The FASEB Journal

Information for Authors*

Purpose and Scope

The FASEB Journal (FJ) is the official publication of the Federation of American Societies for Experimental Biology (FASEB). FJ publishes two types of articles. These are: 1) brief, definitive, and essentially final research communications of broad interest that are considered to warrant prompt publication; and 2) state-of-the-art reviews, drawn as far as possible, from the topics of the FASEB symposia.

Manuscripts containing original communications, or proposals for reviews, should be sent to the Editor-in-Chief, Dr. W. J. Whelan, The FASEB Journal, P.O. Box 016129, Miami, FL 33101, USA.

Original Research Communications

FJ devotes a major portion of its pages (outside the meeting abstracts) to the publication of brief, definitive, original, and essentially final research communications that are considered to warrant prompt publication. The aim of FJ is to illustrate the unity of biology and the interdependence of its constituent disciplines. Therefore, in keeping with this policy, and to qualify for acceptance, an original communication must not only be of outstanding scientific quality but must also be of broad interest.

The subject coverage of FJ is illustrated by the following disciplinary areas: biochemistry, biophysics, cell biology, developmental biology, genetics, immunology, neurobiology, nutrition, pathology, pharmacology, and physiology.

Papers should begin with an abstract written for the general reader and be free from jargon. They should contain an introduction followed by the results and discussion; they should conclude with a succinct bibliography. Methods may be included within the figure legends and tables or as a separate section. Papers may not occupy more than four printed pages (equivalent of 4000 words and inclusive of illustrations and diagrams) and will be returned as unacceptable if they exceed this limitation.

Papers (an original and four copies) should be sent to the Editor-in-Chief. Prompt publication of acceptable papers will be ensured by careful conformity to the instructions to contributors and the expeditious return of proofs.

State-of-the-Art Reviews

FJ also presents research reviews. Heretofore these have been in the form of extended reports emanating from symposia or mini-symposia presented at FASEB meetings. To provide such research summaries in a more compact form and thereby to allow, within space limitations, a more comprehensive and representative survey of new biological knowledge, FJ publishes state-of-the-art reviews that emphasize interdisciplinary aspects of the growing points of research.

These reviews will serve as a window on topics addressed at Society-sponsored symposia or plenary lectures. Therefore, review authors are sought from among those engaged in organizing the symposia. At the same time, volunteered reviews are welcomed that embody the principles of timeliness, topicality, and broad interest. A proposal for such a review or, not a completed review, should be sent to the Editor-in-Chief, who will advise on its acceptability.

Copyright

FJ is copyrighted for the protection of authors and FASEB. Requests for permission for any reproduction of this copyrighted material should be made in writing to the Executive Editor at 9630 Rockville Pike, Bethesda, MD 20814, USA, and should include an explicit statement of intended use and detailed specification of the material to be reproduced.

Authors submitting a manuscript do so on the understanding that if it is accepted for publication, copyright of the article, including the right to reproduce the article in all forms and media, shall be assigned exclusively to the publisher. The publisher will not refuse any reasonable request by authors for permission to reproduce any of their contributions to the journal.

Authors will also be asked to certify that an original communication has not been published elsewhere or as an abstract and is not being considered for publication elsewhere, and that the paper will not be submitted for publication elsewhere until its acceptability for FJ has been decided.

Style of Manuscript

General Instructions

1) Manuscripts should be typewritten, with double spacing and 1-inch margins, on 8½ × 11 inch bond paper. Computer printouts of original drafts must be readable; a dot-matrix printer is generally unacceptable. Metric units should be used. An original and four copies, with figures and tables, should be submitted to the Editor-in-Chief. Pages should be arranged and numbered consecutively in the following order: title page, footnotes, abstract of up to 200 words and indexing key words (maximum of five), text, references, figure legends, tables, and illustrations.

2) The title page should have the following information: title of article; author(s); laboratory or institution of origin with city and state or country; complete address for mailing proofs and telephone number for corresponding author; and shortened title (maximum of 50 characters and spaces) for the running foot.

3) The title should be brief (no more than 90 characters, including letters, spaces, and punctuation) and informative. Do not use phrases in which more than three words modify another word (use "Renal hemodynamic effects of atrial natriuretic factor" rather than "Atrial natriuretic factor renal hemodynamic effects"). Serial titles, such as "Interferon, IX," are not permitted, except as a footnote.

