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# energy

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Edited by and with an introduction by Philip H. Abelson. AAAS is pleased to announce the availability of a collection of enduring and readable articles, designed to help the individual seeking to understand and cope with the energy problems we face. The articles, which originally appeared in *Science* during 1973-1974, provide a wealth of information on energy problems as they affect and are affected by people and institutions, by existing and potential resources, and by developing technology.

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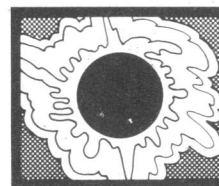
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# Personnel Placement

## POSITIONS WANTED

**Biochemist, Ph.D., 1966.** Four years of postdoctoral research in lipid/carbohydrate chemistry and animal cell virology; 5 years of teaching, undergraduate/graduate; current research grants, nuclear and plasma membranes/cell cycle/herpes simplex virus; publications; desires research/teaching position; available immediately; prefers Northeast, Northwest, Southwest, Mountain. Box 467, SCIENCE. 11/28

**Biochemist (nutritional and pathological science), Ph.D.** Two years of postdoctoral training. Excellent research backgrounds in lipid metabolism, protein chemistry, immunology. Seeks research institute or industrial position. Box 468, SCIENCE. X

**Biochemist, Ph.D.** Postdoctoral experience. Publications. Strong background in analytical and organic. Extensive experience in analytical methods development, protein chemistry, GLC, chromatographic separations. Seeks academic, research, or R & D position. Box 469, SCIENCE. X

**Biologist, M.Sc. 1975.** Background in population genetics and ecology. Extensive experience in field and laboratory. Seeks full-time position. Box 470, SCIENCE. X

**Ecologist/Ichthyologist, Ph.D.** Postdoctoral training; experienced in graduate and undergraduate teaching. Research in environmental monitoring, estuarine, continental shelf and continental slope ecosystems, functional anatomy, systematics. Desires teaching, research, or administrative position. Box 471, SCIENCE. 11/28

**Mathematical Psychologist, Ph.D., with M.A.** in applied mathematics. Experience in mental health care, organizational sociology, learning, and decision-making. Experienced in computer techniques: simulation, statistical software, real-time systems, interactive systems. Publications. Teaching experience. Seeks applied/academic position. Box 472, SCIENCE. X

**Molecular Biologist/Microbiologist, Ph.D. 1974.** Postdoctoral experience. Publications. Teaching. Research: control mechanisms in prokaryotes and eukaryotes, regulation, microbial genetics. Desires teaching and/or research position. Box 473, SCIENCE. X

**Mycologist/Botanist, Ph.D. 1970,** postdoctoral fellowship, 5 years of effective teaching at major university, grants, diverse publications. Seeks new opportunity for quality teaching and quality research. Box 474, SCIENCE. X

**Pathologist** seeks firm or industry as business associate for establishing nationwide clinical diagnostic services and research laboratory for oil-producing Nigeria. This would form a nucleus for developing a pharmaceutical industry from Nigeria's rich natural resources. Box 475, SCIENCE. X

**Pharmaceutical Chemist, Ph.D.,** 20 years of industrial experience, seeks part-time teaching, veterinary school of medicine. Box 3371, Bristol, Tennessee 37620. X

Emigrant from U.S.S.R., doctor of **Physical Mathematics**, senior science worker Academy of Sciences, now on temporary research grant in Switzerland, seeks permanent (research/teaching) employment, United States or Canada. Challenging position in industrial research would be welcome. Long experience/many publications in theoretical/applied atomic, neutron, and plasma physics. Long experience in undergraduate/postgraduate teaching. Box 476, SCIENCE. X

## POSITIONS WANTED

**Postdoctoral Position:** pharmacology-toxicology. Ph.D. expected in summer of 1976, minors in physiology and biochemistry. Interested in renal transport and drug alteration of renal function. Publications. Box 477, SCIENCE. X

**Ph.D. Somatic Cell Genetics.** Training in population genetics and statistics. Expert with computers. Publications. Desires teaching/research position. Box 478, SCIENCE. 11/28; 12/5, 12

## POSITIONS OPEN

### ANIMAL ECOLOGIST

The Department of Zoology, University of California, Davis, is seeking applicants for a position on its faculty. The individual will be expected to teach a one-quarter course in general animal ecology and an advanced course or graduate seminar in his or her own field of specialization. He or she will also be asked to participate in the offering of the department's introductory courses. It is expected that the individual will initiate and carry on a productive research program. Salary and academic rank will be determined by the individual's qualifications and experience.

Persons interested should send a curriculum vitae, a description of their research program and future plans, a summary of their teaching capabilities, and three letters of recommendation. *The University of California is an Equal Opportunity/Affirmative Action Employer.* Send applications to **Dr. George W. Salt, Chairman of the Search Committee, Department of Zoology, University of California, Davis, Calif. 95616.** Screening of applications began 15 November. Closing date for receipt of applications is 15 February 1976.

### ASSISTANT PROFESSOR OF BIOCHEMISTRY

In conjunction with the new University of South Carolina School of Medicine, the Department of Chemistry invites applications from individuals having a Ph.D. degree and postdoctoral experience preferably in one of the following areas: immunochemistry, amino acid or protein catabolism, neurochemistry, or regulation of metabolism. The appointee will join five other biochemists in teaching medical students as well as graduate and undergraduate students in the department. The tenurable appointment based on a 12-month academic year will be effective for September 1976, subject to approval by the South Carolina Board of Budget and Control. Apply by submitting curriculum vitae, a short statement of projected research problems, and names of three references to **Dr. B. M. Gimarc, Head, Department of Chemistry, University of South Carolina, Columbia, South Carolina 29208.** *An Equal Opportunity/Affirmative Action Employer.*

**PEDIATRICS—ASSISTANT PROFESSOR.** Board-eligible or certified pediatrician to provide diagnostic and treatment services to children with developmental disorders within a multidisciplinary University Center. Physicians must have at least 2 years of recognized specialty training beyond pediatric residency in growth and development and/or developmental disorder and/or in the care of the handicapped child. Faculty position requires that candidate demonstrate teaching and research skills. Position available 1 January 1976. Résumés and three references should be addressed to: **Bernard Weisskopf, M.D., Director, Child Evaluation Center, University of Louisville School of Medicine, 540 South Preston Street, Louisville, Kentucky 40202.** *An Affirmative Action/Equal Opportunity Employer.*

The University of California, Irvine, Department of Pathology, is recruiting a full-time **ASSOCIATE OR FULL PROFESSOR** who will also serve as Chief of Clinical Pathology Services at the Orange County Medical Center. Candidates must be M.D.'s and clinical Board-certified. Service administrative responsibilities include direction and operation of clinical laboratory. Teaching responsibilities involve medical students, House Officers, and paramedical training programs. Develop a House Officer training program in clinical pathology. Expected to develop independent research activities. Experience in operation of clinical laboratory is necessary prerequisite. *Applications from all qualified candidates are welcome. Women and minorities are encouraged to apply.* Send curriculum vitae before 1 December 1975 to:

**Dr. Edward R. Arquilla, Chairman**  
Department of Pathology  
University of California, Irvine  
Irvine, California 92664

## POSITIONS OPEN

The University of California, Irvine, Department of Pathology is recruiting for a full-time faculty position at the **ASSISTANT PROFESSOR** level. Candidates must be M.D.'s and be Board-qualified in anatomical pathology. Teaching responsibilities involve instructing medical students, interns, and residents. Some teaching experience is desirable. Service responsibilities include surgical, cytology, and autopsy pathology. Expected to develop independent research activities.

*Applications from all qualified candidates are welcome. Minorities and women are encouraged to apply.* Send curriculum vitae before 1 December 1975 to:

**Dr. Edward R. Arquilla**  
Department of Pathology  
University of California, Irvine  
Irvine, California 92664

### ASSISTANT PROFESSOR CELL BIOLOGY/DEVELOPMENTAL BIOLOGY

Opening available for faculty member with research interest in the nucleus (for example, chromosome ultrastructure, gene localization and function) or in immunohistochemistry (for example, cell surface antigens, Ag-Ab identification of cell and extracellular constituents). Successful applicant would be expected to launch independent research program and to teach histology and appropriate sections of cell and developmental biology courses.

Send curriculum vitae to: **Dr. Elizabeth D. Hay, Chairman, Department of Anatomy, Harvard Medical School, 25 Shattuck Street, Boston, Massachusetts 02115.**

*An Equal Opportunity/Affirmative Action Employer*

### DEPARTMENT OF RADIOLOGICAL SCIENCES UNIVERSITY OF CALIFORNIA COLLEGE OF MEDICINE, IRVINE

The Department of Radiological Sciences in the College of Medicine at the University of California, Irvine, invites applications for a position at **ASSISTANT PROFESSOR** level in **diagnostic radiology**. Applicants must be qualified radiologists with demonstrated evidence of clinical and academic ability. Preference will be given to candidates with a special interest in ultrasound, chest, and/or genitourinary radiology. Duties will include film-reporting and teaching at graduate and undergraduate levels. Applicants will also be expected to develop their own research protocols.

