molecular techniques to questions of gene regulation and/or development.

Contact: **Dr. Glen E. Collier**

MOLECULAR MICROBIOLOGIST with research interests in prokaryotic molecular genetics preferred, but other areas will be considered.

Contact: **Dr. Brian J. Wilkinson**

PHYSIOLOGICAL ECOLOGIST utilizing physiological approaches to investigate ecological questions in plants or animals.

Contact: **Dr. Wayne A. Riddle**

SYSTEMATIST applying current methodologies to questions of classification, phylogeny, and/or evolutionary processes in any taxon.

Contact: **Dr. Joseph E. Armstrong**

Send curriculum vitae, outline of research plans, and names of three references to the respective: **Search Committee Chair, Department of Biological Sciences, Illinois State University, Normal, IL 61761.** Applications will be reviewed beginning 1 December 1987.

Illinois State University is an Equal Opportunity/Affirmative Action Employer. State law mandates demonstrable oral proficiency in the English language as a requirement for these positions.

POSITIONS OPEN

CELL PHYSIOLOGIST. Rank of assistant professor. Qualifications: D.V.M. and/or Ph.D. degree(s) with a strong background in metabolic and biochemical physiology. Teaching duties include participation in teaching physiology in the professional veterinary curriculum as well as in graduate degree (cell biology) programs. The successful candidate will be expected to initiate and conduct a high quality research program. Application closing date: 1 February 1988 or until filled. Position availability date: 1 July 1988. Submit curriculum vitae with a statement of your teaching and research interests, together with the names and addresses of three persons who, upon contact, would be willing to give us an evaluation of your qualifications and abilities to: **Dr. Robert A. Argenzio, Department of Anatomy, Physiological Sciences and Radiology, College of Veterinary Medicine, North Carolina State University, 4700 Hillsborough Street, Raleigh, NC 27606.**

CHAIRMAN DEPARTMENT OF MUSCULOSKELETAL RESEARCH RESEARCH INSTITUTE OF THE CLEVELAND CLINIC FOUNDATION

A search committee of the Cleveland Clinic Foundation is seeking interested candidates for the position of a Chairman for the Department of Musculoskeletal Research within the Research Institute of the Foundation.

The department enjoys a very large modern facility with new laboratories and has strong institutional support. The department is currently active in research in the areas of biomaterials, biomechanics, rehabilitation, and biochemistry. It is expected that the chairman will maintain an active research program and collaborate with related departments at the Cleveland Clinic.

Applicants must be distinguished scientists of national and international reputation with a solid scientific background and demonstrated leadership and administrative skills. Candidates should be in possession of a M.D. or Ph.D. degree.

The Research Institute of The Cleveland Clinic Foundation is composed of seven departments, with over 70 staff scientists and more than 80 pre- and postdoctoral trainees devoted to basic biomedical research.

The position is immediately available with an attractive salary and excellent benefits.

The Cleveland Clinic Foundation is an Equal Opportunity Employer.

Applicants should send their curriculum vitae to: **Dr. Fawzy G. Estafanous, Chairman, Search Committee for Chairman of Musculoskeletal Research, The Cleveland Clinic Foundation, 9500 Euclid Avenue, Cleveland, OH 44106.**

CHAIRPERSON, DEPARTMENT OF PHYSIOLOGY: Quillen-Dishner College of Medicine, East Tennessee State University, Johnson City, Tennessee, is seeking applicants for the position of Professor and Chairman of the Department of Physiology. Applications are invited from individuals with outstanding achievement in research, demonstrated leadership ability, and appreciation for the continuing role of a department of physiology in educating both medical and graduate students. We are seeking candidates from a broad spectrum of disciplines related to physiology who hold the Ph.D. and/or M.D. degree. Review of applications will begin 1 November 1987. *The University is an Equal Opportunity, Affirmative Action Employer and employs only United States citizens and aliens authorized to work in the United States.* Interested applicants should send curriculum vitae, a summary of research goals, and the names of references to:

**Robert Stout, Ph.D., Chair
Physiology Search Committee
Quillen-Dishner College of Medicine
East Tennessee State University
P.O. Box 19870A
Johnson City, TN 37614**

CYTOGENETICIST: The Genetics Center is seeking an assistant director for our large, full-service cytogenetics laboratory. Certification or eligibility by the American Board of Medical Genetics is preferred. Responsibilities include supervising the clinical laboratory, developing clinical or basic research projects, and teaching. Send curriculum vitae to: **Wendy L. Golden, Director, Cytogenetics Laboratory, The Genetics Center, Case Western Reserve University, Cleveland, OH 44106.**

POSITIONS OPEN

CYTOGENETICIST

Trained cytogeneticist required to join research team studying cytogenetics and molecular genetics of human cancer. Extensive experience in analyzing human karyotype and chromosomal rearrangements required. Experience in recombinant DNA technology desirable. Send curriculum vitae and letters of recommendation to:

**Dr. Eric Stanbridge
Department of Microbiology
and Molecular Genetics
University of California
Irvine, CA 92717**

An Affirmative Action/Equal Opportunity Employer.

DEPUTY DIRECTOR MEDICAL RESEARCH SERVICE

The Veterans Administration invites applications for the position of Deputy Director, Medical Research Service. The Medical Research Service currently has a budget of about \$180 million and supports biomedical and behavioral sciences research of over 2500 VA scientists, 75 percent of whom are physicians. It is strongly committed to support of patient-oriented research across the entire spectrum from basic science to clinical application of new knowledge. The Director and Deputy Director are responsible for policy development, peer review management of all investigator-initiated research studies, and budget formulation and distribution. Candidates are expected to be nationally recognized scientists, and must have an established record of scholarly achievement. The position is only open to U.S. citizens with the M.D. degree. Salary is \$72,500 and additionally special pay up to \$24,818.

Qualified applicants are invited to send curriculum vitae, bibliography, and the names, addresses, and telephone numbers of three respondents by 30 November 1987 to: **Richard J. Greene, M.D., Ph.D., Assistant Chief Medical Director for Research and Development (15), Veterans Administration, 810 Vermont Avenue, NW, Washington, DC 20420.**

The Veterans Administration is an Equal Opportunity Employer.

DEVELOPMENTAL BIOLOGY

The Department of Biology of the University of Houston invites applications for tenure-track positions at the **ASSISTANT/ASSOCIATE PROFESSOR** level in Developmental Biology. Candidates must have at least 1 year of postdoctoral experience, and recognized accomplishments in the molecular and/or cellular biology of developing eukaryotic systems. The successful applicants will be expected to establish and maintain an independent research program, and assist in the instruction of graduate and undergraduate students. Located in the nation's fourth largest city, the University of Houston is a state-supported institution with approximately 30,000 undergraduate and graduate students. Interested applicants should submit curriculum vitae, a summary of research interests, and the names of three references to: **Dan Wells, Ph.D., Developmental Biology Search Committee, Department of Biology, University of Houston, Houston, TX 77004.** The University of Houston is an Equal Opportunity Employer.

DEVELOPMENTAL GENETICS

DEVELOPMENTAL GENETICIST: A tenure-track position, at the assistant professor level, is available for a geneticist working at the molecular level on a genetically well-characterized developmental system such as *Drosophila*. We encourage geneticists working in all developmental research areas including pattern formation or neurobiology to apply. Applicants should have postdoctoral experience and a demonstrated ability to attract outside funding. The successful candidate is expected to develop an active research program, participate in the Ph.D. graduate program and teach in genetics. To facilitate these activities the university offers generous start-up funds in addition to major departmental resources such as DNA synthesis, TEM, SEM and molecular graphics. Please send curriculum vitae, a statement of future research plans and three letters of recommendation to: **Search Committee, Biology Department, Wesleyan University, Middletown, CT 06457.** We will begin to review applications on 1 December 1987. However, applications received after this date will continue to be considered.

Wesleyan is an Equal Opportunity/Affirmative Action institution. We encourage applications from minority candidates and women.

POSITIONS OPEN

DIRECTOR OF CELL BIOLOGY RESEARCH

Faculty position in molecular and cellular pathobiology. The Department of Pathology of Tulane University School of Medicine in New Orleans invites applications for a faculty position to strengthen its program in molecular biology. This is a tenure-track position at the level of assistant professor, associate professor, or full professor. The successful candidate, Ph.D. or M.D. with experience in molecular biology and/or immunology, will continue and expand his/her independent research program. In addition he/she will develop and direct the Central Pathology Research Unit, and collaborate with the pathology faculty. Equipment, technical help, and start-up funds will be provided by the Department. Submit curriculum vitae, representative reprints, and name of three references by 30 November 1987 to: **Michael A. Gerber, M.D., Professor and Chairman, Department of Pathology, Tulane University School of Medicine, 1430 Tulane Avenue, New Orleans, LA 70112.** *Tulane Medical Center is an Equal Opportunity/Affirmative Action Employer.*

DIRECTOR, CLINICAL VIROLOGY

The Milton S. Hershey Medical Center of the Pennsylvania State University College of Medicine is seeking a director for a new clinical virology laboratory. The successful candidate is expected to manifest technical competence in diagnostic virology and be sufficiently experienced to set up a new laboratory and direct a new program. The ability to provide clinical consultations in virology and infectious diseases is highly desirable. Proficiency in basic or clinical research is also desirable. Rank, salary, and academic appointments are negotiable. Interested candidates should send curriculum vitae and the names of two references by 31 December 1987 to: **John H. Dossett, M.D., The Milton S. Hershey Medical Center, P.O. Box 850-C, Hershey, PA 17033.** *The Pennsylvania State University is an Affirmative Action/Equal Opportunity Employer.*

DIRECTOR—IMMUNOLOGY

The Medical College of Ohio is seeking an established immunologist to develop and lead a new Immunology Group within the Department of Microbiology. The college is prepared to make a major investment in capital equipment, start-up funds, faculty salaries, and suitable space for this program. Candidates must have a proven record of significant research in cellular immunology and/or in molecular immunology. The successful applicant must be capable of attracting extramural funding and will be appointed to the professorial tenure-track faculty. Send a statement of research goals and ideas for development of the Immunology Program, curriculum vitae, and three letters of recommendation to: **Earl H. Freimer, M.D., chairman, Department of Microbiology, Medical College of Ohio, C.S. 10008, Toledo, OH 43699.**

An Equal Opportunity, M/F Employer and Educator.

EXERCISE PHYSIOLOGIST—a tenure-track position at Ohio University consisting of a joint appointment at the assistant or associate professor level in the College of Osteopathic Medicine and the Department of Zoological and Biomedical Sciences. Teaching responsibilities include respiratory physiology in the medical curriculum and exercise physiology at the undergraduate and graduate student levels. The applicant is expected to generate a research program which involves graduate students and will attract extramural funding. Collaborative opportunities exist with colleagues in the areas of muscle and neurobiology, functional morphology, ultrastructure, cardiovascular and exercise physiology. The expected starting date is 1 July 1988. Deadline for submission of applications is 1 December 1987. Ohio University, with a student body of 15,000, is located in a small, picturesque town in the hills of rural southeastern Ohio. Salary and start-up funds are competitive, and the costs of living and housing in Athens are moderate. Letter of application, curriculum vitae, description of current and future research plans, copies of most significant publications, statement of teaching experience, and three letters of recommendation must be received by 1 December 1987. Address to: **Dr. Frederick Hagerman, Search Committee Chairman, College of Osteopathic Medicine, Irvine Hall, Ohio University, Athens, OH 45701.** *Ohio University is an Affirmative Action/Equal Opportunity Employer.*

POSITIONS OPEN

ECOLOGICAL AGRICULTURE/ NUTRITION

The Evergreen State College invites applications for a one-year position in Ecological Agriculture/Nutrition. Evergreen is a public, liberal arts college emphasizing intensive interdisciplinary and interdivisional study through team teaching. All faculty are designated "Member of the Faculty" without rank or tenure. Salary is based on experience.

The position will teach nutrition within the broader context of human ecology and agricultural development. The nutrition unit will also serve as an elective for health science programs. The program will develop social issues of food and nutrition; politics of food safety, determinants of cultural food choices, Third World development, and hunger issues. M.A. minimum degree required; Ph.D. preferred.

For a full job description and a list of required application materials please write to: **Hiring Dean, The Evergreen State College, Olympia, WA 98505.** Position will close 30 November 1987. *Evergreen is an Equal Opportunity Employer.*

ENZYMOLOGIST: Applications are invited for a tenure-track faculty position at the assistant or associate professor level. We are seeking an applicant with a primary research interest in enzymology. In addition to protein sequencing and oligonucleotide synthesis facilities, the Department of Biochemistry has instrumentation for circular dichroism, lifetime and steady-state fluorescence, rapid reaction kinetics, and scanning calorimetry. All current faculty members have active, funded research programs. Applicants should send curriculum vitae, a description of research interests, and three letters of reference to: **Dr. Mark Olson, Search Committee, Department of Biochemistry, The University of Mississippi Medical Center, 2500 North State Street, Jackson, MS 39216-4505.** Closing date: 15 January 1988. *Equal Opportunity Employer, M/F/H/V.*

EVOLUTIONARY BIOLOGIST

The Hawaiian Evolutionary Biology Program invites applicants for a full-time, assistant researcher to conduct evolutionary research with emphasis on the endemic biota. The position is currently approved for 2 years, with possibility of renewal. A Ph.D. degree in evolutionary biology or related field is required. Demonstrated excellence in research, ability to secure extramural funding, and a multidisciplinary approach to investigating dynamics of evolutionary processes are prime considerations. Submit curriculum vitae and names and addresses of three references to: **Dr. K. Y. Kaneshiro, Director, Hawaiian Evolutionary Biology Program, University of Hawaii, 3050 Maile Way, Honolulu, HI 96822.** Closing date for receipt of application is 30 November 1987.

FACULTY POSITION, MOLECULAR BIOLOGY, PRINCETON UNIVERSITY

The Department of Molecular Biology at Princeton University is seeking applicants with experience in use of modern genetic and molecular biological techniques in the study of *Arabidopsis* or other experimental plant system to fill a position at the assistant professor level.

Submit a brief description of proposed research program, curriculum vitae, and a list of references to: **Dr. J. Broach, c/o L. Abele, Department of Molecular Biology, Lewis Thomas Laboratory, Princeton University, Princeton, NJ 08544.**

Princeton University is an Equal Opportunity/Affirmative Action Employer, M/F.

FACULTY POSITION MOLECULAR BIOLOGY PRINCETON UNIVERSITY

The Department of Molecular Biology at Princeton University is soliciting applicants for a position at the assistant professor level who have strong backgrounds in biochemistry, and who are well-versed in current molecular genetic analyses of yeast.

Submit a brief description of proposed research program, curriculum vitae, and a list of references to: **Dr. J. Broach, c/o L. Abele, Department of Molecular Biology, Lewis Thomas Laboratory, Princeton University, Princeton, NJ 08544.**

Princeton University is an Equal Opportunity/Affirmative Action Employer, M/F.

POSITIONS OPEN

FACULTY POSITION BIOCHEMISTRY AND MOLECULAR BIOLOGY SUNY HEALTH SCIENCE CENTER AT SYRACUSE

We invite applications for a faculty position at the associate or full professor rank from accomplished investigators studying structure-function relationships of hormones and their receptors using state-of-the-art protein and molecular biological techniques. At least 4 years of experience beyond postdoctoral training is required. Applicants should send curriculum vitae, an outline of research interests, and the names of three individuals who can be contacted as references to: **Search Committee, c/o Mrs. Helen Wouff, Department of Biochemistry and Molecular Biology, SUNY Health Science Center at Syracuse, 750 East Adams Street, Syracuse, NY 13210.** Deadline for receipt of résumés: 16 November 1987.

An Affirmative Action/Equal Opportunity Employer.

