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1. Mackey, et al., *Biochemistry* **16**, 4478-4483 (1977)
2. Soeda et al., *PNAS* **75**, 162-166 (1978)

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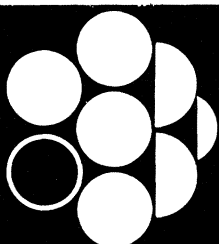


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POSITIONS WANTED

Biochemist/Cell Biologist, Ph.D. 1978. Extensive research experience in enzyme purification, particularly from nuclei and plasma membranes, isolation of natural compounds from seawater, high-pressure liquid chromatography of nucleotides. Publications. Seeks industry or institute research position. Box 329, SCIENCE. X

Cell Biochemist/Nutritionist. Ph.D. medical science, 1975. Development of culture conditions and nutrient media for growth and establishment of human cancer cell lines. Cellular studies on osmolality and electrolyte requirements. Intermediary metabolism. Protein isolation-purification. Growth factors. Teaching. Desires industrial or academic position. Box 330, SCIENCE. 10/27; 11/24

Cellular Radiation Biologist (Ph.D. 1971), **Medical Physicist** (Board-certified 1978), **Nuclear Health Physicist** (M.S. 1966), public health administration (B.S. 1958), certified sanitarian (1958), plus 5 years of experience in hospital administration, 4 years in research, 3 years in cancer therapy, nuclear medicine, safety, 2 years in management of research. Publications. Teaching and lecturing experience intermingled. Pursuing academic, government, or industrial career in management, research, or teaching. Reply to: Box 331, SCIENCE. X

Physiologist: Ph.D. August 1978; experience with prostaglandins, radioimmunoassay, and calcium flux. Seeks postdoctoral position in Washington, D.C., or Baltimore area. W. Freas, Zoology Department, University of Maryland, College Park, Md. 20742. X

POSITIONS OPEN

ANIMAL BIOLOGIST. The Center of Environmental Science of Unity College seeks a biologist to teach in the animal component of our innovative undergraduate program. Strong preference will be given to candidates with a demonstrated capability to utilize extant field resources in undergraduate education. Applicants should send full curriculum vitae by 1 January 1979 and arrange for three letters of reference to be sent to: Dr. Louis V. Wilcox, Jr., Chairman, Center of Environmental Science, Unity College, Unity, Maine 04988. An Affirmative Action/Equal Opportunity Employer

POSITIONS OPEN

ANATOMIST—The Anatomy Program in the Department of Cell Biology has two faculty positions available at the assistant professorial level. Duties associated with each position include teaching in the human gross anatomy course for freshmen medical students and developing a competitive research program in some aspect of biological structure. Preference will be given to candidates with 2 years of post-doctoral training, experience teaching human anatomy, and exhibited research potential in the area of functional/evolutionary morphology, developmental biology, or reproductive biology. Applicants should submit curriculum vitae and names of references to:

Dr. W. J. Gonyea
Faculty Search Committee
Department of Cell Biology
The University of Texas
Health Science Center at Dallas
Southwestern Medical School
5323 Harry Hines Boulevard
Dallas, Texas 75235

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

FACULTY POSITIONS AVAILABLE ANATOMISTS

Positions will be available 1 July 1979 at the assistant professor level. Applicants must have Ph.D. degree in anatomy, or equivalent as well as demonstrated ability to teach gross anatomy, histology, embryology, or neuroanatomy. Preference will be given to candidates with records of research accomplishment in cell biology, immunology, or neuroscience. Applicants should submit curriculum vitae, brief description of future research plans, and names and addresses of three references to:

Dr. Ronald L. St. Pierre, Chairman
Department of Anatomy
The Ohio State University
4072 Graves Hall
333 West 10 Avenue
Columbus, Ohio 43210

The Ohio State University is an Equal Opportunity/Affirmative Action Employer. Qualified women and minority and handicapped persons, as well as others, are encouraged to apply.

AQUATIC ENTOMOLOGIST CORNELL UNIVERSITY

Applications invited for position which carries responsibility for teaching senior/graduate course and research on basic biology and ecology of aquatic insects. Prefer to fill at assistant professor level; others will be considered. Send curriculum vitae and names of five references to: Professor E. H. Smith, Department of Entomology, Cornell University, Ithaca, N.Y. 14853. Deadline for receipt of applications is 1 January 1979. Cornell University is an Equal Opportunity/Affirmative Action Employer.

- 1) ASSISTANT OR ASSOCIATE PROFESSOR, IN-RESIDENCE
- 2) ASSOCIATE OR FULL PROFESSOR, IN-RESIDENCE

University of California, Irvine, Department of Pathology, is recruiting for two faculty positions, one at the assistant or associate professor level and one at the associate or full professor level. Required: M.D., clinical Board-eligible or -qualified, service experience in microbiology, and demonstrated interest in independent research. Duties: teach medical students and house staff, limited administrative responsibility in area of microbiology. All qualified candidates welcome; minorities and women encouraged to apply. Send curriculum vitae and references to: H. Simpkins, M.D., Ph.D., Department of Pathology, University of California, Irvine, Irvine, California 92717 by 4 December 1978.

- 1) ASSISTANT OR ASSOCIATE PROFESSOR, IN-RESIDENCE
- 2) ASSOCIATE OR FULL PROFESSOR, IN-RESIDENCE

The University of California, Irvine, Department of Pathology, is recruiting for two faculty positions, one at the assistant or associate level and one at the associate or full professor level. Required: M.D., Board-eligibility in clinical pathology. Duties: service and administrative responsibilities in blood banking and cellular immunology, teach medical students and house staff, and research. All qualified candidates welcome; minorities and women encouraged to apply. Send curriculum vitae and references to: Dr. H. C. Pirkle, University of California, Irvine, Department of Pathology, 101 City Drive South, Orange, California 92668, by 11 December 1978.

POSITIONS OPEN

ASSISTANT PROFESSOR ANIMAL PHYSIOLOGY

The Program in Physiology at the University of Houston invites applications for an assistant professorship in a tenure-track position. The successful applicant is expected to develop an active research program and to instruct graduate and undergraduate students. Demonstrated research ability in animal physiology and experience beyond the doctorate are essential. The physiology faculty consists of seven members in a biology department of 30 faculty. The University of Houston has reached a stage of growth (30,000 students) where it is consolidating its commitment to excellence in research and teaching. Send curriculum vitae, three letters of reference, reprints, a statement of research interests, and transcripts to: Dr. David S. Mailman, Program in Physiology, Biology Department, University of Houston, Houston, Texas 77004.

An Equal Opportunity Employer

ASSISTANT PROFESSOR

The Department of Biochemistry, Case Western Reserve School of Medicine, is seeking a molecular biologist preferably with experience in messenger RNA processing or recombinant DNA techniques. The position also involves medical and graduate student teaching. Candidates should send a one-page description of present and future research interests, the names of three people who may be contacted for reference, and curriculum vitae, including pertinent experience and list of publications, to:

Chairman of Search Committee
Department of Biochemistry
Case Western Reserve University
School of Medicine
Cleveland, Ohio 44106

An Equal Opportunity/Affirmative Action Employer

ASSISTANT PROFESSORSHIP BIOCHEMISTRY AND BIOPHYSICS

The Department of Biophysical Sciences at the University of Houston invites applications for an anticipated faculty position at the assistant professor level commencing fall 1979. Candidates are being sought with postdoctoral experience, recognized scientific accomplishments, and a strong background in biochemistry or biophysics. Individuals who are interested in the molecular and cellular aspects of the following areas are encouraged to apply: membranes; macromolecular complexes; mechanisms of differentiation or oncogenesis; enzymes. The new faculty member will be expected to establish a vigorous independent research program of outstanding quality and to participate actively in the undergraduate and graduate instruction of the department. Application deadline is 8 December 1978. Interested persons should send curriculum vitae, a statement of their research plans and goals, copies of major publications, and the names of at least three references to: Dr. Allen Bartel, Chairman, Faculty Search Committee, Department of Biophysical Sciences, University of Houston, Houston, Texas 77004.

An Affirmative Action/Equal Opportunity Employer

ASSISTANT PROFESSOR (tenure-track), Department of Biology, Boston University, for September 1979, to teach an undergraduate course in human physiology for students in the nursing and allied health professions and upper-level and graduate courses in muscle physiology offered in conjunction with Boston University's Sargent College of Allied Health Professions. Postdoctoral experience in teaching and research in physiology required, preferably with emphasis in muscle physiology. Knowledge of and experience in the allied health professions desirable. Establishment of an active research program is expected. Send curriculum vitae, pertinent publications, and three letters of reference not later than 31 December 1978 to: Physiology Search Committee, Department of Biology, Boston University, Boston, Mass. 02215. Boston University is an Equal Opportunity/Affirmative Action Employer.

ASSISTANT PROFESSOR. The Department of Chemistry, University of Virginia, invites applications for two full-time, tenure-track appointments to begin September 1979. Candidates with research interests in any area of organic or biologically oriented organic chemistry are invited to apply. The department particularly encourages applications in the areas of synthetic organic or nucleic acid chemistry. Applicants should submit curriculum vitae, an outline of proposed research, and at least two letters of recommendation to: Dr. Francis A. Carey, Department of Chemistry, University of Virginia, Charlottesville, Virginia 22901. An Equal Opportunity Employer.

POSITIONS OPEN

ASSISTANT PROFESSOR OF BIOLOGY. Tenure-track position in a Jesuit university starting September 1979 for a **developmental biologist (zoologist)** with training in molecular genetics. Postdoctoral research or college teaching experience desirable; completed Ph.D. degree required. Send résumé, complete undergraduate and graduate transcripts, and the names of three persons able to evaluate your qualifications to: **Search Committee, Department of Biology, University of Santa Clara, Santa Clara, Calif. 95053.** Closing date for applications is 15 January 1979.

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

THE DEPARTMENT OF ZOOLOGY of the University of California, Davis announces the vacancy of an ASSISTANT PROFESSORSHIP in the area of DEVELOPMENTAL BIOLOGY

The Department of Zoology invites applications from persons with primary interests and experience in research and teaching in any area of developmental biology. The appointee is expected to establish a productive research program and to participate in the department's program of graduate instruction. Teaching responsibilities include a one-quarter introductory course in embryology, a one-quarter advanced course in developmental biology, and participation in a graduate seminar in developmental biology. Candidates must have a Ph.D. degree. Salary will depend upon qualifications and experience.

Applicants should forward curriculum vitae, a description of their research experience and future research plans, reprints of all publications, a summary of teaching capabilities, and three letters of recommendation to: **Dr. R. D. Grey, Chairperson of the Search Committee, Department of Zoology, University of California, Davis, Calif. 95616.** *The University of California is an Equal Opportunity/Affirmative Action Employer.* Closing date for receipt of applications is 30 November 1978.