The individual selected will be a member of the staff of the Veterans Administration Hospital, Long Beach, California (Chief of Radiology, Dr. Henry Pribram) and will be appointed to the faculty of the College of Medicine of the University of California, Irvine.

*Applications from all qualified candidates are welcome; minorities and women are encouraged to apply.*

If you are interested in this position, please write to the address below including a curriculum vitae, an autobiographical letter, and copies of any publications. Closing date: 1 January 1976.

**Eric N. C. Milne, M.B., Ch.B., F.F.R.**  
Professor and Chairman  
Department of Radiological Sciences  
College of Medicine  
University of California, Irvine  
Irvine, California 92664

**ASSISTANT PROFESSOR OF PHYSICAL OR INORGANIC CHEMISTRY,** appointment effective 1 July 1976 for 3 years. The successful applicant will initially be expected to teach in elementary courses (chemical bonding, kinetics, thermodynamics) and to involve undergraduates in experimental research projects. Opportunities to offer more advanced chemistry courses and to teach in extradepartmental courses will arise subsequently. The applicant's field of special competence is not a prime consideration. Please send résumé, description of your teaching and research ideas, transcripts, and three letters of recommendation to: **Chairman, Department of Chemistry, Amherst College, Amherst, Massachusetts 01002.** *An Equal Opportunity/Affirmative Action Employer.*

University of Pennsylvania, Department of Psychology, is seeking two **ASSISTANT PROFESSORS**, one in social (including cultural social psychology, human or animal social ethology), and one in clinical (including abnormal, experimental psychopathology, and personality). Duties include undergraduate and graduate teaching and research. Candidates should send curriculum vitae, all relevant papers (including dissertation summary), statement of research plans and teaching interests, and have sent three to five letters of recommendation to **Personnel Search Committee, Department of Psychology, University of Pennsylvania, 3815 Walnut Street, Philadelphia, Pennsylvania 19174.** *We are an Equal Opportunity Employer.*

## POSITIONS OPEN

**ASSISTANT PROFESSOR.** Haverford College Chemistry Department is seeking candidates for position of assistant professor, starting September 1976. Thorough training in organic chemistry (Ph.D.) should be coupled with a research program applying organic chemistry to problems relevant to biology and biochemistry. Send résumé, outline of research interests, and request reference letters be sent to J. P. Chesick, Department of Chemistry, Haverford College, Haverford, Pa. 19041. *Equal Opportunity/Affirmative Action Employer.*

**ASSISTANT PROFESSOR OF MECHANICAL ENGINEERING:** Ph.D. with concentration in thermodynamics. Some industrial experience is desirable. Must demonstrate good potential for research. Starting date: January 1976. Send résumé to:

Dr. K. C. Lambrakis, Chairman  
Mechanical Engineering Department  
University of New Haven  
300 Orange Avenue  
West Haven, Conn. 06516  
*An Equal Opportunity Employer*

The DEPARTMENT OF ENVIRONMENTAL, POPULATION AND ORGANISMIC BIOLOGY at the University of Colorado, Boulder, Colorado 80302, expects to fill three ASSISTANT PROFESSOR positions beginning September 1976. **AQUATIC BOTANIST:** Opportunities provided for teaching and research in phycology and/or higher aquatic plants. Applicants must be capable of teaching a course in general principles of ecology. Contact Prof. John H. Bushnell. **VERTEBRATE ZOOLOGIST:** Opportunities provided for teaching and research in any one of wide range of disciplines involving vertebrate zoology. Applicants must be capable of teaching comparative anatomy. Contact Prof. Hobart M. Smith. **PLANT ECOLOGIST:** Teaching and research in ecology. Applicants must have additional interest either in economic botany or in biometrics. Contact Prof. David J. Rogers. All applicants should send curriculum vitae, transcripts, and three letters of reference to one of above-named persons. Applicants whose interests lie more in area of molecular biology should not apply. Deadline for applications is 15 January 1976. *The University of Colorado is an Equal Opportunity/Affirmative Action Employer.*

### ASSOCIATE RESEARCH SCIENTIST IN HUMAN CYTOGENETICS

Ph.D. geneticist with research experience in cytogenetics is needed to work with cell synchronization, G-banded prophases, computer analysis, and in situ hybridization in human chromosomes and to assist in the coordination of clinical service activities within the Medical Genetics Division. Salary in the range of \$14,000. Please send curriculum vitae and references to Dr. Jorge J. Yunis, Professor and Director, Medical Genetics Division, Department of Laboratory Medicine and Pathology, Box 198 Mayo Memorial Building, University of Minnesota, Minneapolis, Minn. 55455. *An Equal Opportunity Employer.*

**ASSISTANT PROFESSOR:** To begin no later than September 1976. Ph.D. required, postdoctoral experience preferred. Applicants must have training and experience in environmental health and in an applied area of microbiology. Position shares teaching responsibilities. In addition, the individual is expected to develop a productive research program. Temporary appointment, grant funded for 1 year, with support anticipated for 3 years. Send résumé, transcripts, and four letters of recommendation to: L. P. Mallavia, Chairman, Search Committee, Department of Bacteriology and Public Health, Washington State University, Pullman, Wash. 99163. *Washington State University is an Affirmative Action/Equal Opportunity Employer.* Application review will begin 1 January 1976.

**FACULTY POSITION IN ENVIRONMENTAL HEALTH** available 1 February 1976 or 15 September 1976. Responsibilities include coordination of undergraduate program, teaching, and research. Master's degree in environmental health required, doctorate preferred. Three to 5 years of field experience required. Position authorized at senior assistant professor level. Send résumé, transcripts, and four letters of recommendation to: L. P. Mallavia, Chairman, Search Committee, Department of Bacteriology and Public Health, Washington State University, Pullman, Wash. 99163. *Washington State University is an Affirmative Action/Equal Opportunity Employer.* Application review will begin 1 January 1976.

21 NOVEMBER 1975

## POSITIONS OPEN

### GENETICS/PLANT PATHOLOGY ASSISTANT PROFESSOR

The Genetics and Plant Pathology Departments at University of California, Berkeley, seek to appoint a **somatic cell plant geneticist**, effective 1 February 1976. Training in genetics and molecular or cell biology is essential.

Responsibilities include undergraduate and graduate teaching, and a research commitment to plant somatic cell genetics (for example, selection of agronomically important mutants in haploids, host-pathogen/pest interactions, and so forth). A research program balanced between fundamental and applied problems in agriculture is desired. Send curriculum vitae, transcripts, reprints, brief statement of research plans and have three letters of reference sent to: Michael Freeling, Co-Chairperson of the Search Committee, Genetics Department, University of California, Berkeley, California 94720. Deadline for completed applications: 31 December 1975.

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

**ASSISTANT PROFESSOR OF PHYSIOLOGY AND BIOPHYSICS,** Ph.D. and/or M.D. in physiology, biophysics, or related disciplines. Postdoctoral experience preferred. Some teaching and research experience, preferably in a medical school. Evidence of active research ability and productivity is necessary. Research program in cardiovascular or pulmonary physiology is of interest. Successful applicant is expected to conduct independent research program and guide graduate students. Teaching responsibilities include team-taught medical, dental, and nursing courses. The individual should be able to effectively teach areas other than the primary research area. The salary is approximately \$17,000. Persons interested in this position should send a curriculum vitae and three letters of reference to: Thomas B. Calhoun, Ph.D., Professor and Chairman, Department of Physiology and Biophysics, School of Medicine, University of Louisville, Health Sciences Center, Louisville, Kentucky 40201. *An Affirmative Action/Equal Opportunity Employer.*

**ASSISTANT PROFESSOR, VERTEBRATE PHYSIOLOGY,** to begin 2 January 1976. Ph.D. able to teach courses in cell biology, vertebrate physiology, and animal nutrition and to cooperate in teaching freshman biology. Application deadline 1 December. Applicants should arrange to have transcripts, three letters of evaluation, and résumé sent to: Dr. T. Rambo, Department of Biological Sciences, Northern Kentucky State College, Highland Heights, Kentucky 41076. *An Equal Opportunity/Affirmative Action Employer.*

### REED COLLEGE

The Department of Biology has an opening (September 1976) for a recent Ph.D. in cellular biology who has demonstrated a potential for excellence in teaching and research. The closing date for application is 1 February 1976.

Curriculum vitae, transcripts or course lists, and three current letters of recommendation should be sent to: Dr. Laurens N. Ruben, Chairman, Department of Biology, Reed College, Portland, Oregon 97202. *Reed is an Equal Opportunity Employer.*

### BIOLOGY/ANATOMY AND PHYSIOLOGY

Ph.D. preferred. Master's plus teaching experience required. Beginning 6 January 1976. Teach introductory courses in general biology, anatomy, and physiology. Interested applicants should submit a letter of application, résumé, credentials, and list of personal references by 5 December 1975 to Employee Relations Office, The Williamsport Area Community College, Williamsport, Pa. 17701. *An Equal Opportunity Employer.*

### CHAIRPERSON—DEPARTMENT OF BIOLOGY

Due to the impending retirement of the present chairman, the Department of Biology, Baylor University, Waco, Texas, is seeking a Chairperson for fall 1976.

