

The majority of the photographs are of good quality, though some are poorly lighted and a few show reflections of the glass museum cases through which they were taken. The photographs are well selected and provide an excellent overview of the material. The maps, however, are disappointing, and contain some mistakes (for example, Saône River mislabeled Rhône on p. 236; Dürrnberg misspelled on p. 250; Grächwil shown as a Late Iron Age rather than an Early Iron Age burial on p. 266).

Despite such errors of detail, the book is a good introduction to the subject for the non-professional reader. In making this enormously rich body of data accessible to English-speaking audiences the author has done a valuable service.

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## Outside Views of Science

**Science under Scrutiny.** The Place of History and Philosophy of Science. R. W. HOME, Ed. Reidel, Boston, 1983 (distributor, Kluwer Boston, Hingham, Mass.). xviii, 182 pp. \$36. Australasian Studies in History and Philosophy of Science, vol. 3. From a conference, Melbourne, Aug. 1979.

Should students majoring or doing graduate work in physics or biology or psychology or various branches of medicine or engineering be required to take courses in history, philosophy, policy studies, and sociology of science, technology, and medicine? Or, perhaps better, should aspects of those disciplines—or, better still, of that interdisciplinary matrix—be integrated into the scientific or engineering curriculum? This issue, with special reference to science education in Australia, is the focus of this volume emanating from a conference held under the auspices of the Australian Academy of Science.

Lloyd Evans, president of the Academy when the conference was held and a plant physiologist, sums up some of the arguments against such a requirement: "When the natural sciences began to bloom in the seventeenth century, the scientists [notably those of the Royal Society] rather forcefully demarcated themselves from the more traditional learning." Evans goes on to point out that the oldest scientific society in Australia fined its members for mentioning theology or partisan politics—while, on the other side, the Australasian Associa-

tion for the History and Philosophy of Science does not recognize scientists as members of its professional guild. Philosopher John Passmore, in his contribution to the volume, reports a strong feeling he has encountered among scientists: "How can so insecure a discipline as philosophy expect that scientists should pay any attention to it?"

Among the contributions to the volume the one that makes the best argument for relevance is by historian Everett Mendelsohn. He provides a masterly survey, based on the best recent work in history of science, of the intersections between scientific knowledge and political power since Francis Bacon claimed that "knowledge is power." When, in the mid-20th century, science and technology finally gained the control over nature that could have led to genuine power and the ability to better the human condition, the public, supposed beneficiaries, had grown suspicious of science and scientists. Mendelsohn's conclusion may be trite—"Science is too powerful to leave to the experts"—but his historical lesson is one that scientists and engineers should learn.

Another solid contribution is Passmore's. He provides a patient, lucid, helpful survey of recent philosophies of science with a view to determining which varieties might usefully be taught to science students. He recommends some awareness of epistemological studies (as much as anything to disabuse non-science students of misunderstandings of the nature of science); even more study of comparisons between science and other forms of knowing; and, most important of all, knowledge of social and moral philosophy to deal with problems arising from the application of science and technology.

Other contributions come from Alan Musgrave (a bellicose defense of philosophy of science as *the* normative discipline), Hugh Stretton (an argument that "value-structured" social science deserves a larger place in the curriculum than it has had), and Rom Harré (a demonstration of how history and philosophy of science, rightly taught, could change the teaching of psychology). Other subjects covered include history of medicine, science policy studies, and the controversy in science education over discovery versus indoctrination approaches.

Anti-humanities science and engineering educators are not likely to be persuaded by this volume. But it does show how Australia has begun to face up to the claims of historians, philosophers, and sociologists of science, technology, and

medicine. It is thus an interesting contribution to a long-standing debate—and one that has a certain urgency in times of criticism of science and technology.

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## Books Received

**Abnormal Functional Development of the Heart, Lungs, and Kidneys.** Approaches to Functional Teratology. Robert J. Kavlock and Casimer T. Grabowski, Eds. Liss, New York, 1983. xx, 392 pp., illus. \$58. Progress in Clinical and Biological Research, vol. 140. From a conference, Asheville, N.C., May 1983.

**Adaptation, Stress, and Prophylaxis.** Felix Z. Meerson. Springer-Verlag, New York, 1984. x, 329 pp., illus. \$45. Translated from the Russian by Joseph Shapiro.

**Advanced Medicine 19.** K. B. Saunders, Ed. Pitman, London, 1983 (U.S. distributor, Urban & Schwarzenberg, Baltimore). xii, 420 pp., illus. \$37.50.

**The Bad Earth.** Environmental Degradation in China. Vaclav Smil. Sharpe, Armonk, N.Y., and Zed Press, London, 1984. xvi, 247 pp., illus. \$25; paper, \$13.95.

**Basic and Clinical Tumor Immunology.** Ronald B. Herberman, Ed. Nijhoff, The Hague, 1983 (U.S. distributor, Kluwer Boston, Hingham, Mass.). xiv, 348 pp. \$72. Cancer Treatment and Research.

**The Beaches Are Moving.** The Drowning of America's Shoreline. Wallace Kaufman and Orrin H. Pilkey, Jr. Duke University Press, Durham, N.C., 1983. x, 336 pp. Paper, \$9.75. Living with the Shore. Reprint, 1979 ed.

**Bone and Mineral Research Annual 2.** A Yearly Survey of Developments in the Field of Bone and Mineral Metabolism. William A. Peck, Ed. Elsevier, New York, 1984. xiv, 432 pp., illus. \$73.

**The Book of Ages.** Desmond Morris. Viking, New York, 1984. Unpagged, illus. \$17.95.

**Brain Tumors in Children.** Principles of Diagnosis and Treatment. Michael E. Cohen and Patricia Kressel Duffner. Raven, New York, 1983. xii, 378 pp., illus. \$45. The International Review of Child Neurology.

**Cancer and the Cardiopulmonary System.** M. Khalil Ali and Michael S. Ewer. Raven, New York, 1984. xii, 242 pp., illus. \$45.

**Current Methods in Cellular Neurobiology.** Vol. 2, Biochemical Techniques. Jeffery L. Barker and Jeffrey F. McKelvy, Eds. Wiley-Interscience, New York, 1984. xii, 319 pp., illus. \$59.50.

**Current Problems in Germ Cell Differentiation.** A. McLaren and C. C. Wylie, Eds. Cambridge University Press, New York, 1983. x, 401 pp., illus. \$79.50. From a symposium, London, Sept. 1982.

**Darwin's Plots.** Evolutionary Narrative in Darwin, George Eliot and Nineteenth-Century Fiction. Gillian Beer. Routledge and Kegan Paul, Boston, 1983. xii, 303 pp. \$35.

**Design against Crime.** Beyond Defensible Space. Barry Poyner. Butterworths, Boston, 1983. viii, 118 pp., illus. \$29.95.

**A Development of Quantum Mechanics.** Based on Symmetry Considerations. George H. Duffey. Reidel, Boston, 1984 (distributor, Kluwer Boston, Hingham, Mass.). xiv, 342 pp., illus. \$60. Fundamental Theories of Physics.

**The Explanation of Organic Diversity.** The Comparative Method and Adaptations for Mating. Mark Ridley. Clarendon (Oxford University Press), New York, 1983. viii, 272 pp. \$37.50.

**Explosive Volcanism.** Inception, Evolution, and Hazards. Geophysics Study Committee. National Academy Press, Washington, D.C., 1984. xii, 176 pp., illus., + maps. \$24.50. Studies in Geophysics.

**The Facts On File Dictionary of Telecommunications.** John Graham. Facts on File, New York, 1984. 199 pp., illus. Paper, \$6.95. Reprint, 1983 edition.

**Fatty Acids in Cystic Fibrosis.** Vera Rogiers. Editions de l'Université de Bruxelles, Brussels, 1983. 106 pp., illus. Paper, 450 BF. Monographies Pédiatriques.

**The Global Biogeochemical Sulphur Cycle.** M. V. Ivanov and J. R. Freney, Eds. Published on behalf of the Scientific Committee on Problems of the Environment of the ICSU by Wiley, New York,

(Continued on page 1021)

## AAAS NEWS

(Continued from page 980)

the function of each publishing organization together with a detailed description of its manpower surveys and publications since 1973. A condensed listing of all tables in each publication is also included. To speed the search process, Field and Year of Data indexes are provided in the form of a matrix. The *Guide* contains walk-through examples for using these indexes.

In addition to its quick-reference field and year indexes, this new *Guide to Data on Scientists and Engineers* includes a "Guide for the Perplexed Data User" and a number of additional aids to rapid location and understanding of particular kinds of data.

Because of the unique nature of the *Guide*, the Division of Science Resources Studies of the National Science Foundation has provided funds for printing and distributing a limited number of copies of this new reference work. Research groups and libraries may request a copy of the *Guide to Data on Scientists and Engineers* from the Scientific Manpower Commission, 1776 Massachusetts Avenue, NW, Washington, D.C. 20036.

## COSEPP Study Under Way

The AAAS Committee on Science, Engineering, and Public Policy (COSEPP) is conducting a study of the relationship between graduate study and professional practice in the area of science, engineering, and public policy (SEPP).

The study, which is supported in part by the National Science Foundation, is collecting information on academic programs, primarily at the graduate level, which seek to prepare students for careers in the area. The study will result in a "guide to study in science, engineering, and public policy," and an analytic report assessing the state of education in this area.

Information is being collected from directors and faculty of academic SEPP programs, graduates and students who have completed at least 1 year in such programs, and professionals in the field who are familiar with the academic programs and their graduates.

Persons interested in taking part in the study who have not yet been contacted should write to Albert H. Teich, Project Director, AAAS, 1776 Massachusetts Avenue, NW, Washington, D.C. 20036.

## BOOKS RECEIVED

(Continued from page 984)

1983. xxvi, 470 pp., illus. \$61.95. SCOPE 19. From a workshop, Pushchino, U.S.S.R., Oct. 1979.

**Gold '82.** The Geology, Geochemistry and Genesis of Gold Deposits. R. P. Foster, Ed. Published on behalf of the Geological Society of Zimbabwe by Balkema, Rotterdam, 1984 (U.S. distributor, Balkema, Accord, Mass.). xii, 753 pp., illus. \$45. From a symposium, Harare, Zimbabwe, May 1982.

**Handbook of Measurement Science.** Vol. 2, Practical Fundamentals. P. H. Sydenham, Ed. Wiley-Interscience, New York, 1983. xxii pp. + pp. 655-1413, illus. \$97.95.

**Head and Neck Cancer.** P. H. Rhys Evans, P. E. Robin, and J. W. L. Fielding, Eds. Liss, New York, 1983. x, 261 pp., illus. \$48. From a symposium, Birmingham, England, Sept. 1982.

**Introduction to Plasma Physics and Controlled Fusion.** Vol. 1, Plasma Physics. Francis F. Chen. 2nd ed. Plenum, New York, 1984. xviii, 421 pp., illus. \$24.50.

**An Introduction to the Physical Chemistry of Biological Organization.** A. R. Peacocke. Clarendon (Oxford University Press), New York, 1983. xii, 302 pp., illus. \$65.

**The Jahn-Teller Effect.** A Bibliographic Review. I. B. Bersuker. IFI/Plenum, New York, 1984. x, 589 pp., \$85.

**The Jahn-Teller Effect and Vibrionic Interactions in Modern Chemistry.** I. B. Bersuker. Plenum, New York, 1984. xiv, 319 pp., illus. \$45. Modern Inorganic Chemistry.

**Multimodal Torus in the Weakly Electric Fish Eigenmannia.** Henning Scheich and Sven O. E. Ebbesson. Springer-Verlag, New York, 1983. viii, 69 pp., illus. Paper, \$18.70. Advances in Anatomy, Embryology and Cell Biology, 82.

**Mutagenicity, Carcinogenicity, and Teratogenicity of Industrial Pollutants.** Micheline Kirsch-Volders, Ed. Plenum, New York, 1984. xiv, 336 pp. \$45.

**Natural Selection, Heredity, and Eugenics.** Including Selected Correspondence of R. A. Fisher with Leonard Darwin and Others. J. H. Bennett, Ed. Clarendon (Oxford University Press), New York, 1983. x, 306 pp. \$47.50.

**Natural Systems for Development.** What Planners Need to Know. Richard A. Carpenter, Ed. Macmillan, New York, and Collier Macmillan, London, 1983. xxii, 485 pp., illus. \$37.50.

**Optical and Acoustic Waves in Solids—Modern Topics.** M. Borisov, Ed. World Scientific, Singapore, 1983 (U.S. distributor, Heyden, Philadelphia). viii, 483 pp., illus. \$67. From a school, Varna, Bulgaria, Sept. 1982.

**Organic Molecular Aggregates.** Electronic Excitation and Interaction Processes. P. Reineker, H. Haken, and H. C. Wolf, Eds. Springer-Verlag, New York, 1983. x, 285 pp., illus. \$29. Springer Series in Solid-State Sciences, vol. 49. From a symposium, Schloss Elmau, Bavaria, Germany, June 1983.

**Pain in the Cancer Patient.** Pathogenesis, Diagnosis and Therapy. M. Zimmermann, P. Drings, and G. Wagner, Eds. Springer-Verlag, New York, 1984. x, 240 pp., illus. \$42. Recent Results in Cancer Research, 89.

**Purine Metabolism in Man—IV.** Part A, Clinical and Therapeutic Aspects; Regulatory Mechanisms. Chris H. M. M. De Bruyn, H. Anne Simmonds, and Mathias M. Müller, Eds. Plenum, New York, 1984. xviii, 555 pp., illus. \$75. Advances in Experimental Medicine and Biology, vol. 165. From a symposium, Maastricht, Netherlands, June 1982.

**Radiation-Induced Chromosome Damage in Man.** Takaaki Ishihara and Masao S. Sasaki, Eds. Liss, New York, 1984. xiv, 636 pp., illus. \$98. Progress and Topics in Cytogenetics, vol. 4.