4) The abstract, a paragraph of no more than 200 words, should be written for the general readership and be free from jargon. It should be self-explanatory and suitable for use by abstracting services without rewriting. It should state the purpose and major findings, conclusions, and implications of study. Citations of reference should be avoided; if used, include bibliographic information.

5) Footnotes, double-spaced, should be assembled on one or more separate sheets; they should be numbered consecutively throughout.

6) The text should be readable, clear, and concise. Any necessary corrections should be neat and legible. Standard nomenclature should be used; unfamiliar or new items should be defined at first mention. (See Abbreviations section below.) Foreign words not of general use in the English language should be underlined for italic type; italics should not be used for emphasis. Latin plurals should not be used if the English language equivalent has been accepted, e.g., lamellas, not lamellae. Webster's new collegiate dictionary (1977) should be followed for spelling, compounding, and word separation.

7) Drugs and Trade Names. The chemical or generic name should precede the abbreviation of a drug name the first time it appears. Proprietary (trademarked) names should be capitalized and the spelling carefully checked. Trade names of chemicals or equipment should also be capitalized. Authors should supply an acceptable scientific name in every case as an alternative to the trade name. Trade names should not ordinarily be used in titles. More generally, the use of trade names should conform to the customary standards of good taste in scientific literature.

8) Active voice rather than passive voice should be used whenever possible. Present tense is used for references to existing knowledge or accepted concepts, and for proven conclusions from the present work; past tense is used when describing experimental work on which the paper is based.

Abbreviations, Symbols, and Terminology

Each author must include, as a footnote to the first page of text, a list of any new or special abbreviations used in the paper, with the spelled-out form and definition if necessary for clarity. This is not required for commonly accepted abbreviations. For information on style in general, authors are referred to the CBE style manual, 5th ed. (1983), prepared by the CBE Style Manual Committee (Bethesda, MD). Chemical and biochemical terms and abbreviations should be in accordance with the recommendations for usage by the International Union of Pure and Applied Chemistry (IUPAC) and its committee on nomenclature [see Biochemical nomenclature and related documents, a compendium of IUPAC-International Union of Biochemistry (IUB) documents, available from The Biochemical Society, P.O. Box 32, Commerce Way, Colchester, CO2 8HP, Essex, UK]. Isotope specifications should conform to the IUPAC system, with the mass number placed as a superscript.

*July 1987.
The following abbreviations or acronyms may be used without explanation; others should be defined at first use in the text.

A amper; blood group; chromosome group
A absorption; area
a atto-
a acceleration; activity, relative
AB blood group
ac alternating current
A.D. anno Domini
A.h. amper-hour
AM before noon
AMP, ADP, ATP adenosine phosphates
AMPase, ADPase, ATPase adenosine phosphates
aq aqueous
at. wt atomic weight
BCG bacille Calmette-Guérin
bp boiling point
Bq Becquerel
Btu British thermal unit
C coulomb
°C Celsius
c centi-
ca about
cal calorie
cAMP, cGMP, etc. cyclic AMP, cyclic GMP, etc.
CD circular dichroism
cd candela
cDNA complementary DNA
cf compare
Ci curie
cm, cm², cm³ centimeters
CMP, CDP, CTP cytidine phosphates
CoA coenzyme A
CoASAc acetyl coenzyme A
cpm counts per minute
cps counts per second
cp centipose
c/s cycles per second
cRNA complementary RNA
cubic use exponent 3
° degree, angle
D diffusion, coefficient
d dextro configuration
da density
d (°) dextrorotatory
Da dalton
da deca-
DB decibel
dc direct current
DDT 1,1,1-trichloro-2,2-bis-(p-chlorophenyl)ethane
DEAE-cellulose O-(diethylaminoethyl)cellulose
df degrees of freedom
DNA deoxyribonucleic acid
DNase deoxyribonuclease
dpm disintegrations per minute
dps dTMP, dTDP, dTTP
dyn dyne
E electromotive force; exa-
ed effective concentration, 50%
ed. editor
ED50 effective dose, 50%
EDTA ethylenediaminetetraacetic acid
e.g., for example
EMT ethylene glycol bis(β-aminoethyl ether)-N,N,N',N'-tetraacetic acid
eq electromotive force
eq electron paramagnetic resonance
eq(s) equation(s)
eq(s) equivalent
et al. electron spin resonance
etc. and others
exp so forth
exp. electron volt
f farad; filial generations
°F Fahrenheit
fc femto-
FAD, FADH₂ foot-candle
Fig., Figs. figure(s)
FMN, FMNH flavin mononucleotides
fp freezing point
ft foot
ft lb foot-pound
G gauss; general; gig-
g gravitational constant
guassine phosphates
greater than glutathiones
GSH, GSSG
H henry
h hour
Hb hemoglobin
hnRNA heterogeneous nuclear RNA
hp horsepower
ht height
Hz hertz
I inhibitory concentration, 50%
I.D₅₀ infective dose, 50%
i.d. inside diameter
i.e., that is
lg immunoglobulin
l.m. intramuscular
IMP, IDP, ITP inosine phosphates
in inch
i.p. intraperitoneal
IR infrared
IU international unit
i.v. intravenous
J joule
Jr. junior, with names
k Kelvin
K Michaelis constant
kilo-
kilocalorie
kg kilogram
km kilometer
l levo configuration
l, (-) levorotatory
lb pound
lb/in² pounds per square inch
LD₅₀ lethal concentration, 50%
LD₅₀ lethal dose, 50%
< less than
lm lumen
ln natural log
Book references should include information in the following order: author(s), title, city of publication, publisher, year, and pages. The title of the book should be underlined for italic type. When one chapter is cited its title should be included, and the book's authors or editors should be named.