Qualifications for this position include an earned doctorate, a strong record of research, and administrative ability. Applicants should have a record of strong and innovative leadership.

Inquiries and applications with curriculum vitae should be sent to:

Dr. Floyd F. Davidson, Chairman  
Department of Biology  
Baylor University  
Waco, Texas 76703

# INDUSTRIAL ENVIRONMENTAL TOXICOLOGIST

San Francisco Bay Area



Stanford Research Institute's Center for Occupational and Environmental Safety and Health is seeking an Industrial Environmental Toxicologist to participate in its activities in contract research and consulting research and consulting services for government and commercial clients.

Initial assignments will be associated with the Center's activities in the preparation of NIOSH criteria documents for recommended occupational health standards in SRI's Washington, D.C. office; and in support of a contract with the National Cancer Institute in Environmental Carcinogenesis in SRI's main office at Menlo Park, California. Successful applicants will have solid background in inhalation toxicology and the toxicological aspects of Industrial Hygiene.

Emphasis will be given in evaluating applicants for their ability to critically review the biomedical literature and develop statements to support proposed standards. Previous experience is desirable but can be substituted by unusually strong academic background.



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333 Ravenswood Avenue  
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## POSITIONS OPEN

### BIOLOGISTS

Centenary College, a 4-year liberal arts institution, with a strong premed program, seeks to fill two positions in the Department of Biology at the assistant and associate professor levels. Candidates should have established a professional reputation and be dedicated to the teaching profession. A broad biological background and teaching experience is required. Research in the candidate's specialty is encouraged. Send letters and résumés to: **Dr. A. B. McPherson, Department of Biology, Centenary College, Shreveport, Louisiana 71104.**

*Centenary College is an Equal Opportunity Employer*

The University of California, Irvine, College of Medicine, is seeking a **CHAIRMAN** for the Department of Obstetrics and Gynecology. Candidates must be eligible for appointment as professor of Obs-Gyn, with demonstrated excellence in teaching and research. The successful candidate will be expected to provide academic leadership in the reorganization and development of the department. *Applications from all qualified candidates are welcome; minorities and women are encouraged to apply.* Send curriculum vitae, before 15 December 1975, to **Harris S. Moyed, Associate Dean, University of California, Irvine, California 92664.**

**CHAIRPERSON, DEPARTMENT OF HEALTH SCIENCES.** Person with doctorate in health-related discipline, established reputation as a scholar, and proven ability for administrative and professional leadership. The department's mission includes provision of human anatomy and physiology courses for allied health professional programs. Baccalaureate degree programs are offered by the department in applied physiology, cardiopulmonary technology, and dance/movement therapy. Graduate programs are offered in nutrition, applied anatomy, and applied physiology. Submit letter of interest, curriculum vitae, and list of references to: **Associate Dean Howard Knuttgen, Sargent College of Allied Health Professions, Boston University, Boston, Massachusetts 02215.** *Affirmative Action/Equal Opportunity Employer.*

## DRUG DISPOSITION RESEARCH

Position available for individual (Ph.D. or equivalent) with 1-5 year's experience in the areas of pharmacokinetics and drug metabolism (emphasis on kinetics) to head research section in an international pharmaceutical organization. Ideal candidate will have experience with compartmental modeling, design of bioavailability studies, computer assisted analysis of data, protein binding techniques, GLC, LC, MS, etc. Interest in structure-activity correlates to pharmacokinetics and drug metabolism and new drug development is necessary.

Letters of application with curriculum vitae should be addressed to:

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**Astra Pharmaceutical  
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7 Neponset St.  
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01606

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## POSITIONS OPEN

### CELL BIOLOGIST

Position available as **assistant professor** to teach cell biology plus advanced courses in area of specialty. Must have Ph.D. degree earned by time of arrival and interest in continuing research and directing graduate student research. Will also participate in teaching general biology courses. Salary range \$11,340 to \$12,810. Final deadline for applications is 29 February 1976. Contract begins on or about 24 August 1976. Application forms and details from: **Dr. Fred A. Ryser, Chairperson, Search Committee, Department of Biology, University of Nevada, Reno, Reno, Nevada 89507.** *The University of Nevada, Reno, is an Equal Opportunity/Affirmative Action Employer.*

**CHAIRMAN: COMMUNITY MEDICINE.** At the University of Kentucky the College of Medicine has established high priorities for program development in many areas in which there is a vital role for a vibrant and modern Department of Community Medicine. Special emphasis will be placed on the role that community medicine can fill in contributing to the development and evaluation of new directions in medical education and health care including the design of innovative approaches to the accessibility and availability of health care, geographically dispersed and multi-professional learning experiences for students, and improved capabilities for physicians and other health care providers to maintain and improve their skills and knowledge.

Inquiries with curriculum vitae are invited, addressed to **Dr. Robert Straus, Room MN-654, College of Medicine, University of Kentucky, Lexington, Kentucky 40506.** *An Equal Opportunity/Affirmative Action Employer.*

### CHAIRPERSON—BIOCHEMISTRY NEW YORK UNIVERSITY COLLEGE OF DENTISTRY

Applications are invited from persons with strong teaching interests, administrative experience, and proven research record. Send curriculum vitae to **Dr. Enid A. Neidle, New York University College of Dentistry, 421 First Avenue, New York, New York 10010.** Deadline is 15 January 1976.

*An Equal Opportunity/Affirmative Action Employer*

### CHAIRMAN, PATHOLOGY AND ONCOLOGY UNIVERSITY OF KANSAS MEDICAL CENTER KANSAS CITY, KANSAS

The University of Kansas Medical Center, College of Health Sciences and Hospital, is seeking a **Chairman** for the Department of Pathology and Oncology. Candidates should have established reputations for significant scientific accomplishments and present evidence of interest and proficiency in teaching and training in pathology and related fields. Candidates should provide evidence for leadership and administrative ability. Interested persons as candidates or nominees should submit a curriculum vitae including a bibliography and three references to **K. E. Ebner, Chairman of Search Committee, Department of Biochemistry, University of Kansas Medical Center, 39 and Rainbow Boulevard, Kansas City, Kansas 66103.** Applications close 1 January 1976.

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

**CLINICAL IMMUNO-ONCOLOGIST.** M.D. experienced in fundamental immunology research and medical oncology for joint membership in the Departments of Microbiology and Immunology, and the Department of Medicine. Involves education of medical and graduate students/fellows, participation in patient care programs, and independent research. Faculty position commensurate with qualifications. Curriculum vitae, list of references, and description of professional interests to: **Dr. John L. Fahey, Department of Microbiology and Immunology, University of California School of Medicine, 405 Hilgard Avenue, Los Angeles, Calif. 90024.** *An Equal Opportunity Employer.*

**MICROBIOLOGIST:** Ph.D./M.D. interested in pathogenesis of disease for faculty position in Department of Microbiology and Immunology. Includes participation in medical, dental, and graduate education, and independent research. Position commensurate with qualifications. Curriculum vitae, list of references, and description of professional interests to: **Dr. John L. Fahey, Department of Microbiology and Immunology, University of California School of Medicine, 405 Hilgard Avenue, Los Angeles, Calif. 90024.**

*An Equal Opportunity Employer*

## POSITIONS OPEN

The University of California, Irvine, College of Medicine is seeking a **CHAIRMAN** for the Department of Anatomy. Candidates must be eligible for appointment to the rank of professor. Candidates should have demonstrated excellence in biomedical research and teaching and should preferably have administrative experience. Candidates should be capable of providing academic leadership in the reorganization and development of the department. *Applications from all qualified candidates are welcome; minorities and women are encouraged to apply.* Send curriculum vitae before 15 December 1975, to **Richard F. Thompson, Chairman of the Search Committee, Department of Psychobiology, University of California, Irvine, California 92664.**

### DIRECTOR, SANDERS-BROWN KENTUCKY RESEARCH CENTER ON AGING

The University of Kentucky is establishing an institute for study of the basic biological processes of aging. For a director, we seek a person of international scientific stature, firmly committed to the scientific study of the aging process. The Sanders-Brown Center, expected to be completed in late 1978, will consist of 17,500 square feet of space including ten laboratories, offices, conference rooms, library, animal space, and administrative offices. We need a director who can begin to develop program and funding in temporary quarters until the Center is completed. Write to: **Dr. J. W. Hollingsworth, Department of Medicine, University of Kentucky College of Medicine, Lexington, Kentucky 40506.** *The University of Kentucky is an Equal Opportunity and Affirmative Action Employer.*

### DIRECTOR OF ADMINISTRATION

Position currently available as Director of Administration of a teaching and research division of Harvard University with an annual operating budget of about \$8 million. Will be responsible for all technical and administrative services. The Director will report to the Dean of the division and will work closely with a faculty committee on research and administration. Applicants must possess a Master's degree or equivalent, at least 5 years of experience in scientific or technical management, and understand management problems from the viewpoint of the working scientist. Send curriculum vitae to **Ms. Martha M. Mooney, Division of Engineering and Applied Physics, Harvard University, Cambridge, Mass. 02138.**

*An Equal Opportunity/Affirmative Action Employer*

### ANGLO-AUSTRALIAN TELESCOPE BOARD

The Directorship of the Anglo-Australian Observatory becomes vacant during 1976. Applications are invited by the Board for appointment to the post at a salary currently within the range of \$A25,338 to \$A30,270 with appropriate allowances.