**Radiation Oncology Annual 1983.** Theodore L. Phillips and David A. Pistenmaa, Eds. Raven, New York, 1983. x, 277 pp., illus. \$39.

**Role Transitions.** Explorations and Explanations. Vernon L. Allen and Evert van de Vliert, Eds. Plenum, New York, 1984. xii, 371 pp. \$49.50. NATO Conference Series III, vol. 23. From a conference, Madison, Wis., Aug. 1982.

**The Search for Charm, Beauty, and Truth at High Energies.** G. Bellini and S. C. C. Ting, Eds. Plenum, New York, 1984. xii, 585 pp., illus. \$85. Ettore Majorana International Science Series, Physical Sciences, vol. 16. From a conference, Erice, Italy, Nov. 1981.

**Semiology of Graphics.** Diagrams, Networks, Maps. Jacques Bertin. University of Wisconsin Press, Madison, 1984. xii, 415 pp., illus. \$75. Translated from the French edition (Paris, 1967) by William J. Berg.

**Workshop on Non-Perturbative Quantum Chromodynamics.** (Stillwater, Okla., March 1983.) Kimball A. Milton and Mark A. Samuel, Eds. Birkhäuser, Boston, 1983. xii, 273 pp., illus. \$24.95. Progress in Physics, vol. 8.

# Personnel Placement

SCIENCE publishes each Friday, except the last Friday of the year. Advertising is accepted only in writing; no abbreviations. Any deadline in ad must be at least 2 weeks after date of issue in which ad appears. Also, personnel advertising is accepted only with the understanding that the advertiser does not discriminate among applicants on the basis of race, sex, religion, age, color, national origin, handicap, or sexual preference.

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**Anatomist.** Retired; interested in full-time position teaching gross anatomy and/or embryology and/or anatomy and physiology at the paramedical level. Box 28, SCIENCE. X

**Cellular Immunologist.** Ph.D. 1970. Experience in university research in infectious disease, lymphocyte cell biology, hybridomas, and lymphokines. Training in clinical immunology. Seeking academic faculty position. Box 140, SCIENCE. 6/1,8,15,22

**Flow Cytometry Expert:** M.S. in biochemistry, with 2 years of experience at Genentech and 10 years at Stanford University, seeks challenging position in industry, hospital, or university. Available June 1984. Willing to relocate anywhere. Reply: Assisi, 755 Sunshine Drive, Los Altos, Calif. 94022. Telephone: 415-968-6345. X

**Freshwater Ecologist.** Ph.D. 1984. Lake acidification. Experience: aquatic chemistry and ecology, statistics, data analysis, undergraduate teaching. Publications, research support (past and proposed). Seeks academic or industrial position. Box 141, SCIENCE. X

Recent graduate with **B.S. in Microbiology and Biochemistry** is seeking position in biotechnologies field. Prefers molecular biology area but will consider any area with young, growing firm. Box 142, SCIENCE. X

**Neurophysiologist.** Ph.D., 6 years of postdoctoral experience. U.S. citizen. Extensive experience in intra- and extracellular recording in situ and in vitro. Other skills include multibarrel microiontophoresis, HRP neurohistochemistry, electron microscopy, micro-neurosurgery, computer programming, electronics, photography. Teaching experience. Major publications. Seeks position conducive to the pursuit of an independent research program. Box 144, SCIENCE. X

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Position involves the development and operation of hardware and software for production of an automatic anesthesia record, using commercially available components to the maximum extent consistent with cost-effectiveness. Evaluation of new devices and technology of interest to the Department of Anesthesiology. Development and implementation of telecommunications systems for linking large and small hospitals, including semiautomatic data acquisition and transmission. Development and implementation of hardware and software to support the clinical, research, and education programs of the Department of Anesthesiology. Collaboration in anesthesia, research with faculty member and fellows, including: Assistance with clinical and laboratory studies, participation in design and conduct of experiments, assistance with management, and analysis of clinical and experimental data. Development and implementation of computer programs for analysis of electroencephalographic and evoked potential wave forms. Assistance with design and preparation of proposals for research funding. Other duties as assigned by the Director of Anesthesia Research. Send résumé to: Oklahoma State Employment Service, 3105 East Skelly Drive, Tulsa, Okla. 74105. Refer to Job Order Number 090415.

## POSITIONS WANTED

**Neurobiologist**, Ph.D. 1977. Excellent publications, including brain inflammation. Extensive experience with autoradiographic determination of blood flow and metabolism. Experience with delayed hypersensitivity. Excellent knowledge of biochemistry. Seeks position with innovative inflammation research group in pharmaceutical industry. Box 143, SCIENCE. 6/1,8

**Nutritionist/Administrator/Communicator**. Ph.D. 1983 (experimental nutrition). Publications; 3 years of corporate business experience; 2 years of university teaching experience. Seeking university or industry position with visibility and growth potential, nonresearch preferred. Box 124, SCIENCE. X

**Physiologist**, B.S. (biology) 1981, M.S. (physiology) 1983. Strong background in endocrinology, cell physiology, and biochemistry. Experienced in high-efficiency protein radioiodination, development of membrane receptor binding assays, in vitro superfusion of tissues, tissue culture, and a broad variety of biochemical techniques. Good at programming in BASIC. Seeks a research position. Box 145, SCIENCE, or telephone: 415-591-9248 6/1,8

**Physiologist**, M.D., Ph.D., 35 years in basic research in nutrition and gastroenterology, seeks senior research position in academia or industry. Box 146, SCIENCE. 6/1,8

**Plant Biotechnologist**, Ph.D. 1981. Extensive experience with in vitro plant genetic manipulation systems; tissue culture, protoplast isolation, culture and manipulation. Commercially oriented, internationally experienced, with 12 patents and 24 publications; seeks challenging, highly responsible industrial research position. Prefers ambitious recent startups or established aggressive firms. Available July 1984. Box 147, SCIENCE. X

## POSITIONS OPEN

### ANATOMY

Two full-time faculty positions in anatomy are available starting in fall 1984. One position will be in general anatomy and one will be in neuroanatomy. An M.S. in anatomy or related field will be required. Preference will be given to candidates with a Ph.D. and teaching experience. Deadline for applications is 22 June. Send application and résumé to: Theodore J. Kalthoff, Ph.D., Cleveland Chiropractic College, 6401 Rockhill Road, Kansas City, Missouri 64131.

**AQUACULTURIST**—Tenure-track position, September 1984. Ph.D. in mariculture and another primary field from parasitology, fisheries, microbiology, genetics, physiology, or population ecology. Excellence in undergraduate teaching and research expected. Small college with strong reputation in marine sciences located on Shinnecock Bay (Long Island). Send résumé to: Search Committee, Natural Science Division, Southampton College, Southampton, New York 11968. Telephone: 516-283-4000, extension 161.

**AQUATIC ECOLOGIST**. Sea Grant Postdoctoral Scholarship available 1 July 1984 for quantitative ecologist to examine the community interactions and bioenergetics of Great Lakes fishes. Experience in modelling and/or population dynamics desirable. One-year appointment with possible extension. Send curriculum vitae and three letters of recommendation by 20 June 1984 to: Dr. S. B. Brandt, State University of New York College of Environmental Science and Forestry, Syracuse, New York 13210.

### ASSISTANT PROFESSOR DIVISION OF HEMATOLOGY/ONCOLOGY UNIVERSITY OF VERMONT COLLEGE OF MEDICINE

Full-time academic appointment with patient care and teaching responsibilities in hemostasis and thrombosis. Time allocated to lead research projects in hemostasis and thrombosis. Applicants will be involved in clinical programs in venous thrombosis and pulmonary embolism. Applicants must have M.D. or Ph.D. and M.D. degree, be Board-eligible in general internal medicine and/or hematology. Individual shall hold research grant/career award providing at least 50 percent of annual salary. Qualified and interested applicants should send curriculum vitae, names and addresses of three references, and brief outline of future research interests by 1 July 1984 to: John C. Hoak, M.D., Professor and Chairman, Department of Medicine, Fletcher House, Medical Center Hospital of Vermont, Burlington, Vt. 05401. An Affirmative Action/Equal Opportunity Employer. Women and minorities are encouraged to apply.

## GENETICS

### ASSOCIATE PROFESSOR/SENIOR LECTURER

Applications are invited from suitably qualified persons, regardless of sex, race, colour or national origin, for appointment to the post of **Associate Professor/Senior Lecturer in the Department of Genetics**. Applicants should have a PhD in Genetics or an equivalent qualification in an appropriate related field such as Microbiology or Biochemistry together with a working knowledge of Genetics.

The successful applicant will be expected to teach topics in Prokaryotic Molecular Genetics and Genetics of Micro-organisms to third year and Honours students and to undertake the supervision of post-graduate students in these fields. A knowledge of recombinant DNA technology and an interest in the molecular genetics of higher plants will be a recommendation.

The salary range attached to the post is as follows:

Associate Professor: R21 237 - R26 115 per annum  
Senior Lecturer: R16 557 — R24 045 per annum

A pensionable allowance of 12% is also payable. The initial salary notch will be determined according to the qualifications and experience of the successful applicant.

Benefits for full-time permanent staff include pension and medical aid fund membership, an annual bonus, generous leave privileges, 75% remission of tuition fees for dependants attending the University and a housing subsidy, if the applicant is eligible. A removal, travel and settling-in allowance may be payable.

Applications should be lodged by 31 July 1984.

For a detailed information sheet write to the Assistant Registrar (Academic Staffing),

**UNIVERSITY OF THE WITWATERSRAND**  
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## Molecular/Cell Biologist

Atomic Energy of Canada Limited invites applications for a staff scientist to join the Radiation Radiology Branch at the Chalk River Nuclear Laboratories. Candidates should possess a Ph.D. degree and preferably have post doctoral experience. This is a continuing position and the successful applicant will be expected to establish an independent research program in an area complementary to the interests of the existing group of ten scientists. The branch research program is internally funded. It focuses on mechanisms of DNA damage and genetic and external factors which influence these processes. Present programs on hyperthermia, mutagenesis, and tumor induction and promotion support these aims. Excellent small animal facilities are available.

Atomic Energy of Canada Limited is a Crown Corporation and first preference will be given to Canadian citizens and landed immigrants of Canada; however, foreign nationals are also invited to apply.

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Qualified women and men should send a complete resumé, including the names of three references and quoting file P-8412 to:

**Employment Supervisor**  
Atomic Energy of Canada Limited  
Chalk River Nuclear Laboratories  
CHALK RIVER, Ontario K0J 1J0

Dr. D.K. Myers, Head, Radiation Biology Branch may also be contacted for further information at (613) 584-3311 ext. 2504.



## CHAIRPERSON DEPARTMENT OF IMMUNOLOGY

Showa University Research Institute for Biomedicine in Florida anticipates the formation of a new Department of Immunobiology and Immunogenetics. To assist in this development, the institute would like to begin to identify potential candidates for the position of chairperson for such a department.

The Department of Immunology may consist of one chairperson and four institute members. The candidates for the position of chairperson should have at least 7 years of experience in the research field of immunology, with significant progress in their research.

The institute is a non-profit organization partly supported by Showa University Medical School in Tokyo, Japan, and will be dedicated to cancer-oriented biomedical research. The Department of Virology and Molecular Genetics is currently in operation. Opportunities for affiliation with the University of South Florida College of Medicine in Tampa, Florida, exist.

The institute is housed in a recently completed facility of 33,000 square feet in the beautiful area of St. Petersburg, Florida.

*Showa University Research Institute is an Equal Opportunity Employer.* Individuals interested in this position should send their curriculum vitae and a list of publications to: **The Chairperson, Search Committee, Showa University Research Institute, 10900 Roosevelt Boulevard, St. Petersburg, Florida 33702.**

**Showa University Research Institute  
for Biomedicine in Florida  
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## U.S. DEPARTMENT OF AGRICULTURE (USDA) AGRICULTURAL RESEARCH SERVICE (ARS)

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These positions are located at Beltsville, Maryland. Grade level is GM-15. Salary range is \$50,252 to \$65,327, based on qualifications and experience. U.S. citizenship is required. *USDA is an Equal Opportunity/Affirmative Action Employer.* Send SF-171 by 16 July to:

**Judi Ruth (Code NPS)**  
Agricultural Research Service, USDA  
Room 318D, Building 003, BARC-West  
Beltsville, Maryland 20705  
Telephone: 301-344-2701

Applicants will be informed of eligibility or ineligibility. Eligible candidates will be informed when positions have been filled.

## Chisholm Institute of Technology MELBOURNE, AUSTRALIA.

### Dean

#### Faculty of Technology

(Ref. 84/38)

Applications are invited from suitably qualified persons for appointment as Dean, Faculty of Technology, Chisholm Institute of Technology. The appointee will be a member of the senior management team and will report to the Director.

Chisholm Institute of Technology is a multi-discipline post-secondary education institution offering a wide range of tertiary, specialist and continuing education courses on two campuses with an enrolment in advanced education courses in excess of 6,500. In January 1984 the Schools of Applied Science, Computing & Information Systems and Engineering were amalgamated to form a new Faculty of Technology which offers associate diploma, diploma, degree, post-graduate diploma and master's courses in a wide range of scientific and technological disciplines to approximately 2,100 students.

Applicants should preferably possess a higher degree, an outstanding record of achievement in academic and/or industrial research and development, together with a demonstrated ability to lead creatively the education and research activities of a multi-disciplinary Faculty.

It is expected that the appointee will be able to identify with the projected thrusts of the Faculty, provide academic leadership and foster and extend established links with professional associations, industry and government agencies.

The terms and conditions of appointment will be a matter for negotiation but it is envisaged that the successful applicant will be offered a five-year appointment at Head of School I, currently \$A48,997 p.a. (to be supplemented by the recently approved National Wage Case 4.1% and the Academic Salaries Tribunal 5% salary increase). Other benefits are applicable.

A Position Specification is available from the Staff Branch, telephone (03) 573 2362.

Written applications, in duplicate, quoting the reference number, and including personal and career details, and the names and addresses of three referees, should reach the Staff Officer by 16 July, 1984.