Illustrations
Illustrations should be identified lightly with pencil on the reverse side with the figure number and author name(s); when necessary, the top should be clearly marked. They should be referred to as figures in the text, and should be numbered with Arabic numerals; each should have a legend.

Inasmuch as good illustrations are possible only from good copy, authors should pay particular attention to the following:
1. Illustrations should be sharp, contrasty, unmounted photographs on glossy paper. Original drawings should not be submitted. Photographs should be the width of one column (3½ inches) or two columns (7½ inches).
2. All drawings for reduction to a given size should be drawn and lettered to the same scale.
3. Lettering should be done in India ink and must be proportionate to the size of the illustrations if it is to be legible after reduction. Lettering should be sized so its smallest elements (subscripts or superscripts) will be readable when reduced. Typewritten or computer-generated lettering is not preferred.
4. Graphs such as electrocardiograms, kymograms, and oscillograms should be prepared by a skillful photographer so that the dark cross-hatched background is eliminated, the faint portions of the graphs are intensified, and sharp, contrasty prints are obtained. To avoid this processing, use blue-rulled instead of black-rulled recording paper for the original records.
5. When possible, all lettering should be within the framework of the illustration; likewise the key to symbols should be on the face of the chart. When the figure is so filled that it is necessary to explain symbols in the legend, only the following standard characters, for which the printer has type, should be used:

\[ \square \quad \blacksquare \quad \bigcirc \quad \Delta \quad \triangledown \quad \downarrow \quad \uparrow \quad \vdash \quad \swarrow \quad \searrow \quad \times \]

6. Actual magnification of all photomicrographs should be given. The Editorial Office will make corrections for reduction. An appropriate scale on the photomicrograph itself is, however, preferable and more accurate.
7. Arrangements must be made well in advance with the Editorial Office for the reproduction of any illustrations in color. Authors must have funds available to meet the full cost of color plates and their printing.
8. The approximate position of each figure in the text should be indicated in the margin of the manuscript.
9. Inasmuch as it is the policy of *FJ* to reproduce figures and charts in the smallest size consistent with readability and purpose of the illustration, it is understood that an author will accept the decision of the Editors on the printed size; however, recommendations may be submitted for reduction or enlargement.
10. If illustrations that have been published elsewhere are included, permission must be obtained from the publisher and the author for their use in *FJ*. A copy of the letters granting such permission must be submitted with the manuscript to the Editorial Office.
11. Figure legends should be typed double-spaced, consecutively on one or more sheets of paper. They should contain sufficient information to provide adequate description without reference to text.

