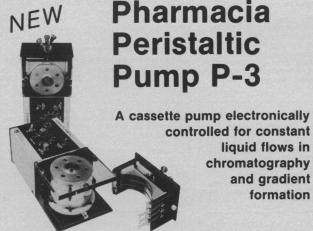


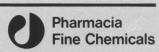
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# **INORGANIC BIOCHEMISTRY**

edited by

# GUNTHER L. EICHHORN,

National Institutes of Health, Gerontology Research Center, Baltimore City Hospitals, Baltimore, Maryland, U.S.A.

1973. 1st reprint 1975 (Paperback)

xxxv + 1,263 pages

Price: US \$36.50 / Dfl. 95.00

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The borderline field between inorganic chemistry and bio-chemistry has become of great interest to many scientists in recent years. Biochemists are very concerned with the role of metals in biological systems and inorganic chemists want to apply their knowledge of metal ion chemistry to problems of biological significance.

This comprehensive work, written by 45 experts (34 from the U.S.A.) in their fields is organized in such a way that each topic logically follows the preceding one. The naturally occurring biochemical coordination compounds are stressed, but inorganic model systems are frequently discussed alongside the biological substances they mimic. Inorganic coordination chemistry is strategically placed among the biochemical chapters: thus the subject becomes an integrated whole. This volume should be of great value to research scientists and advanced students in inorganic and biological chemistry as well as such disciplines as biophysics, molecular biology and molecular structure.

What reviewers had to say about this book

'Inorganic Biochemistry is a two-volume work (now in one paperback volume) that does an excellent job of introducing the reader to basics of coordination chemistry... It provides an excellent pathway by which an inorganic chemist or a biochemist can enter the field of bioinorganic chemistry. I recommend Inorganic Biochemistry most strongly for anyone plannig to undertake bioinorganic research. It is an excellent starting point.'

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"... this book is extremely valuable"

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Neuroscientist: Ph.D. 1966, physiology. Grants, publications, 9 years of teaching experience medical and graduate schools, multidisciplinary programs. Seeks teaching/research position in neurobiology programs at liberal arts college. Box 120, SCIENCE.

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Zoologist, Ph.D. Seeks teaching or teaching-research position. Interests include invertebrate zoology, invertebrate physiology, parasitology. Box 54. SCIENCE. 3/28; 4/4, 11

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Two positions at assistant professor level requiring Ph.D. or M.D. with predoctoral training in anatomical sciences. Teaching duties in gross anatomy and histology-cell biology. Must be interested in independent research program. Apply to Dr. Jan Langman, Department of Anatomy, University of Virginia, Charlottesville, Virginia 22901. An Equal Opportunity/Affirmative Action Employer,

# **ANATOMISTS**

One Histologist; one Gross Anatomist; secondary roles in gross or histology labs. Prefer experienced Assistant or Associate Professors able to direct graduate students. Research open; prefer SEM, TEM, histochemistry, anthropology, neuroscience, Rank/salary based on experience; 12-month contracts start 1 June-1 September 1975. Write: Chairman, Department of Anatomy, Creighton Medical School, Omaha, Neb. 68178. Equal Opportunity/Affirmative Action Employer.

## ANATOMY DEPARTMENT HEAD

The Kirksville College of Osteopathic Medicine invites applications for Chairman of the Anatomy Department. Applicants should have teaching experience in Gross Anatomy and have experience in organizing an Anatomy curriculum. Send inquiries and curriculum vitae to Dr. J. R. Stookey, Dean, Kirksville College of Osteopathetic Medicine, Kirksville, Mo. 63501. An Equal Opportunity Employer

ASSOCIATE DIRECTOR, The Cyclotron Lab. at the University of Maryland has an opening for experienced person to direct and manage the operations and technical support services associated with the facility. Must be experienced in accelerator, beam dynamics and all engineering aspects of a complex-sector-focused cyclotron. August of a complex-sector-rocused cyclotron. Must be able to operate a research facility primarily for nuclear science research. Send résumé before 1 May 1975 to: Professor H. D. Holmgren, Director, Cyclotron Laboratory, University of Maryland, College Park, Md. 20742, with three professional references. EOE,

# POSITIONS OPEN

ANIMAL CELL GENETICIST. The recently appointed Chairman of this Department wishes to assemble a group interested in Biomembranes, especially as they are involved in cell-virus interactions. One appointment, to commence January 1976 or soon thereafter, will be made at the Assistant Professor level of an individual with expertise in animal cell genetics. Candidates having suitable credentials, preferably with at least 2 years of postdoctoral experience in the designated field, should submit, by 1 April 1975, a curriculum vitae, pertinent reprints, and three names of individuals who can provide testimonials to: Dr. N. R. StC. Sinclair, M.D., Ph.D., Acting Chairman, Department of Bacteriology and Immunology, University of Western Ontario, London, Ontario N6A 5C1, Canada.

ASSISTANT PROFESSOR—BIOLOGY. Available August 1975. Applicants must have Ph.D. completed; a broad background in biology is desirable. Responsibilities will include teaching introductory biology and additional courses in the area of physiology/genetics. Send complete curriculum vitae and three letters of recommendation to: Dr. Clyde Porter, Purdue University, North Central Campus, Westville, Indiana 46391. An Equal Opportunity/Affirmative Action Employer.

ASSOCIATE PROFESSOR OF ENVIRON-MENTAL ENGINEERING. Senior position for candidate with strong background in physical-chemical water and waste water treatment. Teachremember and waste water treatment. Teaching and research experience required, practical experience desirable. Leadership role anticipated. Position available immediately; salary open. Send résumé to: Dr. C. H. Ward, Chairman, Department of Environmental Science and Engineering, Rice University, Houston, Texas 77001. Affirmative Action/Equal Opportunity Employer.

