REORGANIZATION OF MICROFILAMENT STRUCTURE

Also in this issue: Cellular calcium signaling • Human apolipoprotein E
Extracellular matrix topology • Cytophilic immunoglobulins • Human fibrinogen
Cytochrome P450, the arachidonic acid cascade, and hypertension

Official Publication of the Federation of American Societies for Experimental Biology

November 1996, Volume 10, Number 13
CALL FOR NOMINATIONS
FASEB EXCELLENCE IN SCIENCE LECTURE AND AWARD 1998

Purpose
To recognize outstanding achievement by women in biological science.

Eligibility
1. All women who are members of one or more of the Societies of FASEB will be eligible for nomination.
2. Nominations recognize a woman whose research has contributed significantly to further our understanding of a particular discipline by excellence in research.

Nominations
1. Nominations may be made only by members of the FASEB Societies.
2. A call for nomination of candidates for the Excellence in Science Award will be posted in the newsletters of the individual Societies as well as the FASEB Newsletter and The FASEB Journal.
3. The call for nominations will be made each year in November. **The nomination deadline is March 1, 1997.** The nomination will be transmitted to the FASEB Board before its May meeting.
4. Nominations must be made in the form of a letter, original and eleven (11) copies, setting forth in detail:
   - the contributions(s) to the field that represents the nominee's outstanding achievement in science
   - leadership and mentorship
   - evidence of national recognition
   - honors and awards
5. Twelve (12) copies of the curriculum vitae and brief selected bibliography of the nominee, as well as twelve (12) copies of *no more than five (5)* reprints, must accompany the nomination.
6. Additional letters of support (twelve (12) copies each) for the nominee are optional but are encouraged.
7. The nominations and supporting letters are to be sent to:

   Ms. Leah C. Valadez  
   FASEB Excellence in Science Award  
   Federation of American Societies for Experimental Biology  
   9650 Rockville Pike, Bethesda, Maryland 20814-3998  
   Telephone (301) 530-7092

Selection
1. The Excellence in Science Award Committee, comprised of a member from each Society of the Federation, will receive the nominations and recommend an awardee based on an evaluation of scientific accomplishments.
2. The awardee must agree to present an Excellence in Science Lecture.
3. The name of the awardee and a summary of the candidate's qualifications will be sent to the FASEB Board for approval at the May meeting.

Award Presentation
The award will be presented before presentation of the Excellence in Science Lecture by the awardee. The award will be presented by the Chair of the Excellence in Science Award Committee or her representative in conjunction with a member of the FASEB Board. The award includes a $10,000 unrestricted research grant, funded by Eli Lilly and Company, travel expenses, complimentary registration at the meeting, and a plaque in recognition of the award.
WERNER MULLER, University of Heidelberg, Germany

DEVELOPMENTAL BIOLOGY

Developmental biology has been revolutionized by the flood of methods and insights from molecular biology and genetics, as well as a resurgence of interest in developmental pathways and fields. This concise, readable and splendidly illustrated textbook describes the organizational, cellular, biochemistry, and molecular processes by which an egg is transformed into an adult animal. Designed for use in either undergraduate or graduate level courses, Developmental Biology is noteworthy for its treatment of development in model organisms, whose contributions to modern biology were recognized in the 1995 Nobel Prize for physiology and medicine. The reader will also find overviews of major themes such as fertilization, developmental genetics and sexual development. An outstanding feature of Developmental Biology is a wealth of exceptionally clear and vivid two-color illustrations that complement the text to provide a succinct yet fully up-to-date treatment of this rapidly changing field that will be welcomed by students, instructors and scientists.
1996/APPX. 346 PP., 123 ILLUSS., SOFTCOVER $39.95

R. GREGER, University of Freiburg, Germany, and
U. WINDHORST, University of Calgary, Alberta, Canada (eds.)

COMPREHENSIVE HUMAN PHYSIOLOGY
From Cellular Mechanisms to Integration

Comprehensive Human Physiology is a significantly important new book in the field of physiology, presenting state-of-the-art knowledge about both the molecular mechanisms and the integrative regulation of body functions. This is the first time that such a broad range of perspectives on physiology have been combined to provide a unified overview of the field. This groundbreaking two-volume set reveals human physiology to be a highly dynamic science rooted in the ever-continuing process of learning more about the complex functioning of our bodies. Each chapter contains a wealth of original data, clear illustrations and extensive references, making this a valuable and easy-to-use reference. Comprehensive Human Physiology is the quintessential reference work in the fields of physiology and pathophysiology, essential reading for researchers, lecturers and advanced students in biomedicine.
1996/2576 PP., 1422 ILLUSS., 695 COLOR., 273 TABLES HARDCOVER (TWO VOLUMES) $129.00

