

T C O M

research notes

Volume 6, Number 4

Published by the Research Office
Texas College of Osteopathic Medicine

December, 1990

HAPPY HOLIDAYS

Best wishes for a happy holiday season from the Research Office staff! Some grant proposal deadlines may fall during our holiday break from December 24, 1990 to January 1, 1991. Please submit your grant proposals for final approval before December 21, 1990, if the deadline falls somewhere during our holiday break. Thank you for your cooperation.

NIH RETURNS GRANT PROPOSALS WITHOUT REVIEW: A CASE HISTORY

The NIH Referral and Review Branch in the Division of Research Grants reviews every grant application to determine if they are legible and properly prepared before they are accepted for review. The specific instructions that apply to the type used in the preparation of an application appears on page 12 of the Grant Application Form PHS 398: **"This application has been designed for optical character recognition. Black type should be used throughout. For the first page, the type width must be 10 characters per inch. For the rest of the application, the type must not be smaller than 15 characters per inch. In addition, the type must not be reduced in height, but should be the standard size, which is 10 to 12 points (approximately 1/8 inch for capital letters)."** The case in question resulted in the return of the proposal based on the following justification: "Unfortunately, the type used in the preparation of your application is too small to be acceptable, since type of this size makes it difficult for the reviewers on the study section to read" and later, "The type size restrictions apply to tables, figures and figure legends. The problem with your application lies in the figures on pages 26, 28, and 29." The main body of the proposal met all other specifications except for these three figures. NIH is cracking down and enforcing type and pagination requirements. This can mean a delay of several months until the next grant application cycle. **Principal investigators are responsible for the final proposal format before the grant application is submitted to NIH. Pagination limitations are given on page 19 and 20 under Specific Instructions - Section 2.** Please follow these instructions to avoid any undue delay in the processing and review of your proposals.

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MEETINGS AND CONFERENCES OF INTEREST

The Sixth Annual Conference sponsored by the Dwight D. Eisenhower Mathematics and Science Higher Education Grants Program at the Texas Higher Education Coordinating Board, will be held at the Guest Quarters Suite Hotel, 303 West 15th Street, Austin, Texas 78701, January 31 and February 1, 1991. This conference will explore the issues of restructuring science teaching at the college level, restructuring mathematics and science training for the preservice and inservice teachers, technology education as a tool of restructuring, and alternative approaches to evaluation and performance assessment. Persons interested in attending this meeting may obtain registration forms from the Research Office.

RECENT PUBLICATIONS

Benjamin, D., H. Lal and L. R. Meyerson. 1990. The effects of 5-HT_{1B} characterizing agents in the mouse elevated plus-maze. *Life Sciences* 47: 195-203.

Dimitrijevič, S. D., M. Tatarko, R. W. Gracy, G. E. Wise, L. X. Oakford, C. B. Linsky, and L. Kamp. 1990. *In vivo* degradation of oxidized regenerated cellulose. *Carb. Res.* 198: 331-341.

Emmett-Oglesby, M. W., D. A. Mathis, R. T. Y. Moon, and H. Lal. 1990. Animal models of drug withdrawal symptoms. *Psychopharmacology* 101: 292-309.

Forster, M. J. and H. Lal. 1990. Animal models of age-related dementia: neurobehavioral dysfunctions in autoimmune mice. *Brain Res. Bull.* 25 (3): 503-516.

Jacobson, M. K., N. Aboul-Ela, M. Mingmuang, J. Moss, and E. L. Jacobson. 1990. Modification of plasma membrane protein cysteine residues by ADP-Ribose *in vivo*. *Journal of Biological Chemistry* 265: 10825-10828.

M. K. Jacobson, N. Aboul-Ela, D. Cervantes-Laurean, P.T. Loflin and E. L. Jacobson. 1990. ADP-ribose levels in animal cells, *In ADP-Ribosylating Toxins and G-Proteins: Insights into Signal Transduction*, J. Moss and M. Vaughan, Eds., American Society for Microbiology, Washington, D.C., pp. 479-492.

Jackson, F. L. and R. J. Wordinger. 1990. Sensitivity to diethylstilbestrol (DES) induced abortions is influenced by the Whitten effect. *Reprod. Toxicol.* 4: 177-181.

Lal, H. and M. J. Forster. 1990. Flumazenil improves active avoidance performance in aging NZB/BINJ and C57BL/6NNia Mice. *Pharmacol. Biochem. Behav.* 35 (3): 747-750.