ASSISTANT PROFESSOR OF NUCLEAR MEDICINE. Applicants must have M.D. and Nuclear Medicine certification, with an interest in both teaching and research. Duties consist of clinical service, teaching, and research in the department and participating in the research programs of the Nuclear Medicine Division. Starting salary commensurate with training and background. Send inquiries, curriculum vitae, and names of three references to F. H. Deland, M.D., Chief, Nuclear Medicine Division, University of Kentucky Medical Center, 800 Rose Street, Lexington, Kentucky 40506, Telephone: 606-258-4017.

The University of Kentucky is an Affirmative Action/Equal Opportunity Employer and encourages applications from members of minority groups and women.

ASSISTANT PROFESSOR OF PLANT PATHOLOGY, University of Wisconsin, Madison, Applicants should hold Ph.D. degree with substantial training in plant pathology. One year of experience beyond the Ph.D. preferred. Duties include responsibility for development of research and teaching program in chemical and integrated control of plant diseases. Applicants should submit curriculum vitae with brief statement of views of possible directions for research in chemical or integrated control. Also, arrange for transcripts of academic records and three letters of recommendation to be sent to Dr. Arthur Kelman, Chairman, Department of Plant Pathology, 1630 Linden Drive, University of Wisconsin, Madison 53706, The University of Wisconsin is an Affirmative Action/Equal Opportunity Employer.

## BIOCHEMISTRY

MEMORIAL UNIVERSITY OF NEWFOUND-LAND. Department of Biochemistry. Ph.D.'s with postdoctoral experience are invited to apply for a position of Assistant Professor, to begin on July 1975. Please send a curriculum vitae, bibliography, and the names of three referees to Dr. C. C. Bigelow

Department of Biochemistry

Memorial University of Newfoundland

Si. John's, Newfoundland A1C 587, Canada

## FOOD SCIENCES

MEMORIAL UNIVERSITY OF NEWFOUND-LAND, Department of Biochemistry, This Department is instituting an Honours program in Nutrition in the fall of 1975. A vacancy exists, at the Assistant Professor level, for a biochemist, nutritionist, food chemist, or a person with other suitable qualifications to teach courses in food sciences and to assist with the development of the program. Applicants should send curriculum vitae, bibliography, and names of three referees to Dr. C. C. Bigelow, Department of Biochemistry, Memorial University of Newfoundland, St. John's, Newfoundland AIC 587, Canada.

# POSITIONS OPEN

ASSISTANT OR ASSOCIATE PROFESSOR OF PHYSIOLOGY. Position immediately available. Will be expected to teach introductory and advanced courses in human physiology and develop research program in his/her area of specialization. Send curriculum vitae and names of referees to: Dr. J. W. A. Burley, Head, Department of Biological Sciences, Drexel University, Philadelphia, Pa. 19104.

# AVIAN ECOLOGY—MANAGEMENT PHYSIOLOGICAL ECOLOGY—FISH

PHYSIOLOGICAL ECOLOGY—FISH

Two Assistant Professor positions: (i) avian ecologist to develop a course in terrestrial avian wildlife biology and management and participate in other wildlife biology offerings, research experience in upland game birds and/or endangered species preferred; (ii) fish physiologist/ecologist to teach fish physiology course and participate in introductory fisheries courses. Both positions require Ph.D. and development of a strong independent research program. Each position includes a 50 percent research appointment in the Agricultural Research Station. Available after 1 July 1975. Applications received after 20 April cannot be assured of consideration. Send inquiries, curriculum vitae, transcripts, and three references to Dr. Dennis G. Raveling (Avian position) or Dr. Peter B. Moyle (Fish position), Division of Wildlife and Fisheries Biology, University of California, Davis, California 95616. An Equal Opportunity/Affirmative Action Employer.

### BIOLOGICAL SCIENCE

Applications invited from Human Anatomists, Animal Virologists, Marine Benthic Zoologists; also biologists to present introductory courses. Assistant Professorships for August 1975; Ph.D. required. Medical Technologist to teach serology and hematology; M.S. degree required. Teaching and research in baccalaureate and masters programs. Send résumé and three letters of recommendation to Dr. H. G. Marshall, Chairman, Department of Biological Sciences, Old Dominion University, Norfolk, Va. 23508. An Affirmative Action/Equal Opportunity Employer.

BIOLOGY FACULTY. The Richmond College of The City University of New York has two positions open for September 1975. Ph.D. re-

ostenions open for september 1975. Thes. tequired.

1) Reproductive Biology-Endocrinologist. Strong background in molecular aspects of development.

2) Reproductive Biology-Comparative Biochemist/Physiologist. Strong background in enzymology and protein chemistry.

Appointment at assistant or associate rank dependent upon credentials. Teaching experience required. Send curriculum vitae and three academic references to S. Koulish, Associate Dean of Faculties, Pure and Applied Sciences, Richmond College, 130 Stuyesant Place, Staten Island, New York 10301. Affirmative Action/Equal Opportunity Employer.

## CHEMISTRY

Faculty position in Chemistry beginning September 1975. A 1- or 2-year appointment for sabbatical replacements. Candidate should be able to teach a variety of undergraduate courses. Send résumé and three letters of recommendation by 31 March to Professor G. L. Johnson, Department of Chemistry, Kenyon College, Gambier, Ohio 43022. An Equal Opportunity Employer.

DIRECTOR, DEPARTMENT OF PSYCHIATRY. Innovative, dynamic, capable teacher, board-certified, to head up an expanding, comprehensive Psychiatric Service in a large medical center. St. Joseph's Hospital and Medical Center is a 540-bed hospital, 46 of which are in the Department of Psychiatry. The Department is community-oriented; has an active Outpatient Department, Partial Hospitalization and Vocational Rehabilitation Programs, and Outreach Clinics; and is a major component of the Paterson Community Mental Health Center. The hospital is a major formal the service of the New Jersey Medical School and also of the Department of Psychology of Fairleigh Dickinson University. Candidate for this position should have wide administrative experience in a general hospital with community mental health orientation and qualify for an appointment as Associate Professor or Professor. The successful applicant will be involved in the development of a residency program. Salary and benefits open. Please respond in writing to: Thomas E. Potter, M.D., Chairman, Search Committee, C/O St. Joseph's Hospital and Medical Center, 703 Main Street, Paterson, N.J. 07503. An Equal Opportunity Employer.