F. VOGEL, University of Heidelberg, Germany,
A.G. MOTULSKY, University of Washington, Seattle

HUMAN GENETICS
Problems and Approaches
Third Edition

The third edition of Vogel and Motulsky’s classic, Human Genetics, presents a cohesive and current compendium of the theory and practice of human genetics. Human genetics has become a central science in its own right, and molecular genetics is now central to human genetics. In addition to important information on the molecular basis of human characteristics and inherited diseases, Vogel and Motulsky describe the principles of epigenetic processes that contribute to human phenotypes. They also examine the molecular bases for the concepts, methods and results in related fields such as population genetics and behavior. This volume has a variety of applications beyond medicine, in areas such as anthropology, behavioral science and evolutionary biology.
1996/APPX. 880 PP., 439 ILLUSS., 205 TABLES HARDCOVER/7 3/8 X 10 7/8 $99.50

R.M. KAMP, Technische Fachhochschule, Berlin, Germany, and T. CHOLI-PAPADOPOLOU, Aristotle University, Thessaloniki, Greece, and
B. WITTMANN-LIEBOLD, Berlin, Germany (eds.)

PROTEIN STRUCTURE ANALYSIS
Preparation and Characterization

Because proteins are involved in all vital processes in every living organism or cell, a knowledge of protein structure is essential to an understanding of biological mechanisms at the molecular level. A variety of methods for analyzing protein structure have been developed recently, the most advanced and sensitive of which have been chosen for this manual. These protocols are used in worldwide in modern biochemical, biomedical and pharmaceutical research laboratories, but are easy enough for beginners to perform. There are protocols on the separation of proteins and peptides, electrophoresis and blotting, analysis of amino acids, identification of crystalline residues and mass spectrometry crystallization of macromolecules.
1997/APPX. 300 PP., 65 ILLUSS., SPINALBOUND $59.95
ISBN 0-387-96150-8 SPRINGER LAB MANUAL

Y.C. FUNG, University of California, San Diego

BIOMECHANICS: CIRCULATION
Second Edition

The long-awaited revision of this classic presents Fung’s treatment of the mechanics of blood circulation to a new generation of biomedical engineering students and researchers. Fung provides an exploration of the physics of the heart, arteries, veins, microcirculation and pulmonary blood flow, focusing on the coupling of fluids and solids in these organs. He presents the mechanical aspects of physiology in precise terms, using a mathematical approach to formulate problems in experimental exploration, data collection, model experiments, in vivo observations and theoretical ideas. The basic equations of fluid and solid mechanics are presented in the appendix. The second edition includes new chapters on coronary blood flow and blood flow in skeletal muscle.
1996/APPX. 416 PP., 298 ILLUSS., HARDCOVER $49.95
ISBN 0-387-94384-6

B. HANNON, University of Illinois, Urbana, and
M. RUTH, Boston University, MA

MODELING DYNAMIC BIOLOGICAL SYSTEMS

In Modeling Dynamic Biological Systems, the authors have written an exceptionally direct and approachable introduction to the biological and ecological applications of computer simulations. Similar to their previous book, Dynamic Modeling, this volume does not require an extensive mathematics or computer science background, and encourages students or scientists from a wide range of disciplines to actively incorporate computer modeling into their education and research. In addition, Modeling Dynamic Biological Systems comes with a CD-ROM containing models and a run-time version of the popular STELLA® II simulation modeling software.
1997/APPX. 250 PP., 100 ILLUSS., HARDCOVER $59.95 (TENTATIVE)

Four Easy Ways to Order:

• CALL Toll-Free 1-800-SPRINGER, 8:30 AM - 8:30 PM. Please mention 5171 when ordering by phone.
• Send messages on the INTERNET to orders@springer-ny.com.
• WRITE to Springer-Verlag New York, Inc., Order Dept. 5171, PO Box 2485, Secaucus, NJ 07096-2485.
• VISIT your local scientific bookseller or urge your librarian to order for your department.