Tables
Each should be typed, double-spaced, on a separate sheet of paper. Each should have a brief title and should be numbered with Arabic numerals. Explanatory matter should be in footnotes. Table footnotes should be listed in order of their appearance with consecutive superior letters. Tables should not duplicate material in text or illustrations. They should be prepared for printing either 3½ or 7½ inches with width.

Nonsignificant figures in tabular data should be omitted. Short or abbreviated column heads should be used. Statistical measures of variation, $P$, SD, SE, etc., should be identified as such.

The approximate position of each table should be indicated in the margin of the text.

Formulas and Equations
Structural chemical formulas, process flow diagrams, and complicated mathematical expressions should be precisely and carefully arranged, but they should be kept to a minimum because in typesetting they are composed by hand and are expensive. Glossy prints of complicated formulas and expressions suitable as line drawings are preferred. All subscripts, superscripts, Greek letters, and unusual characters must be clearly identified.

Acknowledgments
It is customary to acknowledge only persons who have made substantive contributions to the studies reported in the manuscript. Authors will please obtain written permission for everyone acknowledged by name (including references to unpublished work) because readers may infer their endorsement of the paper and its conclusions.

If appropriate, a statement of grant support may be included. Names of grant sources should not be abbreviated.

Experimental Procedures
This journal endorses the principles embodied in the Declaration of Helsinki and expects that all investigations involving humans will have been conducted in conformity with these principles. It is expected that the “Guiding Principles in the Care and Use of Animals” will have been observed in all animal experimentation reported in *FJ*.

Auxiliary Publication
Additional detailed tables, appendices, descriptions of materials and methods, mathematical derivations, extra figures, and other supplementary matter too costly to be included in the journal article may be submitted for deposition without charge to the author with the American Society for Information Science (ASIS), National Auxiliary Publications Service. Material is depository by the Editorial Office with the consent of the author, and a footnote is carried in the published article to the effect that photoprints or microfiche copies are available at moderate cost.

Author Charges
Authors are allowed a certain amount of illustrative material free of charge. Normally this will cover the equivalent of one full page of tables, figures, and halftones, or a half page of chemical and mathematical formulas and equations. Authors are charged for material exceeding this allowance. When excess charges are anticipated, authors should make the necessary arrangements at the time a manuscript is submitted (i.e., initiation of an institutional purchase order, obligation of funds under a grant, etc.).

Page Charges
No page charges are made for any material appearing in *FJ*, irrespective of the source of such material.

Page Proofs
Two sets of page proofs together with the original manuscript are sent to the author. Proofs should be carefully checked without delay and any necessary changes or printer's errors (to be marked in red) should be clearly indicated in the margins. Except for correction of typographic errors, the cost of authors' alterations of subject matter in type will be charged to authors if these charges exceed the journal's allowance. Proofs should be returned promptly to the Editorial Office, *The FASEB Journal*, 9650 Rockville Pike, Bethesda, MD 20814, USA. A delay in returning the proofs will result in a delay in publication.

Reprints
Each author receives with the proofs a reprint order form that must be completed and returned with the proofs to the Editorial Office if reprints are desired. Orders submitted after the journal is printed are subject to considerably increased prices.
EJ EMPLOYMENT OPPORTUNITIES

POSITIONS AVAILABLE — Classified advertisement rates: $160.00 for the first column inch, $145.00 for each additional inch or portion thereof. A column inch consists of eight lines, each 21 picas or 3½ inches long and containing approximately 70 characters (letters, numbers, symbols, punctuation marks, spaces). Display advertisement rates: $535.00 for a ¼ page (3½ inches × 5 inches); $800.00 for a ½ page (vertical 3½ inches × 10 inches or horizontal 7⅞ inches × 5 inches); $1070.00 for a full page (7¼ inches × 10 inches); copy received not camera-ready is subject to an additional typesetting fee of approximately 5% of the rate. Advertisements will be published in the next available issue unless otherwise specified. Payment or purchase order is required with insertion copy. Advertisements are noncommissionable to agents; no cash discounts are allowed. Blind advertisements are not accepted.

POSITIONS DESIRED — Candidates registered with the FASEB Placement Service are allowed one nondisplay advertisement of five lines, each containing approximately 70 characters (letters, numbers, symbols, punctuation marks, spaces). The issue in which the advertisement appears will be based on the date of receipt of copy. Fee for publication in additional issues: $10.00 per issue.