Candidates are invited to send personal and professional details with the names of three referees to the **Secretary, Anglo-Australian Telescope Board, c/o Department of Science and Consumer Affairs, Post Office Box 449, Woden, A.C.T. 2606 Australia.**

Further details are available on request. Applications should be received by the Secretary no later than 7 January 1976.

**ECOLOGIST.** The School of Life Sciences, University of Nebraska-Lincoln, is seeking nominees and applicants for an assistant or associate professorship in theoretical, quantitative, systems, or population ecology. Postdoctoral experience and/or publications required. Salary open. Candidates should submit résumé, at least three letters of recommendation, and reprints of significant publications. Duties begin fall semester 1976. Deadline for receipt of applications is 5 December 1975. Address inquiries, applications and supporting materials to:

**J. Janovy, Jr.  
Ecology Search Committee  
School of Life Sciences  
University of Nebraska  
Lincoln, Neb. 68588**

### ENZYMOLOGIST

To isolate and characterize bacterial enzyme receptors for cancer drugs (thymidylate synthetase) in collaboration with NMR spectroscopists. Write

**J. D. Glickson  
Comprehensive Cancer Center  
University of Alabama  
Birmingham, Alabama 35294**  
*Equal Opportunity Employer*

## POSITIONS OPEN

### UNIVERSITY OF CHICAGO

The Department of Pharmacological and Physiological Sciences invites applications for **faculty appointments** from qualified candidates working in the general area of **neurobiology**. *From the time of its original charter, the principle of the University has been to appoint scholars without regard to race, color, religion, sex or national origin.* Applicants should submit résumé and significant publications as well as arrange to have letters of recommendation sent directly to:

Alfred Heller, Professor and Chairman  
Department of Pharmacological  
and Physiological Sciences  
Recruitment Committee  
University of Chicago  
947 East 58 Street  
Chicago, Illinois 60637

**FACULTY POSITION IN BIOCHEMISTRY.** Full-time regular assistant professorship beginning September 1976 for third biochemist in 15-member department. Position involves undergraduate and graduate teaching and development of active research programs. Recent Ph.D. degree required; teaching and/or postdoctoral research experience desirable. Send résumé, transcript, 200-word description of research interests (including equipment required), and two letters of reference to **Dr. Robert E. VanAtta, Head, Department of Chemistry, Ball State University, Muncie, Ind. 47306.** All credentials must be received prior to 31 December 1975. *An Equal Opportunity/Affirmative Action Employer.*

### THREE FACULTY POSITIONS DEPARTMENT OF BIOLOGICAL SCIENCES STATE UNIVERSITY OF NEW YORK AT BINGHAMTON

Biologists with an interest in both undergraduate and graduate teaching are being sought for positions to begin 1 September 1976 in the following areas:

- Biochemistry (Dr. Alex Shrift, Search Committee Chairman)
- Plant Ecology (Dr. Herbert Posner, Search Committee Chairman)
- Ethology-Animal Behavior (Dr. Sandra Michael, Search Committee Chairwoman)

Any of the positions may be filled at the assistant, associate, or full professor level. The biochemist will teach introductory biochemistry, the plant ecologist will teach introductory biology, and the ethologist-animal behaviorist will teach general zoology (all one-semester courses). In addition, each will teach advanced undergraduate or graduate courses in their specialties. Applicants should submit curriculum vitae, reprints, preprints, current or pending grant proposals, and home and business telephone numbers. Also please submit academic transcripts if applying for assistant professorship. Each applicant should arrange to have three letters of recommendation sent directly to the Search Committee. Send all correspondence to the chairperson of the appropriate Search Committee, Department of Biological Sciences, State University of New York at Binghamton, Binghamton, New York 13901. *An Equal Opportunity/Affirmative Action Employer.*

University of Cincinnati, position open as **HEAD OF DEPARTMENT OF MANAGEMENT.** Successful candidate will have Ph.D. or D.B.A. in management or behavioral science, proven record in scholarly research, high quality teaching, and some technical or operations management desirable. Associate or professor rank. *The University of Cincinnati is a nondiscriminatory, Affirmative Action, Equal Opportunity Employer.* Contact: **Dr. Richard E. Ball, Head, Search Committee, College of Business Administration, University of Cincinnati, Cincinnati, Ohio 45221.**

### INSTRUCTOR

Temporary position to teach a special class the analytical methods that are used in drug analysis. Write

Prof. M. M. Kochhar  
School of Pharmacy  
Auburn University  
Auburn, Alabama 36830

*Auburn University is an Equal Opportunity Employer*

## POSITIONS OPEN

**DIRECTOR, METEOROLOGY PROGRAM.** We seek a person who has attained distinction in meteorological research and has appropriate teaching and administrative experience to direct this independent program and participate in its teaching and research. There are seven faculty, 45 M.S. and Ph.D. students, undergraduate as well as graduate courses, established research programs, and extensive collaboration with government research organizations in the Washington area. For further information contact **Dr. David L. Matthews, Institute for Fluid Dynamics and Applied Mathematics, University of Maryland, College Park, Md. 20742.** *An Equal Opportunity/Affirmative Action Employer*

**LUNAR RESEARCH:** One-year Research Associate post immediately available for theoretical, numerical, and interpretive studies of electric transport of lunar surface materials. Ph.D. in physics, plasma physics, geophysics, or computer science required. Salary negotiable. Résumé, three professional references, and recent reprints to: **Dr. David R. Criswell, Lunar Science Institute, 3303 NASA Road 1, Houston, Texas 77058.** Telephone: 713-488-5200.

### MASS SPECTROSCOPIST RICE UNIVERSITY

The Department of Biochemistry of Rice University announces the availability of a staff position of an experienced bioorganic mass spectroscopist to operate GC-MS unit and to participate in research on sterol biosynthesis and chemistry of complex lipids. Additional experience in IR and NMR desired, but not essential. Salary open. Position available immediately. Interested persons should send résumés to: **G. J. Schroepfer, Jr., Biochemistry Department, Rice University, Houston, Texas 77001.** *An Equal Opportunity/Affirmative Action Employer.*

### MICROBIOLOGY/IMMUNOLOGY

Applicants invited from Ph.D., M.D., or equivalent with sufficient postdoctoral experience, preferably in cellular immunology, to qualify for **assistant professor.** Research support must be self-engendered. Send curriculum vitae and publications list to: **Irving Gordon, University of Southern California School of Medicine, 2025 Zonal Avenue, Los Angeles, Calif. 90033.** *An Equal Opportunity/Affirmative Action Employer.*

### NEUROPHYSIOLOGIST

Assistant Professor to conduct active research program in neurophysiology or endocrinology, to interact with other faculty and graduate students, to teach undergraduate vertebrate physiology in one semester, and one specialty graduate level course in the alternate semester. To start 1 September 1976. Submit curriculum vitae, transcripts of records, publications, three letters of recommendation, and statement of research and teaching interests to: **Dr. Theodore J. Crovello, Chairman, Department of Biology, University of Notre Dame, Notre Dame, Indiana 46556.** *The University of Notre Dame is an Equal Opportunity, Affirmative Action Employer.* Qualified women and minority group candidates are urged to apply.

Openings are available from time to time in **OCEANOGRAPHY** at the Scripps Institution of Oceanography. These openings include specialists in various fields, research scientists, and faculty members. For further information on areas of specialization where openings are anticipated, send inquiries with curriculum vitae and list of publications to the **Chairman of the Ocean Research Division, Scripps Institution of Oceanography, A-020, La Jolla, California 92093.** *The University of California is an Equal Opportunity/Affirmative Action Employer.* Women and minorities are encouraged to apply.

### PHYSICS

An opening exists at the **assistant instructor** level for a person whose primary responsibilities will be to teach and organize elementary physics laboratory sections. Applicants will be expected to hold an M.S. degree or show equivalent work experience. This position is for one term, 2 January to 15 April, with a chance of extension. One-term salary \$4500 to \$5500. Send résumé and recommendations immediately to **Dr. Ray G. Van Ausdal, Physics Department, University of Pittsburgh at Johnstown, Johnstown, Pa. 15904.** Application deadline: 1 December 1975. *The University of Pittsburgh at Johnstown is an Equal Opportunity/Affirmative Action Employer.*

## ENVIRONMENTAL SCIENTISTS

A leading consulting company needs environmental scientists for a multidisciplinary group doing environmental impact assessments on major projects.

**The work** includes studies on existing environments and preparation of environmental reports.

**The desired experience** is 2-10 years in: environmental work or something directly applicable, scientific/technical writing, meetings with clients, subcontractors, and government agencies.

**The desired skills** are excellence in: Oral and written communication, dealing with people, working independently, understanding research, and understanding technical processes that affect the environment.

The positions are:

### Atmospheric Scientist

Ph.D. or M.S. in atmospheric science; know reactions of pollutants, regulations, measurement techniques, relation of pollutants to physiology.

### Aquatic Environmental Scientist

Ph.D. or M.S. in aquatic chemistry, physics, or related field; know reactions of pollutants, regulations, measurement techniques, relation of pollutants to physiology.