DEPARTMENT OF BIOLOGY CASE WESTERN RESERVE UNIVERSITY

A faculty position at the **ASSISTANT PROFESSOR** level in **DEVELOPMENTAL BIOLOGY** or **CELL BIOLOGY** is available. Applicants should have a strong commitment to research and to undergraduate and graduate education. Interested persons may send curriculum vitae and a brief statement of current research, and have three letters of recommendation sent to: **Dr. Norman B. Rushforth, Chairman, Department of Biology, Case Western Reserve University, Cleveland, Ohio 44106.** *Case Western Reserve University is an Equal Opportunity Employer.*

ASSISTANT PROFESSOR IN MICROBIOLOGY AND IMMUNOLOGY. Medical school full-time faculty to participate in the existing medical microbiology course and in advanced courses for graduate students. An active research program, preferably in immunology and/or virology, is highly desired. Salary negotiable, depending on qualifications and experience; starting 1 January 1979. Send résumé and three letters of recommendation to: **Dr. P. G. Iatridis, Director, Northwest Center for Medical Education, Indiana University School of Medicine, 3400 Broadway, Gary, Indiana 46408.** *Indiana University is an Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL POSITION IN PHYSIOLOGY. Medical school full-time research associate for collaborative biomedical research in blood coagulation in relation to diabetes. Salary negotiable, depending on qualifications and experience; available immediately. Send résumé and three letters of recommendation to: **Dr. P. G. Iatridis, Director, Northwest Center for Medical Education, Indiana University School of Medicine, 3400 Broadway, Gary, Indiana 46408.** *Indiana University is an Equal Opportunity/Affirmative Action Employer.*

POSTDOCTORAL POSITION IN ANATOMY. Medical school full-time research associate to participate in biomedical research project concerning neuroendocrinology of the genetically obese rat. Salary negotiable, depending on qualifications and experience; available immediately. Send résumé and three letters of recommendation to: **Dr. P. G. Iatridis, Director, Northwest Center for Medical Education, Indiana University School of Medicine, 3400 Broadway, Gary, Indiana 46408.** *Indiana University is an Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

BIOCHEMISTRY, ASSISTANT PROFESSOR

Tenure-track position beginning spring or fall 1979 in a Ph.D. degree-granting chemistry department. Postdoctoral experience is required. Applicant should have the ability and desire to teach graduate and undergraduate courses (including recitations in general chemistry and organic) and is expected to develop a vigorous independent research program in the area of biochemistry and/or enzymology, and to attract research grant funding. Send résumé, transcripts, descriptions of proposed research (one or more pages per problem), and three letters of recommendation by 22 November 1978 to: **Chairman, Search Committee, Department of Chemistry, Duquesne University, Pittsburgh, Pa. 15219.** *Affirmative Action/Equal Opportunity Employer.*

ASSISTANT PROFESSOR POSITION. Ph.D. chemist trained in analytical, biochemistry, clinical, or physical chemistry to do research in any biochemically related area and to teach at the undergraduate and graduate levels. Ph.D. degree required; some postdoctoral experience preferred. Submit curriculum vitae, publication list, detailed description of proposed research, summary of teaching experience, interests, and three letters of reference to: **D. W. Boykin, Chairman, Department of Chemistry, Georgia State University, Atlanta, Ga. 30303.** Deadline for completed applications: 27 November 1978. *Georgia State University is an Equal Educational Opportunity Institution and is an Equal Opportunity/Affirmative Action Employer in compliance with Title IX and other Civil Rights laws.*

ASSISTANT PROFESSOR, IMMUNOLOGY. Veterinary microbiology department seeking person with Ph.D., advanced training in immunology, and background in microbiology, preferably with D.V.M. and familiarity with methods of clinical immunology. Independent research capabilities; teach professional and graduate programs. Position open until filled. Apply to: **Dr. J. W. Osebold, Chairman, Search Committee, Department of Veterinary Microbiology, University of California, Davis, Calif. 95616.**

*An Affirmative Action/
Equal Opportunity Employer*

The Ocean Research Division Shore Processes Laboratory (SPL) has an academic research position open for an **ASSISTANT TO ASSOCIATE RESEARCH OCEANOGRAPHER OR ENGINEER.** Annual salary range: \$17,500 to \$28,900. The position involves original research in granular-fluid mechanics and its application to innovative sediment management techniques. The candidate selected will work on existing contracts and collaborate on new research projects dealing with basic problems in harbor sedimentation and serve as liaison between the SPL, funding agencies, and engineering community on research related matters. Ph.D. or equivalent in engineering or applied oceanographic sciences required with design experience in sediment management techniques and professional involvement in engineering societies desirable. Appointment level commensurate with candidate's qualifications. Send application and résumé to: **Chairman, Ocean Research Division A020, Scripps Institution of Oceanography, La Jolla, Calif. 92093.** *The University of California, San Diego, is an Equal Opportunity/Affirmative Action Employer.*

ASSOCIATE POSITIONS—The Solar Energy Research Institute has staffing requirements for scientists at the associate level.

Microbiologist/Biochemist with B.S. or M.S. Must have work experience with photosynthetic microorganisms, biochemical techniques, and familiarity with laboratory instrumentation.

Chemist with B.A./B.S. or M.S. in chemistry, physics, or engineering. Experience with mass spectrometry, vacuum systems, and laboratory instrumentation. Knowledge of practical electronics helpful.

Chemist/Organometallic Synthesis with B.A./B.S. in chemistry or M.S. in organic or inorganic chemistry with laboratory or research experience in the synthesis and characterization of organic, inorganic, or organometallic compounds.

Qualified applicants are invited to submit detailed résumés including salary history and professional references with telephone numbers to: **Personnel Services, Solar Energy Research Institute, Division of Midwest Research Institute, 1536 Cole Boulevard, Golden, Colo. 80401.** *Equal Opportunity Employer, M/F/H/V. A Department of Energy contractor.*

ASSISTANT PROFESSOR OF BIOPHYSICS DIVISION OF MEDICAL PHYSICS UNIVERSITY OF CALIFORNIA, BERKELEY

Pending budgetary approval it is anticipated that an opening at this level will be available beginning 1 July 1979. Applicants should have a strong background in the physical sciences and hold the Ph.D. degree; preference will be given to applicants having some teaching and postdoctoral research experience. This position is a full-time, tenure-track appointment, including teaching at the undergraduate and graduate levels, research within the specialty of the applicant, and supervision of graduate thesis research in that area. Faculty and associates of the division specialize in research involving the determination of structure by physical measurements and the relation of structure to biological function. The research capabilities of the applicant should complement the research activities now present in the division; these include: radiation biology, photosynthesis, transmission and scanning electron microscopy of biological structure, mathematical biology, physical and developmental properties of normal and abnormal cells, genetic recombination, and lipoprotein structure, function, and involvement in disease processes. Preference will be given to those applicants with high professional qualifications in the general field of cell-membrane biophysics; that is, using physical approaches to problems of membrane structure and function.

Applications, including a letter specifying qualifications and research interests, curriculum vitae, a list of publications, reprints, and the names of four persons who may be contacted for letters of evaluation, should be sent to arrive no later than 2 January 1979, to: **Professor Alan Bearden, Chairman, Division of Medical Physics, Donner Laboratory, University of California, Berkeley, California 94720.** *The University of California is an Affirmative Action Employer.*

THE UNIVERSITY OF CALGARY

MEDICAL PHYSIOLOGY

The Faculty of Medicine, The University of Calgary, Calgary Alberta, Canada, invites applications for the position of Professor and Head, Division of Medical Physiology.

Candidates should have an established record of achievement as a scholar, an active research programme, and a strong background related to teaching physiology in a medical school setting.

Applications, including an up-to-date curriculum vitae should be forwarded to:

**Dr. L. E. McLeod, Dean
Faculty of Medicine
The University
of Calgary
Calgary, Alberta
Canada T2N 1N4**



POSITIONS OPEN

UNIVERSITY OF VERMONT

Applications invited for **ASSISTANT PROFESSOR OF PHYSICS** (tenure-track) to begin fall 1979. Preference given to physicist with research interests in biological physics. Ph.D. in physics required. Candidates expected to teach physics courses at all levels. Solid state physics background desirable. *Qualified women and minorities encouraged to apply.* Send applications, including curriculum vitae, publication list, and names of three references to: **Chairman, Physics Department, University of Vermont, Burlington, Vermont 05405.**

An Affirmative Action Employer

ASSOCIATE PROFESSOR/PROFESSOR OF ANATOMY. Starting 1 July 1979. Must be experienced in teaching gross anatomy and neuroanatomy; good research background necessary. Salary rank commensurate with qualifications. Send curriculum vitae with complete list of publications to: **Richard G. Hibbs, Ph.D., Professor and Head, Department of Anatomy, Louisiana State University Medical Center, P.O. Box 33932, Shreveport, La. 71130.** *An Equal Opportunity Employer.*

ASSOCIATE PROFESSORSHIP IN BIOCHEMISTRY. Tenure-track position, available starting in September 1979. Applicants should have a strong background in enzymology with research interests in the isolation, characterization, and catalytic kinetics of enzymes. They should also have an established program of independent research and research funding and an interest in undergraduate and graduate teaching. Please submit a résumé and have three letters of recommendation sent to: **Professor J. P. Ferris, Chairman, Biochemistry Search Committee, Department of Chemistry, Rensselaer Polytechnic Institute, Troy, N.Y. 12181** by 15 November 1978. *Rensselaer is an Equal Opportunity/Affirmative Action Employer.*

BIOCHEMIST—MOLECULAR BIOLOGIST

The Department of Biological Sciences, Carnegie-Mellon University, invites applications from molecular biologists whose research interests lie in the area of nucleic acid structure and/or function. Candidates should have postdoctoral experience. The position is at the assistant professor level, although higher appointments will be considered. Duties include teaching at the undergraduate and graduate level as well as maintaining an active research program. Applicants should forward their curriculum vitae, three or more letters of reference, and a brief résumé of research plans to: **Search Committee (1), Department of Biological Sciences, Carnegie-Mellon University, 4400 Fifth Avenue, Pittsburgh, Pa. 15213.** *Carnegie-Mellon University is an Equal Opportunity/Affirmative Action Employer.*

BIOCHEMISTRY FACULTY POSITION RICE UNIVERSITY

Applications are invited for a new faculty position in the Department of Biochemistry of Rice University. Clear distinction in creative research and education essential. Preference will be shown to candidates in the area of molecular biochemistry of nucleic acids. However, applications are encouraged from outstanding candidates irrespective of field of interest.

Rice University is an Equal Opportunity/Affirmative Action Employer.

Send résumé, brief outline of future research plans, and the names of three references to: **G. J. Schroepfer, Jr., Chairman, Department of Biochemistry, Rice University, Houston, Texas 77001.**

The Department of Biochemistry, Rice University, announces the availability of **POSTDOCTORAL RESEARCH POSITIONS** for a program of research on inhibitors of cholesterol biosynthesis. Applicants should have strong experience in bio-organic chemistry and/or biochemistry related to sterol biosynthesis (metabolism, enzymology, cell culture studies, and so forth). The availability of additional positions in the areas of sterol metabolism, sphingolipid chemistry and metabolism, and stereochemistry of enzymatic reaction are also anticipated.

Interested candidates should send résumé, transcripts, and names of three references to:

**Dr. G. J. Schroepfer, Jr.
Department of Biochemistry
Rice University
Houston, Texas 77001**

Rice University is an Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

ASSISTANT PROFESSOR—MICROBIOLOGY

Applications are invited for tenure-track position. Preference will be given to candidates who have had two or more years of postdoctoral experience, present evidence of scholarly productivity, and have potential to initiate and develop an independent research program in bacterial (prokaryote) chemistry or in biochemical aspects of bacterial pathogenesis. Position available 1 July 1979. Send curriculum vitae, summary statement of future research plans, and names of three referees to: **Dr. G. P. Manire, Chairman, Department of Bacteriology and Immunology, 804 Faculty Laboratory Office Building 231H, University of North Carolina School of Medicine, Chapel Hill, North Carolina 27514.**

The University of North Carolina is an Equal Opportunity/Affirmative Action Employer. Applications from women and minority candidates are welcome.

UNIVERSITY OF GUELPH COLLEGE OF BIOLOGICAL SCIENCE DEPARTMENT OF NUTRITION

Applications are invited for the position of **ASSISTANT PROFESSOR IN NUTRITION.** Candidates should have training in experimental nutrition or nutritional biochemistry. The successful applicant will participate in teaching the metabolic aspects of nutrition at the undergraduate and graduate levels, and will develop a research program on some aspect of the nutritional evaluation of food. Curriculum vitae and names of three references should be sent to: **Dr. H. S. Bayley, Chairman of Search Committee, Department of Nutrition, College of Biological Science, University of Guelph, Guelph, Ontario, Canada N1G 2W1,** by 1 January 1979. Appointment is subject to final budgetary approval.

UNIVERSITY OF GUELPH COLLEGE OF BIOLOGICAL SCIENCE DEPARTMENT OF NUTRITION

Applications are invited for a contractually limited position of **ASSISTANT PROFESSOR IN NUTRITION** (2-year term). Candidates should have training in experimental nutrition or nutritional biochemistry. The successful applicant will participate in teaching the metabolic aspects of nutrition at the undergraduate and graduate levels, and will be encouraged to participate in one of the research programs within the department. Curriculum vitae and names of three referees should be sent to: **Dr. H. S. Bayley, Chairman of Search Committee, Department of Nutrition, College of Biological Science, University of Guelph, Guelph, Ontario, Canada N1G 2W1** by 1 January 1979. Appointment subject to final budgetary approval.