# POSITIONS OPEN

# BIOMEDICAL PROFESSOR OF MICROBIOLOGY

Bacteriologist/microbiologist to assume important teaching role. Will develop new course integrating a study of infectious organisms with their epidemiology, prophylaxis, and relation to urban medicine. Requires M.D. with clinical experience, teaching experience in microbiology, and a background in epidemiology. An interest in social problems of contemporary society is essential. Salary: Dependent on experience and qualifications. Send curriculum vitae to: Center for Biomedical Education, The City College, Convent Avenue and 138th Street, New York, New York 10031. An Equal Opportunity and Affirmative Action Employer.

### CHEMISTRY DEPARTMENT HEAD

Nominations and applications are invited for Head of the Chemistry Department. Earned doctorate, teaching experience, and research publications are required. A strong administrative commitment will give new Head an opportunity to strengthen the Department. Preferred starting date 1 September 1975. Salary competitive. Please contact Prof. C. D. Han, Chairman of Search Committee, Department of Chemical Engineering, Polytechnic Institute of New York, 333 Jay Street, Brooklyn, New York 11201. An Equal Opportunity/Affirmative Action Employer.

# POSITIONS OPEN

DEAN, COLLEGE OF PHARMACY AND ALLIED HEALTH PROFESSIONS. The College offers programs in Pharmacy, Medical Laboratory Science, Medical Records Administration, Respiratory Therapy, and Physician Assistant. Candidates should have an earned doctorate or its equivalent in a field represented in the College and background to qualify for a professorial appointment. Administrative experience is desirable. Applications and nominations including a detailed résumé should be sent to Victor D. Warner, Chairman, Dean Search Committee, College of Pharmacy and Allied Health Professions, Northeastern University, Boston, Massachusetts 02115, by 30 April 1975. Northeastern University is an Equal Opportunity/Affirmative Action Employer.

### DEAN, COLLEGE OF GRADUATE STUDIES

The University of Delaware is seeking an outstanding scholar, with excellent credentials in research and in teaching at the most advanced levels, to serve as Dean of the College of Graduate Studies. Essential to the position is an awareness and sensitivity to current trends both in graduate education and in research within a variety of disciplines. The College of Graduate Studies has an enrollment of approximately 1900 students. Salary: competitive. Available: September 1975. Send résumé and references to Dr. Roberta F. Colman, Chemistry Department, University of Delaware, Newark, Delaware 19711. An Équal Opportunity Employer.

University of Amsterdam, Subfaculty of Geology & Geophysics. Chair in Petrology, Ore Geology and Mineralogy.

Applications are invited for the post of

# full professor

in the Department of Petrology, Ore Geology and Mineralogy.

The appointee is expected to take a leading and coordinating part in the teaching and research activities of the Department. He will be expected to promote close cooperation with the corresponding Department of the Free University of Amsterdam, within the framework of the interuniversity reorganization program for the Earth Sciences in the Netherlands. The duties of the appointee will include teaching aspects of ore geology, petrology and mineralogy, mainly to advanced students and supervision of field projects and other educational research projects, including post-graduate work.

Candidates should have teaching and ample research experience in the fields mentioned. They must have experience in geological mapping and other fieldwork and must be conversant with the application of geochemistry to petrology, ore geology and miner-

Knowledge of the Dutch language, though an asset, is not immediately required.

Salary: up to a maximum of about Dfl. 106.000,- p.a.

Applicants for the position and those who wish to draw attention to potential candidates are invited to write to Prof. Dr. C. G. Egeler, Geological Institute, Nieuwe Prinsengracht 130, Amsterdam, The Netherlands, within three weeks, quoting nr. 248

A curriculum vitae and a list of publications are required.

Names of at least two referees should be supplied.

Additional information may be obtained from Drs. H. Helmers, Geological Institute of the University of Amsterdam.

# POSITIONS OPEN

The Biology Department, Gannon College, Erie, Pennsylvania, invites applicants for two faculty positions available September 1975.

CELL BIOLOGY teacher to instruct Freshman undergraduates in Cellular Biology and conduct Cell Biology laboratories. Limited facilities available for development of research programs.

PHYSIOLOGY teacher to present Vertebrate Physiology, Human Anatomy and Physiology, Cordate Anatomy, and Physiology. Strong background in Medical and Clinical Biology required for participation in newly developing programs such as Family Practice Physician Program and Nursing Program.

Qualified applicants for these positions should send curriculum vitae and names of three refer-ences to: Rev. Austin J. O'Toole, Ph.D., Depart-ment of Biology, Gannon College, Erie, Pennsyl-vania 16501.

Gannon College is an Affirmative Action/Equal Opportunity Employer and welcomes applications from women and members of minority groups.

### DEAN, MELLON INSTITUTE OF SCIENCE, CARNEGIE-MELLON UNIVERSITY

Carnegie-Mellon University announces a search for Dean of the Mellon Institute of Science. The Mellon Institute is the college of science in the University. Interested persons should write to: University. Interested persons should write to: University. Schatz, Provost and Vice President for Academic Affairs, Carnegie-Mellon University, 5000 Forbes Avenue, Pittsburgh, Pennsylvania 15213. Carnegie-Mellon University is an Equal Opportunity Employer.

DIRECTOR. The Fels Research Institute, Temple University School of Medicine, is seeking a Director. Highly qualified individuals with record of accomplishment in biological science are invited to apply. This position carries an appointment in an appropriate academic department and offers an unparalleled opportunity for scientist with stature and administrative ability to guide and coordinate an ongoing program of experimental research of high quality and to exert creative imagination in developing new directions in cancer research. Please write to Search Committee, Fels Research Institute, Temple University School of Medicine, 3400 North Broad St., Philadelphia, Pa. 19140. An Equal Opportunity/Affirmative Action Employer.