### Aquatic Invertebrate Zoologist

M.S. in aquatic invertebrate biology/ecology; experience in terrestrial invertebrate zoology.

### Plant Ecologist

Ph.D. with experience in desert plant biology, publications; 2 years experience in Plant Ecology or related field.

### Permits Analyst

Bachelors degree in social, political sciences, or related field; knowledge of legislative and regulatory statutes, government agency structure and interrelations.

### Socioeconomic Scientist

Masters or Bachelors degree in social science, planning, or economics; familiar with statistical methods and techniques and specialized data generation.

For immediate consideration send resume including salary history to:

JVA  
Personnel Services

**WILLIAMS BROTHERS  
ENGINEERING COMPANY**

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Resource Sciences Park  
6600 South Yale Avenue  
Tulsa, Oklahoma 74136  
[918] 496-5000

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## POSITIONS OPEN

### PLANT ECOLOGIST

The Department of Biology, McGill University, invites applications for one position.

**Plant Ecologist.** An appointment at the assistant professor level, to begin on or before 1 September 1976. Duties to include undergraduate teaching, graduate teaching, and a strong research program. The application deadline is 1 January 1976.

Candidates will be chosen on the basis of demonstrated and potential research abilities and the capacity for graduate and undergraduate teaching. Ph.D. required.

Curriculum vitae, statements of research interests, and three letters of reference should be sent to: **Ms. E. Mader, Department of Biology, McGill University, P.O. Box 6070, Station A, Montreal, Quebec, Canada H3C 3G1.**

### FIVE POSITIONS OPEN AT THE ACADEMY OF NATURAL SCIENCES OF PHILADELPHIA

**GEOCHEMIST**—interest and experience in the migration of nutrient elements from the watershed into river systems. Freshwater or estuarine training essential.

**FISHERIES ECOLOGIST**—population dynamics, census methods of adult and juvenile fish, multi-species interactions and statistical design of field programs.

**MATHEMATICAL ECOLOGIST**—with experience in population dynamics, competition, predator prey, and multi-species interaction models.

**ESTUARINE ECOLOGIST**—training and experience in trophic-dynamic approaches in estuarine ecosystems, and an interest in developing conceptual models in estuaries.

**FISH TAXONOMIST**—knowledge of freshwater, estuarine, or marine fish taxonomy and collecting techniques. All applicants must hold a Ph.D. and have demonstrated competence in research. An interest in solving environmental related problems is highly desirable.

Applicants should submit curriculum vitae to: **Director, Division of Limnology and Ecology, Academy of Natural Sciences, 19th and the Parkway, Philadelphia, Pa. 19103. An Equal Opportunity Employer.**

### ANNOUNCEMENT OF POSSIBLE POSITIONS IN BIOLOGY, CHEMISTRY, AND PHYSICS AT THE UNIVERSITY OF DELAWARE, NEWARK, DELAWARE:

Possible positions, rank open, fall 1976. Contracted to newly designed Freshman Honors Program. Ph.D., evidence of undergraduate teaching excellence, and qualifications for honors program required. Typical semester teaching load is 6 hours; one honors course each semester in introductory biology, chemistry, or physics; other honors duties will usually involve independent study, tutorials, or perhaps multidisciplinary projects. Appointees will have advisement responsibilities. Contracts to the Honors Program will be for a maximum of 4 years; there is no guarantee that persons leaving the Honors Program will be offered posts in the Departments of Biology, Chemistry, or Physics. Mature scholars, as well as qualified recent Ph.D.'s, are invited to apply. Salary competitive. *Equal Opportunity/Affirmative Action Employer.* **Prof. Donald W. Harward, Director, Freshman Honors Program, University of Delaware, Newark, Delaware 19711.**

**POSTDOCTORAL POSITIONS**, available immediately, for biochemistry/chemistry/pharmacology Ph.D.'s interested in research on biochemical and biological mechanisms of drug-induced tissue lesions and/or drug metabolism and disposition. Strong background in enzymology/organic chemistry desirable. Send résumé to

**Dr. D. Jollow  
Pharmacology Department  
Medical University of South Carolina  
Charleston, S.C. 29401**

### POSTDOCTORAL POSITION

In clinically applicable tumor cell kinetics. Experience with autoradiography desired. Send résumé and references to:

**Lewis M. Schiffer, M.D.  
Cancer Research Unit  
Allegheny General Hospital  
320 East North Avenue  
Pittsburgh, Pa. 15212**

## POSITIONS OPEN

### POSTDOCTORAL FELLOW

The Laboratory of Human Reproduction and Reproductive Biology is seeking a postdoctoral fellow trained in bioorganic chemistry with experience in mass spectrometry. The individual appointed would also carry the title of research fellow in biological chemistry. The subjects of major interest are steroid hormones and peptides in relation to human reproduction. Opening available 1 January 1976. Send application, including curriculum vitae and bibliography, and solicit letters from three persons familiar with your research to: **Dr. Lewis L. Engel, Laboratory of Human Reproduction and Reproductive Biology, Harvard Medical School, 45 Shattuck Street, Boston, Mass. 02115. An Affirmative Action/Equal Opportunity Employer.**

**POSTDOCTORAL RESEARCH ASSOCIATE** in renal physiology, beginning May 1976. Training in renal hemodynamic or clearance/micropuncture techniques desirable. To collaborate in ongoing research on kidney/nephron autoregulation. *The University of Colorado is an Equal Opportunity Employer.* Applicant should send curriculum vitae and names of three referees to:

**Dr. T. J. Burke  
University of Colorado Medical School  
Denver, Colorado 80220**

### POSTDOCTORAL RESEARCH ASSOCIATE

Challenging position in Shock Research Institute available for 1 to 2 years starting 1 July 1976. Ph.D. or M.D. required. Investigations to concentrate on basic pathophysiologic mechanisms and therapeutics of circulatory shock and myocardial infarction. Competitive salary with excellent fringe benefits. Send curriculum vitae and references to: **Dr. Allan M. Lefer, Chairman, Department of Physiology, Jefferson Medical College, 1020 Locust Street, Philadelphia, Pennsylvania 19107. An Equal Opportunity Employer**

### POSTDOCTORAL RESEARCH ASSOCIATE

Ph.D. in a pathological or anatomical field, to undergo training in the applications of immunology to problems in oral biology involving soft tissue destruction, and to carry research at the ultrastructural level into disease processes involving cell-mediated immunity. Entering salary \$10,000 to \$13,000. Send curriculum vitae to **Dr. John P. Waterhouse, Room 456, 940 Building, University of Illinois Medical Center, P.O. Box 6998, Chicago, Illinois 60680. Equal Opportunity/Affirmative Action Employer.**

### POSTDOCTORAL RESEARCH TRAINEESHIP IN DIGESTIVE DISEASES

Openings are available for research training in digestive diseases (NIH-supported). Applicants should have either an M.D. degree with appropriate postdoctoral clinical training or have a Ph.D. degree in basic science. Training period is for 1 to 3 years depending upon the needs of the applicant. Areas of training include characterization and regulation of intestinal digestive enzymes, study of gastrointestinal hormone receptors, hepatic lipid and lipoprotein metabolism, hormone radioimmunoassay, and controlled clinical trials in liver disease. Applicants should call or send curriculum vitae to **Gary M. Gray, M.D., Division of Gastroenterology, Stanford University School of Medicine, Stanford, California 94305. Telephone: 415-497-4588.**

Duke University Medical Center is inviting applications for a position as **PROFESSOR AND CHAIRMAN** of the Department of Radiology. Applicants should have an M.D. degree and an established record of teaching, research, and clinical proficiency. *Duke University is an Equal Opportunity/Affirmative Action Employer.* Please reply to: **Chairman of Radiology Search Committee, P.O. Box S3704, Duke University Medical Center, Durham, North Carolina 27710.**

The Duke University Medical Center is inviting applications for a **PROFESSOR OF THE HISTORY OF MEDICINE**. Applicants should have the Ph.D. and/or M.D. degree, have established a program in historical research, and be interested in teaching students in several faculties in subjects relating to the history of medicine. *Duke University is an Equal Opportunity/Affirmative Action Employer.* Please reply to: **Chairman of History of Medicine Search Committee, P.O. Box S3704, Duke University Medical Center, Durham, North Carolina 27710.**

## POSITIONS OPEN

### RESEARCH ASSOCIATE

A postdoctoral position for a plant biochemist in Dr. S. C. Fang's laboratory. Experience in plant cell culture or herbicide metabolism is desirable. Send complete résumé and three letters of recommendation to **Lewis G. McLaren, Department of Agricultural Chemistry, Oregon State University, Corvallis, Oregon 97331. Oregon State University is an Equal Opportunity/Affirmative Action Employer.**

### RESEARCH ASSOCIATE PATHOLOGY

Immediate opening for a postdoctoral individual with experience in analytical biochemistry, enzymology, tracer methodology related to intermediary metabolism during growth and development of embryos. Ph.D. in biochemistry required. Send résumé to:

**Box 24J  
Waterman Building  
University of Vermont  
Burlington, Vermont 05401  
An Affirmative Action Employer**

### SENIOR FACULTY POSITION IN NUTRITION AT CORNELL UNIVERSITY

The Division of Nutritional Sciences at Cornell University is seeking candidates or nominations for the James Jamison Professorship of Nutrition. This is a senior position for persons with an M.D. or Ph.D. degree with demonstrated abilities in research and teaching relevant to clinical nutrition. Please send résumés to **M. C. Nesheim, Director, Division of Nutritional Sciences, Cornell University, Ithaca, New York 14853. An Equal Opportunity/Affirmative Action Employer.**

### ALASKA LEGISLATIVE STAFF PROFESSIONAL OPPORTUNITY

The Alaska State Legislature is receiving applications for Research Analyst positions with the Legislative Affairs Agency in Juneau, at salaries ranging from \$16,000 to \$25,000 per year. Persons applying for these posts should have a demonstrated ability to apply technical expertise and/or economic theory to complex public issues; they should be capable of communicating the implications of various policy alternatives to persons with nontechnical backgrounds. The successful applicants will probably have at least 6 years of professional education and/or experience, some of which will have brought them into contact with legislative decision-makers. Experience and present or prior residence in Alaska, though not mandatory, would be desirable.