ASSISTANT RESEARCH ENDOCRINOLOGIST

The Department of Medicine, University of California at San Francisco, is seeking an M.D. and/or Ph.D. to work on the characterization and isolation of parathyroid hormone receptors in kidney and bone. Candidates must have at least 2 years of postdoctoral experience in the mechanism of action of calcitropic hormones, including techniques for radioiodination and measurement of adenylate cyclase. Experience in radioimmunoassay of parathyroid and/or calcitonin also desirable. Send inquiries to:

**Claude D. Arnaud, M.D.
Professor of Medicine
Chief, Endocrinology Section
University of California Service
Veterans Administration Hospital
4150 Clement Street (111N)
San Francisco, Calif. 94121**

ROCHESTER INSTITUTE OF TECHNOLOGY (RIT)

BIOLOGY FACULTY POSITION—Visiting assistant professor. Ph.D.—radiation biology and animal physiology. Teaching experience desired. To teach radiation biology and advanced physiology to upper level biology majors and physiology and anatomy to nonmajors. Opportunity to develop course in area of competence.

Funding anticipated for appointment starting 1 September 1979, and subject to annual renewal for a total period of 5 years. Conversion to tenure-track possible. Send curriculum vitae, three letters of recommendation and transcripts (or course history) to: **Head, Department of Biology, Rochester Institute of Technology, One Lomb Memorial Drive, Rochester, New York 14623.** Closing date for applications: 15 December 1978.

RIT is an Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

BIOCHEMISTRY POSTDOCTORAL RESEARCH POSITION available immediately for studies on the biosynthesis of glycoproteins. Experience in enzyme purification and characterization, especially membrane-bound systems, cell free protein synthesis, carbohydrate chemistry, and affinity chromatography desirable. Starting salary: \$15,000 per year. Send résumé and two letters of recommendation to: **Dr. R. F. Davis, Animal Sciences Center, University of Maryland, College Park, Md. 20742.**

An Equal Opportunity/Affirmative Action Employer

CHAIRPERSON

DEPARTMENT OF PHARMACOLOGY UNIVERSITY OF PENNSYLVANIA SCHOOL OF MEDICINE

Application is invited from highly qualified individuals to head the Department of Pharmacology of The University of Pennsylvania School of Medicine.

Reply to: **Pharmacology Search Committee, Dean's Office, School of Medicine, University of Pennsylvania, Philadelphia, Pa. 19104.** *An Equal Opportunity Employer.*

The Massachusetts Institute of Technology (MIT) **CHEMISTRY DEPARTMENT** will welcome applications for **faculty positions** for 1979-1980 at all levels of appointment from individuals who have demonstrated ability to do exceptional independent research in chemistry. Candidates should submit curriculum vitae, publications list, a description of research interests, and have three letters of recommendation sent not later than 1 February 1979 to: **Professor J. L. Kinsey, Room 18-399, MIT, Cambridge, Mass. 02139.** *We are an Equal Opportunity/Affirmative Action Employer.*

CLINICAL CHEMIST—Department of Pathology seeks a highly qualified clinical chemist with either a Ph.D. or M.D. degree for a faculty position at the assistant professor level with related responsibility as assistant director or director of clinical chemistry. Previous hospital laboratory supervisory experience required; academic and research interests strongly encouraged. Please submit curriculum vitae and letters of reference to: **George P. Studzinski, M.D., Ph.D., Professor and Chairman, Department of Pathology, Code AB, College of Medicine and Dentistry of New Jersey, 100 Bergen Street, Newark, New Jersey 07103.** *Equal Opportunity/Affirmative Action Employer.*

COGNITIVE PSYCHOLOGY—Possible tenure-track position for September 1979 at the assistant professor level. Individuals must have some teaching experience, proven research record, and a desire to develop nationally known research program. Salary is competitive and research resources are excellent. Send curriculum vitae, three letters of recommendation, and copies of publications or preprints to: **Dr. Randall W. Engle, Experimental Search Committee, Department of Psychology, University of South Carolina, Columbia, South Carolina 29208.** *An Equal Opportunity/Affirmative Action Employer.*

MONTANA STATE UNIVERSITY

invites nominations and applications for the position of **DEAN** of the College of Letters and Science. The dean is the top administrator in the college and reports directly to the vice president for academic affairs.

The college is composed of 200 faculty and 1700 student majors. Montana State University is a broad-based, multifaceted university, awarding doctoral degrees in 19 fields, master's degrees in 34 fields, and bachelor's degrees in 45 fields. It is the state's Land Grant University located in Bozeman with an enrollment of 10,000 students.

Qualifications: terminal degree in a professional discipline represented in the college and established reputation for creativity; experience in university teaching preferably at both the undergraduate and graduate levels; knowledge of varieties of teaching methods and scholarship represented in the Departments of Letters and Science; experience in budgetary matters; and demonstrable leadership and administrative capabilities.

Appointment: fiscal year (1 July 1979). **Salary:** negotiable. **Applications:** submit letter of interest, résumé, and names and addresses of three references to: **Dr. Stuart Knapp, Vice President for Academic Affairs, 409 Reid Hall, Montana State University, Bozeman, Montana 59717.** **Deadline:** 31 December 1978. Applicants may receive a complete description of the position by writing to the above address.

An Equal Opportunity/Affirmative Action Employer

**DIRECTOR, DIVISION OF SCIENCE
EDUCATION RESOURCES IMPROVEMENT
(EX 78-40)**

The National Science Foundation, an independent agency of the federal government, welcomes applications for the position of director for the Division of Science Education Resources Improvement. This position is in the Directorate for Science Education which has the responsibility for initiating and supporting programs to strengthen science education at all levels.

The director for the Division of Science Education Resources Improvement is responsible for planning and executing programs designed to address the needs of schools, colleges, and universities in strengthening and improving their science education and research training capabilities. The programs range from institution-wide improvement in the sciences to highly focused projects dealing with a single component of an individual course. The incumbent represents the National Science Foundation in its dealings with scientific and other groups concerned with the programs of the division and other science education activities of the directorate. He or she has responsibility for the development of long-term program plans, annual budget presentations, and developing specific short-term plans for program operation. He or she is responsible for ensuring that proposal and award processing procedures are properly followed by the staff under the incumbent's supervision.

The applicant selected will be offered an excepted appointment under the NSF Act of 1950 as amended. This position is excepted from the competitive civil service and at the grade level equivalent to GS-16 (approximately \$42,423 go \$47,500) and will be filled on a rotational basis for 2 years. Appropriate advance degrees or equivalent experience is necessary. Specific background and experience needed for this position are as follows: (i) Ph.D. or equivalent experience in a field of natural or social sciences, engineering, or mathematics/science education; (ii) broad experience in the management and administration of science education programs; (iii) demonstrated leadership abilities; and (iv) evidence of writing skills.

Applicants should submit a statement of interest and a résumé or Standard Form 171, Personal Qualifications Statement, to: **Division of Personnel and Management, Attention: Section B, Room 212, 1800 G Street, NW, Washington, D.C. 20550. Telephone: 202-632-4107.** Applications should be received no later than 20 November 1978. *The National Science Foundation is an Equal Opportunity Employer.*

**CHIEF,
TUMOR BIOLOGY
SECTION**

The National Cancer Institute is seeking candidates for the position of Chief, Tumor Biology Section. The incumbent will be responsible for the scientific administration of research grants and contracts. Duties will include overseeing all active and competing research grants and contracts in the Tumor Biology Section, evaluating and integrating knowledge in the area of tumor biology, developing and recommending plans for payment of research grants and contracts, initiating actions for support of targeted research, and projecting the scientific and budgetary needs of this program area.

Applicants must have a Ph.D. or equivalent or M.D. degree; a minimum of four years of independent research experience; substantial experience and training in animal physiology and animal pathology; and specific recent research experience with tumors and tumor progression in animals. Knowledge or experience in animal genetics would also be desirable. While no previous administrative experience is required, the applicant should be prepared to defend his/her desire to change from active scientific research to scientific administration.

This is a career Civil Service position. Salaries range from \$26,022 (GS-13) to \$30,750 (GS-14). Letters of interest, Personal Qualifications Statement (SF-171), curriculum vitae and bibliography should be sent by November 13, 1978 to: Dr. Brian W. Kimes, National Cancer Institute, National Institute of Health, Public Health Service, Westwood Building, Room 852, 5333 Westbard Avenue, Bethesda, Maryland 20014. An Equal Opportunity Employer.

**NATIONAL INSTITUTES OF
HEALTH**

**KUWAIT
UNIVERSITY**

**Faculty of
Medicine**

Immediate Opening for: Assistant or Associate Professor in Immunology in the Department of Surgery.

Responsibilities will include setting up and heading the transplant immunology/tissue typing laboratory.

Requirements:

All applicants must possess a Ph.D. or M.D. and have conducted and published research in the field.

Must be available immediately.

Send resume and list of publications to:

IMMUNOLOGIST

Att: C. Osgood
Embassy of Kuwait
Cultural Division
4340 Conn. Avenue, N.W.
Suite 500
Washington, D.C. 20008

POSITIONS OPEN

DEAN AND PROFESSOR OF NURSING

The Medical College of Ohio is seeking a nurse educator to serve as the dean and professor of nursing in an innovative health consortium. The N.L.N. accredited Baccalaureate Nursing Program accepts 100 students after their first year in consortium affiliated programs at Bowling Green State University and the University of Toledo. Located on a new campus in Toledo, with a full-time faculty of 30 members, the School of Nursing has recently added a B.S. degree for R.N.'s, a P.N.P. program, and is planning a graduate program. Candidates for dean must have a doctorate and have baccalaureate educational experience in clinical nursing, teaching, and administration. A graduate educational experience and research experience are preferred. Closing date for applications is 30 November 1978, with a desired appointment date in January 1979, and a starting date of 1 July 1979. Send curriculum vitae and three names of references to: **Joel P. Zrull, M.D., Chairman, Search Committee for Dean and Professor of Nursing, Medical College of Ohio, C.S. #10008, Toledo, Ohio 43699.**

The Medical College is an Equal Opportunity/Affirmative Action Employer.

DEAN, SCHOOL OF NURSING AND HEALTH SCIENCES

Western Carolina University seeks a person with recognized abilities in administration and program development to lead this rapidly emerging school. Programs in nursing, medical technology, medical records; other programs being planned. The university, located adjacent to the Great Smoky Mountains National Park in the western North Carolina mountains 50 miles west of Asheville and 150 miles north of Atlanta, is a constituent institution of the University of North Carolina. Send curriculum vitae and names of three references to: **Dr. F. W. Harrison, Search Committee Chairman, Western Carolina University, Cullowhee, North Carolina 28723**, by 15 January 1979.

An Equal Opportunity/Affirmative Action Employer

DIRECTOR OF NEPHROLOGY. The Department of Medicine, University of Alabama Medical Center, is seeking candidates for the position of director for its Division of Nephrology. Qualifications include a substantial background in academic nephrology, with interest and experience in patient care, teaching, research, and administration. Interested persons should submit their curriculum vitae and letters summarizing their qualifications at the earliest possible time to: **Thomas N. James, M.D., Department of Medicine, University of Alabama Medical Center, Birmingham, Alabama 35294.** *An Equal Opportunity/Affirmative Action Employer.*

RESIDENT DIRECTOR, field research station. Carnegie Museum of Natural History seeks candidate with advanced degree in field-oriented biology or ecology, experience, administrative ability, familiarity with and research adaptable to Eastern mountain forests, and interest in public relations and education. Must live on Reserve. By 1 January 1979 send résumé and names of three references to: **Dr. Mary H. Clench, Powdermill Nature Reserve Committee, Carnegie Museum of Natural History, Pittsburgh, Pa. 15213.** *An Equal Opportunity Employer.*

GEOCHEMISTRY POSITION UNIVERSITY OF MASSACHUSETTS, AMHERST

The Department of Geology and Geography has a vacancy in **low-temperature geochemistry** beginning 1 September 1979. We prefer a person whose interests involve the geochemistry of sedimentary rocks, sediments, or sediment/water interaction with possible specializations such as in stable isotopes, clay petrology, or environmental aspects. The department has an Automated Microprobe and new Automated Siemens XRF, AAS, CHN analyzer, x-ray diffraction equipment, and a laboratory equipped for faculty/student research in aqueous geochemistry. Teaching duties would include a course in introductory geochemistry, plus other courses, depending on the interests of the successful candidate, and supervision of M.S. and Ph.D. student research. We expect the position to be filled at the assistant professor level. *The University of Massachusetts is an Affirmative Action/Equal Opportunity Employer.*

Applicants should send curriculum vitae and the names of at least three references to: **Professor Peter Robinson, Department of Geology and Geography, University of Massachusetts, Amherst, Mass. 01003.** Applications due 1 December 1978.

