

haste in construction, lack of efficient managerial organization, failure to advise some of the stonemasons of the need for sewer lids, and other such causes. Perhaps rather than looking to such a remarkable incompetence a better explanation might be found in seeing the elaborate sewer systems as being in use over a long period of time during which various modifications were undertaken with many sewer stones being reused from earlier placements. Such an interpretation would not, however, be compatible with the excavators' conclusion that the drainage system was constructed, used, and passed into disuse all during the San Lorenzo ceramic phase. Diehl notes that a half-millennium gap appears to exist between the dating of the San Lorenzo system and that of La Venta, a situation he finds "difficult to accept." It is disappointing that none of the lagoons, which these sewers were supposedly to serve, was examined in any detail. Diehl refers to a minor excavation into Lagoon 10, yielding some "chunks" of bentonite; the final project report refers to a trench into Lagoon 10, revealing a lining of "bentonite blocks," but curiously the excavation with this interesting architectural feature is not otherwise reported upon or documented.

As a whole this collection of essays ranges over much of the landscape of Olmec archeological interpretation, and it provides a useful and convenient sampling of some of the thinking characterizing the subject.

JOHN A. GRAHAM

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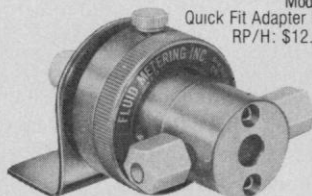
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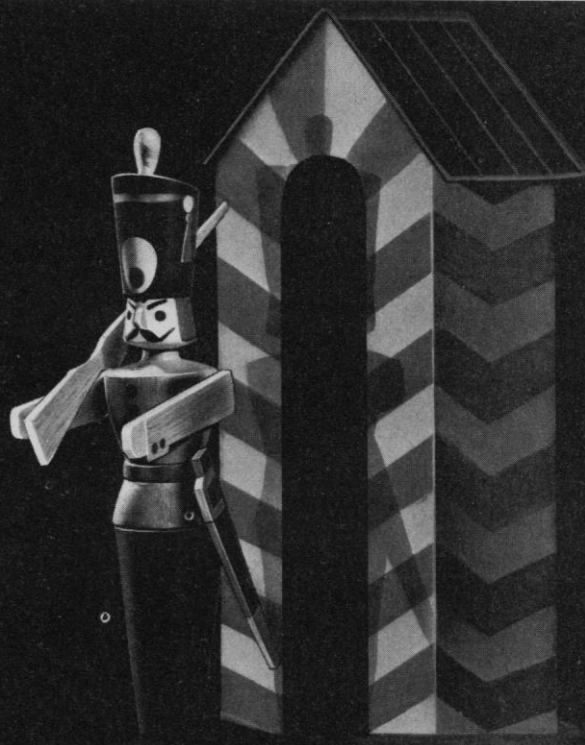
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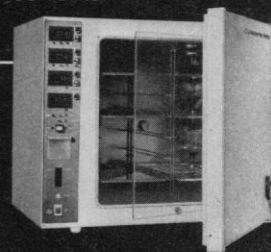
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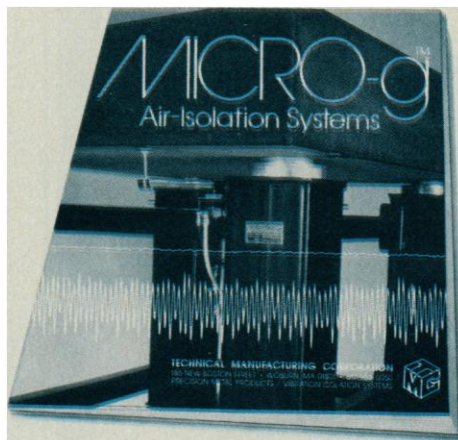
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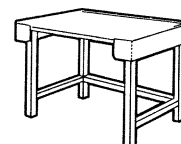
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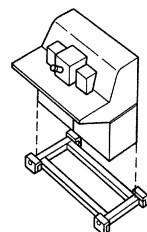
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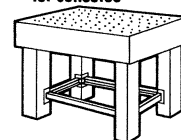
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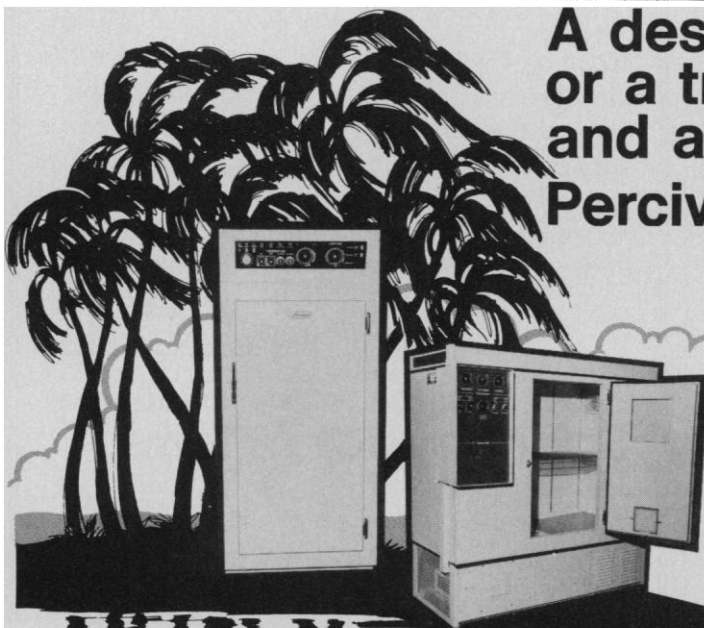


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
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14 May issue (mailed 7 May): **23 April**
21 May issue (mailed 14 May): **30 April**
28 May issue (mailed 21 May): **7 May**
4 June issue (mailed 28 May): **14 May**

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Biology Editor seeks editorial position with researcher or research laboratory. Will graduate May 1982 with B.S. in biology and minor in journalism. Experienced in editing science magazine and journal articles. Has written articles for science magazines and worked on layout of publications. Also experienced in scientific illustration. Résumé and references available. J. McConoughey, 1548 Forest Hills Road, Bettendorf, Iowa 52722. X

Cell/Molecular Biologist. Ph.D. Two years of post-doctoral training, pyrethrum. Experience (industry and academic): protoplast culture and fusion, plant and animal tissue culture, TEM, protozoology, parasitology, legumes, corn, pyrethrum, cryobiology. Teaching experience: zoology, biology, plant and animal cell biology, physiology, electron microscopy. Seeks small college teaching or industrial research position. Publication, résumé on request. R. G. Zieg, 3656 South 40 Avenue, Minneapolis, Minn. 55406. Telephone: 612-722-2203. X

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Multidisciplinary Electronics Engineer with strong interest in human performance, U.S. citizenship, two graduate degrees, 70 publications, 20 years of microwave, telecommunications, and biomedical European experience in governmental and industrial research and international consulting. Seeks position in North America, preferably research or academic biomedical, biomechanical, or human performance fields. Favors location in snow country as suits family avocation of cross country ski racing and coaching. M. Brady, Box 154 Vinderen, Oslo 3, Norway. Telephone: (47-2) 148274. 4/23, 30; 5/7

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Ortho Diagnostic Systems, Inc., a member of the Johnson & Johnson family of companies, is establishing a new research facility in Cambridge, Massachusetts. This laboratory will be a major center for long term studies of the fundamental basis for medical diagnostic methods. Our central location in the Cambridge-Boston research and medical community is reflected in the broad interdisciplinary makeup of the laboratory. Emphasis is placed upon Biology, Biophysics, Physics, Radiation Biochemistry, Biochemistry, Computer Science and Clinical Medicine.

Our technical staff will be responsible for in-house research programs as well as external research programs sponsored by Ortho Diagnostic Systems. This approach will assure a strong interaction with major research institutions, with particular emphasis placed upon long term relationships in challenging basic research areas.

ASSOCIATE LABORATORY DIRECTOR

We are currently seeking an experienced Laboratory Director to manage the biological aspects of our research effort. This position requires a PhD in the Biological Sciences, a minimum of 4 years experience in research laboratory management, along with a minimum of 4 years active participation in basic biological research. Combined experience must total a minimum of 6 years. The Associate Director will assist members of the technical staff with the design and execution of experiments and the analysis of results while assuming management responsibility including technical and support personnel, facilities, budgets and planning.

TECHNICAL STAFF OPENINGS

In addition to the Associate Laboratory Director, we will be adding several professionals to our technical staff in the following areas in the coming months: Cell Biology, Biochemistry, Radiation Biochemistry, Microbiology and Biophysics. We are particularly interested in recent PhD's who are planning to build a research career. Less than 5 years experience is acceptable but you must be laboratory oriented, interested in becoming involved with work at other locations, and committed to interdisciplinary studies.

This is a long term program with many opportunities to establish professional growth. Interested candidates should direct their inquiries to Robert A. King, Ortho Diagnostic Systems, Inc., Cambridge Research Laboratory, 195 Albany St., Cambridge, MA 02139. All inquiries will be held in confidence. Our company is an equal opportunity employer.