PENN STATE FACULTY POSITIONS BIOMOLECULAR STRUCTURE AND FUNCTION

Applications are invited for two tenure-track positions at any level as part of an expanded research concentration in the area of biomolecular structure and function. Candidates are being sought in each of the following areas: (i) protein crystal structure determination and (ii) theoretical/computational studies of biological macromolecules. The University has made a major commitment in this area including laboratory space and equipment necessary for the individual research programs such as x-ray diffractometer including area detector and computer graphics system. The positions will be available in either the Department of Chemistry, the Department of Molecular and Cell Biology, or as joint appointments in these departments. Joint affiliation with the newly formed Penn State Biotechnology Institute is also a possibility. Applicants should have the background, motivation, and ability to develop vigorous, productive research programs and to be excellent teachers. Reply to: **Search Committee for Biomolecular Structure and Function, Department of Chemistry, 152 Davey Laboratory, Box 12, University Park, PA 16802.** Please indicate the area for which you are applying. Include a detailed curriculum vitae, statement of research interests, and up to three recent representative reprints. In addition, the applicant should ask three individuals to send letters of reference directly to us. Review of applications will commence in November 1987. Deadline for receipt of applications is 15 January 1988 or until suitable candidates are identified. *Equal Opportunity/Affirmative Action Employer.*

TWO FACULTY POSITIONS OREGON STATE UNIVERSITY

BEHAVIORAL PHYSIOLOGY—SENIOR POSITION. We seek established scientists with excellent records of scholarship and research accomplishments in endocrinology, neurobiology, or other aspects of behavioral physiology, to help develop a research focus in behavioral physiology, and participate in undergraduate/graduate physiology and graduate seminars. A related position will be added in 1990.

CELL BIOLOGY—ASSISTANT PROFESSOR, tenure track. Interaction with ongoing programs desired.

For details on both positions see ad in *Science*, 7 August 1987. Send applications before 31 January 1988 to: **Behavioral Physiology or Cell Biology Search Committee, Department of Zoology, Oregon State University, Corvallis, OR 97331.** *OSU is an Affirmative Action/Equal Employment Opportunity Employer.*

FACULTY POSITION—GENETICS. Tenure-track assistant professor, starting fall 1988. Teaching includes a general genetics course; participation in introductory biology course; two alternate-year courses, at least one of which should be microbiology, development, or immunology. Research involving undergraduates is encouraged. Ph.D. required; teaching experience desirable. Submit résumé and three letters of reference by 1 December 1987 to: **Dr. Margaret Simpson, Chairman, Department of Biology, Sweet Briar College, Sweet Briar, VA 24595.** *Affirmative Action/Equal Opportunity Employer.*

FACULTY OF THE
SCHOOL OF PUBLIC HEALTH,
UNIVERSITY OF NORTH CAROLINA
AT CHAPEL HILL,
SEEK QUALIFIED CANDIDATES FOR

DEPARTMENT CHAIR

DEPARTMENT OF ENVIRONMENTAL SCIENCES AND ENGINEERING

The Department of Environmental Sciences and Engineering is one of nine departments in the School of Public Health. It has 34 full-time faculty members, 20 research staff, and 132 graduate students. Four masters and one doctoral degree, five academic program areas including air and industrial hygiene, environmental chemistry and biology, environmental management and protection, radiological hygiene, and water resources engineering are offered.

RESPONSIBILITIES: Attract external research funding; recruit faculty; encourage development of interaction with the public health community; and administer other matters pertaining to the operation of a large academic department.

QUALIFICATIONS:

- Earned doctorate in a discipline closely associated with the fields of environmental sciences and engineering.
- Outstanding record of professional activities, research and scholarship.
- Possession of the requisite administrative skills.

FACULTY STATUS, RANK AND SALARY: Tenured position at the Full Professor level, salary commensurate with experience and qualifications.

APPLICATION REVIEW WILL BEGIN ON NOVEMBER 1, 1987, AND CONTINUE UNTIL THE POSITION IS FILLED. EXPECTED STARTING DATE IS JULY 1, 1988.

APPLICATION: Send resume and names of three references to:



Professor Dirk Frankenberg, Chair
Environmental Sciences and
Engineering Search Committee
Room 171A
7400 Rosenau Hall, 201H
University of North Carolina
at Chapel Hill
Chapel Hill, North Carolina 27599

THE UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL IS AN EQUAL
OPPORTUNITY, AFFIRMATIVE ACTION EMPLOYER.



The UNIVERSITY OF MARYLAND AGRICULTURAL BIOTECHNOLOGY CENTER (ABC)

The center is located on the College Park campus and is in the newly initiated Maryland Biotechnology Institute. All appointees will hold tenure-track positions in the Center, joint appointments and laboratory facilities in appropriate departments within the University, and will participate in student training. ABC will bring together researchers with a primary focus on the molecular biology of plant and animal protection from the University, the U.S.D.A. Beltsville, and industry in the Washington/Baltimore Metropolitan area.

1. **Molecular Plant Virologist:** Successful candidate will have a joint appointment with the Botany Department. Candidate will be expected to develop a strong research program in molecular plant virology and to interact closely with a developing group in the Center whose research focuses on plant protection and an established group within the Botany Department exploring molecular plant-microorganism interactions.

2. **Molecular Entomologist:** Successful candidate will have a joint appointment with the Entomology Department. Candidate will be expected to develop strong research program in molecular biology of insects with emphasis on plant and animal protection. Appointee will interact with existing programs within the Entomology Department on insect physiology, biochemistry, molecular basis of insect-plant or insect-pathogen interactions.

3. **Molecular Virologist/Immunologist:** Successful candidate will have a joint appointment with the School of Veterinary Medicine. Candidates will be expected to develop strong research program preferably in the area of host resistance and diagnosis of infectious diseases. Appointee should have experience in recombinant DNA technology and will be expected to develop genetic or immunological procedures for prevention or interaction in diseases and to cooperate effectively with colleagues in ABC and faculty in the School of Veterinary Medicine.

4. **Plant Biochemist:** Successful candidate will have a joint appointment with the Department of Chemistry and Biochemistry. Candidates will be expected to develop strong program in plant biochemistry and to establish a vigorous, competitive program; will have ample opportunities to establish interactions with other members of ABC and with departmental biochemists in the Department of Chemistry and Biochemistry. A commitment to both undergraduate and graduate instruction is also essential.

Applicants must have Ph.D. and postdoctoral experience and all positions are at the junior level. Salary is commensurate with qualifications. Submit a letter stating career goals, proposed research, resume, and four letters of recommendation by December 1, 1987 to:

Chairmen of Search Committees (A. Teramura, Botany; M. Ma, Entomology; S. Mohanty, Vet. Medicine; J. Kozarich, Biochemistry)
c.o. Agricultural Biotechnology Center, H.J. Patterson Hall
University of Maryland, College Park, Maryland 20742

An Equal Opportunity/Affirmative Action Employer.

POST DOCTORAL RESEARCH ASSOCIATE

Position currently available for post doctoral studies of elastin. The applicant should be familiar with cell structure and radiolabeling procedures. A background in molecular hybridization and/or radio immunoassay techniques is also desirable. Work will entail independent studies as well as collaboration with investigators interested in this protein. Send CV and list of references to Dr. Jerome Cantor, St. Luke's/ Roosevelt Hospital Center, 428 West 59th Street, New York, NY 10019. An Equal Opportunity Employer M/F.

ST. LUKE'S/ROOSEVELT
Hospital Center

BECKMAN

SR. APPLICATIONS CHEMIST

Beckman Instruments designs and manufactures quality analytical instrumentation for the life science industry. We currently have the following opportunity available.

Your responsibilities will include developing and demonstrating HPLC separation techniques for the bioresearch and bioindustrial markets, writing application reports, telephone consulting, and participation in trade show and field sales support.

This position requires a PhD in biological/biochemical science, familiarity with the protein, nucleic acid and antibody disciplines, and demonstrated ability in assays for enzymatic activity and techniques of purification and chromatographic resolution of macromolecules. Experience with P.A.G.E. is preferred, and HPLC experience is essential.

Qualified candidates should send resumes to Beckman Instruments Inc., Altex Division, P.O. Box 5101, San Ramon, CA 94583-0701. We are an equal opportunity employer.

BECKMAN

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MicroGeneSys, Inc.

is strongly committed to developing recombinant vaccines for AIDS and other infectious diseases. Recent achievements in MicroGeneSys' vaccine programs have established a platform for dynamic growth. We invite qualified scientists to consider a career with MicroGeneSys. Senior Scientist (Ph.D.), Research Associate (M.S.), and Research Technician (B.S.) level positions are now available in the following areas:

- Protein Biochemistry
- Immunology
- Quality Control
- Process Sciences
- Clinical Research

At MicroGeneSys, we offer a stimulating and challenging scientific environment, competitive salaries and an excellent benefit package. The Company's south central Connecticut location, near New Haven is convenient to New York City and New England locations.

For immediate consideration, please submit a *curriculum vitae* along with a statement of research interests and salary history, in confidence, to the **Personnel Director**, MicroGeneSys, Inc.



MicroGeneSys, Inc.
BIOPHARMACEUTICALS

400 Frontage Road ■ West Haven, CT 06516
TELEPHONE: (203) 932-3203

NEW ENGLAND BIOLABS

A small, informal biotechnology company on the ocean 20 miles north of Boston that specializes in the production and cloning of restriction endonucleases has openings for:

MOLECULAR PARASITOLOGIST (POST DOCTORAL POSITION) - an individual with experience in molecular biology and/or immunology. Projects will involve the cloning and characterization of filarial antigens.

MICROBIOLOGIST/FERMENTATION SPECIALIST - an individual with prior experience in growth of a variety of microorganisms in 25 to 100 liter fermentations. Cell disruption and protein purification experience would be useful. Good mechanical skills and a B.S. in microbiology or related field required.

Candidates please submit curriculum vitae with three references to:

New England Biolabs, Inc.
Human Resources
32 Tozer Road
Beverly, MA 01915-5510



Postdoctoral Fellows Molecular Genetics

Smith Kline & French Laboratories, a leader in pharmaceutical research, is seeking additional postdoctoral fellows to expand its current research programs employing recombinant DNA technology.

Excellent opportunities exist for innovative interdisciplinary research in our new and superbly equipped Research and Development Center in suburban Philadelphia near Valley Forge, Pennsylvania.

The Department of Molecular Genetics is seeking outstanding Ph.D. scientists to pursue research on:

- Streptomyces proteases/role in foreign protein production
- Gene expression in Streptomyces
- Expression and functional analysis of retroviral/AIDS proteins
- T-lymphocyte receptors-structure/function studies
- Regulation of interleukin-1 gene expression
- Tumor Necrosis Factor action at the molecular and cellular level
- Transcriptional activation
- Cloning/expression of Candida genes in S. cerevisiae

We offer an excellent compensation, benefits and relocation package as well as opportunities for personal and professional growth. Publication of research results is encouraged and supported. For confidential review, please forward your C.V. and names of three references to: Robert F. Obst, R0097 Manager, Personnel Relations, Smith Kline & French Laboratories, Research and Development Division, P. O. Box 1539, King of Prussia, PA 19406-0939. We are an Equal Opportunity Employer, M/F/H/V.

SK&F
A SmithKline Beckman Company

Pharmaceutical Clinical Research

The Central Research Division of Pfizer Inc. has a position for a physician in its Clinical Research Department. This department is an integral part of Central Research, a large modern research institution located in a campus setting in coastal southeastern Connecticut. The atmosphere is collegial, friendly, and scientifically stimulating, with frequent seminars by leaders in the fields of medicine, biology and chemistry.

This position provides an opportunity to exercise ingenuity and originality in the application of scientific principles to the clinical investigation of new therapeutic agents. This will involve you in the planning and implementation of clinical research programs with new drugs discovered by our discovery research project teams. Close interaction with these teams affords an opportunity to participate in the transfer of advances in basic science to the clinical situation.

If you are a physician with strong clinical training, prior basic or clinical research experience, and a scientific bent, this is an exciting career opportunity. It involves the planning, initiation, monitoring, and reporting of clinical trials to study new CNS, GI or metabolic medicinal agents. You will be aided by Clinical Research Associates and supported by a team of statisticians and data processing personnel. We prefer that you have training in internal medicine, with board certification and subspecialty training in endocrine-metabolic diseases, gastroenterology, Psychiatry, or hematology-oncology desirable.

We offer a competitive benefit package and compensation, and the opportunity to live in an attractive Connecticut shore community. Please send your resume to: Dr. Jerry K. Larson, Manager of Employment, Pfizer Central Research, Eastern Point Road, Groton, CT 06340.



An equal opportunity employer

RESEARCH NEWS REPORTER *SCIENCE* MAGAZINE

The Research News section of *Science* Magazine has an opening for a writer with a strong background in physical or engineering sciences. Coverage would include current topics in physics, including superconductivity, chemistry, materials science, and engineering. A demonstrated ability to write news and feature articles is required. An application for this full time position in Washington, D.C., should include a curriculum vitae, salary requirements, a letter describing your interest in Research News, and not more than five writing samples.

Please send information to Carolyn Bell, *SCIENCE* Magazine, 1333 H Street, N.W., Washington, D.C. 20005.

EOE

1988 FELLOWSHIP OPPORTUNITIES

Radioactive Waste Management

Fellowships are offered by the U.S. Department of Energy for graduate study and research related to the management of spent nuclear fuel and high-level radioactive waste. The program seeks to encourage qualified undergraduates in earth sciences, engineering, materials science, and radiation science to pursue graduate study at participating university programs in radioactive waste management technologies. Fellowship benefits include a \$1,000 monthly stipend and full payment of tuition and fees.

The program includes a practicum at a participating research center. The practicum is designed to give on-site experience with DOE radioactive waste management research activities. Applications for fellowships beginning September 1, 1988, must be received in the Oak Ridge Associated Universities' University Programs Division office at the address below by February 1, 1988, 4:30 p.m.

Information and application forms may be requested from

RWM Fellowship Program
University Programs Division
Oak Ridge Associated Universities
P.O. Box 117
Oak Ridge, Tennessee 37831-0117
Telephone (615) 576-3455

This is an equal opportunity program open to all qualified persons without regard to race, sex, creed, color, age, handicap, or national origin. An applicant must be a U.S. citizen or a permanent resident alien.

RESEARCH & DEVELOPMENT OPPORTUNITIES

The Dade Division of Fortune 100 Baxter Healthcare Corporation, is a leading supplier of diagnostic products and instrumentation for clinical laboratories, with plants in the U.S., Europe, and Puerto Rico. We currently have exceptional opportunities for Scientists in our Research and Development Departments.

Section Head/Reagent Development

Direct and coordinate a team of scientists responsible for the design, development and evaluation of status enzyme immunoassays. This position requires the combination of broad technical knowledge with strong managerial skills. The selected candidate must possess a Ph. D. in chemistry, biology or biochemistry with 5 years of industrial experience in immunodiagnostic assay design and development.

Group Leader/Immunology

Manage a group of scientists in an antibody development program for both monoclonal and polyclonal antibodies. The selected candidate should have experience in production and characterization of both monoclonal and polyclonal antibodies and possess a Ph. D. with experience in immunochemistry, immunobiology and hybridoma technology.

Research Scientist/Reagent Development

The selected candidate will be responsible for the formulation and development of infectious diseases assays for our Stratus Immunoassay System. The incumbent should possess a Master's degree in a life science and 1-2 years prior industrial experience or a Bachelor's degree and 3-5 years prior industrial experience. The selected candidate should be well versed in enzyme-immunoassays with hands-on experience in their design and validation.

The above mentioned positions are based on the beautiful east coast of South Florida where, in addition to paying no state or local income taxes, you will enjoy a year-round quality lifestyle which attracts visitors from around the world.

Baxter offers a stimulating career opportunity where contributions are recognized and rewarded. For confidential consideration, please forward your CV to Senior Recruiter, Baxter Healthcare Corporation, DADE Division, P.O. Box 520672, Miami, FL 33152. Equal Opportunity Employer.