#### Caulfield Campus,

900 Dandenong Road, Caulfield East, 3145.  
Victoria, Australia. Phone (03) 573 2222.

62674

## MOLECULAR EVOLUTION/ SYSTEMATICS

### Yale University Department of Biology

Yale University's Department of Biology seeks applicants for an assistant professorship in molecular evolution and/or molecular systematics.

Candidate's expertise should include both the use of modern DNA technology to investigate either eucaryotic or procaryotic systems and a knowledge of the theory and analytical methods directed toward the study of evolution. Duties associated with this position include teaching of graduate and undergraduate students and management of a strong research program. The appointment will take effect no sooner than July 1, 1985.

Send curriculum vitae, summary of past and present research, and the names of at least three referees to: **Executive Secretary, Molecular Evolution Search Committee, Department of Biology, Yale University, P.O. Box 6666, New Haven, CT 06511.** Deadline for acceptance of applications is December 15, 1984. Yale University is an Equal Opportunity/Affirmative Action Employer.



Yale University

## Postdoctoral Research Associate

A postdoctoral position is available to study transcriptional and translational control of heterologous molecules in microinjected *Xenopus* oocytes. A background in recombinant DNA and/or monoclonal antibodies is preferred but not required. Pertinent references include: Cell 27:183, JBC 258:4864, Mol. Cell. Biol. 3:2131, JMB 173:227. Send curriculum vitae and three letters of reference to: **Dr. Joel Richter, Cell Biology Group, c/o PERSONNEL OFFICE, Worcester Foundation for Experimental Biology, 222 Maple Avenue, Shrewsbury, MA 01545, U.S.A.**

## WORCESTER FOUNDATION FOR EXPERIMENTAL BIOLOGY



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

## POSITIONS OPEN

### ASSISTANT PROFESSOR

**Naval Architecture and Marine Engineering.** Develop structural research and teaching applied to ships and offshore floating rigs. Emphasis on ship structural mechanics, stiffened plate dynamics, and shell vibration. The minimum requirements are (i) 4 years of laboratory and classroom teaching experience in structures, (ii) 4 years of steel structural design experience, and (iii) a good publication record in areas of emphasis. Send résumé with three references to: **Chairman, School of Naval Architecture and Marine Engineering, University of New Orleans, P.O. Box 1098, New Orleans, La. 70148.** The University is an Affirmative Action/Equal Opportunity Employer.

**ASSISTANT OR ASSOCIATE PROFESSOR OF BIOCHEMISTRY.** A tenure-track faculty position is available in fall 1984 at the West Virginia School of Osteopathic Medicine for a biochemist. The primary responsibility will be teaching medical students. Research facilities are available and research is encouraged. By 15 June 1984 send curriculum vitae and have three letters of recommendation sent to: **Dr. Larry Davis, West Virginia School of Osteopathic Medicine, Lewisburg, W. Va. 24901.**

### UNIVERSITY OF OKLAHOMA COLLEGE OF MEDICINE

Candidates for faculty appointment are invited to apply for the following position:

The Department of Biochemistry and Molecular Biology of the University of Oklahoma College of Medicine invites applications for a tenure-track position at the level of **assistant professor**, to begin January 1985. We are seeking an individual whose interests and training are in molecular and cellular aspects of genetic regulation. An interest in carbohydrates is desirable but not essential. Applicants must hold the Ph.D. degree and have two or more years of postdoctoral experience. Candidates should have demonstrated the ability to conduct independent, vigorous research of high quality, and have a commitment to excellence in teaching graduate students and students in the health professions. Salary will be on a 12-month basis and commensurate with experience. Interested persons should send curriculum vitae, a minimum of three letters of reference, and a description of research interests and plans by 1 September 1984 to:

**Dr. Thomas Briggs,  
Chair, Search Committee  
Department of Biochemistry and Molecular Biology  
University of Oklahoma Health Sciences Center  
P.O. Box 26901  
Oklahoma City, Okla. 73190**

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

Loyola University of Chicago seeks a qualified individual as **ASSOCIATE DIRECTOR OF CLINICAL MICROBIOLOGY AND IMMUNOLOGY.** The candidate must possess an appropriate doctoral degree and at least 2 years of postdoctoral training. Individuals should also have expertise in cellular immunology and tissue typing and be able to be involved in the development of a cellular immunology laboratory. Additional responsibilities include teaching at various levels. The position includes an academic appointment at the rank of assistant or associate professor in the medical school. The successful candidate will join a department of laboratory physicians and scientists at a 500-bed major teaching institution and medical center. Send curriculum vitae and names of three references to: **Dr. E. W. Bernes, Jr., Professor and Acting Chairman, Department of Pathology, Loyola University Medical Center, 2160 South First Avenue, Maywood, Ill. 60153.** Loyola University is an Equal Opportunity Employer.

**ASSOCIATE PROFESSOR** in Residence, Department of Radiology, University of California, San Francisco (UCSF), School of Medicine: Perform research on the basic mechanisms of RF detection in magnetic resonance imaging and/or the behavior of relaxation times in biological materials. Requirements are a Ph.D. in the basic sciences and a proven record of related research and teaching in a university/medical setting. An Equal Opportunity/Affirmative Action Employer. Minorities, women, and handicapped are encouraged to apply. Send curriculum vitae, reprints, and the names of three references to: **Dr. Leon Kaufman, Chairman, Search Committee, S-358, Department of Radiology, UCSF, San Francisco, California 94143.** Position is open until filled.

## POSITIONS OPEN

### CORNELL UNIVERSITY ASSISTANT PROFESSOR DEPARTMENT OF MICROBIOLOGY

Applicants are invited for the position of assistant professor in the Department of Microbiology, College of Agriculture and Life Sciences, Cornell University. The appointee should possess a strong background in microbiology and have research experience in microbial genetics or the study of informational macromolecules. The appointee will be expected to undertake a vigorous research program and to contribute to advanced undergraduate and graduate teaching in microbiology. Inquiries are invited from all qualified applicants. Applicants should possess the Ph.D. in microbiology or related area, have postdoctoral research experience, and have demonstrated research ability. *Women and minority candidates are encouraged to apply.* Curriculum vitae and three letters of reference, submitted by 31 August 1984, should be addressed to: **Dr. P. J. VanDemark, Search Committee, Department of Microbiology, Stocking Hall, Cornell University, Ithaca, N.Y. 14853.** Cornell University is an Equal Opportunity/Affirmative Action Employer.



**SEARCH NORTHWEST  
ASSOCIATES  
A Professional  
Recruiting Agency**

**PORTS O'CALL—SWAN ISLAND  
4505 NORTH CHANNEL  
PORTLAND, OREGON 97217**

**BIOCHEMISTS—MOLECULAR BIOLOGISTS—** Search Northwest Associates is currently recruiting for several biotechnical industrial R&D positions. Ph.D.'s with two-plus years of postdoctoral experience in the areas of monoclonal hybridoma antibody production and application, recombinant DNA/gene expression, or immunodiagnostic kit development are needed for kit development and production. Candidates interested in entering the industrial research environment should send their curriculum vitae to: **R. Dan Heer, or telephone: 503-285-6560.**

**CHAIRPERSON:** Chemistry Department, State University of New York (SUNY), College of Environmental Science and Forestry, maintains teaching and active research programs in three concentrations: Polymer and wood chemistry; biochemistry and natural products, including ecological chemistry; and environmental chemistry. Competitive grants exceed \$750,000 annually. It seeks an individual with administrative skills, and a record of teaching and funded research in one of the above areas, to lead its 14-member faculty and support staff of 3. The department offers B.S., M.S., and Ph.D. degrees, is well-equipped with modern instrumentation, and interacts closely with counterparts at adjacent Syracuse University and SUNY Upstate Medical Center. It is supported by an eight-member analytical and technical services group. Position at competitive salary available after 1 January 1985. Send nominations, applications, curriculum vitae, and names of three references by 15 September 1984 to: **Professor R. T. LaLonde, Chairman, Chemistry Chairperson Search, SUNY College of Environmental Science and Forestry, Syracuse, New York 13210.** Equal Opportunity/Affirmative Action Employer.

### ECOLOGIST

Full-time, temporary position for 1984-1985 academic year. Ph.D. preferred. Teaching responsibilities include general ecology for majors, environmental biology for nonmajors, and participation in general biology for majors and/or nonmajors. Salary negotiable. For full consideration, send letter of application, curriculum vitae, transcripts, and three letters of recommendation by 1 July 1984 to: **Larry K. Fitzpatrick, Director of Personnel, Saginaw Valley State College, University Center, Mich. 48710.** An Equal Opportunity/Affirmative Action Employer.

### HUMAN MOLECULAR GENETICIST

The Department of Human Genetics of the Medical College of Virginia is seeking applications for an assistant professor position. Candidates must have a doctoral degree, at least 2 years of postdoctoral experience, and a strong background in human genetics. The successful applicant would be expected to establish an independent research program and to participate in graduate studies. To apply, send curriculum vitae and three letters of reference to: **Dr. W. E. Nance, Box 33, MCV Station, Richmond, Va. 23298.** Equal Opportunity/Affirmative Action Employer.



**SPECIAL ASSISTANT  
FOR LABORATORY AFFAIRS  
Salary Commensurate  
with Experience  
Excellent Benefits**

The University of California, Office of the President, located in Berkeley, California, is seeking a special assistant for laboratory affairs to assist the senior vice president and the president of the University in their oversight of four Department of Energy (DOE) Laboratories by: developing information for the Regents' Committee; providing staff support to three evaluation committees; preparing annual reports; conducting special studies; serving as consultant during contract negotiations between the University and DOE; providing liaison with other University and government offices; assisting faculty Academic Senate Committees, and laboratory staff on major research proposals and programs and developing policy recommendations. Requires: experience in scientific and technical research, writing, speaking, complex analyses; ability to acquire quickly a working knowledge of current University of California and DOE Laboratory policies, goals, and priorities; ability to interact effectively with a variety of high-level individuals; and ability to obtain a security clearance. Preference to candidates with management experience and knowledge of federal government process relating to DOE Laboratories. Send résumé, salary history, and letter of application no later than 30 June 1984 to:

Screening Committee-4  
University of California, Berkeley  
2199 Addison Street, Number 275  
Berkeley, Calif. 94720

*An Affirmative Action/Equal  
Opportunity Employer*

## DEAN AND DIRECTOR



**AGRICULTURAL EXTENSION SERVICE  
UNIVERSITY OF MINNESOTA  
SAINT PAUL, MINNESOTA**

The University of Minnesota invites nominations, applications, or expressions of interest for the position of Dean and Director of the Agricultural Extension Service.

The Dean and Director has general administrative authority over Agricultural Extension Service affairs as designated by the Deputy Vice President of the Institute of Agriculture, Forestry and Home Economics and consistent with the Memorandum of Understanding between the Regents of the University of Minnesota and the United States Department of Agriculture.

Qualifications include demonstrated program leadership, administrative ability, personnel-financial management, and communication skills.

Preference will be given to persons with a doctorate. However, persons with outstanding records and a minimum of a Masters degree will be considered.

The Dean and Director shall be appointed initially for a seven-year term and may be appointed for additional five-year terms. The Dean and Director will not hold tenure in the administrative position but will hold tenure and the rank of professor in an appropriate academic unit.

Applications should include a letter of intent, vita, transcripts, three letters of reference, and the names of an additional five persons who may be contacted for further information.

Applications and nominations are due by July 1, 1984.

Send nominations and applications to:

**Hamilton I. McCubbin, Chair  
Search Committee for Dean and Director  
of Agricultural Extension Service  
University of Minnesota  
290 McNeal Hall  
1985 Buford Avenue  
Saint Paul, Minnesota 55108**

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

# DIRECTOR, NATIONAL INSTITUTE OF ALLERGY AND INFECTIOUS DISEASES

**NATIONAL INSTITUTES OF HEALTH  
PUBLIC HEALTH SERVICE  
DEPARTMENT OF HEALTH AND HUMAN SERVICES**

The National Institutes of Health invites nominations and applications for the position of Director, National Institute of Allergy and Infectious Diseases (NIAID). This Institute conducts, fosters, and supports research and research training on the prevention, management, and cure of infectious and immunological diseases. Programs encompass intramural laboratory research and extramural (grants and contracts) activities in infectious and immunological diseases and disorders.

This is a Civil Service position in the Senior Executive Service (SES), with an authorized salary range from \$58,938 to \$66,000 per annum depending on qualifications. Candidates may be eligible for Physicians Comparability Allowance up to \$10,000 per year. Alternately, candidates may be eligible for appointment in the Commissioned Corps of the U.S. Public Health Service.

The mandatory professional qualifications are: (1) meet the minimum educational requirements for Medical Officer, GS-602, or Health Scientist, GS-601, for equivalent combination of experience and training; and (2) have research experience and knowledge of research programs in one or more areas related to infectious and immunological diseases and disorders. In addition, candidates must possess managerial/executive qualifications that demonstrate competence to assume leadership responsibilities in: (1) assuring that key national and agency goals are considered in making program decisions; (2) establishing effective external communications by being a representative spokesperson for the organization; (3) developing policy, establishing long-term and short-term goals and priorities; (4) obtaining and allocating the resources necessary to support program implementation; (5) assur-

ing that people are appropriately employed and dealt with in a fair and equitable manner; and (6) assuring that programs are being executed and adjusted as necessary, and that the appropriate results are being achieved.

Candidates who meet the mandatory requirements will be further evaluated by the Search Committee on the following factors: communications and inter-personal skills; training and education; honors and awards; and the degree to which they exceed the minimally qualified level of the mandatory managerial/executive qualifications. Information on any of the above requirements may be obtained by calling Mrs. Helen Stafford at (301) 496-4197.

Applications (Personal Qualifications Statement, SF-171) are to be sent to Helen C. Stafford, Executive Secretary, Search Committee for Director, NIAID, National Institutes of Health, Building 1, Room 19, Bethesda, Maryland 20205. A current curriculum vitae and bibliography must accompany all applications. Applications of women and/or minority group members are especially solicited.