Ortho Diagnostic Systems Inc.
Cambridge Research Laboratory

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Entomologist, M.S. (1980). Seeks research position; 1 year of experience in purification of granulosis virus; 1½ years of bioassay of insecticides; 3 years of supervision in plant quarantine. Box 110, SCIENCE. 4/23; 5/7

NIH Grants Administrator, M.A. degree, with laboratory, program, and peer review experience, desires position as director of sponsored programs or similar position in which own expertise in assisting scientists obtain contract and grant funding can be used. Prefers large specialized center, academia, or industry in Southeast, South, Southwest, or West. Box 104, SCIENCE. X

Immunologist-Immunobiologist, Ph.D., biochemistry 1975. University research experience in humoral and cell-mediated immunity. Publications; 7 years of teaching experience at master's level in immunology, immunobiology, and biochemistry. Seeks research position. Box 111, SCIENCE. X

Immunologist, Ph.D. 1970. University research experience in cellular immunity in infectious and autoimmune disease, lymphocyte mediated target cell killing, and lymphokines. Excellent publications and references. Seeking research position in academia or industry. Box 112, SCIENCE. 4/23, 30; 5/7

Marine Biologist/Ecophysicologist, Ph.D. 1979. Research experience in marine fouling, invertebrates adhesion mechanisms, biomechanics, benthic ecology. Speaks English and French fluently. Open to relocation. Seeks teaching and/or research position. Box 113, SCIENCE. X

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Vertebrate Ecologist, Ph.D. 1982. Research experience in reproductive ecology and body size evolution of mammals and birds. Numerous publications and presentations in life history evolution and wildlife ecology. Strong statistics and computer background. Excellent full-time college teaching experience in mammalogy (2 years), conservation of natural resources, ecological energetics, and vertebrate reproduction. Additional teaching in laboratories of numerous courses. Seeking teaching/research position with college, museum, agency, or industry. Box 114, SCIENCE. X

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ANIMAL PHYSIOLOGIST. Indiana State University, Terre Haute. The Department of Life Sciences invites applications for a position as assistant professor (tenure-track, tentative, dependent upon budgetary approval) in animal physiology beginning as early as fall 1982. Persons with teaching and research interests in neuroendocrinology and/or developmental biology are encouraged to apply. Please send a résumé, research papers, and three letters of reference by 30 May 1982 to: Dr. William Brett, Chairperson, Department of Life Sciences, Indiana State University, Terre Haute, Ind. 47809. Applicant must have interest in teaching at undergraduate and graduate levels, and conduct and direct research in a doctoral program. *Indiana State University is an Equal Opportunity/Affirmative Action Employer.*

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ASSISTANT PROFESSORSHIP

Full-time, tenure-track, state-support appointment is available for individuals with active interests in areas of tumor metastasis, cell matrix and surfaces, and immunology. Candidates should send curriculum vitae and names of three references to: Professor Garth L. Nicolson, Department of Tumor Biology, The University of Texas System Cancer Center, M. D. Anderson Hospital and Tumor Institute, 6723 Bertner Avenue, Houston, Texas 77030.

ASSISTANT PROFESSORSHIP IN ANATOMY— Applications are invited for the above position, available on 1 July or 1 September 1982, from qualified individuals holding a doctor degree. Preference will be given to candidates who are prepared to teach growth anatomy to medical students and who have demonstrated research interest in molecular or cell biology. The applicants should submit curriculum vitae, statement of research interest, and the names of three references to: Dr. T. Barka, Chairman, Department of Anatomy, THE MOUNT SINAI SCHOOL OF MEDICINE, One Gustave L. Levy Place, New York, N.Y. 10029. *An Equal Opportunity Employer.*

DEPARTMENT OF ANATOMY University of California, Los Angeles (UCLA) MEDICAL SCHOOL

Applications are invited for the position of **ASSISTANT PROFESSOR OF ANATOMY IN RESIDENCE**, available 1 July 1982. Candidates must be qualified to teach gross anatomy to medical or dental students, with prior teaching experience being highly desirable. The nature of the candidate's research is unrestricted; however, a program in the general area of cellular or developmental neurobiology or neuroendocrinology would be preferred. Interested applicants should send a letter of application, curriculum vitae, and the names and addresses of three references by 15 May 1982 to: Dr. Richard W. Young, Department of Anatomy, UCLA Medical School, Los Angeles, California 90024.

ASSISTANT PROFESSOR-ANATOMY

The Anatomy Department, University of Wisconsin-Madison, has a position for an assistant professor with responsibility for teaching histology. Applicants must have experience teaching histology and at least 1 year of postdoctoral training, and be actively engaged in fundable research. Preference will be given to applicants whose research is in developmental biology of the nervous system or reproductive biology. Applications should be sent by 1 June 1982 to: Dr. David B. Slauterback, Anatomy Department, University of Wisconsin-Madison, 3550 MSC, Madison, Wis. 53706. *An Equal Opportunity/Affirmative Action Employer.*

CHAIRMAN, DEPARTMENT OF MICROBIOLOGY AND CELL SCIENCE UNIVERSITY OF FLORIDA

The Institute of Food and Agricultural Sciences of the University of Florida invites applications for the position of **CHAIRMAN** of the Department of Microbiology and Cell Science. The successful candidate will be responsible for the leadership of a large (more than 20 faculty), multidisciplinary department with a strong research mission. Candidates must have fiscal and managerial experience. The deadline for applications is 1 July 1982. Send curriculum vitae and the names of five references to: Dr. Arnold S. Bleiweis, Chairman, Search and Screen Committee, 1059 McCarty Hall, University of Florida, Gainesville, Florida 32611. Telephone: 904-392-5921. *An Equal Opportunity/Affirmative Action Employer*

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A tenure-track position will become available in September 1982. Preference will be given to candidates with two or more years of postdoctoral experience, previous faculty status, established record of productivity, and funded or pending research grants. Salary and position are dependent upon background and experience. Candidates conducting research in any area are encouraged to apply but preference will be given to individuals with a strong interest in the area of molecular biology. Duties will involve teaching graduate and medical biochemistry courses. Please submit curriculum vitae, research synopsis (two to three pages), and three letters of reference by 31 May 1982. Send material to: Dr. Edward Bresnick, Department of Biochemistry, University of Vermont College of Medicine, Burlington, Vermont 05405. *The University of Vermont is an Equal Opportunity/Affirmative Action Employer. Women and minority candidates are encouraged to apply.*

UNIVERSITY OF CALIFORNIA, BERKELEY

The DEPARTMENT OF GENETICS invites applications for a tenure-track appointment available 1 July 1982. Appointment will be at the **ASSISTANT PROFESSOR** level at a step commensurate with experience. Preference will be given to candidates with research programs emphasizing gene regulation in higher organisms as part of a developing emphasis in the department. Candidates' research programs should emphasize molecular genetics and should be relevant to understanding broad issues of gene regulation in higher animals such as insects or mammals. Send curriculum vitae, reprints, and a brief statement of research interests and objectives, and have three letters of reference sent to:

Dr. Kenneth Paigen, Chairman of Search Committee
Department of Genetics
University of California
Berkeley, California 94720

Application deadline: 1 July 1982. *The University of California is an Equal Opportunity/Affirmative Action Employer.*

UNIVERSITY OF ALABAMA IN BIRMINGHAM

The University of Alabama in Birmingham (UAB). Department of Nutrition Sciences, is accepting applications for a position as **ASSISTANT PROFESSOR OF NUTRITION SCIENCES** in the Division of Nutritional Biochemistry. A Ph.D. or M.D. with extensive experience or training in folate metabolism is required. Special consideration will be given to applicants with a background in neurochemistry and mental retardation. Duties include teaching graduate level courses and independent research in experimental nutrition as related to human nutrition. Preference will be given to established investigators with experience in folate biochemistry and a proven record of research and funded support. Salary is negotiable based on 12-month appointment, depending upon qualifications and experience. Closing date: 15 May 1982. Send curriculum vitae, statement of research interests, and the names of three references who may be contacted to: Carlos L. Krumdieck, M.D., Ph.D., Vice Chairman, Department of Nutrition Sciences, University of Alabama in Birmingham, University Station, Birmingham, Ala. 35294. *UAB is an Affirmative Action/Equal Opportunity Employer and will welcome applications from members of minority groups and women.*

UNIVERSITY OF ALABAMA IN BIRMINGHAM

The Department of Nutrition Sciences at the University of Alabama in Birmingham (UAB) is seeking a distinguished scientist to serve as **CHIEF, Division of Experimental Nutrition**, and **PROFESSOR of Nutrition Sciences**. Duties will include teaching, development of a Ph.D. program in human nutrition, and research in experimental nutrition. Appointee must be an established investigator with proven research ability. Ph.D. in biochemistry, nutrition, or a related field is required. Prior experience is required in determining human nutritional requirements and in the assessment of nutritional status by biochemical and/or microbiological methods. Salary negotiable based on a 12-month appointment with tenure. Send complete curriculum vitae, including academic background, description of current research programs, and complete list of publications, to: C. E. Butterworth, Jr., M.D., Chairman, Department of Nutrition Sciences, University of Alabama in Birmingham, University Station, Birmingham, Ala. 35294. Closing date is 15 May 1982. *UAB is an Affirmative Action/Equal Opportunity Employer and will welcome applications from members of minority groups and women.*