Primary employers desiring identification and additional details concerning Positions Desired advertisers should write to the address below, indicating the hyphenated 5-digit number appearing as the last element of the advertisement; a one-page application from advertiser(s) will be provided immediately. Advance telephonic determination of current availability of advertisers from earlier-than-current issues is recommended. Employers not currently registered with the Placement Service are charged a minimum fee of $30.00 for identification of up to 10 advertisers, plus $3.00 for each above 10, payable in advance to the FASEB Placement Service.

Some registered candidates do not prepare Positions Desired advertisements; some advertisements are published at times not coinciding with employer recruitment activities. Therefore, primary employers not finding advertisements herein that appear to match current or projected needs are invited to request a search of all active candidate files; telephone or write a description of the desired qualifications, including the date by which the position is to be filled and any special considerations. Results of the search will be discussed telephonically with the requesting official, and applications from candidates declared suitable will be forwarded. Employers not currently registered with the Placement Service are charged a minimum fee of $30.00 for up to 10 applications, plus $3.00 for each above 10; an invoice will be forwarded with the applications.

In publishing these advertisements FASEB assumes no obligations as to qualifications of prospective employees or responsibility of employers, nor shall FASEB obtain further information concerning positions advertised or those seeking employment. Accuracy and completeness of all listings are the responsibility of the submitting party. Replies to announcements should carry copies of supporting documents, not original documents.

Various U.S. state and national laws against discrimination, including the Federal Civil Rights Act of 1964, prohibit discrimination in employment in the United States because of race, color, religion, national origin, age, sex, or any reason not based on a bona fide occupational qualification. The Federation of American Societies for Experimental Biology endorses these principles and reserves the right to edit all copy and to refuse advertisements not in consonance therewith.

Employment in countries other than the United States may be restricted by government visa and other policies. Moreover, it is suggested that the generally accepted employment practices, the cultural conditions, and the exact provisions of the specific positions being considered be investigated thoroughly. The U.S. Embassies in countries of interest to potential employees should be able to provide up-to-date data concerning internal conditions.

For a description of operation at annual meetings, please refer to the January or February issue or contact the Placement Service. Address all correspondence to FASEB Placement Service, 9650 Rockville Pike, Bethesda, MD 20814. (301) 530-7020

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POSSESSIONS AVAILABLE

CHAIRPERSON, DEPARTMENT OF PHYSIOLOGY AND BIO PHYSICS. The College of Medicine, University of Tennessee, Memphis, requests applications for the position of professor and chairperson of its Department of Physiology and Biophysics. The department has a distinguished faculty whose members have active, well-funded research programs. It is located on the campus of one of the nation's largest health science centers. Applicants should hold the Ph.D. and/or M.D. degree or equivalent, be distinguished investigators, have strong credentials in the educational arena, and be capable of providing vigorous academic leadership for this major basic science department. Candidates are requested to submit a CV and names and addresses of at least three references no later than December 1, 1987, to Murray Heimberg, Ph.D., M.D., Chairperson, Physiology and Biophysics Advisory Committee, The University of Tennessee, Memphis, College of Medicine, 800 Madison Ave., Memphis, TN 38163. As an equal opportunity employer, The University of Tennessee, Memphis is committed to an aggressive affirmative action effort and encourages minority applications.

THE DEPARTMENT OF PATHOLOGY, ALBERT EINSTEIN MEDICAL CENTER IN PHILADELPHIA invites applications for the position of research assistant-associate of experimental pathology. Applicants should have a Ph.D. degree with interest in biology of cancer and experience in basic cell biological techniques, in situ hybridization, flow cytometry, and tissue culture. Responsibilities will include providing direction in developing interdisciplinary research projects throughout the institution. The position is available immediately. Please submit CV and references to I. Daskal, M.D., Ph.D., Chairperson, Department of Laboratories, Albert Einstein Medical Center, York and Tabor Rd., Philadelphia, PA 19141. EOE/AAP.