Dade Division

Baxter

POSITIONS OPEN

FACULTY POSITIONS IN MAMMALIAN MOLECULAR BIOLOGY

The Department of Molecular Biology of the University of Texas Health Center at Tyler invites applications to fill several faculty positions in the area of mammalian gene regulation. We especially seek investigators with promise of, or with a proven record of, productivity and extramural funding. Preference will be given to individuals with research interests in one of three major areas: (i) post-transcriptional regulation of gene expression; (ii) the regulation of gene(s) important for the synthesis of extracellular matrix components or (iii) to scientists applying the techniques of molecular biology to the study of lung tissues or lung diseases. Investigators will be expected to build strong, sponsored research programs on a full-time basis, with no teaching responsibility. Salary is completely funded by the University of Texas Health Center at Tyler. Rank will be dependent on research experience and peer recognition. Please send curriculum vitae, a statement of research goals, names, addresses, and telephone numbers of three references to either: **Dr. Gokul C. Das, Department of Molecular Biology or Dr. Richard G. Painter, Department of Biochemistry, The University of Texas Health Center at Tyler, P.O. Box 2003, Tyler, TX 75710. Affirmative Action/Equal Employment Opportunity.**

FIELD ECOLOGIST—Lecturer position available September 1988 to direct a Field Naturalist Master's program designed to train multidisciplinary field scientists in design, methodology, data analysis, and report preparation. Responsibilities include curriculum development, field experiences, student selection, and assistance in procurement of program funding. Candidates must have a Ph.D. in ecology or natural science discipline, with emphasis on field studies. Multidisciplinary and field research experience; holistic perspective; freedom to travel; and familiarity with application of science to environmental policy, resource management, and/or conservation issues are desired. Send letter of application including résumé and transcripts, and have three letters of recommendation sent by 15 January 1988 to: **Field Naturalist Selection Committee, Botany Department, University of Vermont, Burlington, VT 05405-0086. The University of Vermont is an EO/AAE.**

FIRE CHEMISTRY RESEARCH LEADER: Responsible for research in describing and quantifying combustion processes and resulting smoke emissions under variable forest and rangeland fire conditions. A Ph.D. is highly desired, and at least three additional years of experience is required. This research is stationed at the Intermountain Fire Sciences Laboratory in Missoula, Montana. It addresses problems of national and international importance. For information about how to apply, write: **U.S. Forest Service, Personnel Management, 324 25th Street, Ogden, UT 84401 or telephone: 801-625-5300. Equal Opportunity Employer.**

HEAD DIVISION OF NEUROSCIENCE

Baylor College of Medicine is seeking a senior neuroscientist as Head of its Division of Neuroscience. The Division represents an expansion of Baylor's current Program in Neuroscience, which will now have primary faculty appointments and independent space and support. This expansion represents a major development. The person selected and his/her associates will occupy space in a new research tower contiguous with extant basic research laboratories. The Division of Neuroscience is interdisciplinary and is responsible for the educational programs for the Ph.D. Program in Neuroscience. The Division is administratively responsible for medical and graduate students. Applicants must be internationally renowned, have a vigorous research program, and possess the administrative skills to coordinate and enhance a multidisciplinary program involving both basic science and clinical disciplines.

Applicants should submit their curriculum vitae to:

Dr. Arthur M. Brown
Chairman, Search Committee for Head
of the Division of Neuroscience
and

Chairman, Department of Physiology and
Molecular Biophysics
Baylor College of Medicine
One Baylor Plaza
Houston, TX 77030

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POSITIONS OPEN

FIELD STATION MANAGER—The Department of Biology, University of Mississippi, seeks a manager to conduct and supervise maintenance and to provide technical assistance for ongoing research at the 550-acre Biological Field Station near the Oxford campus. The station, which includes 150 man-made ponds, is being developed as part of the department's Freshwater Biology Research Program. Candidates should have a B.S. degree, knowledge of pond construction and operation, and basic plumbing, mechanical, and electrical skills. M.S. degree and/or previous work experience preferred. To ensure primary consideration, send letter of interest, résumé, and names and addresses of three references by 15 November 1987 to: **Dr. Luther A. Knight, Director, University of Mississippi Biological Field Station, Department of Biology, University of Mississippi, University, MS 38677. The University of Mississippi is an Equal Opportunity Employer.**

The University of Wyoming, College of Agriculture, is seeking applications and nominations for **HEAD, DEPARTMENT OF ANIMAL SCIENCE**. Applicants must have a Ph.D. in a discipline of animal or meat/food science and have a proven record of accomplishment in research, teaching, and/or extension education. Established evidence of administrative effectiveness or potential is desired. The Head is responsible for direction of research, teaching, and extension programs, fiscal and personnel matters, and communication within and outside the university. The department has programs dedicated to undergraduate teaching, graduate education (M.S./Ph.D.), fundamental and applied research, and extension education services. The department houses 18 faculty members. Salary commensurate with qualifications and experience. Application deadline: 15 November 1987, or until an appropriate candidate is identified. Appointment date: 1 July 1988. Qualified persons should submit a letter of application, complete résumé, and request three persons to forward letters of reference. Written nominations are invited. Contact: **W. J. Murdoch, Search Committee Chair, Department of Animal Science, P. O. Box 3684, University Station, University of Wyoming, Laramie, WY 82071. The University of Wyoming is an Equal Opportunity Employer.**

HISTOLOGIST/CELL BIOLOGIST. Rank of assistant or associate professor. Qualifications: D.V.M. and/or Ph.D. degree(s) with a strong background in histology and cell biology. Teaching duties include histology in the professional veterinary curriculum and participation in the cell biology graduate program. The successful candidate will be expected to initiate and conduct a high quality research program. Application closing date: 1 February 1988 or until filled. Position availability date: 1 July 1988. Submit curriculum vitae with a statement of your teaching and research interests, together with the names and addresses of three persons who, upon contact, would be willing to give us an evaluation of your qualifications and abilities to: **Dr. J. E. Smallwood, Department of Anatomy, Physiological Sciences and Radiology, College of Veterinary Medicine, North Carolina State University, 4700 Hillsborough Street, Raleigh, NC 27606.**

The U.S. Department of Agriculture, Agricultural Research Service is seeking an **IMMUNOLOGIST OR VETERINARY IMMUNOLOGIST** in the Bacteriology Research Unit, Leptospiriosis/Mycobacteriosis Research Project, National Animal Disease Center, Ames, Iowa. Responsibilities include defining the immunologic mechanisms involved in *Mycobacterium paratuberculosis* infection (Johne's disease) of cattle, developing serologic methods to detect animals infected with *M. paratuberculosis*, and collaborating with others to identify diagnostic and protective antigens of *M. paratuberculosis* and *Leptospira interrogans*.

Ph.D. is desirable. Must be a U.S. citizen. Salary commensurate with experience (\$27,172 to \$42,341). For program and position information contact: **Dr. Harley W. Moon, 515-239-8253.** For information on application procedures/forms contact: **Janie Carr, 301-344-2756.** Applications in response to this ad should be marked 7NO26. The application must be received no later than 11 December 1987. Mail applications to:

Janie Carr
USDA/ARS
Personnel Operations Branch
Building 419, BARC-East
Beltsville, MD 20705
Equal Opportunity Employer

POSITIONS OPEN

IMMUNOLOGIST— EXPERIMENTAL PATHOLOGIST

A tenure-track position exists at the assistant professor or associate professor level for an immunologist interested in investigating immune defense mechanisms. The successful candidate will be provided the opportunity to develop his/her own independent research program and to interact with other researchers engaged in studying immunity to infectious agents, tumors, and allografts.

Trudeau Institute is a free-standing, not-for-profit pure research institute located on the shore of Saranac Lake, 10 miles from Lake Placid, New York.

Send résumé and the names of three references to:

Dr. Robert J. North, Director
Trudeau Institute
P.O. Box 59
Saranac Lake, NY 12983

MICROBIOLOGIST

The Department of Microbiology, Medical College of Ohio, seeks candidates for a tenure-track position. The successful applicant will be expected to develop an independent, competitively funded research program focusing on the genetics or molecular biology of prokaryotes, and to participate in the department's graduate/professional teaching programs. Applicants should have a doctoral degree, and at least 2 years of postdoctoral experience. Send curriculum vitae, research interests, and three references to:

Dr. Earl H. Freimer, Chairman
Department of Microbiology
Medical College of Ohio
Toledo, OH 43699

The Medical College of Ohio is an Equal Employment Opportunity/Affirmative Action M/F Employer and Educator.

MOLECULAR AND CELL BIOLOGY

Applications are invited for **TWO TENURE-TRACK FACULTY POSITIONS** at the assistant professor level with research emphasis in microbial systems (viruses, bacteria, lower eukaryotes), to be filled by 16 August 1988. We plan to fill one position in the area of molecular genetics and one position in the area of cell biology. Competitive salary, set-up funds, and attractive facilities are available. The successful candidates will be expected to establish vigorous, independent research programs. Both candidates will be expected to reinforce our strong commitments to research and graduate training in molecular and cellular biology. Excellent opportunities exist for interaction with other faculty conducting research in cell and molecular biology, microbiology, biochemistry, and genetics. The successful candidates will participate in undergraduate microbiology instruction and graduate instruction in their area of expertise. Applications should include curriculum vitae, statement of research interests and plans, and the names of three references to: **Molecular and Cellular Biology Search Committee, School of Biological Sciences, 101 T. H. Morgan Building, University of Kentucky, Lexington, KY 40506.** Applications should be received by 15 December 1987. *An Equal Opportunity/Affirmative Action Employer.*

DEPARTMENT OF BIOLOGY QUEEN'S UNIVERSITY

The Department of Biology invites applications for a tenure-track position in **MOLECULAR GENETICS**. A preference will be given to applicants in plant science, but applicants in all areas of molecular genetics are urged to apply. The successful candidate should be an enthusiastic and competent teacher in genetics and molecular biology, and will be expected to develop a vigorous research program. Qualifications include a Ph.D. degree and published evidence of excellent research ability. Candidates of either sex are equally encouraged to apply. The appointment will be effective 1 July 1988 (or as negotiated), and is expected to be at the rank of assistant professor with salary commensurate with qualifications. *In accordance with Canadian Immigration Requirements, this advertisement is directed to Canadian citizens and permanent residents.* Application deadline is 15 February 1988 or until a suitable candidate is selected. Send applications, which should include curriculum vitae, statement of future research interests, and names and addresses of three references to: **Dr. D. T. Dennis, Head, Department of Biology, Queen's University, Kingston, Ontario, Canada, K7L 3N6.**

FACULTY POSITIONS AND ENDOWED PROFESSORSHIP IN MOLECULAR BIOLOGY



Iowa State University's expanding molecular biology program includes faculty members from five colleges; interdisciplinary biotechnology research projects established with part of an \$18 million commitment of state funds; a \$30.5 million molecular biology building in the design/construction phase; and state-of-the-art instrumentation centers for protein, nucleic acid, cell, and fermentation research.

ISU invites applications for nine tenure-track faculty positions with competitive salaries at levels commensurate with experience. In addition, the successful candidates are eligible for up to \$150,000 in start-up funds.

ANIMAL VIROLOGIST DEPT. VET. MICROBIOL. & PREV. MED.

The university seeks a virologist with experience in the application of molecular biology to the study of animal viral diseases. Research experience in molecular virology is preferred. Strong candidates will possess DVM/Ph.D. or Ph.D. degrees and an active research program. Teaching requirements are a shared course of animal virology for veterinary students, a graduate course in molecular virology, and training of graduate students.

Contact:

Dr. T. T. Kramer, Chair
Dept. Vet. Microbiol. & Prev. Med.
Iowa State University
Ames, Iowa 50011

DEVELOPMENTAL NEUROBIOLOGIST DEPT. OF ZOOLOGY

Iowa State University seeks an individual who will use state-of-the-art molecular or genetic approaches to study the developing nervous system. The new appointee, along with other faculty in developmental and molecular biology, genetics, and neurobiology, will play a key role in the future growth of neuroscience and developmental biology at ISU. The applicant must have postdoctoral experience in his/her area of research interest. Teaching responsibilities will be modest.

Contact:

Dr. P. Haydon
Dept. of Zoology
Iowa State University
Ames, Iowa 50011

MOLECULAR BIOLOGIST DEPT. OF ANIMAL SCIENCE

We seek a molecular biologist using state-of-the-art techniques to study milk protein synthesis with application to food-producing animals. The successful candidate will have ample opportunity to interact with molecular biologists in several departments who are studying protein metabolism and gene regulation. The individual will be expected to complement and interact with current research in the nutritional physiology group which includes *in vivo* kinetics of metabolism of nutrients.

Contact:

Dr. S. A. Ewing, Head
Dept. of Animal Science
101 Kildee Hall
Iowa State University
Ames, Iowa 50011

MOLECULAR BIOLOGIST DEPT. OF ANIMAL SCIENCE

We seek a molecular biologist using state-of-the-art techniques to study gene expression in vertebrates. The successful candidate will serve to strengthen molecular biological research campus-wide and will have ample opportunity to interact with molecular biologists in several departments. The individual will be expected to complement and interact with researchers working in the areas of muscle biology and animal growth and development.

Contact:

Dr. S. A. Ewing, Head
Dept. of Animal Science
101 Kildee Hall
Iowa State University
Ames, Iowa 50011

PIONEER ENDOWED PROFESSORSHIP

Iowa State University seeks a plant molecular biologist to conduct research in the molecular biology of maize. Possible areas of interest include, but are not limited to, the genetics, biochemistry, and physiology of maize. The individual will interact with internationally respected maize geneticists and breeders, will work in state-of-the-art facilities, and will have access to a large collection of superior quality germplasm and genetic stocks. The individual's research program will receive generous start-up funds and annual income from a \$1 million endowment. The academic level of appointment will depend on the qualifications of the successful candidate. The department affiliation(s) and teaching responsibilities will be determined by the interest and expertise of the individual and the needs of the university.

Contact:

Walter R. Fehr
Biotechnology Coordinator
1301 Agronomy Building
Iowa State University
Ames, Iowa 50011

MICROBIOLOGIST DEPT. OF MICROBIOLOGY

We seek a microbiologist who will conduct strong basic research at the molecular level on some aspect of microbial interaction with plants, animals, or other microbes. The individual will share in the instructional responsibilities of the department. A Ph.D. in microbiology or a closely related discipline and postdoctoral experience are required. Preference will be given to applicants with teaching and/or industrial experience.

Contact:

Dr. Fred D. Williams, Chair
Dept. of Microbiology
205 Science Building 1
Iowa State University
Ames, Iowa 50011

MOLECULAR BIOPHYSICIST DEPT. OF BIOCHEM. & BIOPHYS.

The university seeks an outstanding individual whose research interests are in molecular biophysics. Preference will be given to applicants involved in the application of NMR techniques to the solution of biological problems. The individual will share in the instructional responsibilities of the department at the undergraduate and graduate levels. Qualifications include a Ph.D. degree and a record of excellence and productivity in scholarly research.

Contact:

Dr. Herbert J. Fromm
Dept. of Biochem. & Biophys.
Iowa State University
Ames, Iowa 50011

The university also invites applications for the Pioneer Endowed Professorship in the molecular biology of maize. This position, described in detail below, has a generous start-up package plus annual support from a \$1 million endowment.

Applicants for the tenure-track faculty positions or the endowed professorship should submit a letter of application; a curriculum vita including past and current research activities and publications; and 3 letters of reference to the appropriate contact. Closing date for all positions: January 1, 1988.

MAIZE MOLECULAR GENETICIST DEPT. OF GENETICS

The university seeks a molecular geneticist to conduct research on maize. The new appointee will interact with other maize geneticists on campus to further an already well-established maize research program. The individual will share in the instructional duties of the department at the graduate and/or undergraduate level. Postdoctoral experience is required.

Contact:

Dr. Donald Robertson
Dept. of Genetics
10 Curtiss Hall
Iowa State University
Ames, Iowa 50011 (515-294-3908)

FUNGAL OR PLANT MOLECULAR BIOLOGIST DEPT. OF BOTANY

The individual will conduct basic research on the molecular biology of fungi or plants. The successful candidate will have excellent opportunities for interaction with researchers in biochemistry, genetics, plant physiology, and related disciplines. Teaching responsibilities will include a one-semester graduate course in the applicant's specialty and participation in a one-semester undergraduate course. Preference will be given to applicants with postdoctoral experience.

Contact:

Chair, Dept. of Botany
Iowa State University
Ames, Iowa 50011

MOLECULAR BIOLOGIST DEPT. OF PLANT PATHOLOGY

The successful candidate will be expected to develop a cooperative program of basic research on the molecular mechanisms involved in plant-parasite interactions. Approaches may include, but are not limited to, molecular genetics, physiology or biochemistry of the interaction of fungi, bacteria, viruses, or nematodes with plants. The individual will share in the instructional duties of the department. Postdoctoral experience is preferred.

Contact:

Dr. John H. Hill
Molecular Biology Search Committee
Dept. of Plant Pathology
351 Bessey Hall
Iowa State University
Ames, Iowa 50011

PLANT MOLECULAR BIOLOGIST

Iowa State University seeks an individual to lead a basic research program in the biosynthesis of plant constituents. An individual with training and expertise in biochemistry and genetics is desired. The department affiliation(s) and teaching responsibilities will be determined by the interest and expertise of the individual and the needs of the university.