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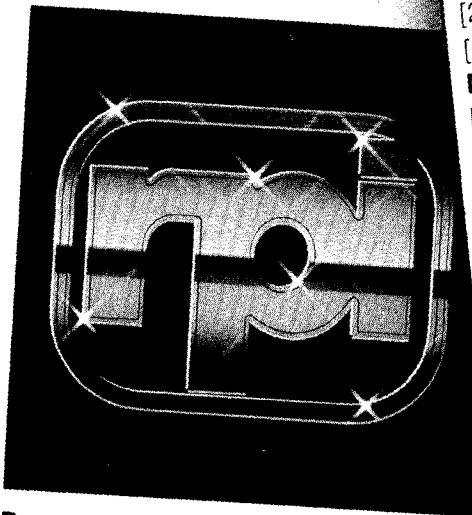
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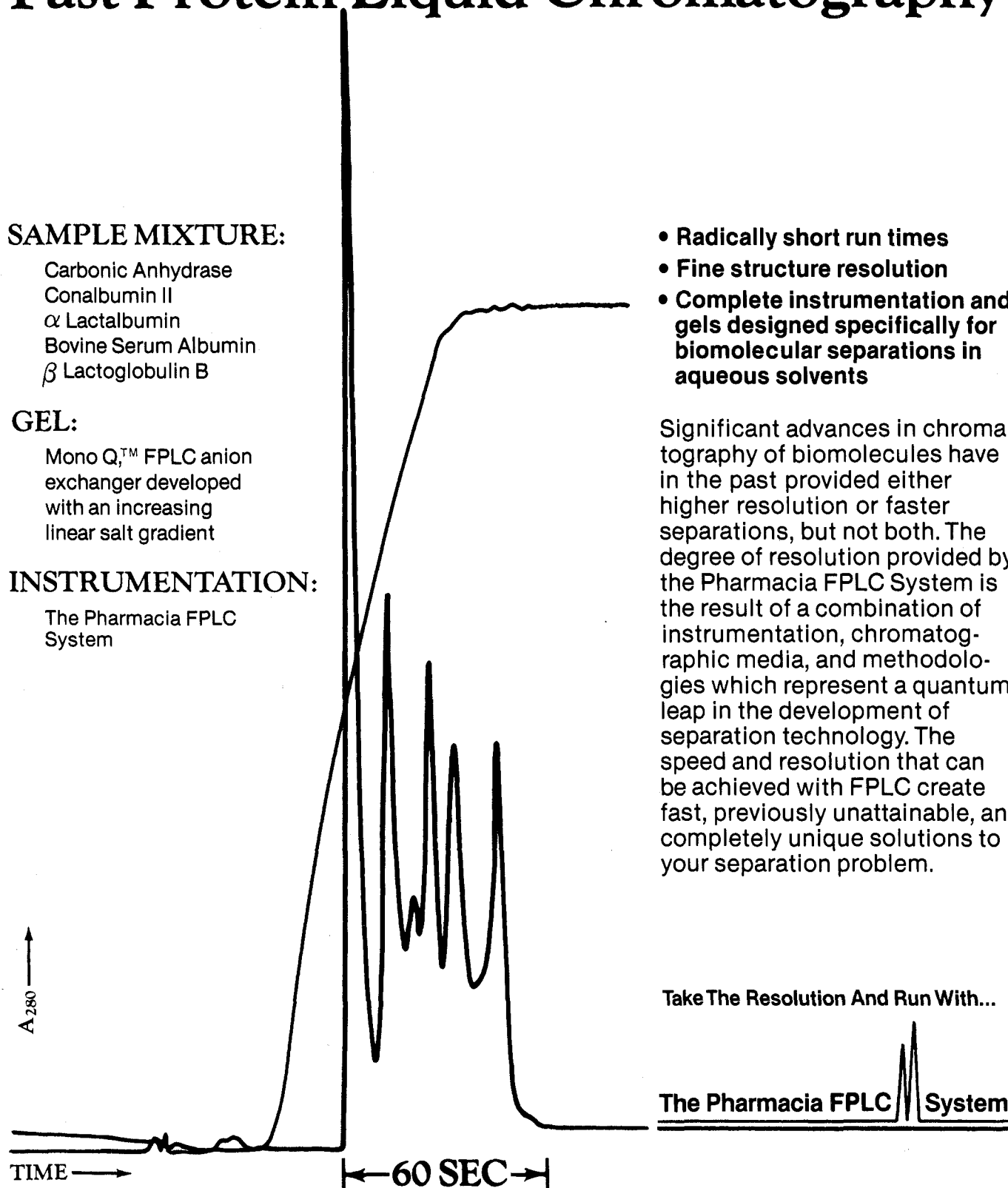
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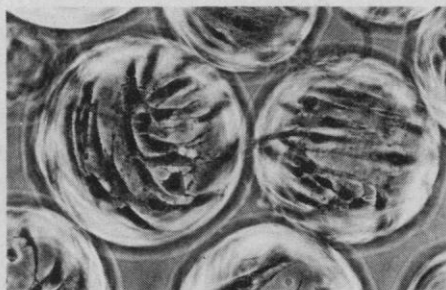
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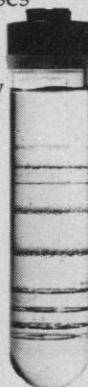
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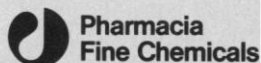
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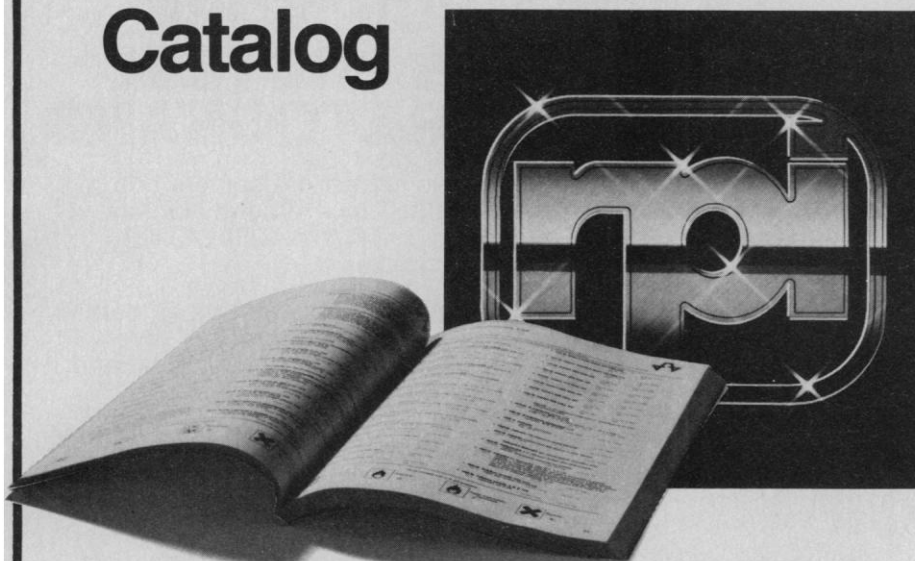
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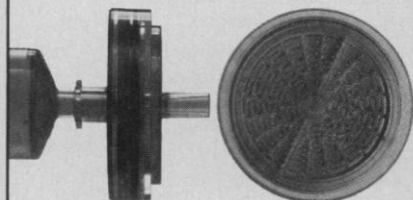
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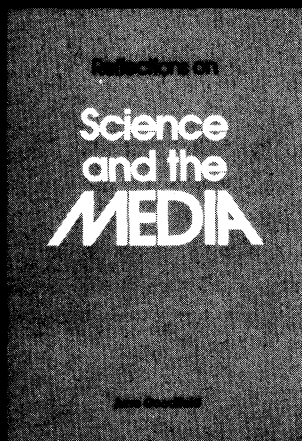
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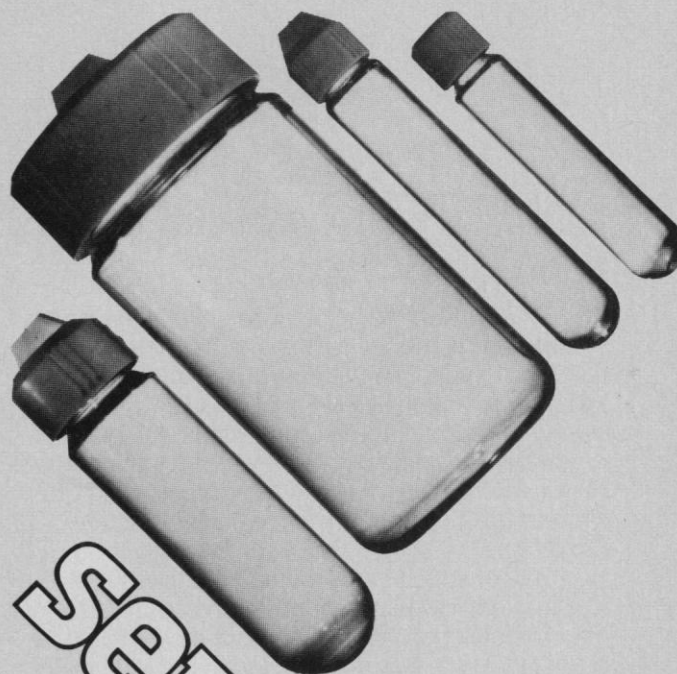
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Smith Kline & French Laboratories, a division of SmithKline Beckman Corporation and a leader in pharmaceutical research, is seeking an Electron Microscopist to supervise our new laboratory in pathology/toxicology (drug safety evaluation), located in suburban Philadelphia.

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Application forms and information on terms and conditions of service may be obtained from:

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(212) 765-1670

or: **THE DIRECTOR, of Personnel**
NATIONAL UNIVERSITY OF SINGAPORE
Kent Ridge
Singapore 0511

POSITIONS OPEN

ASSISTANT PROFESSOR/GEOLOGY

The Department of Geology, University of South Carolina, invites applications for a tenure-track appointment of assistant professor or a 1-year temporary appointment, beginning in late August 1982. Individuals from all areas of geology will be considered but with special interest in the areas of geophysics, seismic stratigraphy, coastal processes. Candidates must have strong commitment to research. Send curriculum vitae, summary of present and proposed research, and the names of three reference sources to: **Dr. Michael A. Arthur, Search Committee Chairman, Department of Geology, University of South Carolina, Columbia, S.C. 29208.**

The University of South Carolina is an Affirmative Action/Equal Opportunity Employer

ASSISTANT PROFESSOR, MICROBIOLOGY AND IMMUNOLOGY. Tenure-track position available for August 1982. Ph.D. required. Postdoctoral experience preferred. Responsibilities include teaching immunology and introductory microbiology, and development of an active research program in microbiology or immunology. Send curriculum vitae and three letters of recommendation by 15 June 1982 to: **Michael A. Poirier, Chairman, Department of Biological Sciences, University of New Orleans, New Orleans, Louisiana 70148 (A MEMBER OF THE LOUISIANA STATE UNIVERSITY SYSTEM).** *Equal Opportunity/Affirmative Action Employer.*

ASSISTANT PROFESSOR, tenure-track position in vertebrate morphology. Duties include teaching comparative anatomy and microtechnique, conducting research, supervising graduate students, and curating vertebrate collections. Ph.D. required with experience in histo/cytotechniques and museum procedure desired. *An Equal Opportunity/Affirmative Action Employer.* Send statement of teaching and research interests, résumé, transcripts, and names of three references to: **John Thornton, Department of Zoology, Oklahoma State University, Stillwater, Okla. 74078,** by 17 May 1982.