FACULTY POSITION IN PHARMACOLOGY. A faculty position in pharmacology is available on or before November 1, 1987, at the research assistant professor level. Applicants should have a strong background in biochemical techniques and extensive experience in investigation of mechanisms of regulation of cyclic AMP synthesis, including techniques for resolution, reconstitution, and purification of components of the hormone-sensitive adenylate cyclase complex. Interested persons should send their CV to Dr. Alfred G. Gilman, Department of Pharmacology, The University of Texas Health Science Center at Dallas, 5323 Harry Hines Blvd., Dallas, TX 75235. An equal opportunity employer.
CHAIRPERSON, DEPARTMENT OF ANATOMY. The Uniformed Services University of the Health Sciences is conducting a search for chairperson of the Department of Anatomy of the F. Edward Hebert School of Medicine. Candidates should have an earned doctoral degree in anatomy, cell biology, neurobiology, or related field; a distinguished record of research; substantial experience in teaching (preferably in medical school); and demonstrated leadership and administrative ability. The position will be available by June 1, 1988; starting date is negotiable. Salary will be commensurate with qualifications. All applications received by November 1, 1987, will be considered, but the position will remain open and applications will be accepted until an appointment is made. Candidates should submit CV and bibliography, statement of research interests and teaching philosophy, and names of three professional references to Chairperson, Anatomy Search Committee, c/o Civilian Personnel Directorate, Uniformed Services University of the Health Sciences, 4301 Jones Bridge Rd., Bethesda, MD 20814. USUHS is an equal opportunity/affirmative action employer.

IMMUNOLOGIST—MICROBIOLOGY FACULTY POSITION. Medical School Department of Microbiology seeks candidates for assistant professorship (tenure track). Position is available June 1, 1988. Starting date is negotiable, and position will remain open until filled. Experience in the molecular biology of the immune response is desirable. Responsibilities include teaching in the second-year medical microbiology course for medical students and in graduate courses. The candidate will be expected to develop his/her own independent research program. Doctoral degree and postdoctoral research experience are required. Salary commensurate with training and experience. Please submit CV and bibliography, description of research interests, major publications, and names of three professional references to Randall K. Holmes, M.D., Ph.D., Professor and Chairperson, Department of Microbiology, c/o Civilian Personnel Division, Uniformed Services University of the Health Sciences, 4301 Jones Bridge Rd., Bethesda, MD 20814-4799. CV will not be returned. Equal opportunity/affirmative action employer.

THE DEPARTMENT OF MICROBIOLOGY AT THE UNIVERSITY OF VERMONT is seeking to expand its research base in molecular genetics. To do this, a significant number of tenure-track faculty will be recruited at both the assistant and associate professor levels. The department will be housed in a new Microbiology Center currently under construction. Interim renovated space and start-up funds are available. Faculty members will have appointments in both the College of Medicine and the College of Agriculture and Life Sciences. Departmental teaching responsibilities are to undergraduate, graduate, and medical students. Applications will be accepted until November 30, 1987, or until satisfactory candidates are selected. Strong applicants should send their CV, present and future research plans, and the names and addresses of at least three references to Dr. Susan S. Wallace, Professor and Chairperson, Department of Microbiology, University of Vermont, Burlington, VT 05405. An equal opportunity/affirmative action employer. Women and minorities are encouraged to apply.

PHYSIOLOGIST. The Sanders-Brown Center on Aging at the University of Kentucky invites applications for a tenure-track faculty position for a physiologist with research expertise in some aspect of the physiology of acute stroke. This position is part of a major multidisciplinary initiative in stroke research at the university. The successful candidate will have an academic appointment in the Department of Physiology and Biophysics or another appropriate department within the university. A letter of interest, a recent CV, and names of three references should be submitted to David R. Wnekstein, Ph.D., Associate Director, Sanders-Brown Center on Aging, 101 Sanders-Brown Bldg., University of Kentucky, Lexington, KY 40536. The University of Kentucky is an equal opportunity employer.

POSTDOCTORAL RESEARCH FELLOWSHIP. Position available immediately under a private grant to study acute and chronic effects of nonpulsatile blood flow in large animals. The candidate should hold a Ph.D., and experience in experimental physiology is required. Salary commensurate with experience. Submit CV with names of three references to Dr. L. Golding, Thoracic and Cardiovascular Surgery, Cleveland Clinic Foundation, 9500 Euclid Ave., Cleveland, OH 44106.