### DIRECTOR WATER RESOURCES RESEARCH INSTITUTE

To administer state, federal, and other funds and to develop and coordinate water-related research in various segments of a Land Grant University in a major agricultural state. Requirements include administrative ability, academic qualifications for graduate staff, and scientific stature. Salary open. Applications with résumés are desired by 27 March. Contact Dr. R. W. Kleis, Chairman of Search Committee, 218 Agricultural Hall, University of Nebraska, Lincoln, Neb. 68503. An Equal Opportunity/Affirmative Action Employer.

Ph.D. IN ECOLOGY. Applications are invited to fill a 1-year position in Ecology. Ph.D. required. Responsibilities include teaching first year courses in biology majors, with an emphasis on ecology, two quarters of senior level Ecology, and direction of undergraduate research in Ecology. Send curriculum vitae, three letters of reference, and teaching interests to: Chairman, Department of Biology, Eastern Montana College, Billings, Montana 50101

FACULTY POSITIONS—MICROBIOLOGY. Applications are invited for two positions at the Assistant or Associate Professor level, starting 15 August 1975. (1) An individual trained in microbial ecology or microbial genetics. (2) An individual with a background in biochemistry, environmental and public health microbiology, and immunology. Postdoctoral and teaching experience required. Distinction in research necessary for appointment at Associate level. Send curriculum vitae, description of professional goals, and names of three referees to Dr. M. J. B. Paynter, Head, Department of Microbiology, Clemson University, Clemson, S.C. 29631. Deadline for applications 18 April 1975. An Affirmative Action/Equal Opportunity Employer.

The University of Michigan, School of NATURAL RESOURCES, is seeking applicants for academic year, teaching-research, positions in the following areas: Outdoor Recreation, Woody Plant Physiology, and Waterfowl-Wetlands Ecology. An earned Ph.D., or equivalent career experience, is desired.

Applications should be sent to Dean Charles E. Olson, Jr., School of Natural Resources, The University of Michigan, 3516 Dana Building, Ann Arbor, Michigan 48104.

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# POSITIONS OPEN

FACULTY POSITION IN EMBRYOLOGY. The Department of Zoology and Physiology seeks qualified applicants for appointment to an Assistant Professorship commencing in August. The appointee will be expected to teach a conventional undergraduate embryology course alternately with experimental embryology or developmental biology, to develop a productive research program, and to contribute to the graduate program in vertebrate morphology and morphogenesis. Applicants should send a curriculum vitae, reprints, and the names of three qualified referees to: Chairman, Department of Zoology and Physiology, Louisiana 76803. An Equal Opportunity/Affirmative Action Employer. Closing date for receipt of applications is 1 April 1975.

ENGINEERING OR SOCIAL PSYCHOLOGIST. The Department of Psychology at New Mexico State University has an ongoing Ph.D. program in engineering psychology and a developing program in social psychology. We have one position to fill preferably by fall 1975 with an applicant from either one of two areas: (i) Experimental Engineering Psychology—a senior-level faculty member having a national reputation. This person is expected to interact extensively with graduate students, and provide leadership within the engineering psychology program. (ii) Experimental Social Psychology—a senior-level person with preferred areas of interest in small group processes and mathematical models. This person should be oriented toward a quantitative and theoretical approach and have an appreciation for the relevance of his or her work to current human performance and man-machine-environment systems. The candidate would provide experienced guidance for the developing program in social. Applicants for either position should have an active research program. Teaching will include graduate courses within the applicant's specialty as well as some undergraduate instruction. Send (i) current curriculum vitae, including teaching and research interests and publications, (ii) recent reprints of publications, (iii) complete listing of courses taught by title and level, and (iv) three letters of recommendation to Warren H. Teichner, Psychology Box 3452, New Mexico State University, Las Cruces, N.M. 88003. NMSU is an Equal Opportunity/Affirmative Action Employer. tion Employer.

SOUTHERN ILLINOIS UNIVERSITY SCHOOL OF MEDICINE is seeking enthusiastic and creative faculty to teach first year medical students in an integrated organ-system-oriented, self-instructional curriculum. Research and graduate teaching are also encouraged. A completed doctorate is required before an application can be considered, and postdoctoral training is desirable. Strong preference will be given to individuals having prior experience (as students or faculty) with medical education. Rank is generally open, dependent upon experience.

The following positions are available now. Applications should be submitted before 11 April 1975:

- 1) PHARMACOLOGIST. Interest in pharmaco kinetics, transport, drug-metabolism; cardiovascular, renal or autonomic pharmacology preferred.
- 2) NEUROANATOMIST. Secondary strengths in human gross anatomy, histology and embryology desirable.
- ogy desirable.

  3) MEDICAL ANTHROPOLOGIST OR MEDICAL SOCIOLOGIST. Expert in cultural and social aspects of disease. Prior medical school experience is essential. Experience in organization of behavioral science programs also helpful. Secondary strength in physical anthropology is desirable.

The following positions may be available, pending outcome of current negotiations. Inquiries are invited:

- invited:

  1) NEUROSCIENTIST. Strengths in human neuroanatomy and neurophysiology required.

  2) GENERAL PHYSIOLOGIST. Requires experience and competence in teaching all human organ system physiology (except neurophysiology) to medical students. Special competence in gastrointestinal physiology preferred.

Additional openings in anatomy, biochemistry, and clinical psychology are anticipated, but not yet approved.