ASSOCIATE DEAN FOR RESEARCH AND SPONSORED PROGRAMS UNIVERSITY OF MIAMI SCHOOL OF MEDICINE

Candidates should possess an M.D. or Ph.D., have been active in scientific research with tangible achievements, have administrative ability and experience, and have experience dealing with federal and other funding agencies. The position will involve a faculty appointment in an appropriate department. The functions of the office include research administration, research support resources disbursement, research and sponsored program development, graduate education development at the medical school, and research community representation to other sectors of the administration. Candidates should supply curriculum vitae and letters of reference to: **Dr. David Wilson, Department of Physiology and Biophysics, R-430, University of Miami, School of Medicine, P.O. Box 016430, Miami, Fla. 33101.**

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CELL/MOLECULAR BIOCHEMIST

The Department of Biochemistry of the University of Georgia has a faculty position open for a cell/molecular biochemist. The rank and salary of this tenure-track position are open. We expect to fill the position during the 1982-1983 academic year, possibly as early as September 1982. The individual will be expected to develop a significant research program in a forefront area, cell/molecular biochemistry, and to contribute to the instructional program of the department. Applicants should send curriculum vitae with a research plan and arrange to have four letters of reference mailed to:

**Joe L. Key
Division of Biological Sciences
Room 400, Bioscience Building
University of Georgia
Athens, Georgia 30602**

Applications should be complete by 1 July 1982. *The University of Georgia is an Equal Opportunity Employer.*

POSITIONS OPEN

BIOCHEMIST—MOLECULAR BIOLOGIST

ASSISTANT PROFESSOR OF BIOCHEMISTRY. The Department of Biochemistry, The Ohio State University, invites applications for a faculty position at the assistant professor level to begin September 1982 or later. We seek an individual with a strong background in molecular biology, who shows promise for teaching and who will establish an active, original research program. Preferred research areas include, but are not limited to, the molecular basis of cell and tissue differentiation and the hormonal control of gene expression, with the use of modern biochemical and molecular genetic approaches. Candidates with postdoctoral experience and demonstrated exceptional ability in molecular biology should send curriculum vitae, a brief statement of research goals, and the names, addresses, and telephone numbers of at least three references to: **Dr. George A. Marzluft, Department of Biochemistry, The Ohio State University, 484 West 12 Avenue, Columbus, Ohio 43210.** Applications will be accepted until the position is filled, but candidates are urged to forward their curriculum vitae without delay.

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CARBOHYDRATE CHEMIST—Independent research institute looking for associate scientist to perform stereo-controlled synthesis of clinically relevant tri- to hexasaccharide structures. Prefer an individual with Ph.D. or equivalent experience. Salary: \$35,000 per year or more, depending on experience. Have complete NMR and mass spectrometry facilities and large, broad funding base within academic medical center environment. Contact: **Dr. John Klock, Institute of Cancer Research, Pacific Medical Center, Box 7999, San Francisco, Calif. 94120.**

UNIVERSITY OF TORONTO CHAIRMAN—DEPARTMENT OF MICROBIOLOGY

On 1 July 1982, the Departments of Medical Microbiology and Microbiology and Parasitology in the Faculty of Medicine will be combined into a single Department of Microbiology. Applications are invited for the position of **chairman** of this new administrative unit. The successful candidate will have an active research program and a strong record of scholarly achievement, the leadership qualities and administrative skills necessary to develop the diverse academic programs of the department, and a broad appreciation of the needs of microbiology in all its facets from basic molecular studies to clinical services. Applications and nominations should be forwarded to: **Dr. F. H. Lowy, Dean, Faculty of Medicine, University of Toronto, Toronto, Ontario, Canada M5S 1A8,** as soon as possible. In accordance with Canadian immigration requirements, priority will be given to Canadian citizens and permanent residents of Canada.

DIRECTOR OF MEDICAL CENTER ENVIRONMENTAL SAFETY AND HOSPITAL EPIDEMIOLOGY

The Duke University Medical Center is seeking a qualified individual to direct the Medical Center Office of Environmental Safety and Hospital Epidemiology. The director is responsible for the planning, organization, and administration of the Hospital Epidemiology and Medical Center Environmental Health Programs. Specific program areas include hospital infection control, hospital environmental control, biosafety, laboratory safety, occupational health, hazardous waste management, and safe handling of carcinogens.

The qualified applicant should possess a doctorate in environmental health science or related discipline, and have at least 3 years of work experience, preferably in the public health field. Preference will be given to applicants with experience in hospital epidemiology. The position is available immediately. Contact: **Dr. Syd Osterhout, telephone: 919-684-3190.** *Equal Opportunity Employer.*

DIRECTOR, CLINICAL PHARMACOLOGY

The University of Alabama in Birmingham is seeking qualified candidates for the directorship of a newly created program in clinical pharmacology. Substantial space and state support are available. Appointments in an appropriate clinical department and pharmacology are available. Applicants should apply to: **John R. Durant, M.D., Chairman, Search Committee, Clinical Pharmacology, University of Alabama in Birmingham, University Station, Birmingham, Alabama 35294.** *An Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

IMPERIAL CANCER RESEARCH FUND CLINICAL SCIENTIST

An established scientist is required to direct the laboratory research in the Department of Medical Oncology, St. Bartholomew's Hospital, London. The laboratory currently comprises about ten scientific and technical staff. The position and laboratory facilities are funded by the Imperial Cancer Research Fund (ICRF) and there is close collaboration with the ICRF laboratories in Lincoln's Inn Fields as well as various ICRF units. The successful applicant may be medically or scientifically qualified and will have made major contributions in the field of experimental oncology, haematology and/or immunology. The appointee will be expected to have a major interest related to the Medical Oncology Unit's commitment to leukaemia and lymphoma, and to pursue an active research programme in this area.

The position is included in the permanent establishment of the Fund and offers a salary within the range £13,230 to £16,440 plus £1,087 London Weighting. Appropriate academic status in the Medical College of St. Bartholomew's Hospital (London University) will be sought and there will be an opportunity for some clinical work. For further particulars, please contact: **Professor J. S. Malpas, Department of Medical Oncology, St. Bartholomew's Hospital, London, England** or **Dr. W. F. Bodmer, Director of Research, Imperial Cancer Research Fund, Lincoln's Inn Fields, London WC2, England.** Closing date: 14 May 1982.

DEVELOPMENTAL BIOLOGY FACULTY POSITION

Applications are invited for a tenure-track position in a well-equipped, research-oriented department. We seek an individual who will establish a vigorous, independent research program in an area of developmental biology and participate in our undergraduate and graduate teaching program. Applicants should submit curriculum vitae, relevant reprints, and a brief statement of proposed research and should arrange to have at least three letters of recommendation sent to:

**Dr. V. Hari
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EPIDEMIOLOGY SPECIALIST

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A potentially long-term research and development position is available 1 June 1982 for an **EXPERIMENTAL PHYSICIST** in the field of **molecular mass spectrometry.** The person must have an interdisciplinary background with experience in the design, fabrication, and innovative use of instrumentation applied to the study of the nature of molecular composition and structure. Experience in physics of ion and neutral beam management, collision and sputtering processes is required. Ph.D. in experimental physics, record of contributions to the original scientific literature, and interest in study of biological systems are also required. Salary range is \$34,900 to \$46,600. Send application, letters of reference, reprints, and preprints by 10 May 1982 to: **Professor A. L. Burlingame, Department of Pharmaceutical Chemistry, University of California, San Francisco, Calif. 94143.** *Affirmative Action/Equal Opportunity Employer.*

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For additional information and application materials, contact the Admissions Office, Marine Biological Laboratory, Woods Hole, MA 02543; telephone 617-548-3705. Applications are due by July 1.

PLANT PHYSIOLOGIST

We are seeking applicants for a research position in a new and innovative research program in the area of plant physiology and biochemistry.

Applicants must have strong formal training in plant biology, agronomy, or crop science at the PhD level. Experience in one or more of these areas is desirable: plant genetics, stress physiology, microbiology, protein chemistry, modern analytical techniques.

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BOX 108, SCIENCE

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The University of California, San Francisco, invites nominations and applications for the position of Dean of the School of Medicine opening July 1, 1982.

UCSF is the only one of the nine campuses of the University of California that is devoted solely to the health sciences with professional Schools of Dentistry, Medicine, Nursing, and Pharmacy, plus a Graduate Division. On-campus facilities include two acute care general hospitals, one psychiatric hospital, and a large ambulatory care program. In addition, the School has affiliated programs at over 100 medical centers and hospitals in the state.

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To qualify, you must hold an M.D. degree and have administrative and scholarly achievements in teaching and research in the health sciences field. The successful candidate must also have proven leadership abilities in the administration of a major health sciences unit. Salary is negotiable and commensurate with qualifications.

Send applications or nominations with complete curriculum vitae, bibliography and three references, by May 15, 1982, to **Mrs. Jeanne Phillips, Search Committee, Dean of Medicine, Chancellor's Office 126-S, University of California, San Francisco, CA 94143.**

UCSF

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POSITIONS OPEN

ENDOCRINOLOGY. A position for a postdoctoral research fellow has unexpectedly become available beginning 1 July 1982 for investigations on the mechanism of action of thyroid hormone. The subject of primary interest is the role and regulation of intracellular T4 to T3 conversion in rat brain and pituitary. Techniques in use include kinetic studies in intact animals, examination of thyroid hormone-nuclear receptor interactions in vivo and in vitro in cell culture systems. Experience in protein chemistry, mechanisms of hormone action, and hormone kinetics in intact animals will be useful. Interested U.S. citizens with the Ph.D. or M.D. degree should submit curriculum vitae, three letters of reference, and a statement of research interests and goals to: **P. R. Larsen, M.D., Department of Medicine, Brigham and Women's Hospital and Harvard Medical School, 75 Francis Street, Boston, Mass. 02115.** An Affirmative Action/Equal Opportunity Employer.

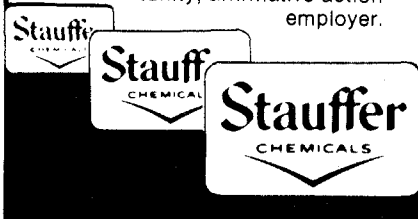
University of Louisville, Department of Physiology and Biophysics, has openings for **INSTRUCTORS** in respiratory physiology, reproductive neuroendocrinology, and renal physiology. Applicant must have completed Ph.D., M.D., or equivalent. Positions are 3- to 4-year, nontenure-track faculty appointments which combine aspects of the traditional research postdoctoral experience with limited administrative and teaching experience. Send curriculum vitae and transcripts to: **David L. Wiegman, Ph.D., Department of Physiology/Biophysics, University of Louisville, Louisville, Kentucky 40292.** The University of Louisville is an Affirmative Action/Equal Opportunity Employer.

LECTURER position available. Teaching duties in upper-division undergraduate cell/molecular biology course. Research opportunity available in laboratory, concentrating on bunyaviruses and persistent infection. Applicant should have a Ph.D. in biochemistry, molecular biology, or a related discipline. In addition, expertise in animal virology is required. Interested applicants should send curriculum vitae and references to: **Dr. Martinez J. Hewlett, Assistant Professor, Department of Cellular and Developmental Biology, Biosciences West, Room 308, University of Arizona, Tucson, Ariz. 85721.** Equal Opportunity/Affirmative Action Employer.