Contact:

Dr. Donald J. Graves
Dept. of Biochem. & Biophys.
Iowa State University
Ames, Iowa 50011

Iowa State University is an Equal Opportunity-Affirmative Action Employer.

POSITIONS OPEN

MOLECULAR BIOLOGIST UNIVERSITY OF MISSOURI-ROLLA

The Life Sciences Department of the University of Missouri-Rolla invites applications for a tenure-track assistant professor position to begin fall, 1988. Requirements include a recent Ph.D. degree in a molecular approach to botany, parasitology, microbiology, or virology, with demonstrated ability to teach and conduct independent research. Postdoctoral experience, command of recombinant DNA techniques, and ability to contribute to a developing bioengineering program are desirable. Send curriculum vitae, recent publications, a statement of research interests, and three letters of reference before 31 December 1987 to: **Dr. Nord L. Gale, Chairman, Department of Life Sciences, University of Missouri-Rolla, Rolla, MO 65401.** *The University of Missouri is an Equal Opportunity/Affirmative Action Employer.*

Exceptional opportunity for **THREE MOLECULAR BIOLOGISTS**, one senior and two junior, to conduct independent research, cooperate with colleagues, and participate in the teaching program, in a department with notable strength in developmental biology. Send curriculum vitae and three references to: **Dr. Dale E. Bockman, Department of Anatomy, Medical College of Georgia, Augusta, GA 30912-3305.** *Equal Opportunity/Affirmative Action Program.*

M.S. IN BIOTECHNOLOGY. A graduate program in biotechnology is offered at the University of Tennessee, Knoxville. It includes extensive training in cell biology and recombinant DNA methodologies, as well as process engineering, plant and animal tissue culture, and monoclonal antibodies. It also includes either co-op experience with industry, or a traditional thesis in an area of specialization. Seminar on sociological, bioethical, and regulatory aspects of biotechnology is part of the program. Financial assistance is available. Please apply to:

**Program Director, Biotechnology
M303 WLS Building
The University of Tennessee
Knoxville, TN 37996-0830**

NEUROSCIENTIST. Position available for Ph.D. neuroscientist at the research assistant professor level in Pediatrics in the Division of Child Development and Rehabilitation at the Children's Seashore House, The Children's Hospital of Philadelphia, and the University of Pennsylvania School of Medicine. Position involves collaboration in research project studying effects of ammonia on excitatory neurotransmitters. Send curriculum vitae, names of three references, and a letter indicating your interest to: **Mark L. Batshaw, M.D., Children's Seashore House, 34th Street and Civic Center Boulevard, Philadelphia, PA 19104.** *Children's Seashore House, The Children's Hospital of Philadelphia, and The University of Pennsylvania are Equal Opportunity/Affirmative Action Employers.*

NEUROSCIENTISTS

Two tenure-track positions are available at the assistant professor level in the Department of Anatomy and Neurobiology. Applicants should have a minimum of 2 years of postdoctoral training, and a strong record of research productivity and potential to establish an independent research program. Preference will be given to applicants with research interests in developmental, molecular, or systems neuroscience. The quality of research program as well as the potential for interaction with present faculty members is more important than the specific type of research. Preference for one of the positions will be given to individuals with experience in gross anatomy. Teaching responsibilities for the second position include neuroscience and/or histology. Both individuals will be expected to participate in a multidisciplinary neuroscience graduate program. Send curriculum vitae, description of research interests, summary of teaching experience, and names of three references by 1 December 1987 to: **Dr. Rodney L. Parsons, Chairman, Department of Anatomy and Neurobiology, College of Medicine, The University of Vermont, Burlington, VT 05405.**

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

BIOCHEMIST/MOLECULAR BIOLOGIST Ph.D. LEVEL Pharmaceutical Research

The Parke-Davis Pharmaceutical Research Division of Warner-Lambert has an opening for a creative and energetic scientist to join the Biochemistry Section within our Pharmacology Department.

Qualifications should include:

- Ph.D. or equivalent in biochemistry or related discipline with strong emphasis on molecular biology
- One to two years postdoctoral research in modern molecular biology with emphasis on protein separation and purification
- Background with enzymes involved in the biosynthesis or action of arachidonic acid metabolites or with protein mediators is desired
- Effective oral, written and interpersonal skills

Responsibilities will be:

- Bench level studies using modern molecular biology technologies to separate and purify enzymes and other therapeutically relevant proteins
- Interact with other biochemists, biologists, medicinal chemists and pharmacologists involved in ongoing drug discovery efforts

We offer excellent compensation and benefits at our modern facilities adjacent to the University of Michigan campus. Qualified applicants should send curriculum vitae in confidence to: **Sandra Hultquist, Human Resources, Warner-Lambert/Parke-Davis, 2800 Plymouth Rd., Ann Arbor, Michigan 48105.**

An Equal Opportunity Employer

PARKE-DAVIS

Div. of Warner-Lambert Co.

ASSISTANT SCIENTIST

Protein Biochemistry

H

offmann-La Roche is one of the world's most progressive and respected leaders in the fields of pharmaceuticals and medical research. Due to our commitment to the advancement of modern science, we are seeking an Assistant Scientist to join our Protein Biochemistry Department.

You will become involved in the purification of proteins (HPLC, gel electrophoresis and affinity chromatography), immuno and enzymatic assays, and the chemical modification of proteins. To qualify, you should have a BS/MS in Chemistry or Biochemistry (or equivalent), the self-motivation needed to work effectively with limited supervision, and excellent verbal/written communication skills. 1-2 years of related experience would be a plus.

In return, we offer a competitive salary, excellent benefits, and the resources of a large, research driven organization. For consideration, please send your resume, indicating salary history and requirements (those resumes without this information will not be acknowledged) to: **Frances Newman, Hoffmann-La Roche Inc., Nutley, New Jersey 07110.** We are an equal opportunity employer.



Hoffmann-La Roche

Working Today For a Healthier Tomorrow.

Membrane Biochemist, Ph.D.

Merck Sharp and Dohme Research Laboratories is currently seeking a Ph.D. Senior Research Membrane Biochemist to join the department of Membrane Biochemistry & Biophysics. The position involves the study of protein chemistry aspects of ion channels/transport proteins with particular emphasis on protein purification and elucidation of structure-function relationships as they pertain to membrane protein activity. The position requires a Ph.D. in biochemistry with at least two years of postdoctoral experience in membrane biochemistry. The candidate should have a broad knowledge of membrane proteins with demonstrated strengths in the purification of ion channels or transport proteins, reconstitution of membrane proteins and the development of procedures for the assay of ion channel/transport protein function.

Merck Sharp & Dohme Research Laboratories is located in Rahway, New Jersey approximately 25 miles from New York City. Our salaries, benefits, and growth potential are excellent.

Interested candidates should submit their resume with the names of three references and salary requirements to: **Ms. Jacqueline A. Eiermann, Merck & Co., Inc., P.O. Box 2000, Rahway, New Jersey 07065.**

Equal Opportunity Employer



Merck & Co., Inc.

Immunology/Pharmacology

THE LILLY RESEARCH LABORATORIES, a Division of Eli Lilly and Company, is expanding its effort in biotechnology and cell biology. A senior scientist is needed in the Cytokine Research Group to develop an independent research program to address the role of cytokines in disease. Experience related to receptor regulation, signal transduction, and/or hematopoietic cell proliferation and differentiation is preferred. The successful candidate should have a Ph.D. and significant postdoctoral experience in the fields of pharmacology, immunology, and/or cell biology. Opportunities are available for collaboration with immunologists, pharmacologists, biochemists, cell biologists, molecular biologists, pathologists and medicinal chemists. The research group is located in a new building with state-of-the-art equipment, laboratories and support.

Interested applicants should send a curriculum vitae to:



John W. Crooks
Manager, College Relations SBR/(S₁)
Eli Lilly and Company
Lilly Corporate Center
Indianapolis, IN 46285

Equal Opportunity Employer

Challenges in Biotechnical R&D

Join us where creative thinking meets broadscoped challenges. Becton Dickinson in Northern Baltimore County, Maryland, is making significant discoveries with direct impact on technical immuno products and processes.

We currently seek highly knowledgeable, widely experienced professionals for the following key roles:

Virologist—Virus Production: Requires PhD in Virology or related field, 1–3 years experience in large-scale production/purification of viruses, and a thorough understanding of GMP requirements. Supervisory skills and prior experience with retroviruses would be helpful.

Project Manager—Technical Transfer Group: To resolve technical problems in transfer of technology to Manufacturing and Quality Control. Qualifications include PhD or equivalent in Immunology or Biochemistry or related sciences. Thorough knowledge and experience in various immunological/immunochemical/biomedical methods of *in-vitro* diagnostic testing with background in microbiology/disease detection.

Group Leader—Biochemistry: To supervise scientists in developing automated non-isotopic immunoassays for diagnostic testing. Requires PhD in Chemistry or related science, and demonstrated experience in development of commercial immunoassays.

Clinical Trial Coordinator: Requires MS or MA degree (PhD a plus) with 6 years post-graduate experience. Must be thoroughly familiar with clinical laboratory instrumentation, *in-vitro* diagnostic products, and able to interact with both independent research and clinical scientists on collaborative studies.

As a nationally respected Fortune 500 health care industry pacesetter, we can offer competitive salaries, excellent benefits and high potential for achievement. Please send resume, including salary history, indicating position of interest, to: Mrs. Robin L. Vedova, Director, Human Resources, Becton Dickinson, 383 Hillen Road, Towson, MD 21204. An equal opportunity/affirmative action employer.

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**BECTON
DICKINSON**

MS/BS Biology/Biochemistry

ASSOCIATE SCIENTIST SCREENING & BIOCHEMICAL RESEARCH

Bristol-Myers is a worldwide leader in the research, development, and marketing of sophisticated pharmaceutical, medical care, consumer and nutritional products. Currently, our Pharmaceutical Research & Development Division, located in Wallingford, CT, can offer you a unique opportunity to continue your career in our "world class" research environment.

Our successful candidate will have a **BS/MS in Biology/Biochemistry** with direct research experience in receptor binding techniques. Additional exposure to automated receptor binding measurement systems, autoradiographic techniques, and/or receptor isolation and purification would be a considerable asset.

Bristol-Myers offers an excellent salary and a comprehensive benefit package including relocation assistance. For confidential consideration, forward your resume, including salary history to: **Bristol-Myers Company, Pharmaceutical Research & Development Division, Department PD/39, P.O. Box 5100, Wallingford, CT 06540.** An equal opportunity employer. (Principals Only Please)

Bristol-Myers

STATE UNIVERSITY OF NEW YORK AT BUFFALO

BIOLOGICAL SCIENCES—FACULTY OPENINGS

TWO ASSISTANT PROFESSORSHIPS: Our goal is to hire individuals who can interact with other members of our faculty and whose research program is in the forefront of his/her field. Serious candidates will be expected to be utilizing modern genetic and molecular approaches to the study of one of the following areas: (a) the *immune system* at the cellular level, (b) the development of an organism which provides a model system for studies in *development*, or (c) regulation in an organism to provide a model for studies of regulation at the level of *gene transcription*.

Successful candidates will be expected to have completed at least two to three years of post-doctoral experience, demonstrate experience in a productive research program, be able to describe in detail plans for future research activities, and show promise for establishing a fundable independent research program.

Candidates will also be expected to demonstrate above average teaching ability for both undergraduate and graduate teaching. *Salary will be nationally competitive; excellent laboratory space and equipment available.*

To apply, candidates must submit a curriculum vitae, including a statement of research background and teaching experience, and at least *three letters of reference*, to **Dr. Darrell Doyle, Chairman, Department of Biological Sciences, 109 Cooke Hall, State University of New York at Buffalo, Buffalo, NY 14260.** *Application deadline is December 18, 1987.*

State University of New York is an Affirmative Action/Equal Opportunity Employer.

Analyst

The Department of Pharmaceutical Research and Technologies at Smith Kline and French Laboratories, located in suburban Philadelphia, is seeking a qualified candidate to join an innovative preformulation group. The primary responsibilities for the position available are to assist in the characterization of macromolecular biopharmaceuticals including development and validation of stability indicating assay methods to characterize and test macromolecular biopharmaceuticals. The successful analyst will use these developed methodologies to provide analytical support to formulators and provide stability testing data for macromolecular drug substances and formulated products. The successful candidate is required to have an M.S. in Chemistry or Biochemistry with 4 or more years of industrial experience in bioanalytical chemistry, including manipulation and analysis of protein solutions. Additional experience in the development of enzyme assay methods and the analysis of enzyme activity is preferred.

We offer an excellent compensation, benefits and relocation package as well as opportunities for personal and professional growth. Please forward your C.V. and the names of three references to: Mary Ann McCarry, Senior Employment Consultant-C0050, Smith Kline & French Laboratories, Research & Development, P.O. Box 1539, King of Prussia, PA 19406-0939. We are an Equal Opportunity Employer, M/F/H/V.

SK&F
A SmithKline Beckman Company

POST DOCTORAL RESEARCH FELLOW & ASSOCIATE RESEARCH SCIENTIST

Positions are available immediately for rapidly expanding NIH-supported program to study the structure and function of the human immune efficiency virus (HIV) genome, and to investigate the effects of HIV infection on cellular gene expression. Applicants for either positions should have a PhD or MD degree and strong background. These positions will include appointments at the College of Physicians and Surgeons of Columbia University. Send CV and list of references to David J. Volsky, PhD, Molecular Virology Laboratory, St. Luke's/Roosevelt Hospital Center, 428 West 59th Street, New York, NY 10019. An Equal Opportunity Employer M/F.

ST. LUKE'S ROOSEVELT
Hospital Center

POST DOCTORAL FELLOW

To study the molecular mechanisms of immunodeficiency virus (HIV) infections using molecular biology techniques. Qualifications include a Ph.D. degree or the equivalent in molecular biology or biochemistry, with experience in tissue culture, cloning and gene sequencing preferred. Position available immediately with funding support for at least 2 years. Please send application, with curriculum vitae and 2 names for reference purposes (and quoting Post Doctoral position), to: **Dr. B.R.G. Williams/Dr. A.S. Lau, Division of Infectious Diseases.**



555 University Avenue, Toronto, Ontario M5G 1X8

THE HOSPITAL FOR SICK CHILDREN



CONSULTANT TOXICOLOGIST (DRUG EVALUATOR)

The Australian Department of Community Services and Health is seeking additional consultants to evaluate pharmacology and toxicology data submitted by pharmaceutical companies in support of applications for general marketing of new products.

Consultants will be located at their existing place of residence/work and will conduct evaluations on a contract basis.

Applicants will be expected to have post-doctoral research experience with a good general knowledge of pharmacology and toxicology and considerable experience of drafting scientific reports.

Applications should be accompanied by a curriculum vitae and list of current interests, highlighting qualifications and experience related to the position, and nominating two referees.

Applications close 4 weeks from the date of this publication and should be sent to:

**Dr. John Donohoe
Drug Evaluation Branch,
Commonwealth Department of
Community Services and Health
P.O. Box 100
WODEN, ACT 2606
AUSTRALIA.**

R&D Scientists

CRYSTAL DIAGNOSTICS is a rapidly growing company applying a unique patented technology to industrial and biomedical diagnostic devices. Several new positions are available for highly motivated individuals in the biomedical R&D group:

Senior Scientists

The positions require a Ph.D with three years' industrial experience in the development of test kits for standard clinical chemistries or immunodiagnostics. Familiarity with dry reagent chemistry would be a definite advantage.

Associate Scientists

Clinical Chemistry or Immunodiagnostics. The positions require a B.S. degree with at least 2 years' industrial experience in (1) the development of clinical chemistry test kits or (2) experience in protein purification and labeling, nonisotopic immunoassay kit development for drugs, or solid phase chemistry and characterization.

Successful candidates will enjoy the opportunity of working in a dynamic and creative environment. We offer competitive salaries and benefits. Qualified candidates should send a detailed resume to the **Personnel Manager at: Crystal Diagnostics, Inc., 600 West Cummings Park, Woburn, MA 01801.**

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DIAGNOSTICS**

Engineers

Physics and Superconducting Apparatus

CEBAF, The Continuous Electron Beam Accelerator Facility, will be a 4 GeV high-intensity continuous wave electron accelerator utilizing superconducting RF technology. Close to historic Williamsburg, Virginia Beach, and a short jaunt from the nation's capital, we offer an excellent environment for talented individuals to grow within their field. Opportunities now exist in the following disciplines:

- Experimental Hall Chief Engineer
- Magnetic Measurements Project Engineer
- Superconducting RF Cavity Cryostat Engineer

Experience a must in one of the following areas:

Design, acquisition, construction and commissioning of physics apparatus, vacuum hardware, cryogenic apparatus, superconducting magnets, precision measurement apparatus, pressure vessels and radiofrequency cavities.