ALL QUALIFIED CANDIDATES WILL RECEIVE CONSIDERATION WITHOUT REGARD TO RACE, RELIGION, COLOR, SEX, AGE, NATIONAL ORIGIN, LAWFUL POLITICAL AFFILIATION, MARITAL STATUS, UNION MEMBERSHIP, OR ANY NONDISQUALIFYING PHYSICAL OR MENTAL HANDICAP.

OPENING DATE: 5/25/84 CLOSING DATE: 6/30/84  
(All applications must be postmarked before closing date)

NIH IS AN EQUAL OPPORTUNITY EMPLOYER

## THE FOUNDATION FOR SUCCESS

If you'd like to step into the future with a stable and growing company, consider Collagen Corporation, a premier biomedical innovator. When we say we've laid the foundation for success, we mean it is there for our people as well as for our company. Our advancement opportunities, salaries and benefits, and steady growth are proof of that.

### Manager of Process Biochemistry

You will lead a team responsible for product and process research on new therapeutic products, which are based on a variety of proteins and protein/polysaccharide composites.

A PhD in biochemistry or related field and 2-5 years of post-doctoral experience in isolation and characterization of a variety of proteins are required. You must have evidence of a high level of scientific or technical achievement as documented by publications or patents. Interest or experience in large-scale purification techniques, and familiarity with the pharmaceutical/biotechnology industry are desirable.

### Share Our Future

Collagen Corporation's strong future is assured by our solid foundation for success. To share our future, please send your resume, a brief account of your interests, and a list of references whom we may contact, to: Dr. Don Wallace, Director, Product Development, Box 205, Collagen Corporation, 2500 Faber Place, Palo Alto, CA 94303. We are an equal opportunity employer.

**Collagen Corporation**



## POSITIONS OPEN

### CHAIRPERSON DIVISION OF BIOLOGICAL SCIENCES UNIVERSITY OF GEORGIA

The University of Georgia is seeking a research scientist of international standing to chair the Division of Biological Sciences. The division includes the Departments of Biochemistry, Botany, Entomology, Genetics, Microbiology, and Zoology, with 125 faculty members and an annual extramural research budget in excess of \$8 million.

Responsibilities of this position include facilitating the continued development of vigorous research programs and of an integrated modern curriculum in biological sciences. The chairperson will exert strong leadership in facilitating the organization and funding of new departmental research and teaching programs.

Applicants for this position should have a record of distinguished accomplishment in competitively funded biological research and be otherwise qualified for appointment at the rank of professor in one of the departments of the division.

Nominations as well as applications are invited. Applicants should send curriculum vitae, a statement of current research interests, and the names of five persons who can serve as references. Deadline for receipt of applications is 15 September 1984. This position is presently vacant. Starting dates may be either 1 January or 1 September 1985. All materials should be sent to:

Robert L. Anderson, Head  
Department of Physics and Astronomy  
University of Georgia  
Athens, Georgia 30602

*An Affirmative Action/Equal Opportunity Employer*

### DIRECTOR—PROGRAM IN CELLULAR AND MOLECULAR BIOLOGY

The University of Nevada, Reno, invites applications for a position as director of a newly established graduate program in cellular and molecular biology. Candidates must hold the Ph.D. degree or equivalent, have at least 5 years of experience in academic teaching and/or research, and have an outstanding record of accomplishment in teaching and research in an area of science relevant to cellular or molecular biology.

The director will be responsible for building, developing, and administering a joint program in cellular and molecular biology in the Colleges of Agriculture, Arts and Science, and Medicine at the University of Nevada, Reno.

Send curriculum vitae and three references by 15 July 1984 to: Thomas R. Kozel, Ph.D., Professor and Chairman of Microbiology, School of Medicine, University of Nevada, Reno, Reno, Nev. 89557. Search will be extended if suitable candidate is not found.

*Affirmative Action/Equal Opportunity Employer*

### DIRECTOR MEDICAL ONCOLOGY UNIVERSITY OF VERMONT COLLEGE OF MEDICINE

Director, Section of Oncology, Department of Medicine and Deputy Director, Vermont Regional Cancer Center. Experienced medical oncologist at professor or associate professor level with demonstrated leadership ability in clinical research, patient care, and teaching. Letters of interest, including curriculum vitae and a description of current clinical and research activities and grant support, should be sent by 1 July 1984 to: John C. Hoak, M.D., Professor and Chairman, Department of Medicine, Fletcher House, Medical Center Hospital of Vermont, Burlington, Vt. 05401.

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

### ECOLOGIST (PLANT)

Temporary position: 15 August to 15 May 1985

**VISITING ASSISTANT PROFESSOR.** The Department of Biology at Idaho State University (ISU) is accepting applications for a temporary position of visiting assistant professor for the academic year to begin 15 August 1984. The successful applicant will teach undergraduate biometry, plant ecology, and range and forest ecology. Other duties will be assigned by the chairperson. A doctoral degree is required. Salary will be \$19,000. Send application, official transcripts, and three letters of recommendation to: The Chairperson, Department of Biology, Idaho State University, Pocatello, Idaho 83209, by 1 July 1984. ISU is an Affirmative Action/Equal Opportunity Employer. Applications from women and minorities are encouraged.

## POSITIONS OPEN

### IMMUNOLOGIST, RESEARCH ASSISTANT PROFESSOR

Research faculty position in Comprehensive Cancer Center and Division of Hematology-Oncology at the University of Alabama in Birmingham. Candidates must have a Ph.D. in immunology with postdoctoral experience preferred. Backgrounds in immunology, immunohematology, and protein chemistry are preferred. The project concerns basic studies on Fc receptor interaction with Ig and characterization of autoantibodies using monoclonal antibody techniques to study mechanisms of platelet and red cell destruction in human immune cytopenias. Send letter of interest and curriculum vitae to: Albert F. LoBuglio, M.D., Director, Comprehensive Cancer Center, University of Alabama in Birmingham, University Station, Birmingham, Alabama 35294. An Equal Opportunity/Affirmative Action Employer.

### INSTRUCTOR/ASSISTANT PROFESSOR OF PHYSIOLOGY

Position (nontenure track) available 1 September 1984 to conduct research on sensory processing of olfactory information. Some teaching required. Preference given to individuals with experience in neurophysiological techniques. Support available for up to 5 years. Salary will depend on experience.

Applicants should have an M.D. or Ph.D. degree in physiology or a related field. Send curriculum vitae and names of three references to: Dr. Richard Costanzo, Department of Physiology and Biophysics, Medical College of Virginia, Box 551 MCV Station, Richmond, Va. 23298. An Equal Opportunity/Affirmative Action Employer.

### MOLECULAR GENETICS/BIOCHEMISTRY

MEHARRY MEDICAL COLLEGE is making a concerted effort in at least three departments to strengthen the area of molecular biology/genetics. The Department of Biochemistry invites applications for faculty (assistant/associate professor) positions in these areas. Preference will be given to applicants with expertise in regulation of gene expression who plan to study or are studying contemporary problems in eukaryotic molecular genetics, using recombinant DNA and/or monoclonal antibody techniques. Applicants should have broad training in biochemistry and molecular biology and will be expected to maintain and/or develop a funded research program of high quality and to participate in the graduate and professional school teaching programs of the Department of Biochemistry. Applicants should send curriculum vitae, names of four individuals who may be contacted for reference, and a summary of research interests or on-going project to: Ifeanyi J. Arinze, Ph.D., Chairman, Department of Biochemistry, Meharry Medical College, Nashville, Tenn. 37208. Meharry Medical College is an Equal Opportunity/Affirmative Action Employer.

**TEXAS A&M UNIVERSITY—ORGANIC CHEMISTRY:** Search reopened. The Department of Chemistry invites applications or nominations for tenure-track positions as assistant professor of organic chemistry, with appointment to start in either January or September 1985. Applicants should submit a résumé, publication list, and description of proposed research, and should arrange for three letters of recommendation to be sent to: Professor J. B. Natowitz, Head, Department of Chemistry, Texas A&M University, College Station, Texas 77843. An Equal Opportunity/Affirmative Action Employer.

### PHYSICAL BIOCHEMISTRY

The Department of Biochemistry has a tenure-track position available at the assistant or associate professor level. Applicants should have broad training in biochemistry and will be expected to maintain and/or develop a funded research program of high quality and to participate in the graduate and professional school teaching programs of the Department of Biochemistry. Applicants should send curriculum vitae, names of four individuals who may be contacted for reference, and a summary of research interests or on-going project to: Ifeanyi J. Arinze, Ph.D., Chairman, Department of Biochemistry, Meharry Medical College, Nashville, Tenn. 37208. Meharry Medical College is an Equal Opportunity/Affirmative Action Employer.

**POSTDOCTORAL FELLOW** to join our investigation of gene structure and cellular factors which determine developmental and hormonal control of specific eukaryote gene transcription. Send curriculum vitae to: Dr. Philip Feigelson, Department of Biochemistry, Institute of Cancer Research, Columbia University, 701 West 168 Street, New York, N.Y. 10032; or telephone: 212-694-6916.

**National Cancer Institute  
Division of Cancer Prevention and Control  
Cancer Control Science Program**

**ASSOCIATE DIRECTOR  
CANCER CONTROL SCIENCE PROGRAM**

The Associate Director has overall responsibility for the planning, coordination, and evaluation of a broad national program designed to reduce cancer incidence, morbidity, and mortality through cancer control applications, health promotion strategies, and health professional education and training. Oversees three branches that administer a \$50 million contract and grant program.

**Salary Range**—\$58,938 to \$66,000 per annum (Physicians may be eligible for an additional \$10,000 allowance).

Position information and qualification requirements may be obtained by contacting:

**Ms. Cathy Schmader, PMS  
National Cancer Institute  
Building 31, Room 3A32  
Bethesda, MD 20205  
(301) 496-6862**

Applications (SF-171, CV, and Bibliography) must be submitted to above address and postmarked not later than July 2, 1984.

**AN EQUAL OPPORTUNITY EMPLOYER**

**HEALTH SCIENTIST ADMINISTRATOR  
DIVISION OF BLOOD DISEASES  
AND RESOURCES  
NATIONAL HEART, LUNG, AND  
BLOOD INSTITUTE**

The National Heart, Lung, and Blood Institute is seeking applicants for the position of a Program Administrator in the Blood Diseases Branch of the Institute's Division of Blood Diseases and Resources, with an annual salary of \$36,152 (GS-13) with potential for advancement to GS-14 (\$42,722). The Branch has responsibility for planning, developing and administering an extramural program of basic and applied, clinical and non-clinical research in the areas of thrombosis and hemostasis and red blood cell disorders. Currently it supports research in these areas with a budget of about \$52 million, primarily in research grants. The incumbent for this position will be responsible for the scientific administration of grants and contracts in the Thrombosis and Hemostasis Program, evaluating and integrating knowledge in this area, developing and recommending plans for payment of research grants and contracts, initiating actions for support of targeted research, including the development of workshops, and projecting scientific and budgetary needs.

Applicants must have a Ph.D., M.D. degree or equivalent, with independent research experience in basic or clinical research, supported by grants and/or contracts, and substantial experience and training in disciplines related to thrombosis and hemostasis. The position to be filled is in the Career Civil Service. Those interested in being considered for this position should submit an SF-171 (Personal Qualifications Statement) along with a Curriculum Vitae and Bibliography to the NHLBI Personnel Office, National Institutes of Health, Public Health Service, 9000 Rockville Pike, Building 31, Room 5A-34, Bethesda, Maryland 20205. For additional information, please call Ms. Kathryn M. Osbourn (301) 496-6477. Deadline for applications is July 16, 1984.

**AN EQUAL OPPORTUNITY EMPLOYER**

**SENIOR AEROSOL  
RESEARCH SCIENTIST**

Battelle, Pacific Northwest Laboratories at Richland, Washington invites applications from aerosol scientists or engineers capable of conducting innovative research involving aerosol physics and animal inhalation exposure technology.

Position requires a working knowledge of aerosol and/or vapor generation and characterization, delivery systems, and respiratory deposition of materials. Applicants should have PhD or equivalent in training in aerosol physics or related aerosol sciences engineering. Will provide technical guidance for the design, testing, and operation of inhalation exposure facilities. Should have experience in oral presentations and in writing research proposals and reports. Experience with interdisciplinary research teams and familiarity with research project management desirable.

Please submit resume, transcript, and references to:  
**Loren P. Henderson, Manager-Employment,  
Battelle-Northwest, P.O. Box 999, Richland, WA  
99352.**

U.S. citizenship required.

An Equal Opportunity Employer M/F.



**NATIONAL INSTITUTE OF ARTHRITIS, DIABETES,  
AND DIGESTIVE AND KIDNEY DISEASES  
OFFICE OF THE DIRECTOR**

**DIRECTOR  
DIVISION OF  
DIGESTIVE DISEASES  
(and Associate Director for  
Digestive Diseases)—Dual Position**

Incumbent must be a recognized and respected leader in the field of digestive diseases related research, with experience and expertise in the development of new knowledge and new technology in digestive diseases. Responsibilities include identifying research needs and opportunities; planning, developing and implementing a high quality extramural research and research training program in the field; and conducting laboratory investigations in digestive diseases related research.

**Salary Range**—\$58,938 to \$66,400 per annum

Position information, SF-171 (application), and qualifications requirements may be obtained by contacting:

**Mr. Clifford Moss, Executive Secretary  
Search Committee for Director,  
Division of Digestive Diseases  
Building 31, Room 9A34  
National Institutes of Health  
Bethesda, Maryland 20205  
(301) 496-4231**

Applications must be postmarked no later than July 31, 1984.