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POSITIONS OPEN

DIRECTOR, PACIFIC MARINE ENVIRONMENTAL LABORATORY. The Environmental Research Laboratories (ERL), National Oceanic and Atmospheric Administration (NOAA), U.S. Department of Commerce in Seattle, Washington, is seeking applicants for a scientific manager to serve as director, Pacific Marine Environmental Laboratory (PMEL). The director plans, directs, and evaluates research programs for investigating deep ocean, coastal, and estuarine processes occurring at sea, and the roles of ocean, atmosphere, and ice in establishing weather and climate. This involves extensive inter- and intraagency coordination as well as the direction of a 100-member staff engaged in research activities. Position is career reserved in the Senior Executive Service. Salary range: \$54,755 to \$58,500 per annum, negotiable based on experience, scientific achievement, and technical/managerial qualifications. **QUALIFICATIONS:** Knowledge of theory and state of the art in a combination of disciplines (physical oceanography, meteorology, marine chemistry/geology, mathematics) to design, direct, and evaluate interdisciplinary research programs. Competence in the scientific management of theoretical and experimental research studies of a large-scale nature. Personal research in oceanography. Executive competence in broad areas of administration such as program planning and evaluation, multigroup coordination, resource acquisition and administration, organizational representation, and human resource utilization including EEO. **TO APPLY:** Interested persons should contact: **Monty Mann, NOAA/ERL, Personnel Services Division (R562), 325 Broadway, Boulder, Colo. 80303.** Telephone: 303-497-6585 or FTS 320-6586, for application forms. Reference Vacancy Number NOAA/ERL 82-14. Position announcement closes 24 May 1982. An Equal Opportunity Employer.

FACULTY POSITIONS

The University of Southwestern Louisiana invites applications for two tenure-track positions to be effective August 1982. Rank and salary negotiable. Ph.D. and strong commitment to research required. Appointees must maintain productive research programs, actively solicit funding, direct graduate research, and interface with environmental and evolutionary biologists. Facilities include a marine/estuarine research complex and electron microscopy laboratory. **PHYCOLOGIST:** Prefer candidate broadly trained who can participate in graduate and undergraduate teaching. **DEVELOPMENTAL BIOLOGIST:** Research area open, but interest in environmental or genetic influences on developmental processes desirable. Experience with invertebrate or lower vertebrate systems preferable. Applicants should enclose statement of research goals, curriculum vitae, and reprints of publications with letter of application; these materials plus names, addresses, and telephone numbers of three references should be sent to: **Search Committee, Department of Biology, University of Southwestern Louisiana, Lafayette, La. 70504.** Closing date is 7 May 1982, or until position fills. An Equal Opportunity/Affirmative Action Employer.

PHYSIOLOGIST

Department of Biology, Syracuse University. A position is available for one semester; the individual will teach introductory, general physiology with laboratory. Ph.D. required. Some facilities available for physiological or behavioral studies. Salary: \$6000 for September to December 1982. Send curriculum vitae and three letters of reference to: **Dr. Donald G. Lundgren, Chairman, Department of Biology, Syracuse University, Syracuse, N.Y. 13210.** Syracuse University is an Equal Opportunity Employer.

POSTDOCTORAL FELLOW/IMMUNOCHEMISTRY. Outstanding opportunity to be involved in innovative cancer research program. Ph.D. with interest in production and purification of polyclonal and monoclonal antibodies, RIA, DNA biochemistry. Send curriculum vitae and names of three references to: **Dr. Andrew Castonguay, American Health Foundation, Valhalla, N.Y. 10595.** An Equal Opportunity Employer.

POSTDOCTORAL POSITION (research associate) available immediately in a research group studying molecular aspects of early mammalian embryogenesis, with emphasis on the teratocarcinoma cell system. Experience in molecular or cellular biology desirable. Please send curriculum vitae and two letters of reference to: **Chi Nguyen-Huu, Ph.D., Columbia University College of Physicians and Surgeons, Departments of Microbiology and Urology, 630 West 168 Street, New York, N.Y. 10032.**

POSITIONS OPEN

FACULTY POSITION IN CHEMISTRY TENURE-TRACK ASSISTANT PROFESSOR Beginning September 1982

The Chemistry Department, State University of New York (SUNY), College of Environmental Science and Forestry (CESF), Syracuse, N.Y., invites applications from highly motivated individuals with a strong research commitment in the areas of polymer science related to macromolecular biophysics, biopolymers, and closely allied disciplines. The college is an upper division/graduate institution offering the B.S., M.S., and Ph.D. degrees. The applicant must have commitment to teach undergraduate physical chemistry as well as graduate topics in his/her field of specialization. Knowledge of statistical and computer methodology is desirable. Send résumé and three letters of recommendation by 20 May 1982 to: **Professor Israel Cabasso, SUNY/CESF, Syracuse Campus, Syracuse, N.Y. 13210.** Affirmative Action/Equal Opportunity Employer.

FACULTY POSITIONS IN BIOCHEMISTRY and TOXICOLOGY. Two full-time positions open in the Physiology/Chemistry Department beginning July 1982. Responsibilities include teaching of either general biochemistry or toxicology and physiological chemistry, as well as assisting in a biochemistry/clinical laboratory. Minimum educational requirement is a master's degree in an appropriate field. Rank and salary commensurate with qualifications and experience. Preference given to individuals at instructor or assistant professor level. Curriculum vitae, three letters of reference, and copies of transcripts to:

**Dr. Howard T. Silverstein, Chairman
Physiological/Chemistry Department
Palmer College of Chiropractic
1000 Brady Street
Davenport, Iowa 52803**

Equal Opportunity/Affirmative Action Employer

FACULTY POSITIONS IN PHYSIOLOGY. Two full-time positions are available in the Physiology/Chemistry Department beginning July 1982. One position involves teaching cardiovascular or renal/pulmonary physiology. The second position is for an individual whose primary responsibility would be the coordination and supervision of a physiology laboratory. Minimum educational requirement is a master's degree in an appropriate field. Rank and salary commensurate with qualifications and experience. Preference given to individuals at the instructor or assistant professor level. Curriculum vitae, three letters of reference, and copies of transcripts to:

**Dr. Howard T. Silverstein, Chairman
Physiology/Chemistry Department
Palmer College of Chiropractic
1000 Brady Street
Davenport, Iowa 52803**

Equal Opportunity/Affirmative Action Employer

MUSEUM: DIRECTOR. The Chicago Academy of Sciences seeks a specialist in the fields of natural history and ecology to serve as its director beginning by September 1982. The successful applicant will have the Ph.D. degree and experience in the design of museum exhibits and administration, as well as an interest in ongoing field research. The Chicago Academy of Sciences was founded in 1857 and is one of the oldest scientific institutions in the Midwest. Allowance for hardship moving. *The Chicago Academy of Sciences is an Equal Opportunity Employer.* All replies confidential. Box 109, SCIENCE.

PLANT GENETICS—TISSUE CULTURIST

A position is available at the Corporate Research Laboratory of George J. Ball, Inc., West Chicago, Illinois. The qualifications for the position are: Ph.D. in horticulture, agronomy, botany, or genetics, and an interest in developing the projects of cell and protoplasts culture and somatic cell genetics in flower and vegetable crops. Send résumé and expected salary to: **Dr. Irwin Chu, Corporate Vice President—Research and Development, P.O. Box 335, West Chicago, Illinois 60185.**

POSTDOCTORAL POSITION available September 1982 to study biochemical effects of adrenal steroids on the developing brain (for example, myelinogenesis, cell proliferation, receptor binding). Experience in neurochemistry required. Background in autoradiography or EM also useful. Send curriculum vitae and three letters of recommendation to: **Dr. Jerrold S. Meyer, Department of Psychology, University of Massachusetts, Amherst, Mass. 01003.** An Equal Opportunity/Affirmative Action Employer.

GENETIC TOXICOLOGY

The Agricultural Research Division has immediate needs for:

(1) An entry-level Cytogeneticist or Geneticist/Molecular Biologist, who wishes to learn cytogenetics. Post-doctoral experience desirable to conduct essays, carry out research and write reports.

(2) Two-year Research Associate position to conduct basic or applied research on projects of mutual interest in the field of genetic toxicology.

Please send resume and salary requirements to Employment Services Supervisor.



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

An Equal Opportunity Employer M/F/H/V

Center in Motion

**Faculty position in Anatomy
University of Massachusetts
Medical School**

Tenure track appointment in human gross anatomy at the assistant, associate, or full professor level available July 1, 1982. Applicants should have the Ph. D. or M.D. degree and postdoctoral training in research. Experience in teaching human gross anatomy and an active research program are required. Preference given to candidates with demonstrated ability to direct a course for first-year medical students. Research effort may center in molecular, cellular, or developmental biology, biological anthropology, or biomechanics.

Applicants should send a curriculum vitae, description of research program, and names of three references to: Dr. Helen A. Padykula, Chairman, Department of Anatomy.



**University of
Massachusetts
Medical Center**
55 Lake Avenue North
Worcester, MA 01605
An affirmative action/
equal opportunity employer

TEACHING-RESEARCH POSTDOCTORAL FELLOWSHIP

UNIVERSITY OF CALIFORNIA, DAVIS

The Department of Biochemistry and Biophysics invites applications from qualified individuals for a Teaching-Research Postdoctoral Fellowship. This is a 9-month, full-time, nontenure-track position that will provide the fellow an opportunity to obtain teaching experience and further training in research. The position is on an annual basis but reappointment is possible for two additional years. The salary will range from \$14,500 to \$16,000 for the 9 months. No range adjustments or merit increases will be offered over the 3-year period. Summer responsibilities and support are negotiable.

The teaching responsibility involves lecturing in one section for one quarter of a two-quarter, upper-division course in general biochemistry, and supervision of one section (one quarter) of an upper-division laboratory course. The research component involves participation in the research program of one of the ladder faculty in the Department of Biochemistry and Biophysics. A Ph.D. degree (preferably in biochemistry) is required.

Applicants should submit a letter describing their qualifications, a concise description of their career goals, curriculum vitae, copies of any publications, undergraduate and graduate transcripts, and the names and addresses of three references to:

Dr. Larry Sprechman, Chairman
Teaching Postdoctoral Fellow
Search Committee
Department of Biochemistry and Biophysics
University of California
Davis, California 95616

Telephone: 916-752-7676 or 752-3611

The deadline for applications is 15 May 1982. We hope to reach a decision by 1 June 1982.