POSITIONS OPEN

DIRECTOR, School of Physical and Earth Sciences: half-time administrative, half-time research/teaching position. Requirements are Ph.D., ability to work with individuals and committees, and experience in teaching and conducting an established research program. Coordinates budget and programs of Departments of Chemistry, Geology, and Physics with combined total of about 50 faculty members. Represents school to higher administration and conducts research and teaching. Salary and academic rank open and negotiable. Submit letter of interest, résumé, list of publications, and names of three to five references to: **E. J. Eisenbraun, Chairman, Search Committee, Room 106 Physical Sciences Building, Oklahoma State University, Stillwater, Okla. 74074**, by 22 December 1978. *Affirmative Action/Equal Opportunity Employer.*

DIVISION DIRECTOR FOR ENVIRONMENTAL BIOLOGY

The National Science Foundation, Directorate for Biological, Behavioral, and Social Sciences, is still seeking qualified applicants for the position of director for the Division of Environmental Biology. This division is responsible for basic research in systematics, evolutionary biology, ecology, and ecosystem science. Applicants should be recognized authorities and have demonstrated national and international leadership in environmental biology. The position is excepted from the competitive Civil Service but is equivalent to the GS-17, \$47,500 per annum. Applicants who applied under the original announcement, No. EX 77-41, need not reapply. Applicants should submit a résumé to: **Division of Personnel and Management, EX78-42, Attention: Section B, Room 212, 1800 G Street, NW, Washington, D.C. 20550.** For further information telephone: 202-632-4106.

ECOLOGIST—Research position to design and conduct estuarine animal ecology as part of a long-term, site-specific ecosystem study. Must have extensive training and experience in aquatic ecology with a strong interest in animal population studies, as well as the ability to conduct physiological and ecosystem research. Three-year position, which could lead to career status. Résumé and statement of research interests should be sent to: **Associate Director for Science Programs, Smithsonian Institution, Chesapeake Bay Center for Environmental Studies, P.O. Box 28, Edgewater, Md. 21037.**

Equal Opportunity Employer

ELECTRONICS ENGINEER, APGI, Genetics and Management Laboratory, Beltsville, Maryland 20705. Assignment involves adapting electronic techniques to the research study of biological parameters at the cow/machine interface in a dairy cattle disease research program. Applicants must have a B.S. or higher degree in a professional engineering curriculum from an accredited college or university (an advanced degree is highly desirable), plus 3 years of professional experience in application of engineering techniques relating to measurements of the physiology or biological processes of animals. Career Civil Service position. GS-11/12, \$18,258 to \$21,883 per annum. For application (SF-171), contact: **Cathleen Enuton, USDA, SEA, AR, Personnel Branch, Room 105, Building 004, Beltsville, Maryland 20705.** Telephone: 301-344-2756. *An Equal Opportunity Employer.*

EXPERIMENTAL ANATOMIST/HISTOLOGIST. Open fall 1979. Assistant professor. Candidates should have Ph.D., research abilities (as demonstrated by publications) in functional or experimental anatomy and electron microscopy, and postdoctoral experience. Teaching duties include an undergraduate course in histology and graduate course in specialty. Candidates are expected to demonstrate excellent teaching abilities and to develop external research support. Send curriculum vitae, four letters of recommendation, and copies of representative publications to: **University of Oklahoma, Department of Zoology, Norman, Okla. 73019, attention: Dr. Victor H. Hutchison, Chair**, by 1 January 1979. *An Equal Opportunity/Affirmative Action Employer.*

INTRODUCTORY ZOOLOGY/DIRECTOR OF UNDERGRADUATE STUDIES. Rank and salary open; fall 1979. Ph.D. Research experience in a zoological discipline as demonstrated by publications and two or more years of outstanding teaching in large introductory courses are required. Send curriculum vitae, four letters of recommendation, and copies of representative publications to: **University of Oklahoma, Zoology Department, Norman, Okla. 73019, attention: Dr. Victor H. Hutchison, Chair**, by 1 January 1979. *An Equal Opportunity/Affirmative Action Employer.*

POSITIONS OPEN

ANNOUNCEMENT SCHOOL OF PUBLIC AND ENVIRONMENTAL AFFAIRS INDIANA UNIVERSITY

The School of Public and Environmental Affairs provides graduate and undergraduate degree programs, as well as research, professional and technical services on the Bloomington, Indianapolis, Northwest (Gary), South Bend, and Fort Wayne campuses of Indiana University. Recruiting is under way for the 1979-1980 academic year for the area and location listed below. All applicants should have a Ph.D. or demonstration of equivalent research ability. Interested applicants should send curriculum vitae to the address listed below no later than 1 February 1979.

Dr. W. G. Meinschein (Code I)
Associate Dean for Academic Affairs
School of Public and Environmental Affairs
400 East 7 Street
Bloomington, Ind. 47401

ENVIRONMENTAL CHEMIST/ENVIRONMENTAL HEALTH SPECIALIST (assistant or associate professor)—Teaching and research in environmental chemistry, environmental health laboratory methods. Degree in chemistry required and work in environmental health preferred. Teaching at undergraduate and graduate levels. Bloomington Campus. *An Equal Opportunity/Affirmative Action Employer*

FACULTY POSITION IN BIOCHEMISTRY. Available summer 1979. Persons with qualifications for assistant or associate professor are encouraged to apply, although the rank is open. Teaching will be in medical, dental and/or graduate biochemistry courses. The applicant will be expected to develop an independent research program. Postdoctoral experience preferred. Send application including curriculum vitae, the names of three references, list of publications, and description of proposed research by 15 November 1978 to: **Chairman, Search Committee, Department of Biochemistry, The University of Texas Health Science Center, San Antonio, Texas 78284.** *An Equal Opportunity/Affirmative Action Employer.*

The Department of Pharmacology and Toxicology, School of Medicine, University of Louisville, invites applications for two full-time **FACULTY POSITIONS** at the assistant professor level. Applicants must have an M.D. degree and clinical training in an appropriate clinical specialty; they will be judged on their ability to conduct independent, notable research, to teach medical pharmacology, and to facilitate clinical applications of pharmacology.

Send curriculum vitae and three letters of recommendation to: **William J. Waddell, M.D., Chairman, Department of Pharmacology and Toxicology, School of Medicine, Health Sciences Center, University of Louisville, P.O. Box 35260, Louisville, Kentucky 40232.**

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

HEART METABOLISM

POSTDOCTORAL POSITION available immediately in the areas of cardiac metabolism, creatine kinase, and mitochondrial bioenergetics. Position open to Ph.D. in biochemistry. Background in enzymology, metabolism, or oxidative phosphorylation is desirable. Salary: \$12,000. Send résumé and three letters of reference to: **Dr. William E. Jacobus, Division of Cardiology, 509 Blalock Building, The Johns Hopkins University School of Medicine, 725 North Wolfe Street, Baltimore, Md. 21205.** *An Equal Opportunity/Affirmative Action Employer.*

MICROBIOLOGIST-PARASITOLOGIST. Florida Institute of Technology, Jensen Beach, School of Applied Technology, has an opening for an assistant professor to begin 27 December 1978. This is considered a full-time teaching assignment involving 15 to 18 hours per week of classroom contact with undergraduate students. Courses in general, environmental, and medical microbiology will be taught as well as courses in human parasitology and parasitology of aquatic animals. Laboratory and project supervision may be assigned in addition to a normal teaching load. Applicants should have a master's degree and successful teaching experience. Send a letter of application, curriculum vitae, supporting documents, and two letters of recommendation to: **Dr. Randall G. Hogg, Head, Natural Science Department, Florida Institute of Technology, 1707 NE Indian River Drive, Jensen Beach, Fla. 33457.**

**PROVOST
DIVISION OF MATHEMATICAL
AND PHYSICAL SCIENCES
AND ENGINEERING
University of Maryland, College Park**

Applications and nominations are invited for the position of Provost, Division of Mathematical and Physical Sciences and Engineering, University of Maryland, College Park Campus. The Division includes the College of Engineering, Departments of Computer Science, Mathematics, Physics and Astronomy, and the Institute of Physical Science and Technology. The MPSE division includes about 500 faculty, 4,000 undergraduates, and 1,300 graduate students. The Provost provides leadership and direction for the Division in instructional and research programs and in general is the chief administrative and academic officer of the Division.

Desired qualifications include an earned doctorate, proven scholarly and professional competence, extensive academic and administrative experience at the university level, and the ability to provide creative and innovative leadership.

Applications and nominations with resumes should be sent by 1 December 1978:

Dr. John O. Corliss, Chairperson
MPSE Provost Search Committee
Department of Zoology
University of Maryland
College Park, Maryland 20742

The University of Maryland is an Equal Opportunity/Affirmative Action Institution.

Pharmaceutical Research

Due to continuing expansion of our research efforts in the investigation of new therapeutic agents, we currently have available three (3) attractive career opportunities, all at the Ph.D. level.

DRUG METABOLISM

This position requires a degree in Analytical Chemistry, Biochemistry or similar discipline, with a minimum of 5 years experience in drug metabolism and analytical instrumentation. Supervisory capabilities desirable.

PHARMACOLOGY

Two (2) appointments are presently available on our staff in New Entity research:

One is for a respiratory pharmacologist or physiologist requiring a minimum of 2 years experience using in vivo techniques applicable to the investigation of lung functions in non-rodent species. This work is being done in conjunction with our active program in respiratory allergies.

The second is in cardiovascular pharmacology requiring 1-5 years applicable experience in drug development or disease processes with particular emphasis on hypertension.

We offer excellent benefits and a challenging environment in which to apply your professional capabilities. Resumes should be sent to: Manager, Personnel Administration, Schering-Plough Research Center, 60 Orange Street, Bloomfield, New Jersey 07003



Schering-Plough

We Are An Equal Opportunity Employer M/F

Research Biochemist Sr. Research Biochemist

Cutter Laboratories, Inc., a leader in human plasma protein fractionation, is seeking two PhD level Biochemists to join our Biochemical Research program on plasma proteins. The successful applicants will have an excellent opportunity to contribute their special scientific skills to developing new therapeutic agents from plasma. Each will be assisted by trained technical help and be stimulated by working closely with other similarly trained biochemists. Applications are invited from scientists with at least 2 years post doctoral experience in biochemistry, in the subject areas of protein isolation and purification, mechanism of action of coagulation factors, and physical measurement and characterization of plasma enzymes.

To Debra Wilkins,
Corporate Personnel
Cutter Laboratories, Inc.
4th and Parker Streets
Berkeley, CA 94710

Equal Opportunity Employer M/F/H



**CUTTER
Laboratories, Inc.**

Research Participation Program

Argonne National Laboratory, one of the U.S. Department of Energy's major research and development centers, announces Research Participation Programs for summer 1979 and academic year 1979-80. Opportunities exist for faculty, graduate students, and undergraduates to participate in Argonne's extensive program of basic and applied energy-related research. Financial assistance is available to research participants, and is provided by the Education Programs Division, U.S. Department of Energy.

Additional information and application forms may be obtained from: ARGONNE CENTER FOR EDUCATIONAL AFFAIRS, 9700 So. Cass Avenue, Argonne, IL 60439. Or call: (312) 972-3365. An equal opportunity employer, m/f.



**ARGONNE
NATIONAL
LABORATORY**

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POSTDOCTORAL RESEARCH

The National Research Council will make approximately 250 awards for research in federal laboratories in 1979. The Research Associateship programs provide scientists and engineers opportunities for post doctoral research in fields of:

**ATMOSPHERIC &
EARTH SCIENCES
CHEMISTRY
ENGINEERING
ENVIRONMENTAL SCIENCES
LIFE SCIENCES
MATHEMATICS
PHYSICS
SPACE SCIENCES**

Some programs are restricted to U.S. citizens. For information on specific research opportunities, program details, and application materials, write, giving research area of interest, to:

Associateship Office (JH 608-S2)
NATIONAL RESEARCH COUNCIL
2101 Constitution Avenue, N.W.
Washington, D.C. 20418

**National
Research
Council**

POSITIONS OPEN

FACULTY POSITION. Applications invited for assistant professor in physiology. Requires Ph.D., 3 years of postdoctoral experience, expertise in neuroendocrinology, neuropharmacology, brain reinforcement mechanisms, single cell recording in behaving animal and microiontophoresis. Duties include teaching neurophysiology/neuroendocrinology to medical and graduate students. Salary: \$21,000. Send curriculum vitae and three references to: Dr. D. C. German, University of Texas Health Science Center at Dallas, 5323 Harry Hines Boulevard, Dallas, Texas 75235.