**AN EQUAL OPPORTUNITY EMPLOYER**



## POSITIONS OPEN

### MEMBRANE STRUCTURE FUNCTION AND PATHOLOGY

The Faculty of Medicine, University of Alberta, invites applications for the positions of research scholar or senior scholar at the assistant professor (\$27,720 to \$39,820) or associate professor (\$35,400 to \$51,658) levels. The successful candidate(s) must have an M.D., D.D.S., and/or Ph.D. degree with at least 2 years of appropriate postdoctoral training, and must have demonstrated outstanding potential for an independent research career in an area of the structure and function of biological membranes. These positions will be long-term and will be funded through an external agency, but the incumbents will enjoy all the privileges of the respective university ranks. The granting of these awards is by competition and is made on the basis of excellence. Candidates should send their curriculum vitae, outlines of proposed research, and the names of three references to: **Professor E. E. McCoy, Department of Pediatrics, University of Alberta, Edmonton, Alberta, Canada T6G 2G3.** *The University of Alberta is an Equal Opportunity Employer but in accordance with Canada employment and immigration regulations this advertisement is directed to Canadian citizens and permanent residents.*

Closing date: 1 August 1984.

**MICROBIOLOGIST/IMMUNOLOGISTS**—The Department of Microbiology and Immunology has two full-time faculty positions (one at tenure-track) at the assistant or associate professor level. We are searching for highly qualified individuals able to establish a productive independent research program. Candidates must have a doctoral degree, extensive postdoctoral experience, and publications in microbial genetics, molecular biology of host pathogen interactions, or immunology. Successful candidates will also be members of the graduate faculty and will have responsibility for teaching both graduate and medical students. Currently the department consists of 13 full-time resident faculty members plus several joint and affiliated appointees, and operates active doctoral and postdoctoral programs. Numerous opportunities for interdisciplinary interactions and collaboration are available with individuals with mutual interest in the department, the institution, and the Philadelphia area. Send curriculum vitae and names of three references to: **Gerald D. Shockman, Ph.D., Chairman, Department of Microbiology and Immunology, Temple University School of Medicine, Philadelphia, Pa. 19140.** *Equal Opportunity/Affirmative Action Employer.*

**NEUROSCIENTIST—ASSISTANT PROFESSOR:** The Department of Neurophysiology of the University of Wisconsin Medical School solicits applications for a faculty position. Candidates must have demonstrated capacity for independent research in areas of neural science which complement those already represented in the department. Areas include, but are not limited to, cellular, molecular, and developmental neurobiology, as well as neurochemistry. Individual will be expected to devote primary effort to research but will participate in the teaching of medical, graduate, and postdoctoral students. Send letter, curriculum vitae, and names of three references to: **J. E. Hind, Chair, Department of Neurophysiology, 1300 University Avenue, Madison, Wis. 53706.** *The University of Wisconsin is an Equal Opportunity/Affirmative Action Employer.*

**PHARMACOLOGIST**—Marshall University School of Medicine. Tenure-track faculty position involving medical/graduate student teaching. Salary commensurate with qualifications and experience. Minimum qualifications: Ph.D. or M.D. and postdoctoral experience. Training and experience in drug metabolism, cardiovascular or CNS pharmacology preferred. Application deadline: 1 September 1984. Apply to: **Donald S. Robinson, M.D., Chairman, Department of Pharmacology, Marshall University School of Medicine, Huntington, W.Va. 25701.** *An Equal Opportunity Employer.*

**POSTDOCTORAL FELLOW/RESEARCH ASSOCIATE POSITION** available 1 July 1984 for Ph.D. with expertise in protein chemistry and interest in the characterization and modification of red cell membrane proteins and proteo-lipids involved in the expression of Rh antigenicity to join group study in removal of blood group antigens from the red cell surface. Send curriculum vitae and names of three references to: **Dr. J. Goldstein, Cell Biochemistry Laboratory, Lindsley F. Kimball Research Institute, New York Blood Center, 310 East 67 Street, New York, N.Y. 10021.**

*Equal Opportunity Employer, M/F*

## POSITIONS OPEN

**PHYSIOLOGICAL PSYCHOLOGIST GS-12,** \$30,549 to \$39,711 per annum. Career civil service position as research physiological psychologist at the Naval Biodynamics Laboratory (NBDL), New Orleans, Louisiana. The position requires the design, development, and execution of experiments directed at assessing the neurophysiological effects on humans of impact acceleration, vibration, and ship-motion. The incumbent should have extensive experience recording and analyzing sensory-evoked potentials recorded from humans. For information, contact: **Dr. M. Weiss, Chief, Neurophysiology Division, NBDL, P.O. Box 29407, New Orleans, La. 70189; telephone: 504-255-4882.** SF-171 and transcript or list of college courses may be sent directly to: **Mrs. B. Rogers, Consolidated Civilian Personnel Office, New Orleans, La. 70142,** and must be postmarked by 25 June 1984. *An Equal Opportunity/Affirmative Action Employer.*

**POSTDOCTORAL FELLOW.** A training position in IMMUNOLOGY to investigate T cell instructed monocyte/macrophage protease generating responses is available 1 July for a minimum period of 2 years, renewable. Areas of investigation available include antigen-specific and non-specific recognition and induction of T cells, immunobiology of the T cell antigen-recognition receptor, T cell signals for monocyte/macrophage induction, cellular pathways and cloning of participatory T cells in monocyte/macrophage responses that induce intrinsic protease and cofactor genes for the exogenous protease cascades, and cloning genes for the induced proteins. Position is within an NIH training program in immunology. Must be U.S. citizen or permanent resident. Send résumé and three letters of reference to: **Dr. Thomas S. Edgington, Department of Immunology, Research Institute of Scripps Clinic, La Jolla, California 92037.** *An Equal Opportunity/Affirmative Action Employer.*

**POSTDOCTORAL POSITION** available in fall 1984 for research on metallo monooxygenase structure and function. The research will involve design, synthesis, and evaluation of novel substrates and inhibitors, as well as the opportunity to participate in the use of EXAFS to probe the active sites of metallo oxygenases. Competitive salary; position renewable by mutual consent. Send curriculum vitae and three letters of recommendation to: **Dr. Sheldon W. May, School of Chemistry, Georgia Institute of Technology, Atlanta, Georgia 30332.** *An Equal Opportunity/Affirmative Action Employer.*

### POSTDOCTORAL POSITION PLANT BIOCHEMISTRY/PHYSIOLOGY

Available immediately to study biosynthesis of abscisic acid in plants and fungi for up to 2 years. Strong background in biochemistry/phytochemistry desirable. Send curriculum vitae and three letters of reference to:

**Dr. D. C. Walton  
Department of Biology  
State University of New York  
College of Environmental Science and Forestry  
Syracuse, N.Y. 13210**

*An Equal Opportunity/Affirmative Action Employer*

**POSTDOCTORAL POSITION** available 1 September for individual with research interest in cell biology or reproductive biology. Excellent research facilities with ample time for research. Individual should be capable of teaching in gross anatomy laboratory. Starting salary: \$19,500. Send curriculum vitae and names of three references by 30 June to:

**Gary E. Wise, Ph.D.  
Chairman, Department of Anatomy  
Texas College of Osteopathic Medicine  
Camp Bowie at Montgomery  
Fort Worth, Texas 76107-2690**

*An Equal Opportunity/Affirmative Action Employer*

### POSTDOCTORAL POSITION IN PRIMATE REPRODUCTIVE ENDOCRINOLOGY

Available immediately to Ph.D. to study steroid production by fetoplacental unit in vivo during baboon pregnancy and by human placenta in vitro. Experience with primates not necessary, but background in reproductive endocrinology essential. Send curriculum vitae to:

**Eugene D. Albrecht, Ph.D.  
Departments of Obstetrics and Gynecology  
and Physiology  
The University of Maryland School of Medicine  
Baltimore, Maryland 21201**

## POSITIONS OPEN

**POSTDOCTORAL POSITION—HUMAN MOLECULAR GENETICS.** Available 1 July 1984 to study molecular mechanisms allowing expression of recessive mutations during development of human cancers [see *Nature* 305, 779-784 (1983)]. Experience in recombinant DNA technology and genetics preferred. Send curriculum vitae and names of three references to: **Webster K. Cavenee, Ph.D., Department of Microbiology and Molecular Genetics, University of Cincinnati College of Medicine, 231 Bethesda Avenue, Cincinnati, Ohio 45267-0524.**

**POSTDOCTORAL POSITION** in the Boston area, available 1 July 1984. Laboratory research interests in hormonal regulation of gene and oncogene expression in liver cells. Applicants with expertise in nucleic acid biochemistry, recombinant DNA technology, microinjection of somatic cells, will be considered. Send curriculum vitae and three letters of recommendation to: **Dr. Lawrence J. Weng, Department of Biology, Brandeis University, 415 South Street, Waltham, Mass. 02254.**

**POSTDOCTORAL POSITION IN PHARMACOLOGY.** Funding for 3 years; available now to study the effects of drugs of abuse upon behavior and neurochemistry. Background in operant behavioral procedures and experience in HPLC-EC analysis of neurotransmitters desirable. Send curriculum vitae and names of three references by 15 July 1984 to: **Dr. Martin D. Schechter, Professor and Program Chairman, Department of Pharmacology, c/o Office of the Provost and Dean, Northeastern Ohio Universities College of Medicine, Rootstown, Ohio 44272.** *An Equal Opportunity/Affirmative Action Employer.*

**POSTDOCTORAL POSITIONS in STUDIES of the NEUROCHEMICAL, METABOLIC, and ELECTROPHYSIOLOGICAL FEATURES of NEURAL TRAUMA with EMPHASIS on MECHANICAL BRAIN INJURY.** Two- to 3-year fellowships available in 1985 to participate in a multidisciplinary research training program focusing on brain injury. Biomechanical program emphasizes basic science studies of clinical features on neural trauma. Applicants would have opportunity to learn and incorporate a number of methodologies into their research interests including neuropathology, autoradiographic studies of brain glucose utilization, cerebral blood flow, ICP dynamics, and blood brain barrier function as well as clinical electrophysiological and behavioral methods. Appointments pay \$20,000 per year and are within the Division of Neurosurgery, Medical College of Virginia. The requirements are U.S. citizenship or permanent residency, and a Ph.D. degree or equivalent. Send résumé, including statement of research interests and goals, and copies of publications by 1 August 1984 to: **Anthony Marmarou, Ph.D., Division of Neurosurgery, Box 508, MCV Station, Richmond, Virginia 23298.** *An Equal Opportunity/Affirmative Action Employer.*

**PSYCHOLOGIST, Ph.D.,** immediate opening in the Department of Psychiatry, University of California, Los Angeles (UCLA), for cardiovascular psychophysiology; 3-year grant-supported research on postural hypotension and blood pressure discrimination; experience in laboratory computer programming and electronics desirable. **Dr. David Shapiro, Department of Psychiatry, UCLA, 760 Westwood Plaza, Los Angeles, Calif. 90024; telephone: 213-825-0252.**

### RESEARCH ASSISTANT PROFESSOR DEPARTMENT OF MEDICINE UNIVERSITY OF VERMONT COLLEGE OF MEDICINE

Full-time research faculty to conduct independent and collaborative research in fields related to hemostasis and thrombosis. Areas of expertise should include biochemistry, cell biology, cell physiology, receptor mechanisms, and an understanding of ultrastructural techniques. Applicants must have Ph.D. in biochemistry, pharmacology, physiology, or cell biology with demonstrated capabilities in research related to hemostasis and thrombosis. He/she will hold a research grant/career award providing 50 percent of total annual salary. Qualified and interested applicants should send curriculum vitae, names and addresses of three references, and a brief outline of future research interests by 1 July 1984 to: **John C. Hoak, M.D., Professor and Chairman, Department of Medicine, Fletcher House, Medical Center Hospital of Vermont, Burlington, Vt. 05401.** *An Affirmative Action/Equal Opportunity Employer. Women and minorities are encouraged to apply.*



## Instrumentation Laboratory's Expansion In Diagnostic Research

Allied, a 10-billion dollar diversified company, has made a major commitment to growth in Human Medical Diagnostics.

This is a new venture focusing on research and development of diagnostic products for human diseases.

The following positions are currently available at Instrumentation Laboratory, Allied's diagnostic company, located in Lexington, Massachusetts.

### Scientists

#### Biochemist

Evaluate biotechnologies having application in *in vitro* diagnostic tests including immunodiagnostics, monoclonal antibodies and DNA probes. Design or develop diagnostic tests using technology available within IL or at other Allied divisions. Guide designs through production phase. MS biochemistry with 5-10 years' experience in diagnostics or biotechnology. Knowledge of immunology, monoclonal antibody technology. Job code BCH.

#### Senior Scientist

We seek an individual with 2 years' minimum hands-on experience operating a fluorescence activated cell sorter. Background in cell surface immunofluorescence, cell cycle analysis and DNA staining techniques is necessary. Experience screening and sorting hybridomas would be desirable. Responsible for maintenance and calibration of the equipment for own project and that of other investigators as well. MS/Ph.D required. Job code SSF.

#### Senior Scientist

We seek a Ph.D level scientist to research biological aspects of lymphokines. Requires broadbased experience including T-cell hybridoma methodology. Minimum 2 years' postdoctoral experience. Should include the isolation, purification and bioassays for lymphokines. Particular interest in TCGF (IL-2) and INF, but not restricted to them. Job code SCL.