The University of California is an Equal Opportunity/Affirmative Action Employer and invites applications from all qualified individuals.

PROJECT SCIENTIST

PHD plus 5 years experience in biophysics, applied mathematics and/or engineering mechanics desired. Duties will involve developing theoretical and empirical models for predicting the regional disposition of gaseous and particulate pollutants in man and various animal species. Emphasis will be upon models which allow examining dose patterns resulting from exposure to fine and coarse mode urban aerosol distributions and to common gaseous pollutants. Will require the development of associated complex computer programs. FORTRAN, BASIC, and UNIVAC 1100 or large scale computer experience required.

Interested candidate should send salary history plus present salary requirements in confidence to:

NORTHROP
G. W. JAHTANIAH
P.O. Box 12313
Research Triangle Park, N.C. 27709

EOE

Center in Motion

**Faculty position in
Developmental Biology
Department of Anatomy
University of Massachusetts
Medical School**

Tenure track appointment in mammalian developmental biology at the assistant, associate, or full professor level available July 1, 1982. Applicants should have the Ph. D. degree, postdoctoral training in basic research, and substantial experience in teaching. Preference given to candidates with demonstrated strength in research. Teaching responsibilities in the programs for first-year medical and graduate students include coverage of fundamental aspects of cell growth and differentiation, tissue interactions, as well as early mammalian development through organogenesis and portions of the course in cell and tissue structure.

Applicants should send a curriculum vitae, description of research program, names of three references to: Dr. Helen A. Padykula, Chairman, Department of Anatomy.



**University of
Massachusetts
Medical Center**
55 Lake Avenue North
Worcester, MA 01605
An affirmative action/
equal opportunity employer

Dermatological Research

Pfizer Central Research seeks an individual with a PhD in Biological Sciences and at least two years research experience in the area of Investigative Dermatology. We are especially interested in persons who have a demonstrated ability to develop new tools for studying structure/function of human epidermis and interactions of this tissue with topically-applied molecules.

This position provides excellent opportunities for professional recognition and considerable interaction with scientists in other disciplines. In addition we offer career growth, a competitive compensation/benefit package and the opportunity to live in an attractive shoreline environment. Please send resume in confidence to: Mr. F. G. Ziegler, Pfizer Central Research, Eastern Point Road, Groton, CT 06340.



An equal
opportunity
employer

POSITIONS OPEN

FACULTY POSITIONS AVAILABLE

Hunter College School of Health Sciences, two tenure-track assistant professors in medical laboratory sciences, September 1982. Requires Ph.D. or equivalent with demonstrated excellence in teaching and sponsored research in any two of the following areas: microbiology, immunology (basic or clinical), genetics, hematology, or blood banking. Medical laboratory experience desirable. Responsibilities are innovative undergraduate teaching, research, service, and participation in development of M.S. Program in Laboratory Immunology. Administrative responsibilities available. Send curriculum vitae and references to: Dr. Irwin Oreskes, Chairman Search Committee, 440 East 270 Street, New York, N.Y. 10010. *Affirmative Action/Equal Opportunity Employer.*

HARVARD UNIVERSITY DEPARTMENT OF CHEMISTRY

Manager of Magnetic Resonance Laboratory
The Department of Chemistry seeks a spectroscopist to supervise the operation and maintenance of its magnetic resonance instrumentation. The Department presently has a Bruker 300 MHz multinuclear FT NMR, a JEOL 270 MHz proton/carbon FT NMR, and Varian/Nicolet XL-100, and intends to acquire additional capability in this area. A strong background in NMR spectroscopy or chemical instrumentation with a Ph.D. in chemistry or physics is desired. The position is available immediately and duties can be expanded to Head of Chemical Instrumentation Laboratory. Interested parties should send complete curriculum vitae in strictest confidence to: Dr. D. J. Ciappenelli, Director of the Chemical Laboratories, Harvard University, 12 Oxford Street, Cambridge, Mass. 02138. *Harvard University is an Equal Opportunity/Affirmative Action Employer.*

PHYSIOLOGIST

The School of Life and Health Sciences at the University of Delaware is seeking a physiologist with postdoctoral training. Preference will be given to candidates with research expertise in the physiology of cells or cellular processes. This is a tenure-track position and is expected to be filled at the assistant professor rank. The successful candidate will be expected to teach an advanced course in his/her area of interest and an undergraduate course in organ systems physiology. Applicants should submit curriculum vitae, representative publications, a statement of research plans, and three letters of recommendation to: Dr. Milton H. Stetson, Associate Director for Graduate Programs and Research, School of Life and Health Sciences, University of Delaware, Newark, Del. 19711. The closing date for applications is 15 May 1982.

POSTDOCTORAL POSITION

The Marshfield Medical Foundation has a postdoctoral position available for a biochemist interested in the study of the renin-angiotensin system. The research will emphasize the isolation and characterization of proteins and enzyme kinetics. All interested postdoctoral applicants should send complete curriculum vitae and the names of three references to: Dr. Duane Tewksbury, Marshfield Medical Foundation, 510 North St. Joseph Avenue, Marshfield, Wisconsin 54449.

An Equal Opportunity/Affirmative Action Employer

POSTDOCTORAL POSITIONS IN BIOCHEMISTRY. One position requires training in molecular biology and concerns research on 2',5'-oligo(A) synthetase and protein kinase. A second position concerns the synthesis, regulation, and post-translational modification of proteins in eukaryotic systems. Training should include recombinant DNA and hybridoma technology. Both positions available June 1982. Send curriculum vitae and three references to: Dr. R. J. Suhadolnik, Department of Biochemistry, Temple University School of Medicine, Philadelphia, Pa. 19140. *An Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL RESEARCH ASSOCIATES. Positions are available in chemical carcinogenesis to study the molecular biology of carcinogen-DNA interactions. These studies are designed to investigate the role of carcinogens in the alteration of gene expression. Methodology to be employed will be DNA hybridization, restriction enzymology, cloning, and nucleic acid synthesis. Apply by sending curriculum vitae and three letters of recommendation to: Dr. Thomas Meehan, Michigan Molecular Institute, 1910 West St. Andrews Road, Midland, Mich. 48640. *An Equal Opportunity Employer.*

POSITIONS OPEN

POSTDOCTORAL ASSOCIATE POSITIONS UNIVERSITY OF IOWA

Please contact the appropriate department to express your specific interest:

ANATOMY—Dr. Terence H. Williams, Professor and Head, Bowen Science Building.

BIOCHEMISTRY—Dr. Edward C. Heath, Bowen Science Building.

INTERNAL MEDICINE—Openings available in all disciplines in the Internal Medicine Department, College of Medicine, University of Iowa. Contact: Francois M. Abboud, M.D., Professor and Head, or Darris Goerdt, Administrator, telephone: 319-356-2850.

MICROBIOLOGY—Dr. Irving P. Crawford, Professor and Chairman, Bowen Science Building.

PATHOLOGY—Dr. Richard G. Lynch, Professor and Chairman, Medical Laboratories. Research activity in all areas of experimental pathology.

PHARMACOLOGY—Dr. J. P. Long, Chairman and Head, Bowen Science Building. Openings available in all areas of pharmacology and toxicology.

PHYSIOLOGY AND BIOPHYSICS—Dr. Robert E. Fellows, Professor and Head, Bowen Science Building.

The College of Medicine, University of Iowa, Iowa City, Iowa 52242. *An Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL POSITION Environmental Chemistry

THE JOINT INSTITUTE FOR THE STUDY OF THE ATMOSPHERE AND OCEAN (JISAO)

RESEARCH ASSOCIATE (postdoctoral) position in environmental chemistry with interests in the marine/atmosphere carbon cycle and/or marine trace metal chemistry. Term of appointment: 1 year, possibly renewable for a second year. Closing date: 15 July 1982. Send curriculum vitae, four letters of recommendation, and a brief research prospectus to: Acting Director, JISAO, c/o Department of Atmospheric Sciences, AK-40, University of Washington, Seattle, Wash. 98195.

An Equal Opportunity/Affirmative Action Employer

POSTDOCTORAL RESEARCH ASSOCIATE. Project involves biochemical study to understand the regulation of actin-myosin interaction and contraction in normal and pathological smooth muscles. The approach is interdisciplinary and possibilities for physiological, biochemical, and structural studies exist. A strong background in protein purification, protein phosphorylation, enzyme kinetics, or metal binding protein is preferable. However, highly motivated person with background in electron microscopy, smooth muscle physiology, or developmental biology will be considered. Send curriculum vitae and names of three references to: Dr. Samuel Chacko, Department of Pathobiology, 305 Veterans School, University of Pennsylvania, 3800 Spruce Street, Philadelphia, Pa. 19104. *University of Pennsylvania is an Equal Opportunity Employer.*

UNIVERSITY OF MARYLAND Department of Physics and Astronomy Research Associate in Observational Astrophysics

The Department of Physics and Astronomy of the University of Maryland invites applications for the position of research associate within the Amplitude Interferometry Program. This research area involves the application of modern electro-optical techniques to develop unique instrumentation for the support of our astrometric and astrophysical observational programs. The research includes developing, fabricating, and testing several new approaches in high accuracy astrometry. These instruments will then be used in observing programs, both at the University of Maryland in conjunction with the U.S. Naval Observatory. A second area of study is amplitude interferometry, a technique for obtaining extremely high angular resolution through the earth's atmosphere. This is primarily directed to stellar diameter and surface features. The applicant should have significant experience in some of the areas of optical systems, photoelectric detectors, interferometry, and computer programming. The position will be a 2-year appointment with a third year renewal expected. Salary will be appropriate to the experience of the appointee. Résumé and bibliography should be sent as soon as possible to: Professor Douglas G. Currie, Department of Physics and Astronomy, University of Maryland, College Park, Maryland 20742. *The University of Maryland is an Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

POSTDOCTORAL RESEARCH ASSOCIATE to study the metabolism and mechanism of action of recently developed antitumorigenic agents which modulate prostacyclin levels in vivo. Experience in drug metabolism with emphasis on metabolite identification desirable. Competitive salary and fringe benefits. Send curriculum vitae and three letters of recommendation to: Professor L. J. Marnett, 435 Chemistry, Wayne State University, Detroit, Michigan 48202. *An Equal Opportunity/Affirmative Action Employer.*

The Harvard Medical School and the Harvard VA Hospitals (Brockton-West Roxbury VA Medical Centers) are jointly seeking to recruit a **PROFESSOR OF PSYCHIATRY** to serve as **CHIEF OF PSYCHIATRY**, primarily based at the Brockton VA Medical Center. The incumbent will be expected to assume strong leadership responsibilities for the development of an academic program which enhances patient care, teaching, and research. Although the chief of psychiatry will be responsible for the Clinical Service Program, he or she will be expected to concentrate major attention on research and teaching. The search committee will welcome applications from outstanding candidates and is especially interested in women and minority candidates. *The Veterans Administration and Harvard Medical School are Equal Opportunity Employers.* Those interested in applying for this position should contact: Dr. Joseph J. Schildkraut, Chairman of Search Committee, Massachusetts Mental Health Center, 74 Fenwood Road, Boston, Mass. 02115.