Qualified candidates are invited to submit resume with salary history to: **Employment Manager, CEBAF, 12070 Jefferson Avenue, Newport News, VA 23606.**

CEBAF

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

POSITIONS OPEN

NEUROANATOMIST

McLean Hospital, a national leader in psychiatric care and research, has a postdoctoral research fellowship available for a recent graduate with an interest in pharmacology and mental disorders. Electron microscopy experience is highly desirable. Salary range: \$22,406 to \$23,456. Position is available for a minimum of 1 year, with the possibility of extension to 3 years. Send résumé and names of three references to: **Dr. F. M. Benes, Mailman Research Center, McLean Hospital, Harvard Medical School, Belmont, MA 02178. An Equal Opportunity Employer.**

NEUROPHYSIOLOGIST UNIVERSITY OF CALIFORNIA (UC) SAN DIEGO

The Division of Orthopaedics and Rehabilitation, University of California, San Diego, is seeking a full-time neurophysiologist, preferably with research experience in the area of neural control of movement. Appointment will be at the assistant or associate professor level in the in-residence series (benefits and privileges equivalent to tenure track, however, tenure not available at this time due to funding source). The successful candidate must have a Ph.D. in neurophysiology or a closely related area and preferably have completed 2 years of postdoctoral experience. The candidate must also have a clearly demonstrated record of independent research and ability to perform graduate level instruction. Level and step of appointment is commensurate with qualifications and experience and based upon UC pay scale. Duties will include (i) collaborative and independent research in neurophysiology, and (ii) graduate level basic science instruction. Send curriculum vitae and list of three reference names and addresses to: **Richard L. Lieber, Ph.D., University of California, San Diego V-151, 3350 La Jolla Village Drive, San Diego, CA 92161. Applications must be received by 20 November 1987. Affirmative Action/Equal Opportunity Employer.**

NEUROSCIENCE UNIVERSITY OF CALIFORNIA, SANTA BARBARA

The Department of Psychology announces a **TENURE-TRACK POSITION** in neuroscience, effective fall 1988. Responsibilities include teaching at both undergraduate and graduate levels, and supervision of students in research. Ph.D. required at time of appointment. Postdoctoral research experience and significant skills in the structural analysis of mammalian nervous systems desired. Potential areas of interest include vision, learning/memory, or motivation. Evidence of excellence in teaching and research is required. The position is open at the assistant professor level. Submit curriculum vitae and reprints, and arrange for three letters of recommendation to be sent to: **Biopsychology Search Committee, Department of Psychology, University of California, Santa Barbara, CA 93106. Applications must be received by 15 December 1987. Equal Opportunity/Affirmative Action Employer. Proof of U.S. citizenship or eligibility for U.S. employment will be required prior to employment (Immigration Reform and Control Act of 1986).**

NEUROSCIENTIST FACULTY POSITIONS

Applications are invited for two tenure-track positions at the assistant professor level in the Medical Sciences Program of the Indiana University School of Medicine on the Bloomington Campus. Applicants must have an earned doctoral degree with postdoctoral research training, in addition to teaching experience in the respective discipline at the medical and graduate level. The positions require establishing a strong independent research program, and participation in the program's teaching efforts and doctoral programs. **Assistant Professor of Biochemistry:** the preferred research interests include neurochemistry and/or molecular mechanisms of effector-receptor systems. **Assistant Professor of Physiology:** research interests should interact with the strengths in neuroscience and growth and development. Applicants must submit curriculum vitae, a brief description of research and teaching interests, and three letters of recommendation to: **Chairman, Search and Screen Committee, Medical Sciences Program, Indiana University, Bloomington, IN 47405.**

Deadline for receipt of applications is 1 December 1987. *An Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

PHYSIOLOGY-CELL BIOLOGY SENIOR POSITION

We are seeking applicants with established records of excellence in teaching and research in cell and molecular biology or physiology with a cellular emphasis. Rank and term of appointment to be negotiated depending on credentials. Teaching responsibilities will include courses in physiology or cell biology. Faculty are expected to conduct active, research programs in which qualified undergraduates may be involved. Start-up funds for research are provided. Position available 1 July 1988. Please send curriculum vitae, statement of research/teaching interests, and names and addresses of three references by 15 January 1988 to: **William C. Grant, Jr., Chair, Department of Biology, Williams College, Williamstown, MA 01267.**

An Equal Opportunity/Affirmative Action Employer, Williams College especially welcomes applications from women and minority candidates.

PLANT GENETICIST—The Department of Botany at the University of Vermont seeks applicants with exceptional records of research accomplishment for a tenure-track appointment as assistant professor. The successful candidate will be expected to prosecute a competitive research program in contemporary molecular genetics, and participate in the undergraduate and graduate teaching program of the Department. This position offers excellent opportunities for diverse interactions with an expanding group of molecular geneticists in several departments. Applicants with Ph.D. and postdoctoral experience should forward curriculum vitae, research plans, statement of teaching interests, and arrange to have three letters of recommendation sent by 15 December 1987 to: **Geneticist Search Committee, Botany Department, Life Science Building, University of Vermont, Burlington, VT 05405-0086. The University of Vermont is an Equal Opportunity/Affirmative Action Employer.**

PLANT PHYSIOLOGIST/PLANT ECOLOGIST

Applications are invited for the position of **RESEARCH SCIENTIST** (rank open) for the Biological Sciences Center, one of five research centers of the Desert Research Institute (DRI), a division of the University of Nevada System. The Biological Sciences Center is currently pursuing regional ecosystem studies, global changes research, and programs addressing biosphere-atmosphere interactions for government and industry.

Applicants must have a Ph.D. in plant sciences, professional experience beyond the Ph.D., a strong publication record, and the proven ability to attract research funding. Grant support and generous start-up funds are immediately available. A research background emphasizing plant-atmosphere interactions and/or remote sensing is highly desirable.

Salary is commensurate with qualifications and includes an excellent benefit package. Applications must be received by 20 November 1987. Send curriculum vitae, statement of research interests, and names of three references to: **Personnel Office, Desert Research Institute, P.O. Box 60220, Reno, NV 89506. For additional information contact: Dr. Carl Fox at 702-673-7322. DRI is an Affirmative Action/Equal Opportunity Employer.**

POSTDOCTORAL FELLOW (Department of Medicine), M.D. or Ph.D. in physiology. Project includes preparing flight experiment for NASA program and related ground studies. Experience required in cardiopulmonary physiology. Salary related to years of experience in accordance with NIH guidelines. Apply to: **Dr. John B. West, Division of Physiology, M-023A School of Medicine, University of California, San Diego (UCSD), La Jolla, CA 92093. UCSD is an Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL FELLOW, PULMONARY HYPERSENSITIVITY. Position beginning immediately with assured support for 3 years to develop methods for assessing the allergenic potential of inhaled anthroquinone-based dyes in small laboratory animals. These methods will then be used to evaluate several dye mixtures. Work would involve close collaboration with established small animal pulmonary physiologists and immunotoxicologist. Send curriculum vitae to: **Robert Spratt, Center for Environmental Medicine, University of North Carolina—Chapel Hill, Trailer #4, Medical Research Building C, CB#7310, Chapel Hill, NC 27599.**

POSITIONS OPEN

POSTDOCTORAL FELLOW/RESEARCH ASSOCIATE POSITION in neuronal transplantation and regeneration studies involving the mammalian visual system. A 2-year position with an option for an additional year will be available on 1 December 1987 for a candidate who has extensive training in neuroanatomical and immunohistochemical techniques at the light and electron microscopic levels. Starting date and salary negotiable. Send curriculum vitae and names of three references to: **Dr. James E. Turner, Department of Anatomy, Bowman Gray School of Medicine, Wake Forest University, 300 South Hawthorne Road, Winston-Salem, NC 27103.**

An Affirmative Action/Equal Opportunity Employer.

A position is available for a **POSTDOCTORAL FELLOW** interested in lipid metabolism and eicosanoid synthesis. Studies will be done in normal and immunologically challenged rabbit macrophages. For further details contact: **Dr. Moseley Waite, Chairman, Department of Biochemistry, Bowman Gray School of Medicine, Winston-Salem, NC 27103. Telephone: 919-748-4373.**

An Affirmative Action/Equal Opportunity Employer.

POSTDOCTORAL FELLOWS. Two research positions available immediately. One to supervise antifungal drug development program. Should have microbiology degree, preferably with mycology experience/background. Will participate in drug/lipid-based drug carrier development. Second position to study the role of retinoids in differentiation of myelomonocytic cells. A Ph.D. in cell biology/pharmacology and familiarity with tissue culture, HPLC, and protein purification. Send curriculum vitae and three letters of reference to: **Dr. Gabriel Lopez, Department of Clinical Immunology, Box 41, UT M. D. Anderson Hospital, 1515 Holcombe Boulevard, Houston, TX 77030. An Equal Opportunity Employer/Affirmative Action.**

A **POSTDOCTORAL POSITION** is available immediately for a recent Ph.D. graduate to study the neuronal mechanisms of opioids and opioid peptides on the production of analgesia. Studies encompass pharmacologic, neurochemical and neuroanatomic approaches. Send curriculum vitae and names of three references to: **Dr. Leon Tseng, Department of Pharmacology, Medical College of Wisconsin, 8701 Watertown Plank Road, Milwaukee, WI 53226. An Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL POSITION. Cloning, sequencing, and expression of a gene encoding a mammalian membrane transport protein. Send curriculum vitae and names of two references to: **Dr. J. F. Lever, Department of Biochemistry and Molecular Biology, University of Texas Medical School, P.O. Box 20708, Houston, TX. 77225. An Equal Opportunity Employer: Women and minorities are encouraged to apply.**

POSTDOCTORAL POSITION available immediately on NIH-sponsored research program to investigate mechanisms of excitation-contraction coupling in airway smooth muscle. Project will include the use of intracellular Ca^{2+} indicators, mechanical perturbations and electrophysiological techniques. Excellent stipend and fringe benefits. Submit curriculum vitae, statement of research interests, and names of three references to: **Dr. S. J. Gunst, Department of Physiology, Mayo Clinic/Foundation, Rochester, MN 55905. An Equal Opportunity/Affirmative Action Institution.**

POSTDOCTORAL POSITION UNIVERSITY OF SOUTHERN CALIFORNIA

Postdoctoral position available immediately to work on pharmacological and molecular characterization of novel regulatory sites coupled to the GABA/benzodiazepine receptor-chloride ionophore complex. Project involves protein purification, isolation, and characterization of regulatory site encoding cDNAs, and structure-function studies of these proteins. Background in protein biochemistry or neurochemistry desired. Send curriculum vitae, research interests, and three references by 30 November 1987 to **Dr. K. W. Gee, School of Pharmacy, 1985 Zonal Avenue, Los Angeles, CA 90033-1086.**

Equal Opportunity Employer M/F/H.

POSITIONS OPEN

POSTDOCTORAL POSITION immediately available for qualified M.D. or Ph.D. to study cytokine regulation; control of cachectin/TNF gene expression. Experience with techniques of molecular genetic analysis preferred. Please send curriculum vitae and letters of reference to: **Dr. B. Beutler, The Howard Hughes Medical Institute, University of Texas Health Science Center, 5323 Harry Hines Boulevard, Dallas, TX 75235-9050.**

POSTDOCTORAL POSITION IN NEUROBIOLOGY available immediately or within the year for a Ph.D. or M.D. Research will concern receptor-mediated ion currents, neurotransmission, and neural connectivity in the enteric nervous system. Experience with electrophysiological recording techniques is desirable, but on-site training will be done. Knowledge of the physiology and pharmacology of receptors will also be helpful. Salary will be appropriate to experience and the cost of living in the New York metropolitan area. Send curriculum vitae and the names of three references to:

Dr. Michael D. Gershon
Department of Anatomy and Cell Biology
Columbia University
College of Physicians and Surgeons
630 West 168th Street
New York, NY 10032

Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL POSITION available immediately to study the structure and biology of human autoantigens involved in regulation of cell proliferation and cell division. Current projects focus on analysis of PCNA, a subunit of DNA polymerase delta, and on human centromere-associated proteins. Applicants should have a Ph.D. degree with a strong background in molecular or cellular biology. Support available at NIH scale. Send curriculum vitae and three letters of reference to: **Eng M. Tan, M.D., or Kevin F. Sullivan, Ph.D., W. M. Keck Autoimmune Disease Center, Scripps Clinic and Research Foundation, 10666 North Torrey Pines Road, La Jolla, CA 92037. Scripps Clinic and Research Foundation is an Equal Opportunity Employer.**

POSTDOCTORAL POSITION available spring 1988 to investigate determinants of photolyase-pyrimidine dimer recognition and repair and/or regulation of PHR1 gene expression in yeast. Previous experience in protein biochemistry or recombinant DNA techniques highly desirable. Send curriculum vitae and names and telephone numbers of three references to: **Dr. Gwen Sancar, Department of Biochemistry, School of Medicine, CB# 7260, University of North Carolina, Chapel Hill, NC 27599-7260. Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL POSITION available immediately to study immunological aspects of tuftsin, a natural immunomodulating peptide. Experience with various in vitro cellular immunological methods is essential. Send curriculum vitae to: **Dr. Kenji Nishioka, Box 107, Surgical Research Laboratory, The University of Texas System Cancer Center, M.D. Anderson Hospital and Tumor Institute, Houston, TX 77030. An Equal Opportunity Employer.**

POSTDOCTORAL POSITIONS (two) available immediately to develop and apply rapid-freezing electron microscopy techniques, in conjunction with time-resolved x-ray diffraction measurements, to structural studies of the mechanism of muscle contraction and other forms of cell motility. Experience in electron microscopy, x-ray diffraction, or muscle physiology desirable. Salaries up to \$23,500. Send curriculum vitae and names of three references to: **Dr. Hugh Huxley, Rosenstiel Center, Brandeis University, Waltham, MA 02254.**

POSTDOCTORAL POSITION in molecular aspects of tumor metastasis. Candidates should have experience in experimental tumor biology or molecular biology of tumor properties, or both. To apply, send curriculum vitae and names, addresses, and telephone numbers of three references to: **Dr. Ann Chambers, London Regional Cancer Centre, 391 South Street, London, Ontario N6A 4G5, Canada.**

POSTDOCTORAL ASSOCIATE

MIT's Department of Applied Biological Sciences seeks a postdoctoral associate for a research project aimed at developing improved adjuvants and novel immunization systems, with particular emphasis on applications to sub-unit vaccines. Ph.D. or M.D. degree with an immunology background.

Interested candidates should send two copies of both cover letter and resume referencing Job No. C87-236 to: **Mr. Ken Hewitt, c/o MIT Personnel Office (E19-239), 77 Massachusetts Avenue, Cambridge, MA 02139.**

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MIT

SENIOR EXECUTIVE ASSOCIATE DEAN

EMORY UNIVERSITY SCHOOL OF MEDICINE

Emory University School of Medicine invites applications for the position of Senior Executive Associate Dean.

The Senior Executive Associate Dean has the responsibilities to advise the Dean on the assignment of duties and responsibilities of the Dean's Staff. A major responsibility is the coordination of the staff in the performance of their assigned duties. Particular oversight is required for the following operations performed by the staff: Budget preparation and management; Faculty and personnel management, including recommendations concerning salaries; Grants and contracts management; Oversight of the special review committees and recommendations in regard to committee assignments; Space planning management which includes facilities renovations, maintenance projects and budget/bid reviews and negotiations; Oversight of planning and development of new construction; Provides analyses of fiscal reports and data to the Dean; Oversight of long-range planning and development of a strategy to achieve the ultimate goals of the School of Medicine.

The Senior Executive Associate Dean should have an M.D. or Ph.D. degree and have had at least five years experience in research and/or administration following either clinical training or postdoctoral training.

Salary is negotiable. Nominations and applications should include a current curriculum vitae and the name of three references and submitted by December 1, 1987 to:

Senior Executive Associate Dean Search Committee
412 Woodruff Health Sciences Center
Emory University School of Medicine
Atlanta, GA 30322

An Equal Opportunity Employer.