**IL offers an excellent salary and benefits package. Please forward resume including salary requirements and specifying job code for the position you are interested in to:**

Mr. Paul A. Smith, Jr.  
Dept. SI  
Instrumentation Laboratory  
113 Hartwell Avenue  
Lexington, MA 02173

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**ALLIED** Instrumentation Laboratory

## RESEARCH POSITIONS

### DEPARTMENT OF PHARMACOLOGY AND CELL BIOPHYSICS UNIVERSITY OF CINCINNATI COLLEGE OF MEDICINE

Four positions are available in a Department which is engaged in an active program of cardiovascular research (Chairman: Professor A. Schwartz). Although collaborative research is possible the four specific areas of interest are:

1. **Postdoctoral position:** Ion transport with special emphasis on sarcoplasmic reticulum. Projects include regulation of calcium transport by cAMP-dependent and calcium-calmodulin-dependent protein kinases; correlation of *in vitro* findings with *in vivo* events using beating hearts; isolation and characterization of sarcoplasmic reticulum membrane-bound protein kinases and phosphoprotein phosphatases. (Attention: Dr. E. G. Kranias)
2. **Postdoctoral position:** Muscle contraction and relaxation with particular emphasis on the roles of the sarcoplasmic reticulum and sarcolemma. Rapid mixing kinetics and fluorescent spectroscopy will be used to obtain data on enzyme structure and function which will then be used as a basis for computer simulation and modeling. Competence in kinetics and computer programming expected. Experience in fluorescence spectroscopy and/or enzyme reconstitution beneficial but not required. Excellent opportunity for biophysics, physics, or physical chemistry major to do biophysical or pharmacological research and to interact with medical investigators in this area. (Attention: Dr. F. Mandel)
3. **Postdoctoral position:** Muscle protein metabolism focusing on myosin, actin and troponin. Projects include contractile protein synthesis and degradation both *in vivo* and *in vitro* in models of cardiac hypertrophy; developmental and adaptive changes in isomyosin composition in cardiac and smooth muscle; generation and characterization of monoclonal antibodies to muscle proteins. (Attention: Dr. Anne F. Martin)
4. **Research Faculty or Postdoctoral position:** Studies of the membrane enzyme,  $\text{Na}^+$ ,  $\text{K}^+$ -ATPase. The research involves determination of the enzyme's antigenic structure, receptor properties (digitalis binding), and its membrane properties. Requires expertise in membrane biophysical and fluorescence spectroscopy techniques with interest in membrane protein lateral movement and cytoskeletal protein interaction. Experience in antibody-antigen interactions, cell culture-hybridoma techniques, and immunohistochemistry is helpful. There will also be opportunities to collaborate with other members of this department and to develop independent research interests. (Attention: Dr. W. James Ball)

Please send curriculum vitae and names and addresses of three references to the faculty member of primary interest at the **Department of Pharmacology and Cell Biophysics, University of Cincinnati, College of Medicine, Cincinnati, OH 45267-0575**. We are an Equal Opportunity Employer.

## POSITIONS OPEN

**POSTDOCTORAL POSITION** available immediately to study cholesterol in membranes and cells and/or functional consequences of membrane structure. Send curriculum vitae and three letters of reference to: **Dr. Philip L. Yeagle, Department of Biochemistry, State University of New York (SUNY)/Buffalo School of Medicine, Buffalo, N.Y. 14214. SUNY/Buffalo is an Affirmative Action/Equal Opportunity Employer.**

**POSTDOCTORAL POSITION IN NEUROSCIENCE** available immediately. The individual will use immunocytochemical methods to study the synaptic circuitry of defined retinal neurons. Experience with basic morphological and biochemical techniques is desirable. Salary support is available for at least 3 years. Applicants should send curriculum vitae to: **Dr. Christopher Brandon, Department of Biological Chemistry and Structure, The Chicago Medical School, 3333 Green Bay Road, North Chicago, Illinois 60064.**

## POSITIONS OPEN

**RESEARCH ASSOCIATE: NEUROSCIENTIST** position available in Department of Neurology, Stanford University School of Medicine/Palo Alto VA Medical Center, starting 1 September 1984, for research associate to join ongoing studies on functional organization and pathophysiology of myelinated axons. Candidates should have Ph.D. or M.D. degree, with a background of research in neurosciences. Position requires experience in intra- and extracellular recording, and/or techniques for studying membrane differentiation, including freeze-fracture. Applications should include curriculum vitae, names and telephone numbers of three references, and summary of research interests. Applications should be sent to: **Stephen G. Waxman, M.D., Ph.D., Professor and Associate Chairman, Department of Neurology (127), VA Medical Center, 3801 Miranda Avenue, Palo Alto, Calif. 94304. Stanford University is an Affirmative Action/Equal Opportunity Employer.**

## POSITIONS OPEN

**POSTDOCTORAL POSITION** in the area of molecular biology to study the biochemical-genetics of F plasmid replication, its control and plasmid partitioning is available immediately. Projects include cloning, DNA sequencing, in vitro replication and regulation of plasmid gene expression. Background in biochemistry, genetics, or molecular biology preferred. The position is part of a NCI training grant and therefore only U.S. citizens or permanent residents can be considered. Send curriculum vitae and names of references to: **Dr. Bruce C. Kline, Section of Microbiology, Department of Cell Biology, Mayo Clinic, Rochester, Minnesota 55905. An Equal Opportunity/Affirmative Action Institution.**

**POSTDOCTORAL RESEARCH ASSOCIATE** position available immediately to study effects of drugs on the visual system of freely moving rats. Training in EEG and extracellular recording and analysis required. Background in physiology, pharmacology, anatomy, and psychology and experience with rodents desired. Send curriculum vitae and names of three references to: **Dr. Martin W. Adler, Department of Pharmacology, Temple University School of Medicine, 3420 North Broad Street, Philadelphia, Pa. 19140. Equal Opportunity/Affirmative Action Employer.**

### POSTDOCTORAL RESEARCH NMR APPLIED TO TISSUE METABOLISM

Two positions are available to pursue research in physiology and metabolism using the noninvasive method of high-resolution nuclear magnetic resonance. The laboratory is currently investigating several aspects of cardiac and brain metabolism using NMR techniques. Research projects in both basic studies and in clinical applications are available. The facilities of the NMR Laboratory are extensive and state-of-the-art and include a 1-meter bore system under development for clinical use. The laboratory also has an excellent staff to support various aspects of the research. Candidates should have training in biochemistry or physiology. Additional experience in physical and analytical chemical methods is desirable but not essential. Please send a résumé and three letters of reference to:

**Ray L. Nunnally, Ph.D.**  
Director of Biomedical Magnetic Resonance  
Department of Radiology  
University of Texas Health Science Center at Dallas  
5323 Harry Hines Boulevard  
Dallas, Texas 75235  
*Equal Opportunity University*

**POSTDOCTORAL RESEARCH ASSOCIATE** position available immediately to study effects of drugs on the visual system of freely moving rats. Training in EEG and extracellular recording and analysis required. Background in physiology, pharmacology, anatomy, and psychology and experience with rodents desired. Send curriculum vitae and names of three references to: **Dr. Martin W. Adler, Department of Pharmacology, Temple University School of Medicine, 3420 North Broad Street, Philadelphia, Pa. 19140. Equal Opportunity/Affirmative Action Employer.**

### PROFESSOR OF PATHOLOGY

Professor of pathology with primary interest in experimental vascular pathology sought. Experience and proven abilities in vascular research, administration, and teaching necessary for a full-time appointment at a Harvard Medical School teaching hospital. *Equal Opportunity.* Please send inquiry and curriculum vitae to: **N. L. Tilney, M.D., Chairman, Search Committee, Brigham and Women's Hospital, 75 Francis Street, Boston, Mass. 02115, by 1 August 1984.**

**RESEARCH ASSOCIATE** opportunity in anesthesiology. One- to 3-year appointment available for clinically trained anesthesiologist, U.S. or Canadian citizen, in the following research programs:

- Dr. G. A. Gronert, metabolism and striated muscle.
- Dr. J. D. Michenfelder, cerebral metabolism and blood flow.
- Drs. K. Rehder, R. E. Hyatt, J. R. Rodarte, respiratory physiology.
- Dr. D. K. Rorie, smooth muscle physiology.
- Dr. R. A. Van Dyke, biochemistry and pharmacology.
- Dr. T. L. Yaksh, pharmacology of pain and stress.

Contact: **Dr. Kai Rehder, Chairman, Division of Anesthesia Research, Mayo Clinic, Rochester, Minnesota 55905. Telephone: 507-285-5821. An Equal Opportunity/Affirmative Action Institution.**

# BIOSTATISTICIANS

Provide  
Statistical  
Support For  
Clinical  
Research  
At  
Du Pont.

These challenging opportunities are with Du Pont's expanding life science research program, located in the Wilmington, Delaware area. Both appointments require a PhD in Biostatistics, Statistics or a related area, plus experience and facility in performing statistical analyses with SAS and other software. Excellent communications skills are important. The professionals we seek must have a commitment to providing statistical support for clinical research in an industrial environment. Also necessary is a background and interest in the mathematical sciences as applied to clinical research. Publications and a broad interest in biological science research are advantages.

## SENIOR BIostatistician

Requires at least 3 years' successful experience consulting with physicians and other personnel in the design, conduct and analysis of clinical trials. Experience in filing successful NDAs is also desirable and you should be conversant with FDA issues and affairs. A substantial background in clinical research methodology is preferred in at least 2 areas of medical research (e.g., analgesics, cancer, cardiovascular diseases, rheumatic diseases).

## BIostatistician

Requires experience in consulting with physicians and other personnel in the design, conduct and analysis of clinical trials. Ideally, the successful candidate will also be acquainted with FDA issues and affairs related to clinical research.

We offer a highly competitive compensation and benefits package, as well as excellent potential for professional achievement. Interested candidates should send their curriculum vitae with a short statement of interest, experience, salary requirements and references, to: **Room X40930S, MCD, Du Pont Company, Wilmington, DE 19898.**



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## POSTDOCTORAL POSITIONS MIT Spectroscopy Laboratory

The MIT Spectroscopy Laboratory and Laser Research Center (LRC) have openings for up to three postdoctoral researchers to pursue selected applications of lasers and laser spectroscopic techniques. The LRC is an NSF supported laser instrumentation facility at which university and industrial researchers from a variety of disciplines work in an interactive academic environment. Depending on the candidates' background and interests, research opportunities exist in applications of lasers to chemistry, nuclear physics, collision physics, and medicine and surgery. Candidates should have a Ph.D. in either physics or chemistry or a related engineering field, extensive hands-on experience in designing and building laser-optical systems, and an interest in both theory and experiment. Candidates interested in laser surgery and applications of lasers to medicine should be oriented towards interdisciplinary research and should have past experience in biomedical engineering.

Candidates must be capable of leadership and providing guidance to graduate and undergraduate students, and will be expected to spend some fraction of time in service to the LRC.

Curriculum vitae and names of three references should be sent to Professor Michael S. Feld, c/o Personnel Office, Massachusetts Institute of Technology, Cambridge, MA 02139.

MIT is an equal  
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# MIT

## STAFF MEMBER SYNCHROTRON RADIATION RESEARCH

The Los Alamos National Laboratory, Los Alamos, New Mexico, is developing synchrotron radiation beam lines at the National Synchrotron Light Source (NSLS) Brookhaven National Laboratory, Brookhaven, New York.

- Ph.D. in physics, chemistry, electrical engineering, or other closely related discipline.
- Demonstrated experience in synchrotron radiation research required. Background in experimental atomic or plasma physics preferred.

Responsibilities include assisting in the design, instrumentation, and commissioning of the Laboratory beam lines. Upon commissioning, will supervise operation of the Laboratory beam lines at the N.S.L.S. Brookhaven in collaboration with the synchrotron project leader in Los Alamos.

To apply send resume in confidence to:

Richard Garcia, DIV-84-BR  
Personnel Administration Division  
Los Alamos National Laboratory  
Los Alamos, New Mexico 87545

University of California



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U.S. Citizenship Required.

## Pharmaceutical Engineer

The Pharmaceutical Research and Development Department of Pfizer Central Research is seeking a pharmaceutical engineer to be a member of a project team responsible for the design of special devices and instrumentation used in the development of new pharmaceutical products. Other areas of interest include the development of pilot processes and equipment for the production of specialized pharmaceutical products.

An M.S. degree in chemical, mechanical or plastics engineering and 3-5 years experience in one or more of the following areas is required: 1) polymer processing, especially extension and coating operations, 2) pharmaceutical production processes, 3) pharmaceutical equipment instrumentation, or 4) the development of specialized production equipment.

This position offers an excellent opportunity for professional recognition and career growth. Publication of important findings will be encouraged. We also offer competitive compensation, benefit package and the opportunity to live in an attractive Connecticut shore community. Please send resume and description of research accomplishments to: Jerry K. Larson, Ph.D., Manager of Employment, Pfizer Central Research, Eastern Point Road, Groton, CT 06340.



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## Microbiologist Animal Health Research

Pfizer Central Research has an immediate opening for a Ph.D. microbiologist or biochemist. You must have 1-2 years postdoctoral training with expertise in microbial physiology or microbial biochemistry, and interest in the study of complex anaerobic ecosystems. Knowledge of the physiology of domestic animals is desirable.

The successful candidate will join a project team to elucidate the mode of action of performance enhancing agents in animals and will participate in a variety of ongoing projects in the field of animal health.

This position offers an excellent opportunity for professional recognition and career growth. Publication of important findings will be encouraged. We also offer competitive compensation, benefit package and the opportunity to live in an attractive Connecticut shore community. Please send resume and description of research accomplishments to: Jerry K. Larson, Ph.D., Manager of Employment, Pfizer Central Research, Eastern Point Road, Groton, CT 06340.



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## Senior Research Scientist

Manufacturer and designer of biomedical and scientific instruments, solutions and reagent systems for use in medical research and industrial laboratories seeks Senior Research Scientist. This is an interdisciplinary position in which the individual will perform technical and scientific evaluation of new technology to be incorporated into the company's products. Applicant will be responsible for developing new procedures and methodology for future instruments in the medical diagnostic field applying hematology, biophysics and physical chemistry. Also will be responsible for overall supervision and direction of research projects in this area. Applicant must have Ph.D. in Biophysics or in Natural Sciences with concentration in biophysics and at least four years' post-doctoral experience in medical research, two of which must be in clinical research in the area of hematology and biophysics. This experience must include techniques of resistive pulse and dynamic light scattering spectroscopy, computer simulation and statistics, and hydrophobic and hydrophilic interactions. Hours: 40 per week. Salary: \$36,000 per year. Send resume to: Division of Employment Security #4392, Hurley Building, Boston, MA 02114. An equal opportunity employer.