Two positions: **PROFESSOR AND ASSOCIATE PROFESSOR OF MICROBIOLOGY.** Require advanced degree with postdoctoral experience. Evidence of productive research, especially in bacterial physiology, microbial genetics, or clinical bacteriology. Contact: Chungming Chang, Ph.D., Chairman, Department of Microbiology and Immunology, National Yang-Ming Medical College, Shih-Pai, Taipei, Taiwan, Republic of China.

RESEARCH ASSISTANT PROFESSOR position available in the Thrombosis Research Center for a Ph.D. in biochemistry with expertise in isolation techniques, radioimmunoassay development, cell isolation techniques, purification of antibodies, and isoelectronic focusing. Position is grant-funded and is on nontenure track. Please send curriculum vitae and three references to: Dr. Robert Colman, Director, Thrombosis Research Center, Temple University School of Medicine, 3400 North Broad Street, Philadelphia, Pa. 19140. *Equal Opportunity/Affirmative Action Employer.*

The University of California, Irvine, College of Medicine, is seeking applicants for a **RESEARCH ASSOCIATE**, Ph.D. position at the assistant professor level, to direct study of clinical uses of evoked potentials in neurological disorders with particular attention to electrophysiological correlation of cognitive disorders. Knowledge of digital computer use and programming, and prior experience in human evoked potentials required. *An Equal Opportunity/Affirmative Action Employer.* Send curriculum vitae and request three letters of reference to be sent to: Arnold Starr, M.D., Department of Neurology, University of California, Irvine, Calif. 92717. Appointment is for 3 years duration, contingent on grant funding. Position available 1 July 1982.

STAFF MEDICAL RESEARCH SCIENTISTS

Guthrie Foundation for Medical Research, affiliated with the Guthrie Medical Center, Sayre, Pa., seeks full-time core staff for new research program in **HUMAN IMMUNOLOGY** starting spring/summer 1983. Applicants should have advanced degree and postdoctoral experience, and have worked on human immune regulation and disease mechanisms. Advantages include a well-equipped new facility; endowed support of base-line research activities and salary; possible collaborative/teaching affiliations with nearby institutions; generous travel and working arrangements; attractive life-style in rural, culturally rich area of Susquehanna Valley on the N.Y./Pa. border; and opportunity to be involved in development of new program. Send letter and résumé to:

S. D. Litwin, M.D.
Guthrie Foundation for Medical Research
Sayre, Pa. 18840

INVERTEBRATE NEUROBIOLOGIST

E. I. du Pont de Nemours and Company, has a Ph.D. level research position available in the Wilmington, DE area for an invertebrate neurobiologist with a strong interest in the identification, synthesis, and metabolic fate of neurotransmitters, neuromodulators, and neurohormones in the insect nervous system. The successful candidate will be expected to develop a fundamental research program and collaborate with chemists, entomologists and other neurobiologists in designing and developing novel insect control agents. Salary is competitive and supplemented by a strong benefits program. Qualified candidates should send curriculum vita, names of three references, and a short statement of research interests and experience to Dr. Don Dinsel, Room 38981, Du Pont Co., Wilmington, DE 19898.



REG. U.S. PAT. & TM. OFF.
Equal Opportunity Employer M/F

NATIONAL SCIENCE FOUNDATION (NSF) Director, Division of Physiology, Cellular and Molecular Biology

The Directorate for Biological, Behavioral and Social Sciences is seeking qualified applicants for position of **Director, Division of Physiology, Cellular and Molecular Biology**. The incumbent manages the division responsible for funding research in the areas of cellular, genetic, developmental, molecular, metabolic, and regulatory biology. Duties include assessing research needs and trends, presenting plans for future development, determining funding requirements, preparing and justifying budget estimates, balancing program needs, allocating resources, overseeing the evaluation of proposals and recommendations for awards and declinations, supervising staff, and representing NSF to relevant external groups. Person selected will receive either a permanent career appointment or a 2-year rotational appointment (requiring leave of absence from current employment). This position is part of the Senior Executive Service with a salary ranging from \$56,936 to \$59,119 (currently limited to \$58,500 per annum).

Qualification requirements include: (i) Ph.D. or equivalent professional experience in the cellular, genetic and/or molecular areas of biology; (ii) substantial research experience and strong evidence of scholarship in the biological sciences, including publication of research; (iii) demonstrated familiarity with relevant academic community and recognized professional standing in the biological science community; (iv) experience in the planning of diverse research programs in the field of cellular, genetic and/or molecular biology; and (v) supervisory and managerial experience, including supervision and development of professional and support staff involved in diverse endeavors.

Applicants should telephone: **Margaret Cademartori, 202-357-7857**, to request announcement EPB 82-8 for a permanent appointment or announcement EPB 82-18 for a rotational appointment. Announcements contain qualification requirements and instructions concerning the supplemental narrative required with SF-171 as application. Send SF-171 and narrative to: **National Science Foundation, Executive Personnel Section, Room 212, 1800 G Street, NW, Washington, D.C. 20550 (attention: EPB 82-8 or 82-18)**. Applications must be received by 4 June 1982.

Equal Opportunity Employer

Monoclonal Antibody Scientist

Postdoctoral Research Positions

The Lawrence Livermore National Laboratory, a leading Laboratory in flow cytometry and mammalian genetics, has two Postdoctoral openings in a monoclonal antibody laboratory to work primarily making anti-hemoglobin antibodies for use in studying hemoglobin mutational variants in humans. One aspect of the work includes making monkey-mouse hybridomas. Another aspect involves participation in a division-wide immunochemistry facility collaborating on a variety of research projects. All immunology projects utilize fluorescent antibody labeling of cells for flow cytometric analysis. Applicants should have a strong background in cell biology, biochemistry, immunology, flow cytometry, and/or genetics. Specific monoclonal antibody experience is desired. Will have frequent contact with senior scientist in these fields and full access to the extensive Biomedical Sciences Division instrumentation. Please send curriculum vitae to: **Earl G. Morrell, Employment Division, Lawrence Livermore National Laboratory, P.O. Box 5510, L-425, Livermore, CA 94550**. U.S. Citizenship is required. An equal opportunity employer, m/f/h.

University of California

**Lawrence Livermore
National Laboratory**

An Equal Opportunity Employer M/F

Harvard School of Public Health Office of Continuing Education



Statistical Planning and Analysis of Clinical Trials

June 28-30, 1982

Fee: \$395

Acquaints physicians and other medical professionals with statistical principles and methods appropriate for the design, conduct, analysis, and practice of clinical trials.

Biological Effects of Ionizing Radiation

July 7-9, 1982

Fee: \$395

Provides radiologists and other clinicians, medical radiation physicists, and radiation protection specialists with the most recent information on genetic and carcinogenic effects of radiation exposure in people and animals.

For further information, please contact:
Office of Continuing Education
Harvard School of Public Health
677 Huntington Avenue
Boston, Massachusetts 02115
Tel: (617) 732-1171

As a matter of policy, Harvard University does not discriminate on the basis of race, sex, or handicap, and strongly encourages applications from minorities and women.

POSITIONS OPEN

RESEARCH ASSOCIATE. We are seeking a cell biologist-biochemist with a Ph.D. degree, a minimum of 2 to 3 years of postdoctoral experience, and demonstrated expertise in the following areas: techniques of mammalian cell culture, as applied to hemopoietic cells such as murine erythroleukemia cells and/or human leukemic cell lines; methods of protein separation and characterization, as used in the elucidation of hemoglobins and other proteins produced by cells in culture; and techniques of modern biochemical genetics including molecular hybridization, DNA restriction analysis, and gene cloning. Applicants must be capable of independent research in this area, as evidenced by a substantial record of publications on subjects related to biochemical and genetic events associated with hemopoietic cell growth and differentiation. The applicant's accomplishments should be such as to qualify him or her as a competitive candidate for securing research grants.

Interested applicants are invited to submit copies of their curriculum vitae to: **Marie Molineaux, Boston Placement Office, Hurley Building, Boston, Mass. 02114**, and refer to Job Reference Number 2252. Applicants should also request that three senior investigators who have supervised or have been closely acquainted with their work submit letters of recommendation with curriculum vitae. Position carries with it university appointment. Salary: \$26,000 per annum.

RESEARCH ASSOCIATE—Ph.D. in biochemistry and 2 years of experience in cultivating normal and transformed fibroblasts in tissue culture and examining their biochemical properties. Experience in ion transport, membrane biochemistry, isolation of membranes and mitochondria, general protein purification methods, chemical synthesis, isolation and pharmacological study of antitumor agents, and electron and fluorescence microscopy also helpful. Annual salary: \$16,838. Send résumé, research summary, and list of publications by 14 May 1982 to: **Dr. Leon A. Heppel, Section of Biochemistry, Wing Hall, Cornell University, Ithaca, N.Y. 14853. Equal Opportunity/Affirmative Action Employer.**

ULTRASTRUCTURAL NEUROBIOLOGIST, University of Kentucky, College of Medicine, Department of Anatomy. Tenure-track position at the assistant professor level is immediately available for a cellular neurobiologist who must have primary expertise in electron microscopy. Applicant must have 2 years of postdoctoral neurobiology research training and suitable background to participate in team teaching of professional students. Candidate must have an active research program in ultrastructural neurobiology, preferably neuroendocrinology, and a good publication record. Department has strong research program in neurosciences and reproductive neuroendocrinology and excellent facilities including an EM suite to be occupied by the new faculty. Send curriculum vitae with detailed description of research goals and names of four referees to: **Dr. M. B. Nikitovitch-Winer, Chairman, Department of Anatomy, University of Kentucky Medical Center, Lexington, Ky. 40536-0084. Deadline: 15 June 1982. Equal Opportunity/Affirmative Action Employer.**

VETERINARY EPIDEMIOLOGIST. The Department of Veterinary Pathobiology, University of Illinois, is seeking qualified applicants to fill a tenure-track faculty position in veterinary epidemiology at the assistant or associate professor level. Candidates should hold the D.V.M. or equivalent degree plus an M.S. or Ph.D. in veterinary epidemiology or equivalent training. The veterinary epidemiologist will be expected to: (i) develop a research program in the epidemiology of animal diseases and (ii) teach epidemiologic principles of herd health/preventive medicine to professional and/or graduate students in the College. Ample opportunity exists for interaction with veterinary diagnostic and clinical and extension programs in the College. The successful candidate must demonstrate an interest and capability in epidemiologic research. Salary commensurate with rank and qualifications.