Persons with program experience in the following areas (or allied fields) are particularly urged to apply:

**FISHERIES**, Renewable Resource Economics, Common Property Resource Management  
**LAND USE MANAGEMENT** and Planning, Land Economics  
**PUBLIC UTILITY REGULATION**, Government Regulation of Business, Transportation System, Planning

Applications and detailed résumés accompanied, if possible, by a representative sample of prior work, should be submitted to:

**Director of Research Services  
Legislative Affairs Agency  
Pouch Y  
Juneau, Alaska 99811**

### STATISTICAL SCIENTISTS

Positions are available for Ph.D.-level statistical scientists. Primary responsibilities within the Statistical Laboratory are for scientific collaboration on the planning, conduct, and analysis of clinical trials in cancer. Opportunities exist for teaching and research within the laboratory and through joint appointments with the Statistical Science Division of the University. Applicants should send full curriculum and employment vitae as well as three letters of recommendation to:

**Search Committee  
c/o Mrs. Jane MacIntyre  
Statistical Laboratory  
State University of New York at Buffalo  
4230 Ridge Lea Road  
Amherst, New York 14226**

**STATISTICAL LABORATORY  
OF THE  
STATE UNIVERSITY OF  
NEW YORK AT BUFFALO**

*An Equal Opportunity/Affirmative Action Employer*

## POSITIONS OPEN

Needed: **TECHNOLOGISTS** or **TECHNICIANS** in these specialties: Analytical methodology in all branches of chemistry, biological and medical sciences, tissue culture, spectroscopy, chromatography, electron microscopy, radioactive isotopes, computer sciences, water sciences, atmospheric sciences, and ecology. Proof of training in the sciences, for example, associate or bachelor of science degrees or equivalent, are required. Work conditions are congenial and salaries are competitive in an attractive Arab Middle Eastern city on the Mediterranean. For practical purposes, Arab-speaking applicants are preferred; but, all will be considered for the large number of available positions. Send applications with three names of references to: (1) **Director General, Arab Development Institute, P.O. Box 8004, Tripoli, Libyan Arab Republic**; or (2) **Technical Counselor for Scientific Research, Embassy of the Libyan Arab Republic, 1717 Massachusetts Avenue, NW, Suite 605, Washington, D.C. 20036.**

## TEMPORARY CONSULTING ASSIGNMENTS

Consulting firm needs temporary senior and junior consultants to work in their Philadelphia suburban offices. Limited travel. Initial assignments of 6 months' duration. Exceptional performance may result in permanent appointment to our professional staff. Will also consider retired professionals for permanent part-time assignments. The following positions are presently open:

**Transportation Economists/Analysts**  
B.S.-B.A. degree (advanced degree preferred) minimum of 2 years' experience in transportation.

**Information and Technology Utilization Analysts**  
B.S.-B.A. degree library sciences or social statistics, minimum of 2 years' experience.

**Editors**  
Excellent writers/editors. Must have extensive experience in economics or information and technology utilization fields.

Send résumé indicating desired salary to **Box 479, SCIENCE.**

*An Equal Opportunity Employer*

## POSITIONS OPEN

**DISTINGUISHED PROFESSORSHIP.** The School of Chemical Engineering at Cornell University is seeking nominations of candidates for its Herbert Fisk Johnson Professorship of Industrial Chemistry. Nominees are expected to present a record of outstanding research accomplishment, evidence of interest in innovative teaching in chemical engineering, and a Ph.D. in chemical engineering or chemistry. Candidates should have research interests in one or more aspects of applied chemistry and chemical engineering, including (but not limited to) surface chemistry, catalysis and reaction kinetics. The committee welcomes candidates from industry or government laboratories, as well as from the academic community. An appointment to the professorship carries tenure, professional travel and support funds, and excellent fringe benefits. Please forward suggestions or résumés to **Professor Julian C. Smith, Director, School of Chemical Engineering, Cornell University, Ithaca, New York 14853.**

*An Equal Opportunity/Affirmative Action Employer*

## VICE PRESIDENT FOR MEDICAL AFFAIRS

The George Washington University School of Medicine and Health Sciences is seeking candidates for the office of Vice President for Medical Affairs. This senior officer is a member of the President's immediate staff and serves the Trustees. He is the chief executive officer of the Medical Center and is responsible for all University health-related programs including the School of Medicine and Health Sciences, the University Hospital, the Ambulatory Care Division clinic, affiliated hospitals, and Allied Health Science programs. Candidates should have doctoral-level professional qualifications, in a field and of a quality suitable for professional appointment in a University department. Substantial senior administrative and executive experience, preferably in an academic health center or its equivalent, is necessary. Résumés should be sent no later than 15 January 1976 to the **Search Committee for the Vice President for Medical Affairs, George Washington University Medical Center, Warwick Building, 2300 K Street, NW, Washington, D.C. 20037.**

*George Washington University is an Equal Opportunity/Affirmative Action Employer*

## POSITIONS OPEN

**UCLA URBAN PLANNING PROGRAM.** Faculty position available in environmental planning and management, starting March or September 1976 (assistant professor preferred). Should have environmental/life sciences training but also an understanding of, and interest in, environmental planning and policy formulation. Doctorate should be completed or expected; professional experience desirable. Send curriculum vitae, names of referees, and brief statement of interests/objectives to **Professor David Conn, School of Architecture and Urban Planning, University of California, Los Angeles, Calif. 90024.** *UCLA is an Equal Opportunity/Affirmative Action Employer.*

**DOCTORAL PROGRAM—PHARMACOLOGY**  
Medical University of South Carolina, Department of Pharmacology, seeks candidates for Ph.D. program. Interdisciplinary environment with capabilities ranging from GC-MS through cell cultures and animal studies to clinical studies of patients. Research training available in biochemical, cardiovascular and clinical pharmacology, drug metabolism, toxicology, and analytical chemistry. Stipends available: \$3900 per year. Contact:

**Department of Pharmacology  
Medical University of South Carolina  
Charleston, S.C. 29401**

**GRADUATE TRAINING PROGRAM IN OCCUPATIONAL HEALTH AND SAFETY OR RADIOLOGICAL HEALTH.** September 1976. Twelve-month interdisciplinary programs leading to the M.S. degree. Involves instruction in all aspects of occupational health and safety or radiological health, seminars, special projects, field trips, and conferences. A limited number of fellowships are available. For further information write to:

**Dr. Samuel Elkin, Director  
Center for Environmental Studies  
Temple University  
3307 North Broad Street  
Philadelphia, Pennsylvania 19140**

## Health Scientist Administrator (Gastroenterology) GS-601-13

The Public Health Service, National Institutes of Health, National Institute of Arthritis, Metabolism, and Digestive Diseases, Bethesda, Maryland, invites applications for the position of Health Scientist Administrator. GS-13 level, \$22,906 per annum.

The position, which requires a professional knowledge in the biomedical area, involves participation in the planning and resource allocation for the areas of digestive diseases, liver diseases, and nutrition.

Forward resumes or federal application form (SF-171) no later than January 15, 1976 to:

Mrs. Mettah Kollmann,  
Personnel Specialist

**NATIONAL INSTITUTES OF HEALTH  
Public Health Service**

National Institute of Arthritis,  
Metabolism, and Digestive Diseases  
Bldg. 31, Rm. 9A-34  
9000 Rockville Pike  
Bethesda, Md. 20014

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## FELLOWSHIPS

### POSTDOCTORAL FELLOWSHIP (CARDIOVASCULAR RESEARCH)

Position available 1 July 1976. Background should include experience in peripheral nerve recordings, neural control of the circulation or chronic cardiovascular recording techniques. Submit current curriculum vitae, research experience, and names of three references to **Dr. Vernon S. Bishop**, Department of Pharmacology, The University of Texas Health Science Center at San Antonio, 7703 Floyd Curl Drive, San Antonio, Texas 78284.