MICROBIOLOGISTS (TWO)

For quality assurance of biological products. Ph.D., M.S., and B.S. Experience in microbiological QA, FDA regulations, and GMP's preferred. Responsibilities will include sterility testing and microbiological monitoring in a large plasma fractionation plant. Metropolitan N.Y. location. Excellent benefits. Salary commensurate with degree and experience. Send résumé and salary history to: Box 332, SCIENCE.

MICROBIOLOGIST. Assistant professor position available September 1979 for person with background in either microbial genetics or microbial ecology. Ph.D. required; duties include teaching at undergraduate and graduate (M.S. and Ph.D.) levels and development of independent research program. Send letter of application, curriculum vitae, and names of three references to: Dr. Donald J. Plocke, Chairman, Department of Biology, Boston College, Chestnut Hill, Mass. 02167. An Equal Opportunity/Affirmative Action Employer.

NEUROCHEMISTRY

Two postdoctoral positions. The Division of Neurobiology and Behavior at Columbia College of Physicians and Surgeons invites applications from postdoctoral level scientists to collaborate on research programs in single *Aplysia* neurons on membrane biogenesis on the chemical mechanisms underlying synaptic plasticity. Applicants must possess training in biochemistry and cell biology; specific experience with practical immunological techniques for the studies on neuronal membranes and cyclic nucleotides for synaptic plasticity would be highly desirable. Interested scientists should send curriculum vitae and three names for references to: Eric R. Kandel or James H. Schwartz, 630 West 168 Street, New York, N.Y. 10032. Applicants should indicate whether they plan to attend the neurosciences meeting in St. Louis, November 1978. Affirmative Action/Equal Opportunity Employer.

PHARMACOLOGY SCHOOL OF MEDICINE UNIVERSITY OF WASHINGTON

Applications are invited for a tenure-track faculty position at the ASSISTANT PROFESSOR level. A Ph.D. or M.D. degree and two or more years of postdoctoral research experience are required. Candidates should be qualified to establish an outstanding independent research program in basic pharmacology and to actively participate in the teaching program of the department. Applicants should send their curriculum vitae, an informative statement of research plans, and the names and addresses of three references to: Pharmacology Search Committee, Department of Pharmacology, SJ-30, University of Washington, Seattle, Wash. 98195.

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

PHARMACOLOGY. The Department of Pharmacology is currently seeking to fill a junior faculty position. Applicants with an interest in toxicology or cancer research and a demonstrated ability for research should send complete curriculum vitae to: Chairman, Department of Pharmacology, University of Connecticut Health Center, Farmington, Connecticut 06032. Equal Opportunity Employer, M/F.

POSTDOCTORAL ASSOCIATE. Position available immediately for research in quantitative genetics of mammalian thermoregulation, renewable for 2 years. Prefer applicants with training in statistics, quantitative, or behavioral genetics; will accept applications from physiologists and population biologists. Minimum salary: \$10,400. Send curriculum vitae and two letters of reference to: Dr. Carol B. Lynch, Department of Biology, Wesleyan University, Middletown, Conn. 06457. An Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

PHYSICAL OCEANOGRAPHER to fill vacant faculty post. Level of appointment commensurate with experience and qualifications. Applicant should have experience in the planning and execution of scientific cruises. Experience in one or more of the large, international oceanographic field programs desirable. Duties include teaching graduate level courses in physical oceanography and supervising the research of graduate students. Interested applicants should send curriculum vitae, including bibliography and two references, by 30 November 1978 to: Professor J. E. Geisler, Chairman, Division of Meteorology and Physical Oceanography, Rosenstiel School of Marine and Atmospheric Science, University of Miami, 4600 Rickenbacker Causeway, Miami, Fla. 33149. The University of Miami is an Affirmative Action/Equal Opportunity Employer.

PHYSIOLOGIST—Faculty appointment at rank of assistant or associate professor now available. Appointee will teach medical and graduate students, and will be responsible for developing an independent research program. Preference will be given to candidates with an interest in mammalian physiology, particularly in the cardiovascular field. Submit curriculum vitae and names of three references to: Dr. Eugene Aserinsky, Chairman, Department of Physiology, School of Medicine, Marshall University, Huntington, West Virginia 25701. Marshall University is an Equal Opportunity/Affirmative Action Employer.

PLANT ECOLOGIST

Department of Botany, University of North Carolina, Chapel Hill, seeks to hire plant ecologist at rank of assistant or associate professor. Preference will be given to candidates with broad ecological background and expertise in ecosystem function or physiological aspects of ecology. Duties include developing independent research program, graduate student training, and teaching at graduate and undergraduate levels. Ph.D. required. Applicants should forward curriculum vitae, reprints, manuscripts, and a brief résumé of research plans and should arrange to have three letters of reference sent to:

Chairman, Ecology Search Committee
Department of Botany 010-A
University of North Carolina
Chapel Hill, North Carolina 27514

Applications received after 15 December 1978 cannot be assured of consideration. The University of North Carolina at Chapel Hill is an Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL APPOINTMENTS

The Ames Laboratory of the U.S. Department of Energy has a number of vacancies for postdoctoral fellows in the fields of chemistry, physics, metallurgy, and engineering. The appointments would be for 1 year, renewable for a second year if mutually agreeable. In some instances there may be a possibility for continued employment beyond the 2-year postdoctoral appointment if circumstances warrant.

Interested persons should submit a complete résumé, along with the names and addresses of three professional references, to:

Ames Laboratory
Personnel Office
127 Spedding Hall
Iowa State University
Ames, Iowa 50011

An Equal Opportunity Employer

POSTDOCTORAL POSITION available immediately to conduct metabolic and permeability studies on maturing reticulocytes and red cells. Send résumé and names of three references to: Dr. H. D. Kim, Department of Physiology, College of Medicine, Room 4122, University of Arizona, Tucson, Ariz. 85724. An Equal Opportunity/Affirmative Action/Title IX/Section 504 Employer.

POSTDOCTORAL POSITION

Single fellowship for 2 to 3 years at a starting salary of \$10,000 per annum or higher (depending upon experience) available immediately to study biochemistry of a transport process in the eye. Candidates with a strong background in biochemistry are preferred. Some experience with physiology is useful. Send curriculum vitae, bibliography, a statement of research interests, and names of three references to: Dr. Douglas S. Gregory, Search Committee, Yale University School of Medicine, New Haven, Connecticut 06510. An Equal Opportunity/Affirmative Action Employer.

POSITIONS OPEN

POSTDOCTORAL POSITION IN NUTRITION to study the role of the potato in dietary patterns in selected countries. Additional background required in economics/social science. Send résumé and references to:

Director General
International Potato Center
Apartado 5969
Lima, Peru

POSTDOCTORAL POSITIONS available immediately and for about 3 years, for DNA—enzymes and protease purification from leukemic cells. Résumé and two letters of reference to:

Dr. Srivastava
Roswell Park Memorial Institute
666 Elm Street
Buffalo, N.Y. 14263

ORAL ROBERTS UNIVERSITY MEDICAL SCHOOL

Postdoctoral position in neural control of the circulation available fall 1978. Candidates must have experience in whole animal peripheral nerve recording techniques or cardiovascular recording techniques. Applicant's life-style should be compatible with a Christian environment.

Send curriculum vitae and names of three references to: Dr. D. Fred Peterson, Associate Professor, Department of Physiology, Oral Roberts University, Tulsa, Oklahoma 74171.

Oral Roberts University is an Affirmative Action/Equal Opportunity Employer.

POSTDOCTORAL POSITION available immediately in Department of Pathology for studies in chemical carcinogenesis, lung development. \$15,000 per annum. Candidates should have interest in lung structure/function/steroid hormones. Experience with EM, isotopes morphometry desirable. Send résumé and three references to: Dr. Shirley Kauffman, Department of Pathology, State University of New York, Downstate Medical Center, 450 Clarkson Avenue, Brooklyn, N.Y. 11203. Equal Opportunity/Affirmative Action Employer.

POSTDOCTORAL POSITIONS in a combined membrane group of the Departments of Biophysical Sciences and Medicine, State University of New York at Buffalo. Basic and applied NIH-sponsored projects on structure-function relationships and drug and hormone-receptor interaction of the erythrocyte and adipocyte membranes. Experience and interest in membrane biochemistry desirable. Salary: \$11,000 to 14,000. Send curriculum vitae to: Dr. C. Y. Jung or Dr. F. A. Green, State University of New York at Buffalo, 3495 Bailey Avenue, Buffalo, N.Y. 14215.

POSTDOCTORAL POSITION available immediately for individual with background in physiology, cell biology, or immunology. Studies involve peptide induced ionic fluxes in tumor cells, change in membrane potential, and induced metabolic changes. Project also requires isolation of serum proteins. Funding according to NIH postdoctoral guidelines. Applicants must be U.S. citizens or have permanent or immigrant visas. Contact: P. A. Ward, M.D., Professor and Chairman, Department of Pathology, University of Connecticut Health Center, Farmington, Conn. 06032. An Equal Opportunity/Affirmative Action Employer, M/F.

POSTDOCTORAL POSITION

Metabolic regulation—A research associate position is available immediately for a recent graduate with the Ph.D. degree to work in the area of the enzymology of the regulation of liver carbohydrate metabolism. Starting salary is \$11,000 to \$12,500, depending on training and experience. Send curriculum vitae and the names of three references to: Dr. Alvin H. Gold, Department of Pharmacology, St. Louis University School of Medicine, 1402 South Grand Boulevard, St. Louis, Mo. 63104.

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

POSTDOCTORAL POSITION. Available immediately to participate in ongoing study of transcriptional changes involved in embryonic development of muscle tissue. Prefer individual with experience or interest in isolation and characterization of messenger RNA. \$12,000 per year. Send curriculum vitae and references to: Dr. Charles P. Ordahl, Medical Research Building, Temple University School of Medicine, 3420 North Broad Street, Philadelphia, Pa. 19140. An Affirmative Action/Equal Opportunity Employer.

CHIEF, GENETICS AND TRANSPLANTATION BIOLOGY BRANCH

The National Institute of Allergy and Infectious Diseases is seeking candidates for a position as Medical Officer (Administration) or Health Scientist Administrator (Biological Sciences).

M.D., D.O. or equivalent in a biomedical science with training and experience in clinically relevant immunology, immunogenetics and transplantation biology, and immunopathology. Position involves research grant activities, design, and monitoring of collaborative studies, administrative functions and contracts project officer, initiation of programs for reagent procurement and establishment of research resources in areas concerned with organ transplantation, histocompatibility tissue typing, genetic-disease associations, genetic immunodeficiency disorders, and histocompatibility antigen studies.

This is a career Civil Service position with a salary range of \$43,248 to \$47,500. Appointment may also be made via the U.S. Public Health Service Commissioned Corps.

Interested candidates should submit a Personal Qualifications Statement (SF-171), a curriculum vitae, and bibliography by November 13, 1978 to: National Institutes of Allergy and Infectious Diseases, National Institutes of Health, Public Health Service, Personnel Office, Ms. Sheila D. Johnson, 9000 Rockville Pike, Building 31, Room 7A33, Bethesda, Maryland 20014 or (301) 496-4634. An Equal Opportunity Employer.

NATIONAL INSTITUTES OF HEALTH

PHARMACOLOGIST (GI)

ICI Americas Inc., a subsidiary of Imperial Chemical Industries, Ltd. (ICI) of London, England, has an opening for a GASTRO-INTESTINAL PHARMACOLOGIST in the Biomedical Research Department, pharmaceuticals R & D, located in suburban Wilmington, Delaware.

Interested candidates should have the following credentials:

- **BS/MS in Pharmacology—or related biological field.**
- **Good chemical background.**

Salary commensurate with qualifications and experience plus an excellent benefits package. Send resume and college transcripts in confidence to:

Margaret M. McElwee



ICI Americas Inc.