CLINICAL SCIENTIST—MICROBIOLOGIST

The Parke-Davis Pharmaceutical Research Division has an immediate opening in the Clinical Infectious Disease group for a Clinical Scientist.

The responsibilities for this position will be to design, implement, and monitor clinical programs with anti-infective agents; to write/review research reports and manuscripts; to interact with domestic and international investigators and regulatory agencies; and, to participate in Clinical Research Department administration and planning.

The requirements for this position include a Ph.D. in microbiology or equivalent, with three to five years clinical infectious disease background and research experience; industry experience preferred.

Our modern facilities located adjacent to the University of Michigan campus are devoted entirely to research. Ann Arbor provides a superb quality of life in a stimulating academic community with ready access to major metropolitan centers.

Candidates interested in joining this very active team should send resume, reference list, salary requirements, in confidence to: **Ms. M. Wolin, Sr. Human Resources Representative, Parke-Davis, 2800 Plymouth Road, Ann Arbor, Michigan 48105.**

WARNER LAMBERT

"EQUAL OPPORTUNITY IN ACTION"

Postdoctoral Scientist Molecular Pharmacology

The Molecular Pharmacology Department, directed by Dr. Stanley T. Crooke, at Smith Kline & French Laboratories, located in suburban Philadelphia, Pennsylvania, is seeking a Postdoctoral Scientist to participate in isolation and characterization of receptors involved in phospholipid metabolism and characterization of pharmacological and/or biochemical agents in signal transduction.

We consider postdoctoral studies to be of major importance in an individual's career and encourage publication of findings in leading journals and full interaction with the scientific community. Our postdoctoral appointments are normally for two years duration.

The successful candidate is required to have:

- Ph.D. with 0-2 years of postdoctoral experience required.
- training in protein chemistry, receptor biology, biochemical pharmacology or equivalent molecular biological experience.
- experience and/or practical knowledge in phospholipid/Ca²⁺ metabolism and signal transduction mechanisms.

We offer excellent compensation and benefits and an attractive relocation policy. For confidential consideration, send your C.V. and the names of three references to Robert F. Obst, R&D Senior Employment Consultant, SmithKline Beckman Corporation, 1554 Spring Garden Street, Philadelphia, PA 19101. We are an Equal Opportunity Employer, M/F/H/V.

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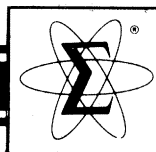
Coagulation Chemist

Sigma Chemical Company, a world renowned manufacturer of biochemicals and diagnostic reagents, is seeking a PhD Biochemist or Clinical Chemist to add to its coagulation staff. The successful candidate will have at least two years' experience in clinical coagulation. Industrial experience in the development of diagnostic reagents preferred. Excellent opportunity for a Chemist with a desire to grow into a supervisory position. Full company paid benefits. Send resume to:

Personnel Department
Sigma Chemical Co.
3500 Dekalb

St. Louis, Missouri 63118

Equal Opportunity Employer M/F



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CHEMICAL COMPANY

Opportunities in Biotechnology

For over 25 years, we have been investing our time and resources in the future of biotechnology. Today, our investment is paying off with outstanding career opportunities in this rapidly expanding field. Collaborative Research is a leader in the development, manufacture and marketing of biotechnology products and services for healthcare and industry.

HUMAN GENETICS -

Post docs (temporary, 2 year positions)

Scientific Computer

Applications - We seek an individual with research interests in applications of computing to molecular genetics. Responsibilities will be to work with a mathematician/molecular biologist in developing techniques for applying linkage analysis with DNA markers to the study of quantitative traits. A PhD in Genetics, Molecular Biology, Biology or Mathematics and programming ability is essential. Experience with molecular cloning techniques is desirable.

Molecular Geneticist - We are also seeking a molecular geneticist with expertise in state-of-the-art molecular cloning techniques to apply to the genetics of humans and the development of medical diagnostics. The position requires a PhD in Genetics, Molecular Biology or related discipline.

PHARMACEUTICAL R + D -

Cell Biologist - To apply innovative techniques in the expression of heterologous genes in mammalian cells as well as to do original research in cell culture. Successful candidate will serve as a vital link in our program aiding molecular biologists and fermentation engineers in the development of new strains, expression systems and medium designs. These efforts will be directed primarily towards maintaining our leadership position in plasminogen activators as well as in developing second generation thrombolytic molecules. A PhD in Cell Biology with appropriate postdoctoral experience is required.

Biochemical Engineer - We also seek a PhD or MS-level Biochemical Engineer with experience in yeast fermentation development. Successful candidate should possess an MS with related work experience or a recent PhD.

For consideration, please submit your CV, list of publications and the names of 3 references to the Human Resources Dept., (S10), Collaborative Research, Inc., Two Oak Park, Bedford, MA 01730. An equal opportunity employer.

Where new technologies come to life

Collaborative Research Incorporated



CARDIOVASCULAR PHARMACOLOGIST

Rorer Central Research, a rapidly expanding pharmaceutical research organization, has an outstanding career opportunity for a Section Manager in our Cardiovascular Pharmacology Group, located in suburban Philadelphia.

The successful candidate will have a PhD in Pharmacology or related discipline, with 5 to 8 years experience beyond a post-doctorate. A demonstrated expertise in the area of atherosclerosis is essential.

Responsibilities will consist primarily of supervising drug discovery and development in our atherosclerosis program by introducing and developing new approaches for prevention in treatment in this therapeutic area. Management experience in a pharmaceutical setting is desired.

If you are interested in pursuing this opportunity submit a resume including salary expectations for prompt, confidential review to **Barbara F. Lippmann, Rorer Central Research, 640 Allendale Rd, King Of Prussia, PA 19046.** An equal opportunity employer, M /F



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1515 BROADWAY
NEW YORK, N.Y. 10036**

VETERINARY PATHOLOGIST

Squibb Corporation, a Fortune 200 Company, is an internationally recognized leader in the research, marketing, and manufacture of innovative pharmaceuticals.

The Squibb Institute for Medical Research, located in New Brunswick, New Jersey, currently has an opportunity available in The Department of Pathology for a Veterinary Pathologist.

The candidate selected for this position will participate in the development of therapeutic agents. Responsibilities include evaluation of animal tissues from drug safety studies; research into mechanisms of toxicologic effects; and preparation of timely reports on pathology findings and interpretations for submission to worldwide regulatory agencies in support of drug applications.

We seek an individual who has demonstrated expertise in toxicologic pathology, a D.V.M., PhD and/or board certification by the American College of Veterinary Pathologists.

In addition to professional growth, we offer outstanding benefits and a competitive salary, commensurate with experience. For confidential consideration, please forward your resume including salary history to **E.R. Squibb & Sons, Dept. AK/E19387, E.R. Squibb & Sons, P.O. Box 191, New Brunswick, NJ 08903.** An equal opportunity employer.



SQUIBB

Where science comes to life.

Research Scientist

The Formulations Section of the Agricultural Research Division of American Cyanamid Company has an immediate opening for a protein and peptide research scientist in an Animal Health Formulations Group to develop peptide/hormone delivery systems.

Applicants should have a Ph.D. with either post-doctoral or research experience in protein chemistry. The candidate should have a strong background in either organic chemistry or pharmaceutical sciences and experience in formulations is desirable but not essential. Responsibilities include delivery system design, preformulation and stability work, and analytical method problem solving through the discovery and development of novel drug delivery systems.

American Cyanamid offers competitive salaries, benefits and a relocation package as well as opportunities for personal and professional growth. Please send resume, including salary requirements, to:
Employment Office



American Cyanamid Company
Agricultural Research Division
P.O. Box 400
Princeton, NJ 08540

An Equal Opportunity Employer M/F/H

POSITIONS OPEN

POSTDOCTORAL POSITIONS (two) (M.D. or Ph.D.), NIH-funded available immediately at Case Western Reserve University to study immunological detection of cartilage changes in animal models of osteoarthritis and disc degeneration (**Dr. Moskowitz**) and alterations in proteoglycan synthesis in human osteoarthritis (**Dr. Malemud**). Experience in RIA, ELISA, or gel electrophoresis desirable. Send curriculum vitae and names of three references to: **Roland W. Moskowitz, M.D., University Hospitals, 2073 Abington Road, Cleveland, OH 44106. An Equal Opportunity Employer.**

POSTDOCTORAL POSITIONS available January 1988 to study recognition of viral antigens (including HIV gene products) by T lymphocytes and monoclonal antibodies. Send curriculum vitae and letters of reference to: **Drs. Jack Bennink and Jonathan Yewdell, Laboratory of Viral Diseases, NIAID, National Institutes of Health, 9000 Rockville Pike, Building 5, Room 432, Bethesda, MD 20892. U.S. citizenship required. NIH is an Equal Opportunity Employer.**

POSTDOCTORAL POSITIONS IN IMMUNOTOXICOLOGY are available immediately to characterize the effect of epoxidized xenobiotics on host resistance and cell-mediated immunity. Requires a Ph.D. in a field related to immunotoxicology. Prior experience in monitoring cytotoxic T-lymphocyte and natural killer cell activity, and lymphokine production is desirable. Salary: \$22,000 to \$37,000 will be commensurate with skills and experience. Send curriculum vitae, recent reprints, and names of four references to: **Dr. Sarjeet Gill, Division of Toxicology and Physiology, University of California, Riverside, CA 92521 by 15 November 1987. An Equal Opportunity/Affirmative Action Employer.**

POSTDOCTORAL POSITIONS AVAILABLE AT THE UNIVERSITY OF CHICAGO

Postdoctoral positions available in the Trace Element Laboratory, Clinical Nutrition Research Unit, the University of Chicago. General requirements: recent doctoral degree in the appropriate field, a strong experimental background, and an interest in medical applications of trace elements. Salary range \$16,000 to \$24,000. Funds available for 2 to 3 years.

(i) ICP/MS—position involves studies of ICP/MS for accurate measurement of stable isotopes of mineral (e.g., Mg) and trace elements (e.g., Se). Requirements: knowledge/experience with ICP/MS, strong experimental/theoretical background in plasma chemistry related to ICP/MS, knowledge of isotope ratio mass spectrometry.

(ii) TI/MS—position involves development of TI/MS procedures for precise measurements of stable isotope ratios for minerals/trace elements. Requirements: strong background in TI/MS or equivalent, understanding chemical separation procedures, and interest in biological applications.

(iii) Selenium metabolism—position involves investigation of distribution of various forms of selenium in animal tissues. Qualifications: sound theoretical/experimental background in biochemistry as applied to Se or other trace elements, experience with chromatographic methods including HPLC, experimental background in protein separations.

All inquiries should be directed to: **Dr. M. Janghorbani, Department of Medicine, Box 223, University of Chicago, 5841 South Maryland Avenue, Chicago, IL 60637. Telephone: 312-702-6921.**

POSTDOCTORAL RESEARCH AFFILIATE—

Appointment available for biochemical pharmacology/toxicology studies of cancer chemotherapeutic agents. The Research program focuses (a) on enzymatic mechanisms of bio-reductive activation of compounds that react with DNA and (b) on their cytotoxic selectivity in animals. Training or recent experience in experimental cancer chemotherapy with strong biochemistry background is desirable. Appointment is for 1 year, renewable, with a competitive stipend and benefits commensurate with experience and qualifications. Curriculum vitae, summary of pertinent research experience, and names of three professional references may be sent to: **Dr. Herbert S. Schwartz, Department of Experimental Therapeutics, Roswell Park Memorial Institute, 666 Elm Street, Buffalo, NY 14263. Affirmative Action/Equal Opportunity Employer.**

SENIOR R&D CHEMIST

R.J. Reynolds Tobacco Company, an affiliate of RJR Nabisco, Inc., has an immediate opening for a Senior R&D Chemist.

The primary responsibility of the successful candidate for this position will be to plan and conduct research projects employing spectroscopic techniques in the study of indoor air quality. Research facilities and equipment are state-of-the-art. Project work will be varied and will be conducted in cooperation with a multidisciplinary team of scientists with specialized knowledge of environmental and tobacco science.

This position requires a Ph.D. Degree in Analytical, Physical/Organic, or a related field of chemistry, with emphasis or experience in optical spectroscopic techniques. Specific background in laser sources, optics, and/or data treatment, as well as knowledge of IR techniques, is desirable. Additionally, experience in the application of these techniques in environmental analysis or related fields is desirable, however, outstanding candidate with specific credentials will be considered.

This position offers the opportunity for further growth and development. Salary is commensurate with ability and experience. Winston-Salem, N.C. location with an excellent benefit package. Send resume and salary history, in confidence, to: **Mr. Thomas M. Brinkley, Manager, Recruiting, R.J. Reynolds Tobacco Company U.S.A., Reynolds Building, Winston-Salem, N.C. 27102.**

(No Telephone Inquiries, Please)



R.J. Reynolds Tobacco Company

An Equal Opportunity Employer M/F

Research Associates

Triton Biosciences Inc., a dynamic subsidiary of Shell Oil Company, is a medical products company focused on the diagnosis and treatment of cancer and life-threatening diseases. Excellent opportunities exist for BS/MS researchers as follows:

Immunology—Requires 3-5 years experience in immunological research. Should have experience in cell culture, production of monoclonal antibodies, ELISA and other immunoassays and transfections. Refer to Job BL-10.

Virology—Should have 3+ years experience in mammalian cell culture, virus propagation and viability assays. Refer to Job AT-12.

Immunodiagnostics—Will help develop new cancer assays. Requires experience in immunoassay development and familiarity with monoclonal antibody production. Refer to Job BB-14.

Triton offers competitive salary and benefits including relocation assistance. Please forward c.v. to: Triton Biosciences Inc., Attn: Employee Relations, 1501 Harbor Bay Parkway, Alameda, CA 94501. An equal opportunity employer.



Triton Biosciences Inc.

DIRECTOR MOLECULAR BIOLOGY

BOEHRINGER INGELHEIM PHARMACEUTICALS, INC., is a major researcher, developer, manufacturer and marketer of prescription and over-the-counter drugs located in DANBURY, CT. We have an opening for a Director of Molecular Biology to manage the research and development efforts of the scientific staff of the Department of Molecular Biology in the discovery of candidates for development of new drugs, and to perform studies needed to register and market drugs.

The individual we seek has a Ph.D. degree in Biochemistry and Molecular Biology with ten years relevant research experience, three of which were as a Senior Manager in a research position. You should also have an excellent publication record and the proven ability to recruit, train, motivate and retain a scientific staff.

We offer competitive salary and benefits and an innovative vacation package.

Please forward your resume including salary requirements and history to: **Box CEC-1S, R&D, BOEHRINGER INGELHEIM PHARMACEUTICALS, Inc., 90 East Ridge, P.O. Box 368, Ridgefield, CT. 06877.** An equal opportunity employer m/f/h/v.



**Boehringer
Ingelheim**

REGIONAL BONE CENTER

The Regional Bone Center at Helen Hayes Hospital, a Columbia University affiliate, is a national center for the study of osteoporosis funded through Health Research, Inc., by the NIH as a Specialized Center of Research (SCOR)--Robert Lindsay, M.B., Ph.D., Principal Investigator. Openings exist for scientific staff at the post-graduate/doctoral and technical levels.

POSTDOCTORAL POSITIONS (Ph.D./M.D.)

Cell Biologist: To study the origin, mode of action, and regulation of the osteoclast. Experience in either bone cell biology, biochemistry, hematology, or immunology would be advantageous. (Project Director: David W. Dempster, Ph.D.)

Histomorphometrist: Master's or postdoctoral fellow to do histomorphometric studies of bone biopsies from experimental animals and patients with osteoporosis. Selected candidate will receive training in bone histomorphometry, but experience in quantitative microscopy would be an advantage. (Project Director: David W. Dempster, Ph.D.)

Molecular Biologist: To study molecular aspects of vitamin D and parathyroid hormone actions in skeletal tissues. Training in RNA/DNA isolation, Northern analysis, and preparation of gene libraries is preferred. (Project Director: Thomas L. Clemens, Ph.D.)

TECHNICAL SPECIALISTS (B.S./M.S.)