*An Equal Opportunity/Affirmative Action Employer*

### BIOPHYSICS FELLOWSHIP AND ASSISTANTSHIPS

For graduate study in an interdisciplinary program in biophysics administered through the graduate field that fits student's background, including applied physics, applied math, biochemistry, chemistry, electrical engineering, neurobiology and behavior, physics, and so forth. For further information contact **Biophysics Advisory Committee**, 210 Clark Hall, Cornell University, Ithaca, N.Y. 14853.

Two **POSTDOCTORAL FELLOWSHIPS** are now available to study pharmacological and immunological aspects of inflammation, including cell membrane receptors. Salary \$10,000 to \$10,500. Applicants should send a curriculum vitae to either **Dr. K. E. Eakins** or **Dr. W. Manski**, College of Physicians and Surgeons, Columbia University, 630 West 168 Street, New York, N.Y. 10032. *Columbia University is an Equal Opportunity Employer.*

### TWO POSTDOCTORAL FELLOWSHIPS IN THE EARTH AND PLANETARY SCIENCES

The Lamont-Doherty Geological Observatory of Columbia University invites scientists interested in any field of the earth and planetary sciences to apply for the following fellowships.

Two postdoctoral fellowships, each awarded for a period of 1 year (extendable to 2 years in special instances) beginning in September 1976 with a stipend of \$13,000 per annum. Completed applications are to be returned by 15 February. Application forms may be obtained by writing to the **Director, Lamont-Doherty Geological Observatory, Palisades, New York 10964**.

Award announcements will be made 31 March 1976.

**PREDOCTORAL FELLOWSHIPS IN PHYSIOLOGY** leading to the Ph.D. degree: state-supported stipends of \$3960 per year available. Modern research facilities in membrane, cardiovascular, respiratory, renal, neuro, endocrine, and comparative physiology. Attractive coastal environment. Deadline: 1 March 1976. Write

**Dr. D. D. Wheeler**  
Department of Physiology  
Medical University of South Carolina  
Charleston, S.C. 29401

Selection of candidates based solely on merit.

Announcing **POSTDOCTORAL AND PREDOCTORAL FELLOWSHIPS** available at the University of California, Irvine, for studies on neoplasia. These fellowships will be awarded to qualified individuals on a competitive basis. The fellowship will extend for a period of 2 years postdoctoral and for a period of 4 years predoctoral. The program of research involves studies directed at the cellular, molecular, genetic, developmental, and clinical levels. Candidates have the opportunity to study with faculty members in basic science and clinical departments.

*Qualifications for postdoctoral:* Ph.D. or M.D. with specialization in genetics, developmental and cell biology, biochemistry, immunology, or microbiology.

*Applications from qualified candidates are welcome; minorities and women are encouraged to apply.*

For information write:

**Dr. Michael W. Berns**  
373 Steinhaus Hall  
Developmental and Cell Biology  
University of California, Irvine  
Irvine, California 92664

or

**Dr. Gale A. Granger**  
447 Steinhaus Hall  
Molecular Biology and Biochemistry  
University of California, Irvine  
Irvine, California 92664

## FELLOWSHIPS

### POLYMER SCIENCE AND ENGINEERING UNIVERSITY OF MASSACHUSETTS

Research fellowships of \$4800 are available for September 1976, for students interested in obtaining an advanced degree in synthesis and characterization of polymers, physical chemistry of synthetic and biopolymers, as well as morphology and solid state properties of high polymers and polymer processing.

Applications for qualified students should be addressed to: **Dr. Otto Vogl**, Polymer Science and Engineering, University of Massachusetts, Amherst, Massachusetts 01002.

*An Equal Opportunity/Affirmative Action Employer*

## REQUESTS FOR PROPOSAL

### TUMOR IMMUNOLOGY

The National Cancer Institute (NCI), National Institutes of Health, is interested in contracting for the following projects (RFP available):

#### IMMUNOTHERAPY

Reference No. NCI-CB-64006-31—"Evaluation of Immunotherapy with Tumor Preparations in Man (Active Specific Immunotherapy)." These studies will evaluate optimum dose, route and schedule of administration of modified or unmodified tumor cells or antigen obtained from such cells to give maximum immunoresponsiveness to tumor specific antigens in cancer patients. The major thrust of these proposals should be the application of reliable assays to the evaluation of the cellular and humoral tumor specific response to immunization with tumor cells or their products. Proposals due 9 February 1976.

Reference No. NCI-CB-64007-31—"Immunotherapy of Squamous Cell Carcinoma of the Lung Treated by Resection or Radiotherapy." The goal of this work will be to evaluate resection or radiotherapy versus resection or radiotherapy plus an immunotherapeutic agent in squamous cell carcinoma of the lung. Proposals due 9 February 1976.

Reference No. NCI-CB-64008-31—"Evaluation of Tumor Cell 'Vaccination' in Squamous Cell Carcinoma of the Lung." The goal of this work will be to compare results of resection or radiotherapy with the same primary treatment plus tumor cells in addition to the immunoadjuvant. Proposals due 9 February 1976.

A request for proposal for each project listed is expected to be available on or after 15 November 1975, by written request to **Contracting Officer, DCBD, Research Contracts Branch, National Cancer Institute, Room C-437, Landow Building, National Institutes of Health, Bethesda, Maryland 20014**. Request for RFP must cite the reference number(s) of the desired project(s) as shown above. Requests or inquiries must be in writing.

### TUMOR IMMUNOLOGY

The National Cancer Institute (NCI), National Institutes of Health, is interested in contracting for the following projects (RFP available):

#### IMMUNOBIOLOGY

Reference No. NCI-CB-64009-31—"Immunogenicity of 'Spontaneous' Animal Tumors." The NCI wishes to support investigations of the immunogenicity of "spontaneous" tumors in syngeneic animals. These should be tumors that arise spontaneously in low frequency in inbred animals and are not known to be caused by a viral agent; tumors arising after low exposure to known-carcinogens may also be acceptable. Proposals due 30 January 1976.

Reference No. NCI-CB-64023-31—"Cells Involved in the Immune Response to Tumors." NCI wishes to support investigations of the role of cell interactions and/or an analysis of the function of individual subpopulations in the generation and/or suppression of immune response to *tumor cells*. Studies of the role of anti-tumor cell antibody or non-specific immunoglobulin in facilitating or suppressing immune responses to tumors may also be supported. Proposals due 30 January 1976.

A request for proposals for each project listed is expected to be available on or after 15 November 1975, by written request to **Contracting Officer, DCBD, Research Contracts Branch, National Cancer Institute, Room C-437, Landow Building, National Institutes of Health, Bethesda, Maryland 20014**. Request for RFP must cite reference number(s) of the desired project(s) as shown above. Requests or inquiries must be in writing.

## REQUESTS FOR PROPOSAL

### TUMOR IMMUNOLOGY

The National Cancer Institute (NCI), National Institutes of Health, is interested in contracting for the following projects (RFP available):

#### IMMUNOTHERAPY

Reference No. NCI-CB-64001-31—"Immunotherapy: New Approaches to Immunotherapy." Proposals are sought for creative approaches in the use of the immune system for cancer therapy. Both animal and human studies are acceptable. Animal work should be relevant to application in man. Proposals due 9 February 1976.

Reference No. NCI-CB-64002-31—"Cancer Immunotherapy: Phase I Study of Effects of Immune Stimulants on Human Immune Response." These studies will be aimed at determining maximally tolerated doses and toxicity of immunotherapeutic agents in patients with advanced cancer. In addition, agents will be evaluated for their capacity to restore or to augment immune function. Proposals due 9 February 1976.

Reference No. NCI-CB-64003-31—"Animal Models for Tumor Immunotherapy." These studies will evaluate the parameters of dose, route, schedule of administration, manipulation of tumor cells, etc., in existing successful animal models for tumor immunotherapy. Immunoprophylactic models will not be acceptable. Proposals due 9 February 1976.

Reference No. NCI-CB-64004-31—"Studies of Immune Stimulants in Patients Receiving Radiation Therapy." These studies will document and evaluate the immunosuppression caused by localized radiotherapy and will evaluate the effects of immunostimulants on the immune system of such patients. In vitro and in vivo assays for humoral and cellular immune function must be included. Proposals due 9 February 1976.

Reference No. NCI-CB-64005-31—"Immunotherapy Using Immunoresponsive Cells Sensitized in vitro by Tumor Cells, Modified Tumor Cells, or Tumor Cell Fractions." Proposals for animal studies, human laboratory studies, or human clinical studies to evaluate in vitro immunization as a form of immunotherapy against cancer are sought. Sophisticated immunologic techniques including tumor specific reactions are an essential component of this work. Proposals due 9 February 1976.

A request for proposal for each project listed is expected to be available on or after 15 November 1975, by written request to **Contracting Officer, DCBD, Research Contracts Branch, National Cancer Institute, Room C-437, Landow Building, National Institutes of Health, Bethesda, Maryland 20014**. Request for RFP must cite the reference number(s) of the desired project(s) as shown above. Requests or inquiries must be in writing.