Submit curriculum vitae and three letters of recommendation to:

Dr. John H. Caster Coordinator—Academic Appointments Box 3, School of Medicine Southern Illinois University Carbondale, Ill. 62901

An Equal Opportunity/Affirmative Action Employer

# POSITIONS OPEN

FACULTY POSITIONS IN VIROLOGY, MICROBIAL GENETICS, AND ECOLOGY. Three positions for research-oriented faculty to teach undergraduate/graduate courses and contribute to the doctoral program in Life Sciences, excellent facilities provided. VIROLOGIST—preference will be given to applicants with established research program, rank and salary open. MICROBIAL GENETICIST—assistant professor, interest in such areas as energy flow, nutrient cycling, or diversity relationships. Send curriculum vitae, list of publications, and letters of reference or names of referees to: Dr. C. P. Sword, Department of Life Sciences, Indiana State University, Terre Haute, Ind. 47809. Affirmative Action/Equal Opportunity Employer.

Ph.D. FACULTY POSITIONS available August 1975. Catholic four-year liberal arts college. Physiologist to teach medically oriented human physiology and biochemistry; Microbiologist to teach microbiology, histology, and embryology; and Physical Chemist to teach instrumental analysis, physical chemistry and introductory physics. Rank and salary negotiable. Send curriculum vitae, transcripts, three letters of reference by 10 April to Dr. Surendra P. Singh, Kansas Newman College, Wichita, Kan. 67213. Equal Opportunity/Affirmative Action Employer.

GENETICS/DEVELOPMENTAL BIOLOGY.
Permanent position (Assistant Professor, Ph.D. required) beginning September 1975 at undergraduate liberal arts, coed, coordinate campus of the University of Minnesota. Campus of 1600 students with five biology faculty is in town of 5300 located 150 miles west of Minneapolis. Teaching responsibilities include participation in general biology and specialty areas. Send curriculum vitae plus three letters of reference by 18 April to: Dr. Thomas Straw, Search Committee, Division of Science and Mathematics, University of Minnesota, Morris, Minn. 56267. Affirmative Action Employer.

GROSS ANATOMIST, challenging semi-administrative, teaching and research position in new facility available 1 July 1975. Primary responsibility to teach general gross anatomy with specialization in lower extremity. Opportunity for Chairperson position. Applicants must have Ph.D., extensive cadaver experience, and demonstrated commitment to teaching. Applicants send curriculum vitae to: Carl Abramson, Ph.D., Director of Basic Sciences, Pennsylvania College of Podiatric Medicine, 8th and Race Streets, Philadelphia, Pa. 19107. An Equal Opportunity Employer.

HEAD, DEPARTMENT OF BIOLOGICAL SCIENCES. The Department of Biological Sciences, Purdue University, is seeking an established scholar with broad interests to serve as Head for the Department beginning on or after 1 July 1975. The Department has more than 50 faculty members and extensive responsibilities in teaching, research, and service appropriate to a publicly supported university. The Head would be expected to provide imaginative and decisive leadership to assure the continuing quality and further development of the Department. We are looking for a person with a record of outstanding scientific achievements who has vision and a serious commitment to public higher education. Applications and nominations including a curriculum vitae, bibliography, and names of individuals familiar with the candidate's qualifications should be sent to Dr. William R. Fuller, Search Committee Chairman, School of Science, Purdue University is an Equal Opportunity/Affirmative Action Employer.

NEPHROLOGIST—The Division of Nephrology in the Department of Medicine at the University of Alabama in Birmingham has available a position at the Assistant Professor or the Associate Professor level. The position is open to qualified individuals at a senior level fulfilling three criteria. First, the individual must have expertise in the care and management of patients with renal disease and in the operation of a hemodialysis unit. Second, the individual must have a firm commitment to teaching programs oriented to medical students, graduate students, house officers, and fellows. Finally, the individual should have a research background and be able to carry out independent research, preferably in renal micropuncture. Apply to the Division of Nephrology, University Station, Birmingham, Alabama 35294. Telephone: 205-934-3585. An Equal Opportunity/Affirmative Action Employer. Expiration date for receipt, of applications: 1 June 1975.

# **AAAS** Fellows

A Fellow of the AAAS is defined as one "who has produced a body of work on behalf of the advancement of science that is scientifically distinguished or socially highly significant, or both." Fellows are elected annually by the AAAS Council upon recommendation by the Council Committee on Fellows, which now solicits nominations for consideration at its fall 1975 meeting. Forms may be obtained from the Executive Office, AAAS, 1776 Massachusetts Avenue, NW, Washington, D.C. 20036.

Forms completed by an individual member of the Association should be sent not later than 1 May to the secretary of the nominee's voting section for possible inclusion in the slate of nominees to be submitted by the section committee to the Council Committee on Fellows. Alternatively, nomination may be made by any three AAAS Fellows and the form sent directly to the Executive Office for receipt not later than 15 October. The Committee will give equal consideration to nominations from the section committees and from groups of three Fellows.

Names and addresses of the section secretaries will be supplied by the Executive Office upon request.

# DIRECTOR PHYSICS DIVISION

# Argonne National Laboratory

Applications and nominations are invited for the position of Director of the Physics Division of Argonne National Laboratory. The Division conducts broad-ranging research in nuclear and atomic physics. Nuclear physics work, carried out in medium-energy, lowenergy and theoretical programs, seeks to gain an understanding of basic nuclear phenomena and to obtain important nuclear data. Atomic physics activities strive to understand atomic, molecular and ionic structure, radiations and reactions, many of which are of long-range importance in energy generation. A candidate should have a distinguished record of achievement in areas of physics relevant to the Division's programs. He or she should have the ability to provide sound, imaginative leadership to the Division and the motivation to contribute to decision-making in a large and diverse Laboratory. Argonne is operated by the University of Chicago under a contract between the University of Chicago, the Argonne Universities Association, and the United States Energy Research and Development Administration.

Applications or nominations should be submitted by May 1, 1975, to Dr. Robert G. Sachs, Director, Argonne National Laboratory, Argonne, Illinois 60439.