Submit résumé plus three letters of recommendation to: **Dr. Ronald D. Smith, Chairman, Veterinary Epidemiology Search Committee, College of Veterinary Medicine, University of Illinois, 1101 West Peabody, Urbana, Ill. 61801; telephone: 217-333-2449.**

To receive maximum consideration, applications should be received by 1 August 1982. Starting date effective as soon thereafter as possible.

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

POSITIONS OPEN

University of Michigan Medical School, Department of Surgery, Section of Plastic Surgery, has a position available for a **RESEARCH INVESTIGATOR, Ph.D.** degree or similar qualifications required. Must have research experience in electron microscopy on vascular tumors and endothelial cell research. Address inquiries to: **Head, Section of Plastic Surgery, University of Michigan Hospital, Ann Arbor, Michigan 48109. A nondiscriminatory, Affirmative Action Employer.**

INSTITUTE

INDUSTRY-UNIVERSITY RESEARCH RELATIONS

22 JUNE 1982

Institute on industry-university research arrangements includes sessions on current practices, costs, and benefits; case studies; problem areas; and action plans. Contact: **Dr. Nanette Levinson, CTA-Hurst 206, American University, Washington, D.C. 20016. Telephone: 202-686-2513.**

TRAINING PROGRAMS

Ph.D. PROGRAM IN PHARMACOLOGY

Under the auspices of a federally funded, predoctoral training grant, the Department of Pharmacology, Tulane University School of Medicine, offers training toward the Ph.D. (for qualified applicants) and the M.D./Ph.D. degrees. Areas of research specialization include biochemical, chemical, cardiovascular, pulmonary, renal, hematopharmacology, neuropharmacology, toxicology, and clinical pharmacology.

This program has been continuously funded by NIH for more than 20 years and has not failed to place its trainees.

For more information, write to:

**James W. Fisher, Ph.D.
Professor and Chairman
Department of Pharmacology
Tulane University School of Medicine
1430 Tulane Avenue
New Orleans, Louisiana 70112**

POSTDOCTORAL TRAINING PROGRAM IN SLOW INFECTIONS

Applications are invited for advanced training in research in the molecular biology and immunology of slow infections. Preceptors and their areas of research include: (i) Stanley Prusiner, isolation and chemical structure of the scrapie agent; (ii) Daniel Stites, immunobiology of scrapie infection; and (iii) Ashley Haase, molecular pathogenesis of slow infections caused by measles and visna viruses, and the role of viruses in chronic diseases of humans. Candidates should be U.S. citizens or permanent residents committed to a research career; hold a Ph.D., M.D., or D.V.M. degree, and have experience in biochemistry, immunology, virology, medicine, or neurology. Appointments, to begin 1 July 1982, are for 3 years with a salary ranging from \$13,380 to \$18,780. Applications should include a short summary of research interests and background, curriculum vitae, and two letters of reference. Address to: **Stanley Prusiner, Neurology, M-794, University of California, San Francisco, Calif. 94143. The University of California, San Francisco, is an Affirmative Action/Equal Opportunity Employer.**

NEUROBEHAVIORAL SCIENCES POSTDOCTORAL POSITIONS

Applications are invited for an interdisciplinary neuropsychobiological research training program. The program objectives are to facilitate the development of investigators who are familiar with integrated concepts of neurobiology and behavior as well as their individual anatomical, biochemical, pharmacological, physiological, psychological, or clinical specialties. In addition to the intensive research experience in one or more laboratory disciplines, the conceptual basis of neurosciences as it relates to an understanding of the normal and maladaptive development of human neurobiology and behavior is emphasized in a series of seminars and symposia. For further information and application forms, contact: **Dr. Everett Ellinwood, Neurobehavioral Sciences Research Training Program, Duke University Medical Center, P.O. Box 3870, Durham, N.C. 27710.**

FELLOWSHIPS

Saint Mary's University, Halifax, Nova Scotia POSTDOCTORAL FELLOWSHIP

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Curriculum vitae and two letters of recommendation to be sent to:

**Professor Keith Vaughan
Department of Chemistry
Saint Mary's University
Halifax, Nova Scotia, Canada B3H 3C3**

PRE- AND POSTDOCTORAL FELLOWSHIPS IN AGING AND THE NERVOUS SYSTEM—An NIA Training Grant at the Sanders-Brown Center on Aging, University of Kentucky. will support pre- and postdoctoral fellows to study aging and the nervous system. Research includes studies of microchemical changes in cortex and hippocampus, membrane chemistry, brain trace elements alterations, neuroimmunology, neuroendocrine aspects of reproductive aging, effects of brain lesions on behavior, brain plasticity, neurotransmitter pharmacology, life history of single neurons, and cytoskeletal studies.

Interested applicants should send credentials to: **William R. Markesbery, M.D., Director, Sanders-Brown Research Center on Aging, University of Kentucky, Lexington, Ky. 40536.**

POSTDOCTORAL FELLOWSHIP. Immediate position in the Institute of Biological Sciences, SYNTAX, Palo Alto, Calif., involving studies on membrane changes that occur at the biochemical and biophysical level in various cells during inflammatory process, as part of a major program on inflammatory research. Recent Ph.D. in biochemistry or cell biology, background in membrane biology and biochemistry, and research experience with biomembranes are preferred. Experience with phospholipids with knowledge of eicosanoid biochemistry helpful.

Please send résumé to: **Dr. K. Murthy, RI-138, SYNTAX, 3401 Hillview Avenue, Palo Alto, Calif. 94304. Telephone: 415-855-5888. We are an Equal Opportunity Employer.**

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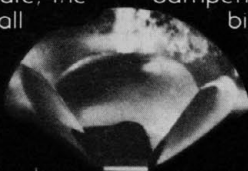


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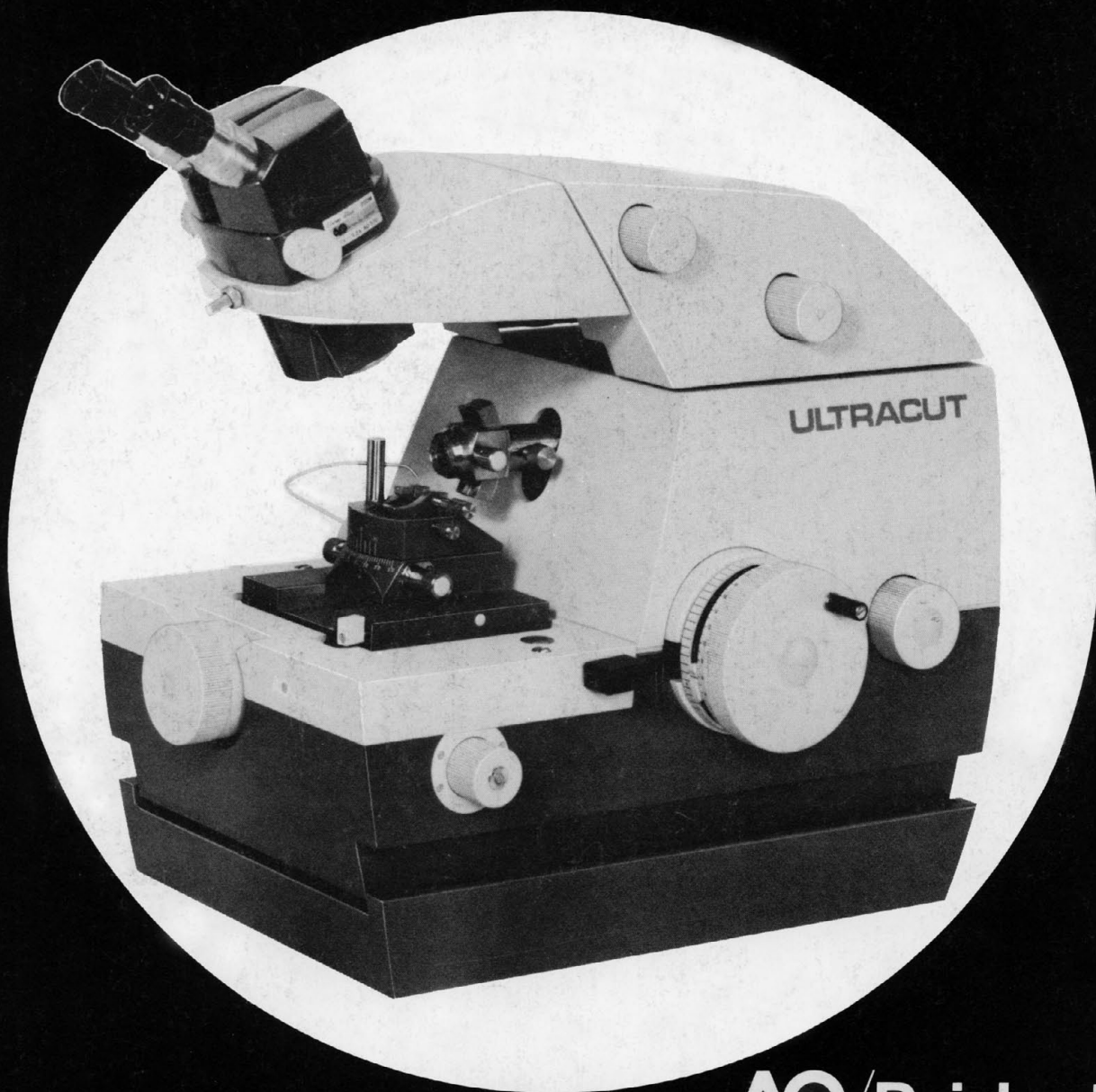
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