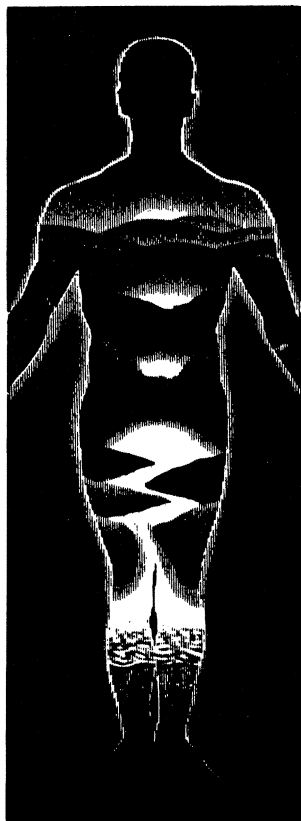
Senior Laboratory Technicians: Several positions are available for persons skilled in histology, radioimmunoassay, cell culture, or with interest in bone mass measurement.

Helen Hayes Hospital has easy access to NYC. Appointments carry competitive salaries and benefits. Send curriculum vitae to:

**Helen
Hayes
Hospital**

**Human Resources
Helen Hayes Hospital
Route 9W
West Haverstraw, NY 10993**

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SYNTHETIC ORGANIC CHEMISTS (BS/MS)

Research In Cardiovascular Diseases and Cancer

Discover the opportunity that awaits you at our Wallingford, Connecticut Research Center: synthesizing new compounds for biological evaluation as agents in the treatment of cardiovascular diseases and cancer. Explore the possibilities presented by synthesis and purification of target molecules and intermediates, as you determine physical constants, obtain spectral data, conduct literature searches, evaluate laboratory data and write reports.

Qualifications include laboratory experience in modern spectroscopic and experimental techniques and preparative chromatography, along with a working knowledge of synthetic organic chemistry.

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POSITIONS OPEN

POSTDOCTORAL POSITIONS. Study cell surface receptor dynamics; second messenger control of intracellular calcium and neurotransmitter secretion. Positions available in several collaborating laboratories. Model systems include neuronal cells, fibroblasts, and vascular endothelial and smooth muscle cells. Techniques include digital fluorescence imaging and novel approaches to kinetics as well as biochemical measurements. Salary up to \$25,000. Send résumé and names of three references to: **Dr. E. W. Westhead, Department of Biochemistry, University of Massachusetts, Amherst, MA 01003.** Deadline for applications: 1 January 1988 or until suitable candidates have been identified. *An Affirmative Action/Equal Opportunity Employer.*

POSTDOCTORAL RESEARCH ASSOCIATE

Position available immediately to study the survival of genetically engineered bacteria in aquatic biofilms. Background in bacterial physiology, polymer chemistry, or molecular biology preferred.

Salary is negotiable. For best consideration, please send curriculum vitae with names of three references by 15 November 1987 to:

**Dr. Madilyn Fletcher
Center of Marine Biotechnology
University of Maryland
600 East Lombard Street
Baltimore, MD 21201
Telephone: 301-783-4807**

The University of Maryland is an Equal Opportunity Employer.

POSTDOCTORAL RESEARCH ASSOCIATE

Ph.D. in biochemistry or neurochemistry with 0 to 3 years of experience. Research will focus on regulation of membrane asymmetry in response to ethanol in vitro and in vivo using biophysical, biochemical, and cell culture techniques. Salary negotiable. Send curriculum vitae, along with names of three references, to: **W. Gibson Wood, Ph.D., VA Medical Center, GRECC, 111G-JB, St. Louis, MO 63125.**

POSTDOCTORAL RESEARCH ASSOCIATE. Position open immediately to study the biochemical basis and physiological significance of human alpha-fetoprotein microheterogeneity and the relationships between AFP biochemistry and the diagnosis of birth defects and cancer. Candidates should have a recent Ph.D. in physiology, biochemistry, or related discipline. Previous experience in glycoprotein biochemistry, RIA, and column chromatography desirable. Send curriculum vitae and the names of three references to: **Dr. Brooks A. Keel, Scientific Director, The Women's Research Institute, 2212 East Central, Wichita, KS 67214.**

POSTDOCTORAL RESEARCH ASSOCIATE. Available immediately to study fate of genetically engineered microorganisms in soils. Experience in molecular biology techniques required; study will involve construction of novel genotypes; experience in microbial ecology also desirable. Send curriculum vitae and names of three references to: **Dr. Ronald M. Atlas, Department of Biology, University of Louisville, Louisville, KY 40292.** *Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL RESEARCH ASSOCIATE—Position available for an electrophysiologist to characterize the properties of central axons which have regenerated along peripheral nerve implants. Preference given to applicants experienced in spinal cord physiology and/or tract-tracing, and histological techniques. Please send curriculum vitae with names of three references to: **Dr. Julia K. Terzis, Microsurgical Research Center, Eastern Virginia Medical School, 700 Olney Road, Norfolk, VA 23507.**

POSTDOCTORAL RESEARCH POSITION available immediately to study role of mammary somatosensory signaling in neuroendocrine control of suckling-induced postpartum anestrus. Ph.D. in physiology, endocrinology, or related area with interests and/or experience in reproductive endocrinology. Experience with cattle not required. Curriculum vitae and names of three references to: **Dr. G. L. Williams, Beef Cattle Reproduction Laboratory, Texas A&M University Agricultural Research Station, HCR-2, Box 43-C, Beeville, TX 78102.**

POSITIONS OPEN

FOREST BIOTECHNOLOGY NORTH CAROLINA STATE UNIVERSITY POSTDOCTORAL RESEARCH ASSOCIATE

Position available to work on the genetic modification of lignin biosynthesis in pine. Experience with gene isolation, protein purification, or DNA transfer is necessary. To apply, send curriculum vitae and names of three references before 1 December 1987 to: **R. Sederoff, Department of Forestry, North Carolina State University, Raleigh, NC 27695-8002, or Telephone: 919-737-2891 or 415-486-3308** for more information. *The University is an Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL/RESEARCH ASSOCIATE

Trained epidemiologist with 1 to 3 years of experience to work with multidisciplinary research group involved in large-scale studies of air pollution and respiratory health. Opportunity to participate in the organization and development of field data being collected in children from over 20 different locations and be involved in the analysis of data previously collected in 20,000 adults and children.

Opportunities to explore various databases that include indoor and outdoor exposure, time-related changes in symptoms and pulmonary function, and other personal risk factors and disease outcomes. Excellent training and growth opportunities for subsequent academic position. Please send a copy of your curriculum vitae to: **Dr. Frank Speizer, Department of Environmental Science and Physiology, Harvard School of Public Health, 665 Huntington Avenue, Boston, MA 02115.**

Expressions of interest are particularly invited from women and minority candidates.

POSTDOCTORAL RESEARCHER (ANTICIPATED). Aquatic toxicology/pharmacology. Recent Ph.D. in toxicology, pharmacology, biochemistry, or related science with experience in aquatic toxicology. Experience in methods related to pharmacokinetic analysis, metabolism, and distribution of xenobiotics in fish are highly desirable. The project is a collaborative study with **Dr. John Lech** at The Medical College of Wisconsin. Send curriculum vitae and names of three references by 15 November 1987 to: **Dr. Kevin Kleinow, Department of Pharmacology, School of Veterinary Medicine, Baton Rouge, LA 70803.** *L.S.U. is an Equal Opportunity Employer.*

POSTDOCTORAL RESEARCHER. Recent Ph.D. in biochemistry, chemistry, or related science with experience in drug metabolism. Experience in methods development related to metabolite extraction, isolation, and identification essential. Responsibilities include supervision of contract research on drug metabolism and identification in the equine. Submit résumé by 15 November 1987 to: **Dr. Steven Barker, Department of Veterinary Physiology, Pharmacology and Toxicology, School of Veterinary Medicine, Baton Rouge, LA 70803.** *L.S.U. is an Equal Opportunity Employer.*

POSTDOCTORAL TRAINING IN CLINICAL CHEMISTRY. Position available 1 July 1988, for basic scientist or physician interested in a career as laboratory director in academic Laboratory Medicine. Our 2-year program provides practical experience in clinical chemistry laboratories and extends relevant basic scientific knowledge.

Deadline: 1 December 1987. Write to:

**Margaret Kenny, Ph.D.,
Program Director
Department of Laboratory Medicine
University of Washington
SB-10
Seattle, WA 98195**

An Equal Opportunity/Affirmative Action Employer.

RESEARCH ASSISTANT PROFESSOR/RESEARCH ASSOCIATE position available for Ph.D. or M.D. to study biochemistry of delayed hypersensitivity and chronic inflammation. Experience in protein biochemistry, recombinant DNA technology, and cell culture desirable. Rank and salary dependent on experience. Send curriculum vitae and names of three references to: **Dr. H. P. Godfrey, Department of Pathology, New York Medical College, Basic Science Building, Valhalla, NY 10595.** *Equal Opportunity Employer.*

POSITIONS OPEN

PROFESSOR AND DIRECTOR PHYSIOLOGICAL RESEARCH LABORATORY

UNIVERSITY OF CALIFORNIA, SAN DIEGO

A biologist with an outstanding record in research, teaching, and administration is sought as the new Director of the Physiological Research Laboratory (PRL). PRL, located on the Scripps Institution of Oceanography (SIO) campus, is the focal point of marine biomedical research at the University of California (UC), San Diego, and is composed of faculty, staff, and students from the Departments of Medicine and SIO. The Director will be appointed to the rank of full professor (tenured) in the Department of Medicine, and will be responsible for independent research, will participate in the graduate teaching program and will seek financial support for the laboratory through the writing of grant applications. Salary level (11-month basis) will be determined by candidate's qualifications and will be based on UC pay scales. Candidates who can interact profitably with colleagues in the Departments of Medicine and SIO are especially sought.

M.D., Ph.D. (or equivalent) degree is required. Candidates should forward curriculum vitae, a two-page outline of their research plans, and the names of four individuals from whom letters can be requested to: **Chair-PRL Director Search, University of California, San Diego, M-002, La Jolla, CA 92093.**

To be assured of consideration, applications must be received by 30 November 1987. Starting date for the appointment is 1 July 1988.

The University of California 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 a probationary appointment towards tenure. 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. *The University of Minnesota is an Equal Opportunity Educator and Employer and specifically invites and encourages women and minority applicants.* Send résumé to: **Elke Eckert, M.D., UMHC Box 393, University of Minnesota Hospitals, Minneapolis, MN 55455** by 30 December 1987.

RESEARCH ASSOCIATE/POSTDOCTORAL POSITION available immediately to study neurophysiology of locus coeruleus and nucleus basalis neurons in waking monkeys. Excellent facilities. Two years of funding minimum. Salary commensurate with experience. Excellent benefits included. Submit curriculum vitae and three references to: **Gary Aston-Jones, Department of Biology, New York University, Washington Square, New York, NY 10003.** *Equal Opportunity/Affirmative Action Employer.*

RESEARCH ASSOCIATE: M.D. or Ph.D. in pharmacology or biochemistry to conduct research on "Phosphatidylinositol in Regulation of Calcium Gating" and "Free Radicals/Prostaglandins Biochemistry", using chromatography methods, gas chromatography/mass spectrometry techniques, HPLC, lipid extraction, tissue culture and microdissection. Demonstrated ability to design and conduct research as evidenced by scholarly publications. Salary: \$17,500; 40 hours per week. Apply: **Employment Security Commission, 516 North Mangum Street, Durham, NC 27701.** Job Order No: NC 7101073. DOT Code: 090.227-010. *Affirmative Action/Equal Opportunity.*

RESEARCH ASSOCIATE. Collaborate with NIH-funded studies of humoral factor(s) affecting cell ion transport and growth in hypertension [see *AJP* 251, H984 (1986)]. Applicant should have Ph.D. in biochemistry, pharmacology, or cell biology with postdoctoral training. Experience with cell culture and with chromatographic procedures, including HPLC, necessary. Beginning salary \$30,000 to \$33,000. Send curriculum vitae to: **H. W. Overbeck, M.D., Ph.D., Departments of Medicine and Physiology, University of Alabama at Birmingham, Birmingham, AL 35294.** *Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

RESEARCH ASSOCIATE IN MOLECULAR GENETICS. Requirements Ph.D., 3 years of postdoctoral experience in molecular and microbial genetics. Primary responsibilities: teaching experimental techniques to graduate students and fellows, and collaborative research. Please send applications and curriculum vitae to: **JoAnn Olsen, 502 PCTB, Johns Hopkins University School of Medicine, 725 North Wolfe Street, Baltimore, MD 21205.** *The Johns Hopkins University is an Equal Opportunity/Affirmative Action Employer.*

BIOCHEMISTRY OF MACROMOLECULES

RESEARCH ASSOCIATE POSITIONS are available to study the role of macromolecular interactions in the regulation of enzyme catalysis (pyruvate kinase and phosphofructokinase) and gene expression (*E. coli* cyclic AMP-binding protein). Successful candidates should be highly motivated, creative, and independent individuals. A background in physical and/or molecular biology is desirable. Send curriculum vitae and names of three references to:

Dr. James C. Lee
Department of Biochemistry
St. Louis University
School of Medicine
1402 South Grand Boulevard
St. Louis, MO 63104

RESEARCH ASSOCIATE

Position open for **POSTDOCTORAL FELLOW** to study systemic and renal hemodynamics and changes in vasoactive humoral substances before and after altered divalent ion nutrition. This position is for 2 years of support. Salary is negotiable. Closing date 27 November 1987. Submit curriculum vitae to: **Edward T. Zawada, Jr., M.D., Professor and Chairman, Department of Medicine, University of South Dakota, School of Medicine, 2501 West 22nd Street, Sioux Falls, SD 57105.**

RESEARCH ASSOCIATE—B.S. OR M.S.

Research associate wanted to conduct studies on cataract formation in rat models, using light microscopy and analytical electron microscopy for morphological and enzyme histochemical analysis of lens tissue. Minimal requirements include a bachelor's degree with experience in tissue processing, thin sectioning, transmission electron microscopy, and photomicrography. Funding of the project assured until 30 June 1990.

Salary commensurate with experience and qualifications.

Send curriculum vitae and three references with telephone numbers by 16 November 1987 to:

Dr. Willis Gorthy
Department of Anatomy
and Neurobiology
Colorado State University
Fort Collins, CO 80523

An Equal Opportunity/Affirmative Action Employer.

RESEARCH FELLOW—Research position is now available for a molecular biologist, trained in eukaryotic recombinant DNA techniques to study expression of growth factors and oncogenes by normal and neoplastic bone tissues and cells. Additional experience in tissue culture, protein biochemistry, and HPLC analysis preferred. Initial commitment of 3 years is required. Send résumé and three references to: **Dr. Josef F. Novak, Orthopedic Research Laboratory: Allegheny Singer Research Institute, 320 East North Avenue, Pittsburgh, PA 15212.** *An Equal Opportunity Employer.*

RESEARCHER/RESEARCH ASSOCIATE SOUTHERN ILLINOIS UNIVERSITY (SIU) SCHOOL OF MEDICINE

GASTROENTEROLOGY: The Department of Internal Medicine is recruiting a research position involving scientific and technical support in physiologic, biochemical, and pharmacologic aspects of research projects and clinical service in the area of gastrointestinal diseases. Minimum qualifications are an M.S./M.A. with 2 years of laboratory experience. Preference will be given to candidates with a Ph.D. and/or background in the areas of physiology, biochemistry, or pharmacology. Closing date on this position is 20 November 1987, or until the position is filled. Résumés should be sent to: **Steven R. Perrigo, Administrator, Department of Internal Medicine, SIU School of Medicine, P.O. Box 19230, Springfield, IL 62794-9230.** *SIU School of Medicine is an Affirmative Action/Equal Opportunity Employer.*

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Deadline January 19, 1988

SCIENTIFIC EXCHANGES

NAS Scientific Exchange Program with the U.S.S.R. and Eastern Europe

The National Academy of Sciences (NAS) invites applications from American scientists who wish to make visits beginning during the period September 1, 1987 through December 31, 1988 to the U.S.S.R., Bulgaria, Czechoslovakia, the German Democratic Republic, Hungary, Poland, Romania, and Yugoslavia. Long-term research visits of 3 to 12 months duration are encouraged, particularly if contact with colleagues in the other country has already been established. The minimum length of visits is 1 month in one country.