RESEARCH OPPORTUNITIES
Opportunities to conduct research at the National Center for Toxicological Research, a Food and Drug Administration laboratory in Jefferson, Arkansas. Research efforts at NCTR focus on testing the assumptions used in assessing risks posed by toxic chemicals emphasizing studies in biomarkers, modulators of toxicity, and extrapolation/exposure assessment.

POSTGRADUATE RESEARCH
- Up to 2 years of support for recent MS or PhD recipients

FACULTY RESEARCH
- Summer or sabbatical support for college or university faculty

INFORMATION AND APPLICATIONS
- U.S. citizenship or permanent resident alien status required
- Deadline continuing
- Please indicate if interested in faculty or postgraduate program

ORAU Research Programs at NCTR
University Programs Division
Oak Ridge Associated Universities
P.O. Box 117
Oak Ridge, TN 37831-0117
(815) 576-3190

FJ EMPLOYMENT OPPORTUNITIES
TWO POSTDOCTORAL POSITIONS: MOLECULAR BIOLOGIST AND CELLULAR IMMUNOLOGIST. Ph.D. (or M.D. with research experience) to work on immunogenetics of human immune response to allergens. Molecular biologist must have solid background in rDNA technology, including DNA sequencing. Cellular immunologist should preferably have experience in T cell cloning. Experience in protein purification/characterization advantageous for both positions. Demonstrated research creativity and publications essential. Send CV, copies of at least two publications, and names of three or four referees to David G. Marsh, Ph.D., Johns Hopkins University School of Medicine, Good Samaritan Hospital, Baltimore, MD 21239. Affirmative action/equal opportunity employer.

POSTDOCTORAL FELLOWSHIP. Starting fall 1987 for research on the interaction of endogenous opioid peptides with the sympathoadrenal system in fetal and neonatal sheep. Background in pharmacology, neurophysiology, and biochemistry of these areas. RIA, radioenzymatic assays and molecular biology. Send resume, two letters of recommendation, and summary of research interests to Dr. J. F. Padbury, Research and Education Institute, Inc., Harbor-UCLA Medical Center, 112 W. Carson St., Torrance, CA 90502. Salary negotiable. AA/EOE.

POSTDOCTORAL POSITION now available for a 2-year study of cell pH and calcium in epithelial and smooth muscle cells. Signal transduction, protein processing, and the regulation of ion transport will be studied by using fluorescence spectroscopy, computer-assisted image analysis, and transport techniques. U.S. citizenship required. Contact Dr. Mark Graber, Bldg. 61-151, VAMC, Northport, NY 11768; telephone 516-261-4400 ext. 2875.

POSITIONS DESIRED

Ph.D., 1977; Chemistry, Physical inorganic, Solution chemistry, thermodynamics and kinetics in solution, synthesis; Macrocyclic ligands and coordination complexes, characterization, IR, NMR, bioinorganic organic; Available immediately; Research and/or teaching; Salary negot. 2-2306

Ph.D., 1974; Physical biochemistry; Experience in enzymology/protein purification and characterization, rDNA techniques, tissue culture, nucleic acid biochemistry, teaching biochemistry, physical chemistry, general chemistry; Date, salary negot.; Research or teaching and research preferred. 2-2307

Ph.D., 1986; Biochemist/radiochemist; Extensive experience with radioisotopic metabolic studies in plants and animals, broad knowledge of modern chromatographic instrumentation, expertise in GC-MS, excellent oral and written commun.; Available immediately; Academia/industry; Salary negot. 2-2308

Ph.D., 1980; Analytical chemistry; Protein purification and chemical modification, solution chemistry, kinetics and reaction mechanism, TIC, HPLC, IR, AAS, bioinorganic/bioorganic, electrophoresis, gradient fractionation, research and/or teaching; Available immediately; Salary negot. 2-2309

Ph.D., 1985; Biochemistry and cell biology; Research interests include enzymology of chemical carcinogenesis, membrane signal transduction, and chromatin structure; Date negot.; Staff position in academia or industry; Salary open. 2-2311