Wilmington, Delaware 19897

An Equal Opportunity Employer M/F



Open to both
men and women



Public Service
Canada
Fonction publique
Canada

PALEONTOLOGIST

Salary: \$16,500 to \$39,517 (depending on experience)
Ref. No: 78-RES-63 (S)

**Energy, Mines and Resources, Geological Survey of Canada
Calgary, Alberta**

A scientist is required at the Institute of Sedimentary and Petroleum Geology to conduct research in Western and Northern Canada on marine molluscan faunas from the Cretaceous period. The successful candidate will investigate phylogenetic relationships of fossils through detailed field and taxonomic studies, and will develop and apply biostratigraphic models for paleoecological assessment and for local, regional and world-wide correlation.

Qualifications

Applicants must possess a Ph.D., or have a lesser degree with evidence of research experience and productivity equivalent to a doctorate in geology or paleontology with specialization in molluscan faunas. Experience and demonstrated ability in paleontological studies of Cretaceous cephalopods and pelecypods is essential. Knowledge of English is essential.

RESEARCH SCIENTIST — ORGANIC GEOCHEMISTRY

Salary: \$15,230 to \$36,760 (depending on experience)
Ref. No: 77-PSTP-32-153 (S)

**Fisheries and Environment Canada
Burlington, Ontario**

A research scientist is required in the Process Research Division of the National Water Research Institute to study the physical-chemical processes involving organic matter in recent and modern sediments associated with aqueous systems. Emphasis will be placed on the carbon cycle and studies will be undertaken in lakes and rivers in support of national water management programs. The incumbent also provides advice and assistance in the development of optimal water resource management strategies.

Qualifications

Applicants must possess a Ph.D. or lesser degree with evidence of research experience and productivity equivalent to that of the Ph.D. in geochemistry or a closely related field. Experience and research productivity in the field of organic geochemistry is also required. Knowledge of English is essential.

How to Apply

Send your application form and/or résumé to:

**Mr. D.E. Fraser
National Capital Region Staffing Office
Public Service Commission of Canada
Ottawa, Ontario K1A 0M7
Closing Date: November 17, 1978**

Please quote the applicable reference number at all times.

POSITIONS OPEN

POSTDOCTORAL POSITION

To study drug-lipid interactions in model membrane systems. Experience with liposomes preferred but not required. Contact:

Dr. Norman D. Weiner
College of Pharmacy
University of Michigan
Ann Arbor, Mich. 48109

POSTDOCTORAL POSITION

Available immediately for research in isolation and characterization of lymphocyte membrane receptors. A strong background in immunochemistry or protein chemistry is required. Send résumé with three references to:

Dr. J. J. Marchalonis
Position #1035
Cancer Biology Program
FREDERICK CANCER RESEARCH CENTER
P.O. Box B
Frederick, Maryland 21701
An Equal Opportunity Employer, M/F

POSTDOCTORAL RESEARCH ASSOCIATE

Study of pulmonary artery intermediate (100Å) filaments. Background in protein chemistry and/or amino acid sequencing required. Three-year position, available immediately. Starting salary: \$12,000 per annum. Send résumé and three letters of reference as soon as possible to: **Dr. P. Johnson, Department of Chemistry, Ohio University, Athens, Ohio 45701.** *Affirmative Action/Equal Opportunity Employer.*

POSTDOCTORAL RESEARCH ASSOCIATE

Position available for recent Ph.D. to conduct research on the behavioral pharmacology of opioids. Send résumé and names of two references to:

Dr. Stephen G. Holtzman
Department of Pharmacology
Emory University School of Medicine
Atlanta, Georgia 30322

POSTDOCTORAL RESEARCH ASSOCIATE for studies of changes in oxygen transport and utilization during adaptation to hypoxemia. Mitochondrial activity, tissue pO_2 , and tissue capillarity will be measured in small muscle biopsies, initially from laboratory animals and, later, from patients. Ph.D. in biochemistry or physiology, with some relevant postdoctoral experience, needed for this non-tenured junior faculty position. Starting salary: \$12,000 to \$13,000, commensurate with qualifications. Available immediately. Interested applicants should send curriculum vitae and names of three referees to: **Samuel Charache, M.D., Johns Hopkins University School of Medicine, Department of Medicine, Hematology Division, Baltimore, Maryland 21205.** *Equal Opportunity Employer.*

POSTDOCTORAL RESEARCH SPECIALIST

Ph.D. in biochemistry, genetics, or molecular biology, to participate in research on the phage T4-induced shutoff of host metabolic functions. Available 1 January 1979. Send curriculum vitae, bibliography, and names of three references to: **Dr. Peter Snustad or James F. Koerner, Department of Genetics and Cell Biology, University of Minnesota, St. Paul, Minn. 55108.** *The University of Minnesota is an Equal Opportunity Educator and Employer.*

PRE- AND POSTDOCTORAL POSITIONS are available for studies on the protein-synthesizing system with special emphasis on ribosomes—topography, biogenesis, and function—under various conditions of growth and development. Teaching opportunities available. Reply with résumé to:

Professor Bruce H. Sells
Laboratories of Molecular Biology
Faculty of Medicine
Health Sciences Complex
Memorial University of Newfoundland
St. John's, Newfoundland, Canada A1B 3V6

RESEARCH ASSOCIATE, Ph.D. Biochemistry position available immediately with established group investigating porphyrin-protein interactions as related to diseases of porphyrin metabolism. Broad experience in separation, identification of proteins essential. Background in TLC, HPLC, fluorometric methods desirable. *Columbia University is an Equal Opportunity/Affirmative Action Employer.* Send résumé to: **Box 26, Columbia University, 630 West 168 Street, New York, N.Y. 10032.**

POSITIONS OPEN

RESEARCH ASSOCIATES (two). Fully trained neurologists. Board-certified or -eligible, with research training in neuroanatomy and neurochemistry to work in research program in neuroendocrinology. One position requires experience in radioimmunoassay techniques. *Equal Opportunity/Affirmative Action Employer.* Those interested should send curriculum vitae to:

Eli S. Goldensohn, M.D.
Coordinator, COAP
Department of Neurology
Neurological Institute
710 West 168 Street
New York, N.Y. 10032

RESEARCH ASSOCIATE

Develop specific antisera for identification of macrophage differentiation antigens and sustaining mononuclear phagocyte depletion in vivo. In addition to demonstrated expertise in raising antisera, experience with liquid bone marrow culture and/or hybridomas is highly desirable. Salary to \$14,000. Reply with curriculum vitae and names of three references to: **Dr. Stephen Russell, Department of Pathology, University of North Carolina School of Medicine, Chapel Hill, North Carolina 27514.** *An Equal Opportunity/Affirmative Action Employer.*

RESEARCH ASSOCIATE—Postdoctoral position for research on neural (especially spinal) basis of sexual reflexes in male rats. Applicants need appropriate electrophysiological and/or neuroanatomical skills and experience. Salary: \$12,000. Apply by 5 November 1978, sending curriculum vitae and three references to: **Dr. B. Sachs, Department of Psychology, U-20, University of Connecticut, Storrs, Conn. 06268.** *An Equal Opportunity Employer.*

RESEARCH FELLOWS—Postdoctoral positions available immediately for studies on various aspects of the interferon system at the molecular and cellular levels and in animals; studies on production, purification, and characterization of interferons, isolation and purification of interferon mRNA's, action mechanism and in vivo evaluations of interferons. Send letter indicating areas of interest and résumé with references to: **William E. Stewart, II, Interferon Laboratories, Sloan-Kettering Institute for Cancer Research, 1275 York Avenue, New York, N.Y. 10021.** *An Equal Opportunity Employer, M/F.*

RESEARCH PATHOLOGIST

The Biology Division at the Oak Ridge National Laboratory has an opening for a pathologist (M.D. or D.V.M.) with experience in diagnostic and experimental pathology to assume a senior position in an NIH-sponsored research program. Candidate must have a proven record as an electron microscopist. Person with experience in quantitative morphology and/or cytology desired. Also knowledge in population dynamics of normal and diseased epithelial tissues. Salary: \$2150 to \$2500 per month. Send résumé to: **Union Carbide Corporation, Nuclear Division, Oak Ridge National Laboratory, P.O. Box X, Oak Ridge, Tennessee 37830.**

Solid Formulations Research

B.S./M.S.

Position in solid formulations research for a B.S./M.S.-level pharmaceutical scientist/chemist with at least 2 years of experience in solid dosage forms.

For further information and consideration, please send your résumé to: **Manager, Personnel Operations, Schering-Plough Research Division, 60 Orange Street, Bloomfield, New Jersey 07003.**



Schering-Plough
We Are An Equal Opportunity Employer M/F

POSITIONS OPEN

RESEARCH FELLOW—Postdoctoral position available for studies on the mode of action of interferon. Ph.D. in biochemistry or related subject is required. Interest in protein biosynthesis and nucleic acids is desirable. Salary: \$11,000, plus allowances for experience and dependents. Send curriculum vitae and names of references to: **Dr. Sohan L. Gupta, Interferon Laboratories, Sloan-Kettering Institute for Cancer Research, 1275 York Avenue, New York, N.Y. 10021.** *An Equal Opportunity Employer, M/F.*

SENIOR SCIENTIST—Institute of Chemical Analysis, Northeastern University. Senior staff position with potential for long-term academic appointment. Broad experience (minimum of 3 years) in organic analysis required, especially in chromatography as related, but not limited, to environmental or clinical applications. Collaborative and independent research expected. Salary commensurate with experience. Send résumé, three letters of recommendation, a brief outline of research plans, and sample of representative reprints to: **Dr. B. L. Karger, 341 Mugar Hall, Northeastern University, Boston, Mass. 02115.** *Northeastern University is an Equal Opportunity/Affirmative Action Employer.*

STAFF TOXICOLOGIST

A growing, independent testing laboratory is seeking a Ph.D. in toxicology or a biologically related field with extensive biostatistical training or experience. The position will involve design and analysis of data from safety studies in laboratory animals, as well as bioavailability studies in humans. An ability to present results in written form will be important. Send résumé to:

Dr. Kent R. Stevens
Food and Drug Research Laboratories, Inc.
P.O. Box 107
Waverly, N.Y. 14892

Applications from Ph.D.'s with medical school teaching experience are invited for **TEACHING POSITIONS** in the following courses:

Medical Writing Techniques
Biochemistry
Human Anatomy
Physiology
Haematology
Parasitology
Epidemiology
Pharmacology

The university is located in the West Indies. Please send curriculum vitae to:

St. George's University
c/o Foreign Medical School
Service Corporation
One East Main Street
Bay Shore, New York 11706

TROPICAL ECOLOGIST (Plant-Insect Interactions)

The Smithsonian Tropical Research Institute (STRI) announces the availability of a 3-year appointment for an ecologist.

The candidate will design and conduct investigations into the ecology of plants and animals of the Isthmus of Panama in order to assess the impact of the expected colonization of this area by the Africanized Brazilian honey bees.

Interested candidates should submit curriculum vitae, reprints of relevant publications, the names of references we may contact, and a statement of the research that he/she is interested in pursuing in this area to: **Director, STRI, Box 2072, Balboa, Canal Zone.**

STRI operates a variety of facilities on the Isthmus of Panama, including a Tropical Biology Library receiving 450 journals in ecology, animal behavior, and evolution. Salary: \$17,638 to \$20,862, plus relocation expenses. *The Smithsonian Institution is an Equal Opportunity Employer.* Deadline for applications is 31 December 1978.

PROGRAM DIRECTOR URBAN AREA HEALTH EDUCATION CENTER

The College of Medicine and Dentistry of New Jersey-New Jersey School of Osteopathic Medicine is responsible for development and overall contract performance of the newly created Area Health Education Center for Camden, N.J.

The College is recruiting for the administrator of this program. Reporting to the dean, the director will administer programs to:

- Design health profession education programs,
- Develop a multi-disciplinary approach for training of primary health care professionals,
- Provide opportunities for health practitioners to participate in academic resources,
- Coordinate and upgrade health manpower education,
- Identify health manpower needs,
- Develop new health careers,
- Increase opportunities for recruiting and training minorities in health care field, and
- Improve quality of primary health care delivery.

The successful candidate must possess:

- Doctorate in appropriate discipline with minimum of 5 years of related proven experience,
- Demonstrated in-depth leadership ability in allied programs and knowledge of areas of required expertise,
- Evidence of scholarly achievements sufficient to merit senior adjunct faculty appointment in the Department of Family Medicine, and
- Ability to lead professionals in a multi-institutional and interdisciplinary partnership.