### TUMOR IMMUNOLOGY

The National Cancer Institute (NCI), National Institutes of Health, is interested in contracting for the following projects (RFP available):

#### IMMUNODIAGNOSIS

Reference No. NCI-CB-64019-31—"Clinical Evaluation of Immunodiagnostic Tests for Cancer." NCI seeks laboratories that have developed a serologic assay which distinguishes cancer patients from those with benign disease and normal individuals. A prerequisite to application is distinguished performance on a coded serum panel provided through arrangements with NCI (see advertisement in *Science*, 19 September 1975). Proposals due 30 April 1976, 31 August 1976, or 31 December 1976 (see actual RFP for instructions regarding due date).

Reference No. NCI-CB-64020-31—"Diagnostic Applications of Antibodies to Microorganisms and/or Their Natural Products." NCI seeks laboratories with documentable evidence of antibodies to bacteria, oncogenic viruses, other viruses or their products that cross react with human tumors and who have a suitable assay system developed for such cross-reactivity. Relevance to human disease must be described. Proposals due 26 January 1976.

Reference No. NCI-CB-64021-31—"Diagnostic Application of Human Tumor or Organ-Associated Antigens." NCI seeks laboratories with documented evidence of new antigens (i.e. different from CEA or AFP) or antibodies with specificity for a particular tumor organ type. Detailed summary of such evidence must accompany proposal. Proposals due 26 January 1976.

A request for proposals for each project listed is expected to be available on or after 15 November 1975, by written request to **Contracting Officer, DCBD, Research Contracts Branch, National Cancer Institute, Room C-437, Landow Building, National Institutes of Health, Bethesda, Maryland 20014**. Request for RFP must cite reference number(s) of the desired project(s) as shown above. Requests or inquiries must be in writing.



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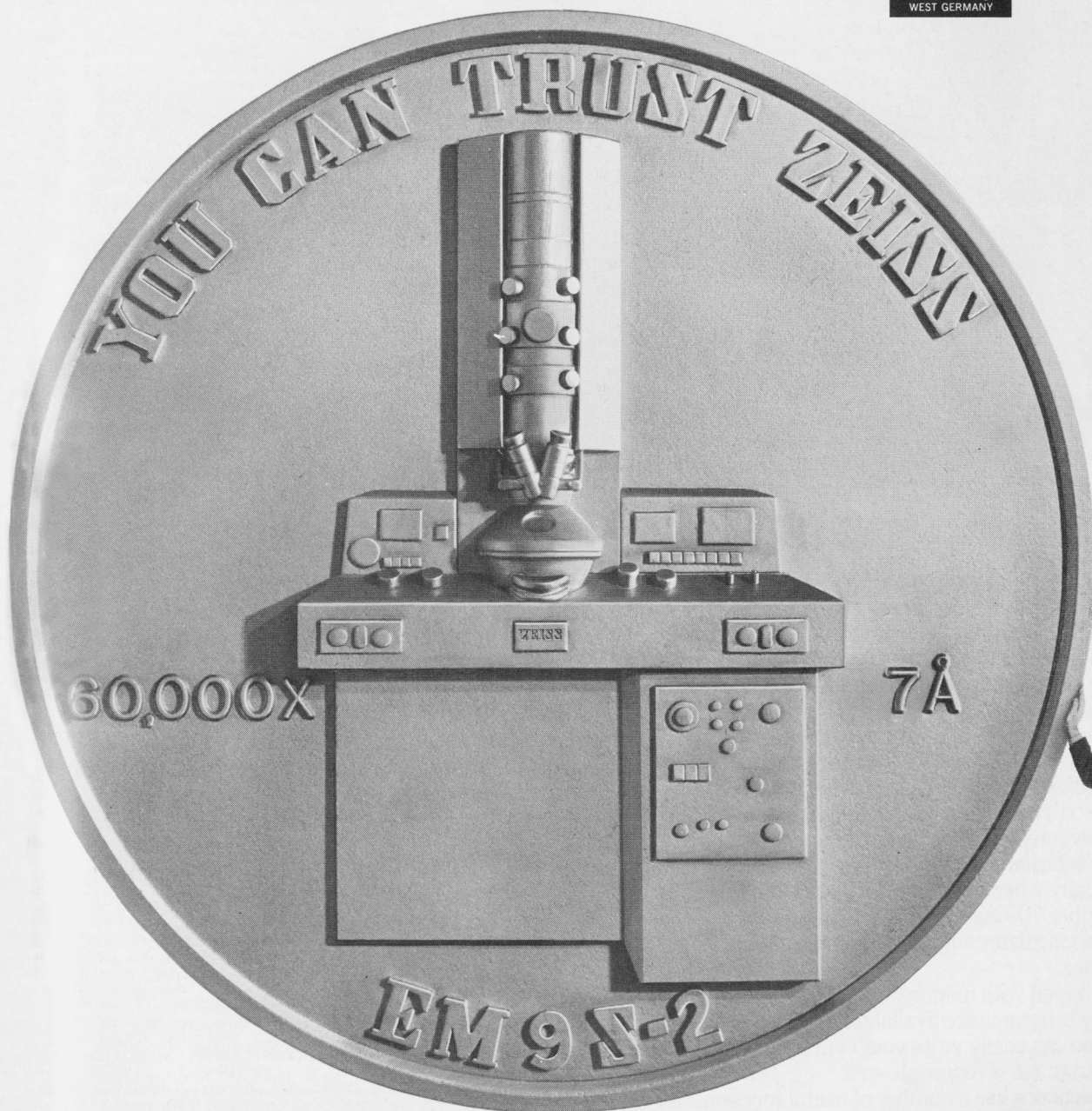
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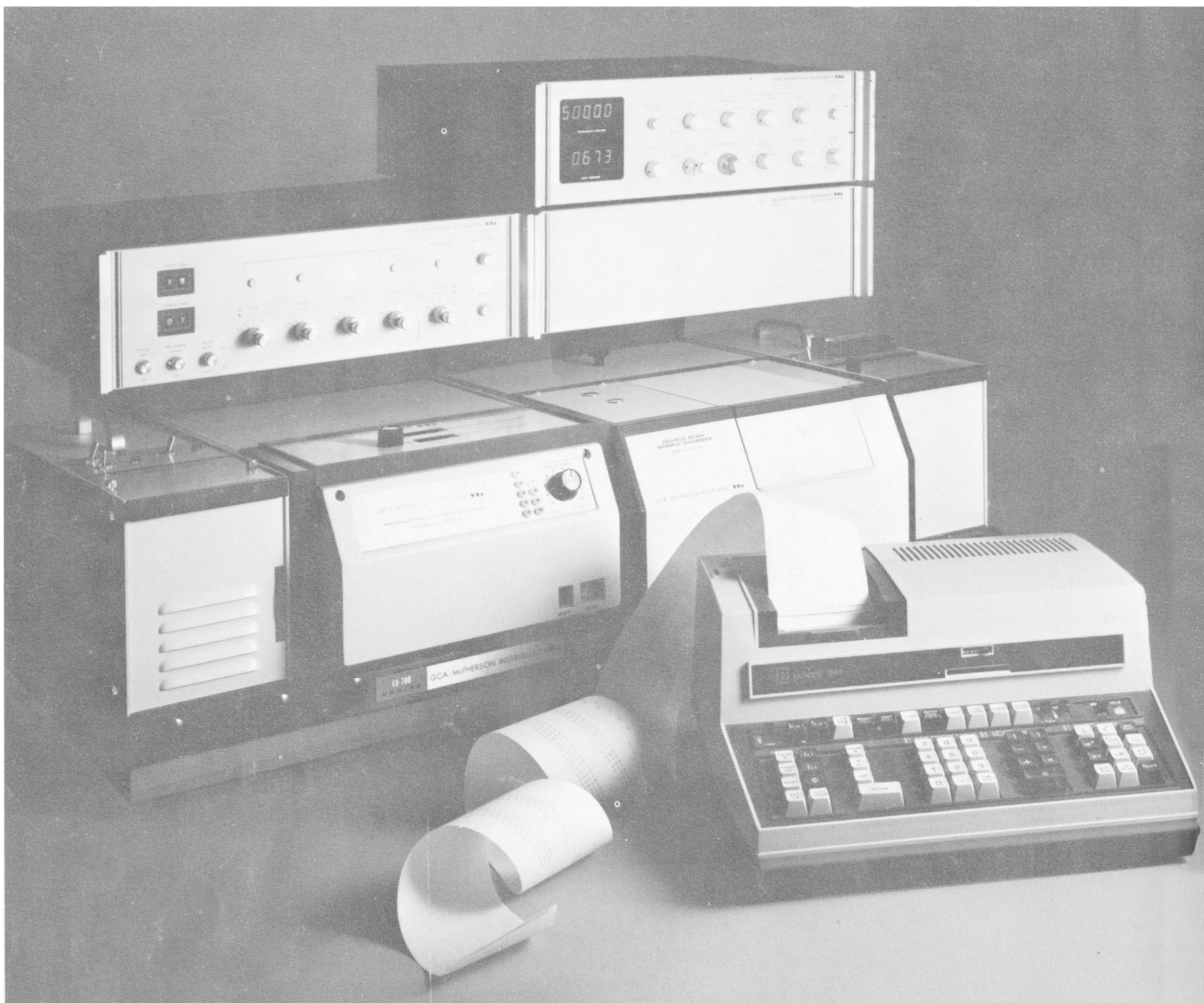
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