Applicants must be U.S. citizens and have a doctoral degree or its equivalent by June 1987 in physics; chemistry; mathematics and computer sciences; earth, atmospheric, and oceanographic sciences; agricultural, forestry, fishery, and plant sciences; biological and medical sciences; environmental sciences; engineering; archaeology and anthropology; geography; or psychology. Also included are science and technology policy studies and other aspects of the economic and social sciences that involve quantitative analysis. Other scientific disciplines not explicitly mentioned will be considered on a case-by-case basis. Necessary expenses will be met by the NAS and the foreign academy, including reimbursement for long-term visitors for salary lost up to a predetermined maximum and expenses for accompanying family members for visits exceeding 5 months.

Requests for applications should reach the National Academy of Sciences not later than February 13, 1987. Applications must be postmarked by February 28, 1987. Address application requests to:

National Academy of Sciences
Office of International Affairs
Soviet and East European Affairs (JH-218)
2101 Constitution Avenue, NW
Washington, D.C. 20418
Telephone: (202) 334-2644

Molecular Biology Research

An opportunity exists at The Upjohn Company for a Biochemistry Associate in the Reproduction and Growth Physiology Group. The individual will be an interactive member of a research team investigating the regulation of hepatic and adipose gene expression, specifically lipogenic proteins, by somatotropin and insulin-like growth factor-1.

The candidate should possess an M.S. degree or B.S. degree plus a minimum of 3 years experience in biological sciences from which laboratory and literature skills in molecular biology were acquired. The candidate must have experience with Northern and Southern analysis, and DNA sequencing procedures. Experience with cDNA and genomic library construction and screening is desirable. In addition, the candidate should have demonstrated skills in experimental design and data interpretation, and will be responsible for presentations and publications.

Kalamazoo is located in Southwestern Michigan midway between Chicago and Detroit and offers varied cultural events, cosmopolitan shopping and entertainment, lakes and woodlands minutes away, abundant year-round sports and recreation. Upjohn offers advancement opportunities, a highly competitive salary commensurate with experience, comprehensive benefits and relocation assistance. For confidential consideration, please call from outside of Michigan toll free 1/800/253-8600, ext. 3-6767, (inside Michigan call collect 616/323-6767) to request an employment application be sent to you immediately. Please refer to position number 21860-A when calling.

Upjohn

Our commitment to scientific excellence continues...

We are an Equal Opportunity Employer M/F.

POSITIONS OPEN

RESEARCH ASSOCIATE: Two positions available, current year, recommended 3 years of grant support. Recent Ph.D., strong chemical background. Join a protein chemistry laboratory/glycoprotein hormones and inhibin. Get on-job experience with proteins, structure-function relationships. Mail résumé to: **Dr. Darrell N. Ward, Department of Biochemistry, Molecular Biology, Box 36, The University of Texas MDAH, Houston, TX 77030. An Equal Opportunity/Affirmative Action Employer.**

RESEARCH ASSOCIATES— MOLECULAR BIOLOGY OF MALARIA PARASITES

Three postdoctoral positions available immediately for initially 3 years to study the expression and structure of genes from human malaria parasites in different vector systems (two positions) and to further develop and modify malaria specific DNA probes (one position). Applicants should have a strong background in recombinant DNA technology. Starting salary: U.S. \$32,000 per year. Please send curriculum vitae and one reprint to: **Dr. J. Werner Zolg, Department of Molecular Biology, Biomedical Research Institute, 12111 Parklawn Drive, Rockville, MD 20852. An Equal Opportunity Employer.**

RESEARCH POSITION in biomedical engineering available for basic and clinical research on bone density using quantitative computerized tomography (QCT), dual photon absorptiometry, and bone scintigraphy. Candidate will have the opportunity to collaborate with large multidisciplinary laboratory focusing on bone and mineral metabolism. Candidate must have a Ph.D. in Bioengineering or allied field. Experience in bone density desirable but not necessary. Salary competitive. Potential postdoctoral fellows or research assistant professors are invited to apply. Send curriculum vitae and two letters of reference to: **Dr. Donald Sauser, Radiology Department, Loma Linda University, Loma Linda, CA 92354.**

RESEARCH SCIENTIST: Direct laboratory conducting original research in immunology involving genetics and erythrocyte complement receptor with specific emphasis on collagen vascular diseases and AIDS. Apply advanced knowledge and sophisticated technical skills in: (i) lymphocyte assays, gel electrophoresis and transformation; and (ii) identification, purification, and measurement of biological proteins. Recruit outstanding postdoctorals to perform research, and publish and report on results. Minimum of 5 years of experience in job offered, and must possess Ph.D. in immunology and published extensively in field in international journals. Forty hours per week, \$40,000 per annum. St. Luke's-Roosevelt Hospital Center is affiliated with Columbia University. Send résumé and references to: **Box 160, SCIENCE.**

SENIOR IMMUNOLOGIST/ PROTEIN CHEMIST

San Francisco Bay Area biotechnology company developing novel medical diagnostic and therapeutic products for atherosclerosis and autoimmune diseases seeks candidates for the position of senior immunologist or protein chemist. Needed to characterize epitope map of various antigens associated with above diseases. Must have expertise in protein chemistry, purification, and sequencing. Working knowledge of and/or experience in polysaccharide chemistry, cDNA, peptide synthesis, and monoclonal antibodies also desirable. Candidates with hands-on working style able to direct several research assistants preferred. Interest in publishing and other academic interactions desirable, but not mandatory.

Competitive salaries, benefits, and equity participation.

Please send curriculum vitae in confidence to: **Personnel Director, Vasacor, 2438 Wyandotte Street, Suite C, Mountain View, CA 94043.**

SENIOR SCIENTIST ELECTROPHORESIS

Start-up company developing innovative technologies for electrophoresis is seeking a biochemist or analytical chemist to direct scientific aspects of research and development. Must have Ph.D. and publications on electrophoretic techniques. Based in San Francisco bay area. Send résumés to: **Molecular Dynamics, 230 Santa Ana Court, Sunnyvale, CA 94086.**

POSITIONS OPEN

SENIOR FACULTY POSITION AND DIRECTOR UNIVERSITY OF CALIFORNIA SOUTHERN OCCUPATIONAL HEALTH CENTER

The University of California, Irvine, is seeking nominations and applications for the position of Director of the Southern Occupational Health Center (SOHC). A candidate for Director may also be considered a candidate for the Chair of the Department of Community and Environmental Medicine, UCI. Irvine is the lead campus for academic programs in occupational health at Irvine and Los Angeles (UCLA). The Center provides a focus for graduate degree and residency programs in occupational medicine, industrial hygiene, toxicology, epidemiology, ergonomics, and other specialty areas related to occupational health and safety.

Qualifications of the Director should include national stature as a scholar and leader in occupational medicine or other specialty area in occupational health, and significant experience as an academic administrator. A physician is preferred, but other specialists with research doctoral degrees will be considered. All candidates must qualify for professorial rank (tenured) in the UCI College of Medicine.

Salary is competitive and commensurate with qualifications.

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

Please send nominations and/or applications by 15 December 1987 to:

**Search Committee for the Director of the SOHC
Dean's Office, College of Medicine
University of California, Irvine
Irvine, CA 92717**

SENSORY NEUROPHYSIOLOGIST: Tenure-track possibility for position available at assistant professor level. Serious commitment to collaborative work within the Microsurgical Research Center. Expertise required to characterize electrophysiologically the properties of central axons which have regenerated along peripheral nerve implants. Preference given to applicants experienced in spinal cord neurophysiology and tract-tracing and histological techniques. Please send curriculum vitae with three letters of recommendation to: **Dr. Julia Terzis, Microsurgical Research Center, Eastern Virginia Medical School, P.O. Box 1980, Norfolk, VA 23501.**

TEACHING ASSISTANTSHIPS (including tuition waiver) available for qualified applicants beginning September 1988. Graduate study leading to M.S. or Ph.D. with concentration in biochemistry, botany, ecology, marine biology, microbiology, molecular biology, physiology, or vertebrate biology. For further information write to: **Professor Gwilym S. Jones, Graduate Coordinator, Northeastern University, Boston, MA 02115. Northeastern University is an Equal Opportunity Affirmative Action/Title IX Employer.**

TENURE-TRACK POSITIONS are available in the Department of Biology at California State University, Long Beach (CSULB), beginning fall 1988. Ph.D. required. Rank and salary open depending on qualifications.

CHAIRPERSON to provide academic and administrative leadership for the instructional, research, and service missions of the department.

CELL BIOLOGIST to teach and conduct research in cell biology and related areas such as genetics.

ALGOLOGIST to teach and conduct research in algology and related plant science areas.

Send résumé, research plans, transcripts, and three letters of recommendation by 15 December 1987 to: **Chairman, Department of Biology, CSULB, Long Beach, CA 90840. CSULB is an Equal Opportunity/Affirmative Action/Title IX Employer.**

TOXICOLOGIST, Ph.D.

Successful midwest laboratory seeking candidate to head department. Responsibilities include: new test development and performance, screening and confirmation, quality control, and interfacing with client companies. Qualifications: Ph.D. in toxicology or pharmacology, career experience in forensic application of toxicology, including court testimony. Curriculum vitae and salary expectations to: **Personnel Manager, Continental Bio-Clinical Laboratory Service, 2740-28th Street SW, Grand Rapids, MI 49509.**

POSITIONS OPEN

TEMPORARY ASSISTANT/ ASSOCIATE PROFESSOR DEPARTMENT OF BOTANY MIAMI UNIVERSITY

Miami University invites applications for a one-semester temporary appointment in the area of plant physiology. Appointment begins 11 January 1988 and ends 8 May 1988 but with an opportunity for an additional summer appointment. The successful applicant will be expected to participate in an advanced course in "Physiological and Molecular Botany" and teach an advanced seminar on "Current Topics in Plant Physiology."

Send applications to

**Dr. Martha J. Powell
Department of Botany
Miami University
Oxford, OH 45056**

Telephone: 513-529-2140 or 4200

Materials to be submitted include a letter of intent, résumé, and three letters of recommendation. Initial consideration of credentials will commence 1 December 1987.

Equal Opportunity in Employment and Education.

WETLANDS ECOLOGIST—Immediate opening for project leader and/or postdoctoral position with the Cornell University Laboratory of Ornithology to study effects of Open Marsh Water Management on salt marsh ecology on Long Island, New York. One-year position with potential 1-year extension. Salary: \$21,500 per year. Subsidized housing available on national wildlife refuge. Send résumé, reprints, and three references with telephone numbers to: **Dr. Thomas Litwin, Director, Seatuck Research Program, Box 31, Islip, NY 11751; telephone 516-581-6908 by 1 December 1987. Cornell is an Affirmative Action/Equal Opportunity Employer.**

FELLOWSHIPS

FELLOWSHIPS. Stanford University's Center for International Security and Arms Control announces 1-year fellowships designed to provide mid-career scientists an opportunity for study in problems related to international security, defense policy and planning, and arms control starting fall 1988. Application deadline is 19 February 1988. For information contact: **David Bernstein, 320 Galvez Street, Stanford, CA 94305-6165.**

POSTDOCTORAL FELLOWSHIP. A vacancy exists for a postdoctoral fellow interested in studying the regulation of immunity to tumor transplantation antigens and histocompatibility antigens. Applicants should have basic training in immunobiology. Starting salary will be \$18,500 plus liberal fringe benefits. Subsidized Institute housing is available.

The Trudeau Institute is a private, not-for-profit, basic medical research institution located on the shore of Saranac Lake and near Lake Placid, New York.

Send curriculum vitae and names of three references to:

**Dr. Robert J. North, Director
Trudeau Institute, Inc.
P.O. Box 59
Saranac Lake, NY 12983**

POSTDOCTORAL FELLOWSHIP available immediately. Study involves VLDL influences on cultured endothelial cell fibrinolytic protein synthesis at the translational and transcriptional levels (use of cDNA probes) including activator binding studies. Send curriculum vitae and names of three references to: **Dr. F. M. Booyse, Division of Cardiovascular Disease, University of Alabama at Birmingham, 1038 Zeigler Research Building, Birmingham, AL 35294. An Affirmative Action/Equal Opportunity Employer.**

POSTDOCTORAL FELLOWSHIP available in Connective Tissue and Metabolism Group. Work relevant to Alzheimer's disease, amyloidosis, and bone regeneration. Background: Ph.D. in protein chemistry and/or proteoglycan, glycosaminoglycan biochemistry, and culture techniques a distinct asset. Available immediately. Salary competitive. Send curriculum vitae and three letters of recommendation to: **Dr. R. Kisilevsky, Department of Pathology, Queen's University, Kingston, Ontario, Canada, K7L 3N6.**

Lilly Research Laboratories

Postdoctoral Scientist Program

Eli Lilly and Company

THE LILLY RESEARCH LABORATORIES, a Division of Eli Lilly and Company, is offering postdoctoral research opportunities in several areas of biology, pharmacology, and chemistry. Postdoctoral Scientists will work in close association with Lilly scientists who are involved in the basic research process of drug discovery. Publication and presentation of results will be an integral part of the program. This postdoctoral experience is designed to give individuals in-depth research training in a focused area of biology and/or chemistry. The program will also provide an opportunity to become acquainted with the drug development process within the pharmaceutical industry. Postdoctoral Scientists will be expected to participate fully in the conceptual and design phases of projects, within the following areas:

Biochemical Toxicology Research

The postdoctoral scientist will study changes in hepatic lipid metabolism induced by peroxisome proliferating agents and other chemicals. The research will examine the role of mitochondrial and peroxisomal metabolism in the development and regression of fatty changes in the liver and the relevance of changes in lipid metabolism to the genesis of peroxisome proliferation. Candidates should have training in biochemistry, pharmacology, or related discipline and experience in lipid metabolism.

Molecular and Cell Biology Research

The postdoctoral scientist will join a laboratory studying eucaryotic gene regulation and conduct basic research on the expression, intracellular processing and secretion of recombinant proteins in mammalian cells. Training in molecular biology, cell biology or biochemistry is required. The scientist will combine molecular and biochemical approaches to understand the sequence of events from the expression of a gene to the secretion of its product.

Molecular Genetics Research

The postdoctoral scientist will join an active program in *Streptomyces* molecular genetics research focused on the cloning and expression of antibiotic biosynthetic genes. The project will include the development of transposable elements and bacteriophage vectors to genetically manipulate streptomycetes and related actinomycetes.

Muscle Metabolism Research

Scientists with training in muscle growth, muscle physiology, and molecular biology will perform basic research on the regulation and control of skeletal muscle protein synthesis and degradation. A strong background in biochemistry and molecular biology is desirable.

Peptide Engineering Research

The postdoctoral scientist will participate in a synthetic program directed at delineating the structural features of insulin which dictate its various biological properties. The scientist will receive extensive training in the chemical synthesis, semisynthesis, and biosynthesis of insulin and related substances. Prior experience in some aspect of peptide synthesis, purification and characterization is desirable.

Protein Glycosylation Research

The postdoctoral scientist will use nuclear magnetic resonance spectroscopy to evaluate glycan distribution of glycosylated proteins and to pursue other structural questions relating to protein carbohydrates. The scientist will collaborate with researchers involved in the structure elucidation of a wide variety of natural products of pharmaceutical interest. Experience in applying one- and two-dimensional NMR techniques in studies of glycoprotein carbohydrates is required.

Recombinant Protein Research

The postdoctoral scientist will study the enzymatic cleavage of proteins produced by recombinant DNA technology with the goal of obtaining desired protein products. The scientist must have a strong background in enzyme kinetics and protein chemistry and will have the opportunity to gain experience in enzyme immobilization, protein sequencing, and molecular biology.

Postdoctoral appointments are of one-year duration and are renewable for a second year with mutual agreement. Candidates with no more than one previous postdoctoral experience are encouraged to apply.

Eli Lilly and Company will provide a comprehensive pay and benefits program including relocation expenses.

Qualified applicants should send their current curriculum vitae, indicating program of interest to:



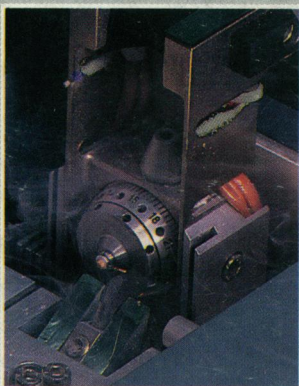
John W. Crooks
Manager, College Relations (PSP)³
Eli Lilly and Company
Lilly Corporate Center
Indianapolis, Indiana 46285

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These and other new features make the Reichert-Jung FC4E better than ever for cryosectioning specimens for immuno-electronmicroscopy, morphological studies, element analysis, study of fast physiological process and material research. For more information on the new FC4E, call 716-891-3000.

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