## ECOLOGY/ EVOLUTION/ BEHAVIOR

### Yale University Department of Biology

Yale University's Department of Biology seeks applicants for an assistant professorship in ecology, evolution or behavior.

Candidates with research interests which span more than one of the areas mentioned above are especially desirable. Duties associated with this position include teaching of graduate and undergraduate students and management of a strong research program. Send curriculum vitae, summary of past and present research, and the names of at least three referees to: **Executive Secretary, Ecology/Evolution/Behavior Search Committee, Department of Biology, Yale University, P.O. Box 6666, New Haven, CT 06511.** Deadline for acceptance of applications is December 15, 1984. Yale University is an Equal Opportunity/Affirmative Action Employer.



Yale University

## POSITIONS OPEN

University of New Hampshire, Professional, administrative, technical vacancy. **Title: POSTDOCTORAL/RESEARCH ASSOCIATE—NEUROBIOLOGY.** **Responsibilities:** Isolate and purify bioactive peptides from invertebrates and determine their mechanisms of action. **Minimum qualifications:** Ph.D. degree in either biochemistry or neurophysiology; demonstrated ability to work independently. **Salary:** \$14,270 to \$21,960; normal starting salary not to exceed \$15,920. **Application deadline:** 15 June 1984. Send résumé directly to: **Dr. Watson, Zoology Department, Spaulding Life Science Center, University of New Hampshire, Durham, New Hampshire 03824.** Include one letter of recommendation and two other references. *The University of New Hampshire is an Equal Opportunity/Affirmative Action Employer.*

**POSTDOCTORAL RESEARCH ECOLOGIST.** A 2-year postdoctoral research associate appointment is available to participate in project examining effects of periodical cicada emergence on avian and insect community dynamics in the Arkansas Ozarks. Preference will be given to persons with background in ecological modeling and evolutionary ecology. Willingness to participate in field research and data analysis desirable. Successful candidate will work closely with forest entomologist (F. M. Stephen) and vertebrate ecologists (D. A. James and K. G. Smith). Salary commensurate with experience; available after 1 September 1984. Send résumé and names of three references by 10 July to: **Kimberly G. Smith, Department of Zoology, University of Arkansas, Fayetteville, Ark. 72701.** *The University is an Equal Opportunity/Affirmative Action Institute.*

### Scripps Clinic and Research Foundation

**TWO POSTDOCTORAL RESEARCH POSITIONS** are available for 2 years in an established Hepatitis B virus research laboratory. A molecular biologist position requiring Ph.D. or M.D. and experience in basic recombinant DNA techniques, DNA mediated gene transfer, and cell culture will investigate the state and expression of the Hepatitis B viral genome in human and animal systems. An immunologist position requiring Ph.D. and experience in T cell cloning techniques will investigate cellular aspects of the immune response to HBV antigens.

Please submit curriculum vitae, references, and a statement of research interests to: **Dr. F. V. Chisari, C-202, Scripps Clinic and Research Foundation, 10666 North Torrey Pines Road, La Jolla, Calif. 92037.**

### RESEARCH ASSOCIATE

Designs and conducts biochemical experiments in the area of membrane biology with particular emphasis on characterization of cholinergic muscarinic receptors in pancreas and heart. Techniques include receptor binding studies and the statistical treatment of such data, liquid scintillation and gamma counting, visible and fluorescence spectroscopy, electrophoresis, protein isolation techniques, including molecular weight, ion exchange, and affinity chromatography, tissue isolation, and subcellular fractionation. This individual also prepares manuscripts describing the work done and proposals for new lines of research to be pursued in the future. Must have Ph.D. in histology and 5 years of experience in the job offered. Must also have specific expertise with membrane bound receptors as delineated above. Forty hour week; \$24,000 per year. Apply to: **The Louisiana Office of Employment Security, 617 St. Charles Avenue, New Orleans, La. 70130.** Refer to Job Order Number 416642.

**RESEARCH ASSOCIATE** to design, conduct, and analyze experiment on the neurophysiology and neuropharmacology of circadian timekeeping in primates and rodents. The research involves the use of microprocessor data collectors, polygraphs, and minicomputers for continuous long-term recording and analysis of circadian rhythms of neural multiple-unit activity and other physiological and behavioral rhythms, and their responses to pharmacological agents. Requirements include Ph.D. in neurophysiology or related field; 3 years of postdoctoral research in circadian neurobiology; and strong background in neurophysiology (evoked potentials, single/multiple-unit activity recording), sleep physiology, and behavioral research in primates, and experience in the use of surgical and histological techniques for placement and verification of lesions, knife-cuts, and chronic electrode and cannula implants. Salary: \$23,000 per year; 35 hours per week. Send résumé only to: **Robert Willis, Job Order Number 4417, Division of Employment Security, Hurley Building, Government Center, Boston Mass. 02114.**

## Analytical Chemist

### Consumer Products

American Cyanamid Company, maker of PINE-SOL®, BRECK®, NINA RICCI®, OLD SPICE® and LADY'S CHOICE®, is a dynamic, forward thinking company and a worldwide leader in consumer products. We currently seek a research scientist capable of contributing to our Professional and Research Service Department.

You will provide technical and analytical support to product development teams. You should have a Ph.D. in Analytical Chemistry and approximately 0-3 years' experience in an analytical laboratory with knowledge of GC, HPLC, IR and UV-VIS. Good problem solving and method development abilities coupled with effective interpersonal and communications skills will be essential.

American Cyanamid seeks and encourages talented, innovative individuals who would thrive in an exciting, developmental research environment. We offer definite potential for career advancement, highly competitive salaries and benefits which include a supportive work environment. For immediate consideration, or further information, forward your credentials in confidence to:



### American Cyanamid Company Consumer Products Research Division

Attn: Ms. S. L. Johnson  
Manager, Administration, Dept. SC  
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Clifton, New Jersey 07015

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National Institute of Environmental Health Sciences  
National Institutes of Health  
Public Health Service  
Department of Health and Human Services

## SCIENTIFIC DIRECTOR.

The National Institute of Environmental Health Sciences (NIEHS), located in Research Triangle Park, North Carolina; conducts, fosters, and coordinates research and research training on the biological effects of chemical, physical, and biological substances in the environment. In addition to directing, developing and evaluating the NIEHS Intramural Research Program, the incumbent serves as an expert consultant to the Institute Director, Federal agencies and other organizations in the field of environmental health. The Intramural Research Program currently is allocated 177 of the Institute's 567 permanent positions and an operating budget of approximately \$14 million.

This is a Civil Service position in the Senior Executive Service (SES) with a salary range from \$58,938 to \$66,000 per annum, depending on qualifications. Physicians may be eligible for an additional comparability allowance up to \$10,000 per year. (Alternatively, candidates may be eligible for appointment in the Commissioned Corps of the U.S. Public Health Service.) The individual selected, if not presently in the SES, must serve a one-year probationary period.

Position information and qualification requirements may be obtained by contacting:

Alvin L. Wade, Jr.  
NIEHS Personnel Office, P.O. Box 12233  
Research Triangle Park, NC 27709  
(919) 541-4318

Applications consisting of a Personal Qualifications Statement, SF-171 (available at all Federal Job Information Centers and Federal Personnel Offices); a curriculum vitae; and a bibliography, should be submitted to the above address and postmarked not later than 7/13/84.

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## MANAGER BIOLOGICALS LABORATORY

Wyeth Laboratories, Inc. has an outstanding opportunity available in our Research and Development Department for a manager of the Biologicals Laboratory. This key position will be located at our Radnor facility near Philadelphia.

Primary responsibilities will be to manage and participate in the planning, implementing, monitoring and evaluating of various projects in the field of vaccines and other biologicals.

The successful candidate will be a Ph.D. in molecular biology, virology or microbiology, with at least 5 years of related experience. This individual must possess superior oral and written communication skills. Strong skills in human relations, supervision and ability to interface effectively with our Production Department and Government Regulatory Agencies are absolute requirements.

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

**Wyeth Laboratories, Inc.**  
 P.O. Box 8299  
Philadelphia, PA 19101  
TM

Equal Opportunity Employer, M/F/H

## Atherosclerosis and Thrombosis Research Scientists

The Upjohn Company, recognized as a world leader in pharmaceutical research, is expanding its Atherosclerosis and Thrombosis Research Group and is seeking Scientists to initiate and carry out original research in the following areas:

**Models of Atherosclerosis** (Position #16229G) - Conduct research to elucidate the processes and mechanisms involved in the development of atherosclerosis, and evaluate novel methods of treatment using animal models and in vitro techniques. Applicants should have a Ph.D. with relevant experience using quantitative morphological and biochemical techniques; primate research experience and experience in pharmacology, physiology, cell culture, and histochemistry are desirable.

**Cellular Interaction** (Position #16230G) - Conduct research to understand the development of atherosclerosis and its accompanying complications of thrombosis and vasospasm, focusing on cellular interactions at the blood vessel wall (endothelium, smooth muscle, macrophage, platelets, neutrophils). Devise systems to study the phenomena of cell injury, cell proliferation and infiltration, and lipid accumulation. Applicants should have a Ph.D. in a medical science with relevant expertise in biochemistry, physiology and/or pharmacology.

**Connective Tissue/Calcium Metabolism** (Position #16282G) - Conduct research to understand the development of vascular pathology, especially the involvement of connective tissue elements, calcium, and tissue calcification in atherosclerosis, thrombosis, and vasospasm. Applicants should have a Ph.D. with relevant experience in the above areas, and expertise in the areas of connective tissue metabolism and/or calcium metabolism.

**Blood Coagulation/Thrombosis** (Position #16283G) - Conduct research to understand and manipulate the endogenous blood coagulation and clot lysis systems, especially the interaction of blood proteins with cells in deep vein thrombosis, arterial thrombosis, and thrombolysis; interact with scientists interested in in vivo models of thrombosis and vasospasm superimposed on vascular pathology. Applicants should have a Ph.D. with relevant experience in the above areas, and expertise in coagulation chemistry, biochemistry, protein isolation and/or enzymology.

For all four of the above positions, applicants must have demonstrated effective collaboration with other scientists, the ability to integrate data from different disciplines, and strong oral and written communication skills. Postdoctoral experience is preferred. Publication of research data is encouraged, and it is expected that the successful candidates will attain peer recognition for their scientific accomplishments.

**Biology/Biochemistry Assistant** (Position #15703A) - Work in the area of atherosclerosis research with emphasis on the biochemical mechanisms of atherosclerosis and its complications. Research will involve animal studies and studies with isolated tissues and cells. Applicants should have a BS or MS with a minimum of two years experience in a lipid biochemistry laboratory. Techniques of lipid extraction, lipid analysis (GLC, TLC), subcellular fractionation of tissues, and enzyme assay are required. Knowledge of lipoprotein fractionation, tissue culture techniques, and experience with isotope usage are desirable. Good verbal and written communication skills are necessary.

Upjohn offers a stimulating research environment and career potential. **For confidential consideration, send a current c.v., list of publications, names and addresses of references, and graduate transcripts (if appropriate) to: Gerald L. Potratz, Corporate Employment, The Upjohn Company, 7000 Portage Road, Kalamazoo, MI 49001.** When applying, please indicate the specific position # of interest.

**Upjohn**

**A century of caring**

An Equal Opportunity Employer M/F/H/V

## POSITIONS OPEN

The California Space Institute, La Jolla campus, of Scripps Institution of Oceanography, has an immediate opening at the **POSTDOCTORAL OR CAREER ENTRY LEVEL** (Ph.D. or equivalent degree) for a physical or inorganic chemist or chemical engineer with a research background appropriate to participate in a University of California, San Diego (UCSD), program for the development of chemical procedures and technologies for the separation and processing of lunar soil into useful materials. There may also be the opportunity to participate in experiments relating to processes using terrestrial materials in earth orbit. Position is for 1 year with the possibility of a second year dependent on available funding. Salary range: \$20,280 to \$26,100, commensurate with qualifications. Send résumé and references to: **Elaine Cox, California Space Institute A030, Scripps Institution of Oceanography, La Jolla, Calif. 92093**, by 15 June 1984. For additional information regarding the position contact: **Dr. David Criswell** at the above address, or telephone: **619-452-2047**. UCSD is an Equal Opportunity/Affirmative Action Employer.

### RESEARCH FELLOW DEPARTMENT OF EXPERIMENTAL PATHOLOGY

Merck, Sharp and Dohme Research Laboratories is now seeking a **senior research pathologist/electron microscopist** to join our Experimental Pathology Department located in Rahway, New Jersey.

The successful candidate must have a Ph.D. (or equivalent) and 5 years of postdoctoral experience in experimental pathology, electron microscopy, and histology. Scientists with ongoing programs and publications in experimental hepatocarcinogenesis, immunopathology, or pathology of the extracellular matrix will be given preference.

Salary, benefits, and growth potential are excellent. Send résumé to:

**Susan R. Jenkins**  
Merck & Company, Inc.  
P.O. Box 2000  
Rahway, N.J. 07065

*An Equal Opportunity Employer*

### RESEARCH POSITIONS IN MOLECULAR GENETICS

Applications are invited for several full-time research positions in the Molecular Genetics Program, Children's Hospital Research Foundation, and the Department of Pediatrics, University of Cincinnati. Successful candidates will join an established, expanding program of research in human molecular genetics. Recombinant DNA technology is extensively utilized to characterize normal and mutant human genes. There is ample opportunity to interact with other molecular biology groups at both the Foundation and the University of Cincinnati Medical School.

1) **RESEARCH ASSOCIATE/POSTDOCTORAL FELLOW**. Applicant must have an M.D. or Ph.D. with training in molecular genetics, biochemistry, or a related field. Initial appointment is for 2 years with the possibility of renewal.