Payment may be made by check, purchase order or credit card. Please enclose $3.00 for shipping (add $1.00 for each additional book) and appropriate sales tax if you reside in CA, IL, MA, NY, PA, TX, VA, and VT. Canadian residents please add 7% GST. Remember, your 30-day return privilege is always guaranteed!
Pricing subject to change without notice.
11/96
REFERENCE #: 5171
At the Forefront of Biological Research

MOLECULAR BIOLOGY OF MEMBRANE TRANSPORT DISORDERS
The past ten years of spectacular advancement in this field, reviewed in 33 chapters grouped in 4 sections:
• Biomembranes and Strategies for Study • Membrane Channels and Carriers • Transport in Organized Systems, and • Clinical Disorders of Membrane Transport.
0-306-45164-6/708 pp/279 ill./1996/$149.50

THE MOLECULAR AND CELLULAR BIOLOGY OF WOUND REPAIR
Second Edition
edited by Richard A. F. Clark
From a review of the First Edition:
“An overview...the book is excellent.” —American Scientist
A completely revised second edition, with new chapters on • provisional matrix proteins • extracellular matrix receptors, and • scarring versus nonscarring in adult wounds.
0-306-45159-X/636 pp/126 ill./1995/$125.00

IMMUNOPHARMACOLOGY REVIEWS • Volume 2
edited by John W. Hadden and Andor Szentivanyi
“A thoroughly enjoyable and very useful work.” —ASM News on Vol. 1
Surveys the most current findings in this emerging field, including unique coverage of neuroimmunomodulation.
0-306-45239-1/460 pp/ill./1995/$129.50

FATIGUE: Neural and Muscular Mechanisms
edited by Simon C. Gandevia, Roger M. Enoka, Alan J. McComas, Douglas G. Stuart, and Christine K. Thomas
“A cornerstone of the newly developing field of neurourosearch...timely and valuable...complete, useful, and readable...deserves to be placed in any medical and biological library.” —Doody’s Health Sciences Book Review Journal
Volume 384 in the series Advances in Experimental Medicine and Biology
0-306-45193-5/556 pp/ill./1995/$125.00

New for 1996!
JOURNAL OF MAMMARY GLAND BIOLOGY AND NEOPLASIA
Editors: Margaret C. Neville and Daniel Medina
A unique, integrative quarterly providing comprehensive analyses of all aspects of the subject. Each issue features a series of minireviews on a single topic, with guest editors who are authorities in the field.
Subscription: Volume 2, 1997 (4 issues)
Send for a free sample copy of the journal!

Book prices are 20% higher outside US and Canada.

PLENUM PUBLISHING CORPORATION
233 Spring Street, New York, NY 10013-1578
(212)620-8000/(800)221-9369
http://www.plenum.com

UCLA PNI
Post-Doc Fellowships Available

Psychoneuroimmunology is the transdisciplinary scientific field concerned with the interactions among behavior, the brain and the immune system. The field documents the complex networking of the nervous, endocrine and immune systems in maintaining health and combating disease. Its clinical applications range from the understanding of the biological mechanisms by which psychosocial factors influence the onset and course of immune-related diseases to the clarification of how immunologic disorders can induce psychiatric symptoms. Psychoneuroimmunology aims to develop more comprehensive ways of understanding health and illness, and correspondingly, to amplify the scientific basis for establishing more humane approaches to medical care.

The University of California Los Angeles, (UCLA) is now accepting applications for its Postdoctoral Research Training Fellowship in Psychoneuroimmunology. Research training is provided in immunology, behavioral sciences and/or neurosciences, and in basic and clinical interdiscipinary research under preceptorship of one or more investigators. Stipend levels depend on level of experience.

For Further Information
CALL: 310-825-8281 FAX: 310-206-5046
E-MAIL: pni@neurobio.medsch.ucla.edu
or write
PNI Program, Dean’s Office
UCLA School of Medicine
12-138 CHS, Box 951722
Los Angeles, CA 90095-1722

Deadline is February 1, 1997

AA/EOE