# Argonne National Laboratory

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Applicants should forward SF-171, Personal Qualifications Statement before 30 April 1975 to:

Director, Personnel Services Division Code 7212, Room 823 800 N. Quincy Street Arlington, Virginia 22217

Refer to Announcement No. 75-08 on application

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# **RESEARCH BIOCHEMIST**

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Requirements include a Ph.D. in Biochemistry or a closely related major and a strong complementary background in Microbiology. A minimum of 2 years of industrial research experience is required. Since this is an expanding area of research within BETZ, we are seeking an individual with a strong aptitude for future supervisory assignments.

To apply in confidence, send letter or resume outlining education, experience and salary requirements to: STUART W. LONGWORTH, Manager of Professional Employment, BETZ LABORATORIES, Trevose, Pa., 19047. An equal opportunity employer.



# **UNIVERSITY OF** PAPUA NEW GUINEA (PORT MORESBY)

Applications are invited for the post of (a) SENIOR LECTURER or (b) LECTURER IN HUMAN BIOLOGY. The Department of Human Biology is responsible for teaching of preclinical science subjects to medical students during the second and third years of their undergraduate training. Areas of study include Gross Anatomy, Histology, Embryology, Growth and Development, Genetics, Biochemistry, Physiology, Neuroanatomy and Neurophysiology, Pharmacology and Nutrition. The apointee will be required to participate in the teaching of Pharmacology/Physiology. Salary scales: (a) A\$11,603-A\$13,284 p.a. (b) A\$8,674-A\$11,362 p.a. £1 sterling = A\$1.77). In addition, an allowance of A\$1,300 p.a. if single is payable. An extra A\$1,000 Marriage Allowance and A\$156 per child Child Allowance may also be payable. Conditions include provision of housing, annual leave fares, FSSU type superannuation. In some cases it may be possible to make an appointment on secondment. Applications for all positions should be in duplicate and include particulars of age, nationality, marital status, qualifications and experience, the names and addresses of three referees, a recent small photograph and an indication of estimated starting date. Further details and the conditions of appointment are available from The Secretary, P.O. Box 4820, University of Papua, Papua, New Guinea. Send applications as soon as possibile.

## POSITIONS OPEN

JUNIOR FACULTY

Position available in the cardiac pharmacology lab for an individual with experience in developmental biology. Applicants must have M.D. or Ph.D. Send curriculum vitae to:

Dr. Robert L. Volle Department of Pharmacology University of Connecticut Health Center Farmington, Conn. 06032

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# DEPARTMENT OF GENETICS UNIVERSITY OF WASHINGTON, SEATTLE

We are seeking a mammalian geneticist at the rank of Assistant Professor, for appointment in 1975 or 1976. Qualifications include the ability to teach undergraduate genetics, to supervise graduate student training for the Ph.D., and to carry out a significant research program. Preference will be given to immunogenetics as the area of expertise, but other areas of mammalian genetics are not excluded from our consideration. Applicants should send a curriculum vitae and names of references to Chairman, Department of Genetics, University of Washington, Seattle, Washington 98195. The University of Washington is an Equal Opportunity Employer with an Affirmative Action Policy.

### MICROBIOLOGIST

Ph.D., beginning 1 September 1975, to teach undergraduate and graduate courses in microbiology and immunology. Write to Charles Reif, Department of Biology, Wilkes College, Wilkes-Barre, Pa. 18703. An Equal Opportunity/Affirmative Action Employer.

NUTRITION. A position is available, beginning July 1975, for a senior nutritional scientist highly accomplished in the fields of energy regulation and feeding behavior. Duties will include about equal parts of research and teaching. Candidates may apply by sending a letter indicating their interest, together with a curriculum vitae and the names of three referees, to the undersigned. The University of Pennsylvania is an Equal Opportunity Employer. Dr. D. S. Kronfeld, Chief, Section of Nutrition, Department of Clinical Studies, School of Veterinary Medicine, Univer Pennsylvania, Kennett Square, Pa. 19348. University of

# **PESTICIDE**

ORGANIC SYNTHESIS CHEMIST

Excellent opportunity for experienced synthesis chemist, preferably with background in pesticides. Ph.D. degree required. Position in San Francisco Bay Area.

If interested, submit detailed résumé of experience and salary history to:

**Box 124, SCIENCE** 

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# POSITIONS OPEN



The Department of Physiology-Anatomy, University of California, Berkeley, invites applications for a PHARMACOLOGIST to organize and teach a program in pharmacology and to conduct research in that area. The candidate should have extensive teaching and research experience. The level of appointment will be commensurate with qualifications. Applicants should submit a curriculum vitae, a list of significant publications, a statement of current research interests, and the names of three references to: Dr. Paola S. Timiras, Department of Physiology-Anatomy, University of California, Berkeley, California 94720. The materials should not exceed five pages and must be received by Dr. Timiras no later than 15 May 1975. The position is available immediately. The University of California is an Equal Opportunity Employer.

The Assembly of Life Sciences of the National Research Council-National Academy of Sciences, seeks a PHYSICIAN at a competitive salary for an 18-month appointment as a Staff Officer in the conduct of an effort to evaluate the biomedical research and development program of a major federal agency.

Areas in which experience is desirable include biomedical research; administration/management of biomedical research programs; and survey research, including study design and execution, data collection analysis and editing, interpretation of findings and report writing.

Responsibilities will be in support of an NAS/NRC committee and subcommittees undertaking the above evaluation, An interest in problems of public policy as they relate to science and technology would also be useful. Applicants should send their résumés to Dr. Artemis P. Simopoulos, Division of Medical Sciences, Assembly of Life Sciences, National Research Council-National Academy of Sciences is an Equal Opportunity Employer.