2) **RESEARCH ASSISTANT PROFESSOR**. Demonstrated expertise in molecular genetics is required. Previous experience in site directed mutagenesis or gene transfer to eukaryotic cells is an asset. Development of an independent research program supported by extramural funds is a possibility, although the initial appointment will be in a collaborative group. Term of initial appointment is flexible (typically 3 years) with the possibility of renewal. Salary is negotiable.

Send curriculum vitae, reprints, and names of three references to: **Dr. John Hutton, President's Office, Children's Hospital Research Foundation, Cincinnati, Ohio 45229**.

Position available: The Department of Urology at the College of Physicians and Surgeons at Columbia University has secured funding for the **MICHAEL CHERNOW RESEARCH SCHOLAR** position in cancer research. Candidates should be qualified in molecular biology as applied to urologic oncogenesis and should have demonstrated capacity for independent investigation. Candidates must achieve joint appointment in an appropriate basic science department in the University at the level of assistant or associate professor. Send curriculum vitae and letters of reference to: **Carl A. Olsson, M.D., Professor and Chairman, Department of Urology, Box 44, College of Physicians & Surgeons, 630 West 168 Street, New York, N.Y. 10032**. Columbia University is an Affirmative Action/Equal Opportunity Employer.

## POSITIONS OPEN

**POSTDOCTORAL OR RESEARCH ASSOCIATE** position available. Studies of in vivo or in vitro regulation of insulin receptors and action in fat cells and tissue. Experience in biochemistry and/or physiology preferred for this basic science-oriented laboratory. **Dean H. Lockwood, M.D., Endocrine-Metabolism Unit, Department of Medicine, University of Rochester Medical Center, Rochester, New York 14642**. An Equal Opportunity Employer.

**RESEARCH MICROBIOLOGIST** with the Lymphosarcoma Research Unit, National Animal Disease Center, U.S. Department of Agriculture (USDA), Agricultural Research Service (ARS), Ames, Iowa. Career Federal Service. Candidate will conduct research on bovine reproductive diseases of viral origin. Postdoctorate experience desirable. Salary: GS/M-12/14 (\$30,402 to \$55,538), based on qualifications and experience. For applications: **Jerrie Brooks, USDA/ARS-B87, Personnel Operations, Building 003, Room 318H, BARC-West, Beltsville, Md. 20705**. Telephone: **301-344-4567**. Candidates must be U.S. citizens. An Equal Opportunity Employer.

### SENIOR CELLULAR AND/OR MOLECULAR IMMUNOLOGIST

Applications are invited for a senior, tenured faculty position to head the Division of Research Immunology in the Department of Pathology and Laboratory Medicine. The individual sought should possess a record of research achievement in cellular and/or molecular immunology and have demonstrated capability in research training. This person will be expected to continue the development of this established, nationally recognized research and training program, including recruitment of new members. No clinical service responsibilities are required of this position. Interested candidates should submit résumés and names of three references prior to 15 July 1984 to: **Dr. Leonard Jarett and Dr. Peter C. Nowell, Co-Chairmen, Immunology Search Committee, Department of Pathology and Laboratory Medicine, University of Pennsylvania School of Medicine, Philadelphia, Pennsylvania 19104**.

*The University is an Affirmative Action/Equal Opportunity Employer.*

**VICE PRESIDENT FOR RESEARCH AND DEAN, SCHOOL OF GRADUATE STUDIES**. The Medical College of Georgia, an Equal Opportunity, Affirmative Action Employer and Educational Institution, seeks nominations and applications for the unified position of vice president for research and dean, School of Graduate Studies. Applicants must possess an earned doctorate (Ph.D. in biomedical sciences, M.D., D.D.S., or equivalent) and demonstrate ability to provide administrative leadership; accomplishments of research excellence; creativity in promotion of interdisciplinary basic and clinic research and training; ability to obtain extramural research funding; and recruitment of graduate students and research-oriented faculty.

Applications should include curriculum vitae and names of three references. Search procedures will not be closed before 1 September 1984 with the position available on or before 1 July 1985.

Applications, nominations, and information requests should be directed to: **Dr. Thomas R. Dirksen, Chairman, Search Committee, School of Dentistry, Medical College of Georgia, Augusta, Ga. 30912**.

## REQUEST FOR PROPOSALS

### REQUEST FOR PROPOSALS

The Lighting Research Institute, Inc., a not-for-profit organization formed to promote and sponsor basic and applied research and development in North America for all forms of lighting is making its annual request for proposals based on its research agenda. Proposals are being sought for the following research areas with an emphasis on those areas which have direct human application:

**Photobiology; vision, systems application (engineering, physical sciences, and economic research in lighting systems); and psychology.**

The deadline for receipt of proposals is **14 September 1984**. For a copy of the Institute's research agenda, proposal application, and/or further information, please contact:

**Richard L. Vincent**  
Program Manager  
Lighting Research Institute  
345 East 47 Street  
New York, N.Y. 10017  
Telephone: **212-705-7918**

## CONFERENCE

### THE JAMAICA BAY ENVIRONMENTAL CONFERENCE: PROBLEMS AND IMPLICATIONS OF URBAN ECOSYSTEM REVITALIZATION GATEWAY NATIONAL RECREATION AREA

A symposium will be held on 18 June 1984 at Queens College, City University of New York. It is being co-sponsored by the New York City Chapter of the Sierra Club. Two guest-speaker panels, one to be moderated by Dr. George D. Ruggieri, director, New York Aquarium and Osborn Laboratories of Marine Sciences, and one by Dr. Barry Commoner, director, Center for the Biology of Natural Systems, Queens College, will address a host of environmental concerns associated with the preservation and enhancement of Jamaica Bay, a significant portion of the Hudson-Raritan estuarine system. Poster sessions will be held with emphasis on urban ecosystem revitalization and specific research conducted in the immediate vicinity of Jamaica Bay.

For further details and registration forms, contact: **John T. Tanacredi, Division of Professional Services, Gateway National Recreation Area, Floyd Bennett Field, Brooklyn, New York 11234**. Telephone: **212-338-3505/6**.

## ANNOUNCEMENT

A bank of serum specimens for women at varying risks of breast cancer has been established in the Diagnosis Branch, Division of Cancer Biology and Diagnosis, National Cancer Institute (NCI). Panels of test specimens can be secured to evaluate newly discovered biological markers for breast cancer, to verify preliminary data, and to study multiple markers for early detection of breast cancer. Sera are maintained at  $-70^{\circ}\text{C}$  in 1-milliliter sealed glass vials.

Requestors for test panels must document the discriminatory power of their assays. The Bank cannot support feasibility studies based on theoretical considerations nor can it handle large population based epidemiological studies. The assays must not require more than 1 milliliter of serum for accurate determination. Requestors must agree to accept specimens under a blind code number and report the results to NCI. Some duplicates will be included in each test panel. To request a test panel, it is sufficient to write a letter addressing above points to:

**Dr. I. J. Masnyk**  
Division of Cancer Biology and Diagnosis  
National Cancer Institute  
Building 31, Room 3A04  
Bethesda, Md. 20205

## FELLOWSHIPS

### LUCILLE P. MARKEY PREDOCTORAL FELLOWSHIPS \$9,000 to \$12,000 plus tuition and fees

Two fellowships are available in 1984 in the Department of Physiology and Biophysics and two in the Department of Pharmacology, at the University of Miami School of Medicine, for Ph.D. studies in the following fields: membrane biology and biophysics; neurophysiology; muscle biology; cardiovascular pharmacology; neuropharmacology; developmental neurobiology; and cell-to-cell communication. Applications are sought from highly qualified individuals with backgrounds in the physical, biological, or engineering sciences. Stipend dependent on qualifications. In reply, send undergraduate records, GRE scores, and a letter giving your scientific interests, and arrange for three letters of recommendation.

For consideration in Physiology and Biophysics, write to: **Dr. S. J. Socolar, P. O. Box 016430, Miami, Fla. 33101**. Telephone: **305-547-6821**.

For consideration in Pharmacology, write to: **Dr. A. H. Caswell, P. O. Box 016189, Miami, Fla. 33101**. Telephone: **305-547-6643**. The University of Miami is an Affirmative Action/Equal Opportunity Educator and Employer.

**POSTDOCTORAL FELLOWSHIP** position available for recently graduated immunologist; this individual will be working with a group of clinical immunologists interested in autoimmune diseases. Active projects include: effect of autoantibodies on lymphocyte response, cell traffic in experimental arthritis, and mononuclear phagocyte function in murine lupus. Send résumé and three references to: **Dr. R. P. Messner, Box 108 Mayo, University of Minnesota, Minneapolis, Minn. 55455**.

**LUCILLE P. MARKEY  
PREDOCTORAL FELLOWSHIPS IN  
CELLULAR AND MOLECULAR BIOLOGY**

Exceptional candidates are invited to apply for Lucille P. Markey Predoctoral Fellowships at the University of Kentucky Chandler Medical Center for training in cellular and molecular biology.

Jointly administered by the Departments of Microbiology/Immunology and Biochemistry, the program provides an integrated research and training experience in: molecular genetics, immunology, biomembranes, cell regulation, molecular mechanisms of pathogenesis, and molecular virology. The Lucille P. Markey Cancer Center and Sanders-Brown Research Center on Aging offer special opportunities for the study of cancer and diseases of aging.

Fellowships include initial stipends up to \$10,000, full tuition, travel and books. Appointments commence: Fall, 1984.

Interested individuals should promptly contact:

**Dr. Fred Zechman**  
Associate Dean for Research  
and Graduate Studies  
University of Kentucky  
Chandler Medical Center  
203 Medical Center Annex 2  
Lexington, KY 40536-0080  
(606/233-5293)

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**SQUIBB**

**SENIOR RESEARCH  
INVESTIGATOR  
Cellular Biology**

This is an exceptional opportunity to become associated with The Squibb Institute for Medical Research in Princeton, NJ.

This position entails basic research in the molecular genetics of pathogenic microorganisms with particular emphasis on the development and implementation of screening procedures for novel antibiotics. Requirements include a Ph.D. in Biochemistry/Molecular Biology, or equivalent, with 5 to 8 years experience in one or both of the above areas, and a working knowledge of bacteriology or mycology. The ability to collaborate with scientists in the development of screens for novel antibiotics is essential.

We offer an excellent salary and benefits package fully attuned to the importance of this position. Qualified applicants should send their resume, including salary requirements, in complete confidence to: **SQUIBB CORPORATION, Department 8, P.O. Box 4000, Princeton, NJ 08540.** We will accept direct applicants response only. An equal opportunity employer.

**U.S. PUBLIC HEALTH SERVICE  
EPIDEMIOLOGY TRAINING PROGRAM—1985**

The U.S. Public Health Service (USPHS) invites applications for a planned extension of a training program in medical epidemiology. Up to eleven (11) persons per year, who already have an M.D., a doctorate in an allied health profession, or Ph.D. in a biomedical or behavioral science (e.g., biochemistry, psychology, etc.), or equivalent, may be accepted as Service Fellows of the USPHS (a non-tenured, junior professional classification under Civil Service) for up to a three-year period of duty. Applications received by **September 10, 1984** may be considered for service to begin between July 1, and September 1, 1985.

During the first year, each successful applicant will attend a university at government expense to study epidemiology, biostatistics, and related subjects. This course work should be creditable toward, but will not necessarily complete requirements for, a degree in public health. During the subsequent two years, individuals will work in association with senior epidemiologists in the participating USPHS agencies (Alcohol, Drug Abuse, and Mental Health Administration; Food and Drug Administration; National Center for Health Statistics; and the National Institutes of Health) primarily in research studies. A matching procedure akin to the National Internship Matching will be employed to assure that each individual is assigned to a preceptor whose area of expertise is of interest to the trainee, and consistent with his/her career plans.

Salaries will be provided according to the scale in effect for staff fellows in intramural research at ADAMHA

and NIH. The current schedule of remuneration for a physician to be recruited in 1985 is \$30,000 per annum for the first year (\$21,000 for a non-physician), with a \$2,000 increase annually for the second and third years. Educational costs for the first year and relocation expenses are provided in addition.

Basic requirements for application to the program are:

1. M.D., doctorate in an allied health profession, or Ph.D. in a biomedical or behavioral science, or equivalent, **AND** one year of post-doctoral training or experience (by July 1, 1985).
2. **U.S. Citizenship** at time of application.
3. Acceptability to an accredited university offering an M.P.H. or equivalent, or more advanced public health degree.

To obtain further program details and application forms, SEND A POSTCARD ONLY, with your PRINTED name and home mailing address to:

**Robert S. Gordon, Jr., M.D., M.H.S.**  
Chairman, Steering Committee  
NIH, Building 1, Room 238  
Bethesda, Maryland 20205

PLEASE . . . DO NOT SEND letters, curriculum vitae, resumes, transcripts, reprints, etc. until you have reviewed the instructions for submission and completed the application form.

THE USPHS IS AN EQUAL OPPORTUNITY EMPLOYER

# **AAAS Report IX**

## **Research and Development**

### **FY 1985**

#### **Intersociety Working Group**

This timely document analyzes major budget and policy issues relating to R&D in the FY 1985 budget, presents data on federal agency and industry support for R&D, and discusses trends in R&D funding in light of current policy issues. The report looks in detail at the R&D programs of major federal agencies and provides cross-cutting analyses of the budget by several scientific and engineering disciplines.

284 pp.

Paperback \$10.00

#### *Also Available:*

**R&D in FY 1985: Budgets, Policies, Outlooks. Proceedings of the 1984 AAAS Colloquium on R&D Policy.**

Approx. 175 pp.      Paperback \$7.00

**Congressional Action on R&D in the FY 1985 Budget.** Willis H. Shapley, Albert H. Teich, and Jill H. Pace. Fall 1984

Approx. 50 pp.      Paperback \$3.00

Books may be purchased by writing to the **AAAS Sales Department, 1515 Massachusetts Avenue, NW, Washington, DC 20005**. Please allow 6-8 weeks for delivery. All orders under \$10 must be prepaid. Visa and MasterCard customers include account number, expiration date, and signature. Past reports in the series are available; contact the Sales Department for more information.