Ph.D., 1988 (exp.); Cell physiology, protein chemistry; Experience in protein purification, glycoprotein analysis, isolation of primary hepatocytes, HPLC analysis of retinoids/glycoproteins; Available spring or summer 1988; Postdoctoral position in acad./ind.; Salary negot. 2-2312

Ph.D., 1985; Virology, molecular biology; Experience in library screening, hybridization techniques, gene expression: expression vectors, fusion proteins, Western blots, in vitro transcription, nuclear extracts; Date negot.; Postdoctoral or staff position in industry; Salary open. 2-2314

Ph.D., 1979; Microbiology, enzymology/protein chemistry; Experience in enzyme purification and characterization, HPLC, electrophoresis, background in tissue culture, biochemical toxicology, drug metabolism; Research position preferred; Salary negot. 2-2315

Ph.D., 1977; Cardiovascular, autonomic pharmacology/toxicology; Experience with radioligand receptor binding, radioimmunoaassay, biostatistics, isolated tissue preparations, cardiopulmonary bypass perfusion and hemodynamic measurements; Available immediately; No geographic pref.; Prefer position in industry or govt.; Salary range $38,000. 2-2402

Ph.D., 1970; Biotechnology, protein chemistry-structure, immunochimistry; cell culture; Familiar with molecular biology, recombinant DNA and protein engineering, research on molecular biology of immune regulation, many publications and ideas successfully used in industry; Available immediately; Position in industry; Salary negot. 2-2414

M.D., 1983, ABIM, 1985; Bd. elig. endocrinology 1987, university trained, basic research: peripheral neuroendocrine, growth hormone receptor physiology, clinical research: D.M./cardiovascular; Avail. July 1988; Prefer city in northeast; Desire academic post with patient care/teaching. E-128

M.D., 1977 (London), ABIM, 1986; Bd. elig. endocrinology/metabolism, academic training, research obesity/diabetes/metabolism/hormone physiology; Avail. negot.; Desire academic/teaching/practice sector. E-162

Ph.D., 1985; Neuroendocrine pharmacology; HPLC catecholamines/enkephalins, research in vitro/in vivo corelease studies/interaction with CV system; Avail. Oct. 1987; Desire faculty/industry. E-163

Ph.D., 1983; NIH reproductive endocrinology postdoc., research physiology/biochemistry of gonadotropins/receptors, purification/antibody production characterization of gonadals proteins, assay development/bioactive serum gonadotropins; Avail. fall 1987; Desire academic/industrial research position. E-164

Ph.D., 1987; Physiology/endocrinology/reproduction; Research hormonal regulation of glycoprotein hormone biosynthesis and secretion, hormonal control of ovarian steroid production, steroid metabolism; Avail. Jan. 1988; Desire postdoc. E-165

M.D., 1970, ABIM, 1975, AB endocrinology/metabolism, 1977; University/NHI trained, research pituitary/obesity/renin; Avail. immediately; Desire teaching/research/patient care. E-167

Ph.D., 1986; Endocrinology/reproductive physiology; Postdoc. exp., research hormone secretion mechanism, opioid-reproduction interaction, pituitary cell culture/reverse hemolytic plaque assay, RIA/receptor binding assays; Avail. Jan. 1988; Desire industrial/academic/teaching; Salary negot. E-168

Ph.D., 1987 (expected); Physiology, neurobiology, reproductive endocrinology; Research hypothalamus-pituitary-gonadal hormone regulation, small-animal surgery and histology, radioimmunoassay; Avail. Jan. 1988; Desire postdoc. or training. E-170.


Ph.D., 1985; Chemistry, biochemistry; Research androgen receptor isolation/cell-cell interaction, cell labeling, protein purification, FPLC, EPR, two-dimens. gels, glycoprotein modification and isolation; Avail. July 1988; Desire academia. E-172

Ph.D., 1985; Biochemistry, endocrinology; Research interests: steroid hormone regulation of gene expression, nuclear acceptor sites/components, molecular biology techniques, androgen action; Avail. March 1988. E-173

M.D., 1982; Ob/gyn. resid. 1986, repro. endo. fellowship 1988, univ. trained, NIH research HPO axis physiology, clinical/basic, RIA, tissue culture, clinical experience, IVFGIFT, lasers; Avail. July 1988; Prefer mid-southeast; Desire clinical practice/IVF/academia/research. E-192
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