PHYSIOLOGICAL PSYCHOLOGIST, Assistant PHYSIOLOGICAL PSYCHOLOGIST, Assistant Professor, Ph.D. with an emphasis in psychopharmacology or neurochemistry. Related interests in learning or developmental psychology are desired. Duties include teaching undergraduate and graduate courses in experimentally oriented program. Promise of excellence in teaching and research required. Salary open. Position anticipated to begin fall 1975. Send curriculum vitae and three letters of reference to Dr. Dennis M. Feeney, Psychobiology Search Committee, Department of Psychology, University of New Mexico, Albuquerque, New Mexico 87131. An Equal Opportunity Employer.

Individuals with a Ph.D. degree in PHYSIOLOGY and with teaching experience in a medical school environment which will be available after June 1975. The position requires teaching a general systems physiology course to first-year medical students in the spring semester. The appointee will also be expected to establish a vigorous research program in neurophysiology or cardiopulmonary physiology during the summer and fall semesters. Rank and salary will be dependent upon experience and qualifications. Send curricu-lum vitae to: **Thomas A. Troeger, M.D., Director,** South Bend Center for Medical Education, Indiana University School of Medicine, Haggar Hall, University of Notre Dame, Notre Dame, Indiana 46556. Indiana University is an Equal Opportunity Employer.

## UNIVERSITY OF TROMSØ PROFESSOR OF PHYSICS

Applications are invited for the above appointment in the INSTITUTE OF MATHEMATICAL AND PHYSICAL SCIENCES, UNIVERSITY OF TROMSØ, NORWAY. Depending upon qualifications the position may be filled as docent (assistant professor). The Auroral Observatory is integrated in the Institute. The research in physics at the Institute is mainly concerned with the phyics of the upper atmosphere. Applicants should possess experimental or theoretical, which could give major support to the research. During the next few years a European Incoherent Scatter Radar (EISCAT) will be set up in Northern Scandinavia. Detailed descriptions of the plans for this European cooperative project are available. The new facility will, together with existing experimental equipment, have outstanding possibilities for research in the fields of ionospheric, magnetospheric, and plasma physics. The position has normal lecturing duties. It is required that applicants either speak or be willing to learn a Scandinavian language.

Salary N.kr. 109,970. The University will help with housing and other problems. Applications should be received by 15 April 1975, including five copies of curriculum vitae and three sets of relevant publications.

Applications should be addressed to Universitetet I Tromsø, Postboks 635, 9001 Tromsø, Norway.

# POSITIONS OPEN

PHYSICAL ANTHROPOLOGIST. Assistant Professor level, Michigan State University, tenure stream appointment. Salary \$12,000 to \$13,000 for 10 months based on qualifications. Ph.D. required with strong interests in areas such as hominid evolution, osteology, primate behavior, and human diversity. Submit curriculum vitae and three letters of reference to B. Gallin, Chairman, Department of Anthropology, Michigan State University, East Lansing, Michigan 48824, by 15 April 1975. An Affirmative Action Employer.

RESEARCH-ORIENTED PHYSICIAN with extensive clinical experience to direct the efforts of a Harvard research center which seeks to analyze the medical, social, economic, and political implications of health practices. Director would focus on research priorities and goals and coordinate program to achieve objectives. Should be able to communicate with individuals from a variety of professional disciplines, including clinical medicine, economics, and statistics. Position would include simultaneous appointment as a professorial member of the School of Public Health faculty. Qualified women and minority group members are encouraged to apply. Interested individuals should write to Mrs. Emily Morrison, Assistant to the Dean, Harvard School of Public Health, 677 Huntington Avenue, Boston, Massachusetts 02115.

PLANT AUTECOLOGIST. The Department of PLANT AUTECOLOGIST. The Department of Botany, University of California, Davis, invites applications for a faculty position in physiological plant ecology. Demonstrated or potential excellence in research and teaching are primary criteria. Candidates whose research expertise and teaching interests complement rather than duplicate the competencies of present faculty are of particular interest. The Ph.D. is required. The position is funded at the Assistant Professor level, but a higher level may be considered in the case of an exceptionally qualified, experienced candidate.

date.

Applicants should submit a curriculum vitae, list of publications, graduate and undergraduate transcripts, a résumé of research and teaching goals, and the names of three references to Dr. H. J. Ketellapper, Chairman of the Search Committee, Department of Botany, University of California, Davis, Calif. 95616. Closing date: 22 April 1975. The University of California is an Equal Opportunity/Affirmative Action Employer.

### POSTDOCTORAL RESEARCH BIOCHEMIST

Isolation, purification and properties of enzymes. Endocrine tissues. Available 1 April 1975. Applications from qualified candidates are welcome; women and minorities are encouraged to apply. Send curriculum vitae to Department of Physiology, University of California, Irvine, California 92664.

### POSTDOCTORAL **POSITIONS**

Openings for two (2) postdoctoral trainees in neuropharmacology, biophysical pharmacology, or chemical pharmacology, effective July 1975. chemical Contact:

Dr. R. L. Volle Department of Pharmacology University of Connecticut Health Center Farmington, Conn. 06032

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## POSTDOCTORAL POSITION

Research associate in biochemistry of hormone action. Write:

Professor R. L. Jungas Department of Physiology University of Connecticut Health Center Farmington, Conn. 06032

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Ph.D. or M.D. RESEARCH ASSOCIATE position in pathology department available immediately for experienced behavioral pharmacologist with background knowledge in neurophysiology and psychology to study the effects of organomercury compounds on primates and rodent adults and newborns. Preferably familiar with testing for behavioral interactions, temporal discrimination, and operant conditioning. Salary up to \$15,000 commensurate with training and experience. Applicants accepted until 15 April 1975. Send curriculum vitae and bibliography to N. Karle Mottet, M.D., Professor of Pathology, University of Washington School of Medicine, Seattle, Washington 98195. An Equal Opportunity Employer.