Competitive salary and excellent benefits.

Please submit curriculum vitae, by 6 November 1978, to:

Agnes E. McGinnis, Director of Administrative Planning,



**COLLEGE OF MEDICINE AND
DENTISTRY OF NEW JERSEY
NEW JERSEY SCHOOL OF
OSTEOPATHIC MEDICINE
300 Broadway, Camden, N.J. 08103**

Equal Opportunity/Affirmative Action Employer, M/F

GENETIC TOXICOLOGIST

The Upjohn Company's Pathology and Toxicology Research Unit is seeking a scientist with a Ph.D. in cell biology, pharmacology, or biochemistry and a strong background in chemical carcinogenesis. Experience with short term assays in carcinogenesis and mutagenesis is required. The incumbent will conduct basic research on mechanisms of carcinogenic potential. Research environment with opportunity for multidisciplinary collaborative research.

Located in Kalamazoo, a medium-sized community with excellent cultural and recreational advantages. Excellent company benefits.

Submit résumé in complete confidence to:

Upjohn

Kent S. Morgan
The Upjohn Company
7171 Portage Road
Kalamazoo, Mich. 49001

An Equal Opportunity Employer, M/F

THE CHINESE UNIVERSITY OF HONG KONG FACULTY OF MEDICINE

Applications are invited for the following foundation chairs:

ANATOMY PHYSIOLOGY PHARMACOLOGY

tenable at this new medical school with an annual student intake of 100. There will be opportunities for original research but considerable undergraduate teaching experience is essential. Non-medically qualified candidates may apply but preference will be given to those medically qualified. Successful applicants are expected to be in post at the latest by the end of 1980 or early 1981, to take part in compiling the basic medical sciences curriculum and installing departmental facilities. Teaching will begin in the fall term of 1981. The minimum salary for professorships will be HK\$11,735 per month (U.S.\$1 = HK\$4.7). Terms of service also include long leave, superannuation benefits (university, 15 percent; appointee, 5 percent), housing accommodation on campus and air passages. Full particulars of the appointment, together with copies of relevant documents concerning the medical school and the university, may be obtained from: **Secretariat, The Chinese University of Hong Kong, Shatin, New Territories, Hong Kong**, to which applications (six copies) giving full details of qualifications and experience and the names and addresses of three persons to whom reference may be made, should be sent not later than 15 December 1978.

AUSTRALIAN INSTITUTE OF MARINE SCIENCE

Applications are invited for the following position in research at the Australian Institute of Marine Science (AIMS), which is situated on a 190-hectare site at Cape Ferguson near Townsville, North Queensland, and projects development into one of the foremost institutions in the world in the field of tropical marine science. Facilities include a \$12.8-million headquarters and comprehensively equipped laboratory complex, library, lecture theatre, controlled environment rooms and aquaria, accommodation for visiting scientists, and various field and technical support facilities such as a deepwater boat harbour, recompression chamber, and maritime services building.

Initial research at AIMS has been concentrated in three main areas: (i) **tropical marine food webs**, (ii) **the Great Barrier Reef and its reef-building organisms**, and (iii) **tropical marine pollution**.

The existing fleet of small vessels will shortly be augmented substantially, with the delivery of a 25-m research vessel built specifically for AIMS.

Further major expansion is planned, and will assure challenging research growth in tropical marine science.

BIOLOGICAL OCEANOGRAPHER

Duties: to plan and execute field/laboratory programmes devoted to a fuller understanding of the structure, function, and dynamics of pelagic food webs, especially within coastal and oceanic waters of the tropics. Consideration of likely interactions with shallow benthic and land-sea interface systems are viewed as potentially significant.

Qualifications: a Ph.D. degree or equivalent qualifications in the field of biological oceanography with evidence of substantial contribution in research and experience in the management of programmes at sea and ashore. A specific area of interest is not prerequisite; however, the individual selected must be equipped to view his or her responsibilities with perspective within the broad limits of the discipline.

Appointment will be made within the senior research scientist range (\$18,819 to \$21,545), depending on qualifications and experience. Appointment at a higher level may be considered in exceptional circumstances.

It is envisaged that the successful applicant will be required to take up appointment on 1 April 1979.

Further information on AIMS and general employment conditions will be supplied on request.

Application must include full curriculum vitae, plus the names and addresses of three professional referees, and should be sent to:

**The Secretary
Australian Institute of Marine Science
P.M.B. No. 3
Townsville, M.S.O. 4810, Australia**

Closing date for applications is 17 November 1978.

DIRECTOR

YOUTH DEVELOPMENT RESEARCH CENTER

Nominations and applications are being received for the position of Director of the Boys Town Center for the Study of Youth Development.

Established in 1974, the Boys Town Center has attracted a recognized professional staff in the social and behavioral sciences. The Center's mandate is to conduct significant interdisciplinary research and to disseminate findings related to problem prevention and the rehabilitation of troubled youth. The Center occupies new research facilities which are augmented by computer facilities, a specialized library, and conference accommodations. Center activities are supported by an annual budget from Father Flanagan's Boys' Home, Omaha, Nebraska.

The Director is the principal executive officer of the Center and reports directly to the Executive Director of Father Flanagan's Boys' Home and its Board of Directors. The Center Director is responsible for the total operation of the Center including establishing program priorities, professional staff recruitment and evaluation, and fiscal management. The Director also coordinates research and dissemination activities between the Center and regional centers located at Catholic University of America and Stanford University.

The Director must have a combination of education and experience commensurate with the responsibility and authority assigned to the position. He/She must have a doctorate degree, preferably a Ph.D., in an area related to human development and shall have a minimum of five years of administrative-research experience with two years in a senior administrative role. It is desirable that the Director have an outstanding research/publication record. The Director must have the ability to establish a planning process resulting in policies and annual budgets for a large research operation. He/She must have the ability to recruit outstanding scholars in the field of youth development and to coordinate the efforts of a highly qualified and diverse professional staff. The Director must be familiar with research administration, extramural funding procedures, dissemination techniques, data processing functions, library activities, training methodology, and conference programming. He/She must be able to represent the Center effectively to the Executive Director, Board of Directors, the scholarly community and the general public.

The Director position is available 1 January 1979. Salary is competitive. Nominations and applications, including resume and three references, should be submitted by 30 October 1978 to:

**Dr. Claude H. Organ, Jr.
Chairman, Search Committee
The Boys Town Center
Boys Town, NE 68010**

Boys Town is an Affirmative Action/Equal Opportunity Employer

POSITIONS OPEN

RESEARCH MICROBIOLOGIST

The Research Council of Alberta has an opening for productive research in microbiology in non-medical fields of interest to Alberta. Opportunity for independent work and also collaboration with specialists of other disciplines.

Current fields of interest include rumen microbiology, soil microbiology, petroleum microbiology, and industrial microbiology. Research experience in microbial metabolism, particularly anaerobic, would be an advantage.

Send résumé and names of three references to:

Dr. T. Kaneda
Alberta Research Council
University of Alberta Campus
Edmonton, Alberta, Canada T6G 2C2

VIROLOGY POSTDOCTORAL POSITIONS AVAILABLE. Research interests of participating faculty include transformation by SV40, expression of endogenous viruses, virus-induced diabetes, herpesviruses and human cancer, rotaviruses, hepatitis, and environmental virology. Submit curriculum vitae, three references, and outline of research interests to: Dr. Janet Butel, Department of Virology, Baylor College of Medicine, Houston, Texas 77030.

VISITING SCIENTIST POSITION

Joint Institute for the Study of
the Atmosphere and Ocean
University of Washington

The Joint Institute for the Study of the Atmosphere and Ocean (JISAO) at the University of Washington currently is searching for highly qualified candidates for a postdoctoral position in the area of estuarine processes. Candidates should be cognizant of those areas of geophysical fluid mechanics that bear on estuarine problems. Furthermore, it would be desirable if they were interested in those aspects of estuarine research that are similar to or complement the estuarine circulation and turbulence investigations currently being carried out at the Pacific Marine and Environmental Laboratory and in the Oceanography Department.

To apply, please send a professional résumé, two letters of recommendation, and a brief research prospectus to: John M. Wallace, Interim Director, JISAO, c/o Department of Atmospheric Sciences AK-40, University of Washington, Seattle, Wash. 98195. Closing date for receipt of application material is 1 December 1978.

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PROGRAMS

GRADUATE AND POSTDOCTORAL TRAINING IN CELLULAR BIOPHYSICS

Modern physiology seeks to analyze the function of animal systems quantitatively using the techniques and approaches of chemistry, physics, engineering, and applied mathematics. Applications are presently being considered for both a Ph.D. program stressing an independent approach to the acquisition of knowledge supported by directed tutorial study, and for a postdoctoral training program. Both the programs are supported by a National Research Service Award. Inquiries should be addressed to: Dr. C. L. Schaaf, Director, Graduate Division of Physiology, Rush College of Health Sciences, 1750 West Harrison, Chicago, Illinois 60612.

POSTDOCTORAL TRAINING IN ENDOCRINOLOGY at West Virginia University Medical Center. New interdisciplinary program supported by NIH. Participating faculty and research areas are: Margaret Albrink, M.D., hyperlipidemia/insulin resistance; James Blair, Ph.D., liver carbohydrate metabolism; Fred Butcher, Ph.D., stimulus-secretion coupling; Roy Butcher, Ph.D., pituitary-ovarian function; Howard Colby, Ph.D., adrenal/hepatic monooxygenases; George Hedge, Ph.D., (program director), thyroid/adrenal neuroendocrinology; Keith Inskeep, Ph.D., utero-ovarian relationships; Michael Mawhinney, Ph.D., androgen/estrogen action; John Thomas, Ph.D., androgen actions/toxicology. Application information and more detailed descriptions of research programs are available on request from: Dr. George A. Hedge, Professor and Chairman, Department of Physiology, West Virginia University Medical Center, Morgantown, W.Va. 26506. West Virginia University is an Equal Opportunity/Affirmative Action Employer.

CONFERENCE

HUMAN FACTORS IN CLINICAL MEDICINE AND PROSTHETIC DEVELOPMENT

18 to 20 January 1979
New York City

Brooklyn College (CUNY) and New York Academy of Medicine are cosponsoring an International Conference on the state of the art in physical and sensory prosthetic development. Topics range from biomaterials and direct nerve stimulation to artificial limb design and visual, vibrotactile, and auditory prosthetic design, application and clinical efficacy. For information and registration write: Professor G. Leisman, Department of Health Science, Brooklyn College of CUNY, Brooklyn, N.Y. 11210.

ASSISTANTSHIPS

GRADUATE RESEARCH AND TEACHING ASSISTANTSHIPS leading to M.S. and Ph.D. degrees are available in the Department of Biochemistry and Biophysics at Texas A & M University. Departmental interests include cell metabolism, protein turnover, hormone action, trace mineral metabolism, lipid and nucleic acid research, analysis of macromolecular structures using x-ray crystallography, computer graphics, mass spectrometry and protein sequencing, nitrogen fixation, neurobiochemistry, human nutrition, and drug design. Apply now for fall 1979 to: Dr. Martyn Gunn, Department of Biochemistry and Biophysics, Texas A & M University, College Station, Texas 77843. An Affirmative Action/Equal Opportunity Employer. Texas A & M especially invites applications from minority groups and women.

GRADUATE STUDY

GRADUATE STUDIES. Medical University of South Carolina. Predoctoral traineeships available for study leading to the Ph.D. degree in the Departments of Anatomy, Basic and Clinical Immunology and Microbiology, Biochemistry, Biometry, Pathology, Pharmacology, Physiology, or the interdisciplinary program in Molecular and Cellular Biology and Pathobiology. Stipends are \$3900 per year and are awarded on a competitive basis. For application and catalog, write to: Dean, College of Graduate Studies, Medical University of South Carolina, 171 Ashley Avenue, Charleston, South Carolina 29403. The Medical University is an Equal Opportunity/Affirmative Action Employer.