# POSITIONS OPEN

The International Laboratory for Research on Animal Diseases (ILRAD) has scientific, post-doctoral, and Visiting Scientist positions immediately ately available in immunology, parasitology, bio chemistry, immunochemistry, pathology, cell culture, and electron microscopy. ILRAD is sponsored by a consortium of donor agencies and will have an international scientific staff conducting research on various aspects of trypanosomiasis and East Coast fever. Persons with training and experience in areas appropriate to research on trypanosomiasis and East Coast fever are invited to inquire at the address given below and should provide a current curriculum vitae which includes name, age, citizenship, education, chronology of professional experience, and list of publications. Dr. James B. Henson, Director, ILRAD, P.O. Box 47543, Nairobi, Kenya.

POSTDOCTORAL POSITION available immediately for the study of ribosomes bound to chloroplast thylakoid membranes: activity, mode of attachment, and release mechanism. Candidates should have a Ph.D. and training or interest in protein synthesis mechanisms and/or organelle development, plant biochemistry. Salary range \$9000 to \$9500 for a 1-year appointment. Contact: Dr. A. T. Jagendorf, Section of Genetics, Development and Physiology, Plant Science Building, Cornell University, thaca, N.Y. 14853.

Cornell University is an Equal Opportunity Employer with an Affirmative Action Program.

RESEARCH FELLOW IN PHYSICAL OR-GANIC CHEMISTRY. Fields of interests: elec-tro-organic chemistry, spectroelectrochemistry, and quantum chemistry (used as a tool).

The candidates should have a Ph.D. in either Physics or Chemistry.

Appointments are for 1 year, from 1 September 1975. Salary in the range of D.fl 2.800 (\$1100) monthly.

Send detailed curriculum vitae containing names of two referees to Dr. D. van der Meer, Chemical Physics Laboratory, Twente University of Technology, P.O. Box 217, Enschede, Netherlands.

SEDIMENTARY PETROLOGIST at rank of Assistant Professor beginning 1 September. A strong commitment to excellence in undergraduate strong commitment to excellence in undergraduate education, an interest in research and a Ph.D. are required. Will teach sedimentary petrology, elementary geology, and other geology courses. Send résumé and names and addresses of three references to Dr. Bruce K. Goodwin, Chairman, Department of Geology, College of William and Mary, Williamsburg, Virginia 23185. The College of William and Mary is an Equal Opportunity Employer.

THE LADY DAVIS INSTITUTE FOR MEDICAL RESEARCH is seeking two staff scientists capable of directing independent research pro-

grams.

1) Cell or molecular biologist with interests in mechan-

1) Cell or molecular biologist with interests in transcriptional and translational control mechanisms of eukaryotic cells, in relation to growth, mechanisms of hormone action, and so forth.

2) Protein chemist with interest in structure-function relationships particularly as applied to bio-membranes.

Salary commensurate with experience and qualifications. Please send curriculum vitae, names of three referees, and a description of research interests to Dr. N. Kalant, Lady Davis Institute for Medical Research, 3755 Ste. Catherine Road, Montreal, Quebec, Canada H3T 1E2.

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## WILDLIFE BIOLOGIST

Permanent position (9-month appointment) beginning academic year 1975-1976. Apply

Dr. John Owen Chairman, Search Committee Department of Biology University of North Dakota Grand Forks, N.D. 58202 Department phone: 701-777-2621 Home phone: 701-775-8089

# POSITIONS OPEN

### STAFF OFFICER—LIFE SCIENCES

The Assembly of Life Sciences of the National Research Council/National Academy of Sciences seeks a Staff Officer for a 2-year appointment at a competitive salary based on training and experience in the general area of ecological and population biology. Applicants should have substantial background in such areas as ecosystem dynamics, population biology, community and experimental ecology, limnology, or forestry and range sciences. Responsibilities will be largely in support of committees making analysis and assessments of re-Responsibilities will be largely in support of committees making analysis and assessments of research alternatives and policy implications in this general area. An interest in governmental practices and policies as they relate to science and technology will be helpful. Applicants should send their résumés to Dr. Russell B. Stevens, Assembly of Life Sciences, National Academy of Sciences, Room 340, 2101 Constitution Avenue, NW, Washington, D.C. 20418. The National Academy of Sciences is an Equal Opportunity Employer.

# FELLOWSHIPS ....

### POSTDOCTORAL FELLOWSHIPS

Beginning 1 September 1975 opening for two or more Postdoctoral Fellows with at least 1 year's previous experience in carbohydrate and/or protein chemistry and/or membranes. Salary \$9000 up depending on experience. Send curriculum vitae and two letters of recommendation to O. Bahl, Ph.D., Division of Cell and Molecular Biology, Health Sciences Building, State University of New York at Buffalo, Buffalo, New York 14214.

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Postdoctoral fellowships are now available for periods up to 2 years. Applications are invited from individuals with D.D.S., M.D., or Ph.D. degrees in one of the biological or behavioral sciences. The program objective is to provide fellows with specific research programs and a broad exposure in the detection, diagnosis, improvement of treatment, genetic counseling, and study of normal and abnormal craniofacial development, including molecular biology. The fellowship stipends start at \$10,000. Send curriculum vitae and two letters of reference to Dr. Harold C. Slavkin, Program Director, Department of Biochemistry, School of Dentistry, Gerontology Center, University of Southern California. 1900. The University of Southern California is an Equal Opportunity/ Affirmative Action Employer.

STUDENT FELLOWSHIPS available for U.S. citizens toward Ph.D. in Pharmacology. Diversified training related to the pharmacological and biochemical basis for drug action with emphasis on cancer therapeutics: inhibition of nucleic acid, protein and membrane components, enzyme activity regulation, coenzyme action and inhibition, basis for selective toxicity, pharmacokinetics in animals and cells, immunotherapy, immunosuppression, experimental chemotherapy, molecular pharmacology, hematology, and preclinical and clinical pharmacology. Stipends are \$3000 per annum. Write to E. Mihitch, M.D., Chairman, Graduate Pharmacology Program, Roswell Park Memorial Institute, Buffalo, N.Y. 14263.

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