DOCTORAL FELLOWSHIP HARVARD UNIVERSITY

Candidates for doctoral studies in industrial hygiene, radiation protection, and air pollution control are invited to submit applications for the Leslie Silverman Fellowship which will be awarded at the Harvard School of Public Health for the 1979-1980 academic year. The fellowship provides tuition plus a monthly stipend of \$300. Deadline for the submission of applications is 1 February 1979. Contact: Chairman, Department of Environmental Health Sciences, Harvard School of Public Health, 665 Huntington Avenue, Boston, Mass. 02115. Applications from women and members of minority groups are encouraged.

TRAINEESHIPS

TRAINING IN METABOLISM

PREDOCTORAL AND POSTDOCTORAL TRAINEESHIPS are available immediately and for 1979 in a new NIH-supported program. Trainees will participate in collaborative investigations under supervision by faculty of the Departments of Biochemistry, Medicine, Pediatrics, and Pharmacology of Case Western Reserve University, School of Medicine. The program has been designed for the Ph.D. or would-be Ph.D. desiring a foundation in clinical investigation while developing his or her basic science capabilities and for M.D.'s to obtain expertise in basic science. Ph.D. candidates must fulfill the requirements of the basic science department for awarding the degree. For detailed information write to:

Dr. Merton F. Utter, Program Director
Department of Biochemistry
Case Western Reserve University
School of Medicine
Cleveland, Ohio 44106

TRAINEESHIPS

POSTDOCTORAL TRAINEESHIPS in cancer biology, developmental biology, and genetics at the Jackson Laboratory. Emphasis is on multidisciplinary approaches to the study of basic problems in mammalian gene regulation. The awards, supported by the NIH, are made to applicants who are subject to NIH citizenship requirements and who have acquired the Ph.D. or M.D. degree within the last 2 years. Applications consisting of a statement of research interests, curriculum vitae, and three references should be sent to: Dr. Leslie P. Kozak, The Jackson Laboratory, Bar Harbor, Maine 04609. An Equal Opportunity/Affirmative Action Employer.

FELLOWSHIPS

POSTDOCTORAL RESEARCH FELLOWSHIP in experimental ophthalmic pathology available immediately at Jules Stein Eye Institute, University of California, Los Angeles (UCLA). This 2-year fellowship is sponsored by NIH. Applicant must have prior training in immunology. Must be U.S. citizen. Send résumé and three references to: Alan L. Shabo, M.D., Jules Stein Eye Institute, UCLA School of Medicine, Los Angeles, Calif. 90024. An Equal Opportunity/Affirmative Action Employer.

MARKET PLACE

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STATEMENT

Statement required by the Act of 12 August 1970: Section 3685, Title 39, United States Code showing the ownership, management, and circulation of:

SCIENCE published weekly on Friday except the last week in December, but with an extra issue on the third Tuesday in September, at 1515 Massachusetts Avenue, NW, Washington, D.C. 20005. Date of filing: 27 September 1978. This is also the address of the publisher, the editor, and the managing editor, who are, respectively, William D. Carey, Philip H. Abelson, and Robert V. Ormes.

The owner is American Association for the Advancement of Science, 1515 Massachusetts Avenue, NW, Washington, D.C. 20005. Stockholders: None.

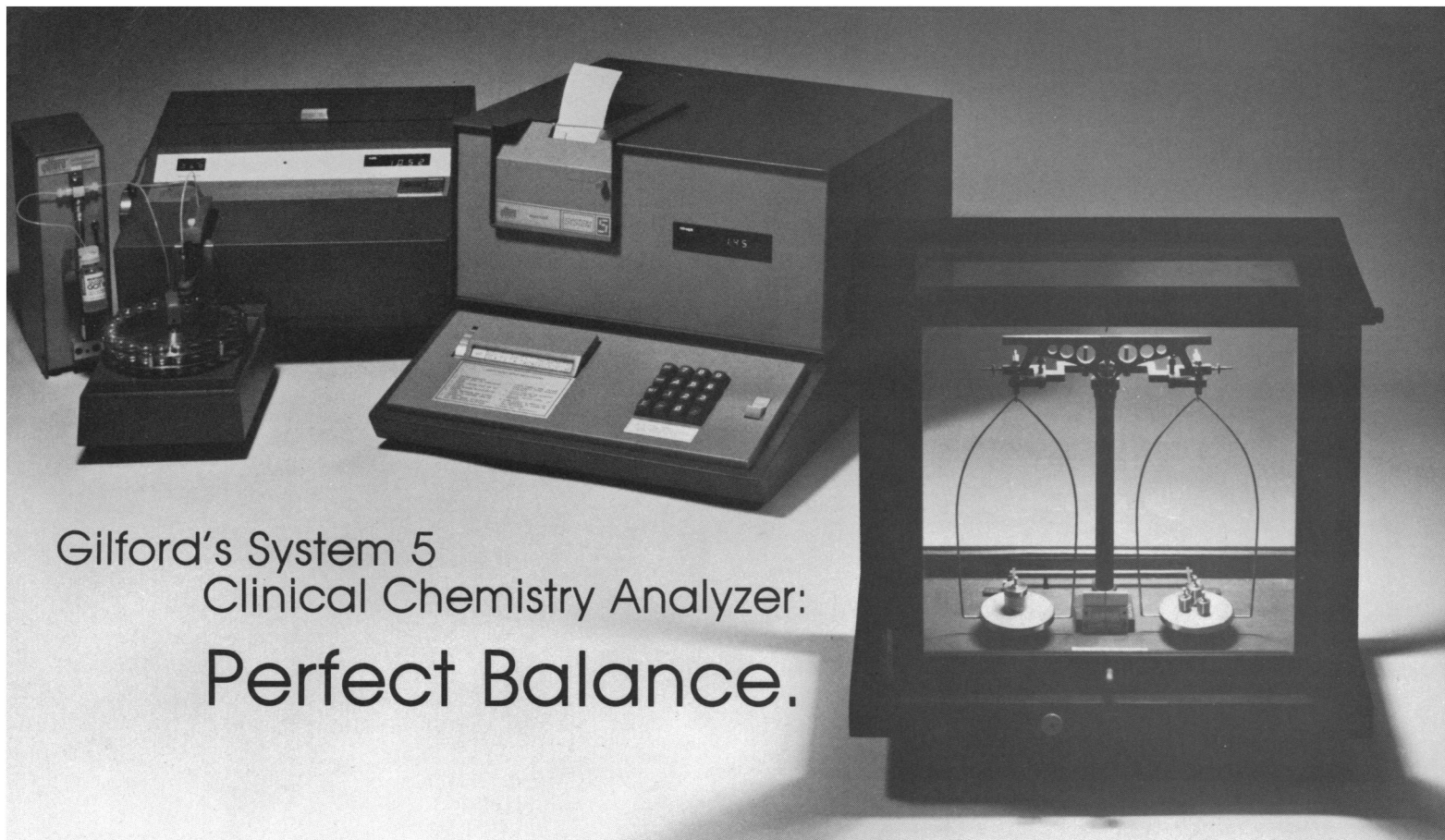
Known bondholders, mortgagees, and other security holders owning or holding 1 percent or more of total amount of bonds, mortgages, or other securities: None.

The purpose, function, and nonprofit status of this organization and the exempt status for federal income tax purposes have not changed during preceding 12 months.

The average number of copies of each issue during preceding 12 months are (A) Total No. copies printed: 160,045; (B) Paid circulation: (1) sales through dealers and carriers, street vendors, and counter sales: 302; (2) mail subscriptions: 152,807; (C) Total paid circulation: 153,109; (D) Free distribution by mail, carrier, or other means: (1) samples, complimentary, and other free copies: 1,970; (2) copies distributed to news agents, but not sold: none; (E) Total distribution: 155,079; (F) Office use, leftover, unaccounted, spoiled after printing: 4,966; (G) Total: 160,045.

Actual number of copies of single issue published nearest to filing date are (A) Total No. copies printed: 160,839; (B) Paid circulation: (1) sales through dealers and carriers, street vendors, and counter sales: 63; (2) mail subscriptions: 151,390; (C) Total paid circulation: 151,453; (D) Free distribution by mail, carrier, or other means: (1) samples, complimentary, and other free copies: 1,991; (2) copies distributed to news agents, but not sold: none; (E) Total distribution: 153,444; (F) Office use, leftover, unaccounted, spoiled after printing: 7,395; (G) Total: 160,839.

I certify that the statements made by me above are correct and complete. (signed) HANS NUSSBAUM, Business Manager



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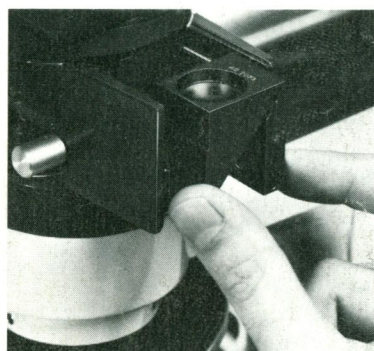
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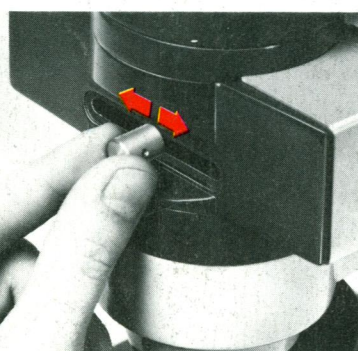
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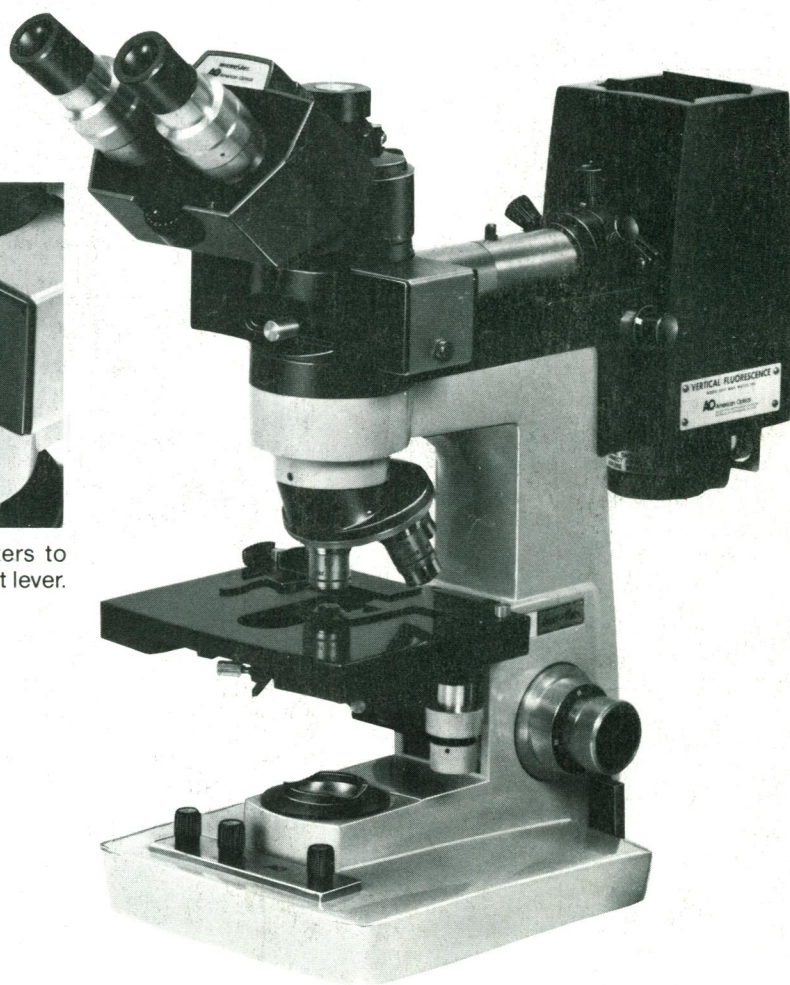
The new AO[®] FLUORESTAR[®] microscope makes fluorescence more convenient with Fluor Clusters.



Matched filter combinations in interchangeable Fluor Clusters.



Switch from Fluor Clusters to brightfield with convenient lever.



The all-new FLUORESTAR microscopes have an advanced Fluor Cluster system that greatly simplifies operation and makes fluorescence faster and more efficient. Matched barrier, exciter and dichroic filter combinations are precisely aligned in interchangeable clusters. A single lever positions the desired filter combination. The same lever switches the microscope to transmitted brightfield.

Objectives also serve as the condenser to assure full use of the numerical aperture. You get full field coverage even with 10X objective and 10X wide-field eyepiece.

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