Papa, F. J., J. H. Shores, S. Meyer, R. O'Reilly, and R. J. Bourdage. 1990. The role of pattern matching and pattern discrimination in clinical problem solving. *In Teaching and Assessing Clinical Competence*. W. Beuder, R. J. Heimstra, A.J.I.A. Scherpbier, R.P. Zwiestra, Eds., BoekWerk Publ., Groningen, Netherlands, pp. 317-322.

Stanley, N. C., F. L. Jackson, and E. L. Orr. 1990. Attenuation of experimental autoimmune encephalomyelitis by compound 48/80 in Lewis rats. *J. Neuroimmunol.* 29: 223-228

Thomassin, H., M. K. Jacobson, A. Guay, J. Verreault, N. Aboul-Ela, L. Menard, and G.G. Poirier. 1990. An affinity matrix for the purification of poly(ADP-ribose) glycohydrolase. *Nucleic Acids Research* 18: 4691-4694.

Wilson, J. E. 1990. How surface-bound drugs inhibit thrombus formation. *Drug Dev. Res.* 21: 79-92.

Wise, G. E., V. L. Rudick, A. M. Brun-Zinkernagel, and W. Fan. 1990. Ultrastructural and immunocytochemical characterization of cultured cells from rat molar stellate reticulum. *Arch. Oral Biology* 35: 603-613.

R. J. Wordinger, J. Sutton and A. Braun-Zinkernagel. 1990. The ultrastructure of oocyte migration through the mouse ovarian epithelium during neonatal development. *Anatomical Rec.* 227: 187-198.

PAPER PRESENTATIONS

Paul F. Cook, Ph.D. Professor and Chairman, Department of Microbiology and Immunology and Acting Chairman for the Department of Biochemistry and Molecular Biology presented a paper entitled "The mechanism of the beta-replacement enzyme, O-acetylserine sulphydrylase" at the International Symposium on Vitamin B6 and Carbonyl Catalysis at Osaka, Japan, October 15-19, 1990.

Rafael Alvarez-Gonzalez, Ph.D. Assistant Professor, Department of Microbiology and Immunology, presented a paper entitled "ADP-ribosylation of G-proteins in rat liver utilizing 2'-deoxyNAD as a substrate for cholera toxin" and a poster presentation entitled "Covalent modification of the rat liver nuclear lamins with ADP-ribose polymers utilizing 3'-deoxyNAD as a substrate" at the 18th National Congress of the Biochemistry Society of Mexico held at San Luis Potosi, Mexico, November, 1990.

Tony Romeo, Ph.D. Assistant Professor, Department of Microbiology and Immunology, presented a paper entitled "Molecular cloning of genes that encode regulatory factors for glycogen biosynthesis in *Escherichia coli*" at the 18th National Congress of the Biochemical Society of Mexico held at San Luis Potosi, Mexico, November, 1990.

POSTERS PRESENTED

The following posters were presented at the recent meeting of the Society of Neuroscience held at St. Louis, Missouri by Drs. Harbans Lal, Michael Emmett-Oglesby, Michael Forster, Paul L. Prather, Mehdi Rezazadeh and Ejem Ahanotu from the Department of Pharmacology.

M. J. Forster, C. A. Barnes, M. Fleshner, E. N. Ahanotu, M. L. Laudenslager, R. S. Mazzeo, S. F. Maier, and H. Lal. "Failure to modify spatial memory, brain autoimmunity and humoral immune response"

H. Lal, M. Flores, and M. J. Forster. "A delayed reversal paradigm for assessment of age-associated decline in memory capacity of individual mice"

S. M. Rezazadeh, P. Prather, and H. Lal. "Anxiogenic behavior during ethanol withdrawal: reversal by buspirone as evaluated in the elevated plus maze"

E. N. Ahanotu, H. Lal, P. L. Prather, and M. J. Forster. "Caloric restriction prevents age-associated impairments in learning of a maze strategy by autoimmune mice"

P. L. Prather, and H. Lal. Anxiogenic stimulus produced by cocaine are potentiated during protracted withdrawal from concurrently administered cocaine and ethanol in rats"

D. Benjamin, E. I. Saiff, J. Coupet, and H. Lal. Down regulation of brain 5HT₂ receptors underlies anxiolytic effect produced by sustained treatment with Gepirone"

S. L. Pugh, S. L. Abdel-Malek, and M. W. Emmett-Oglesby. "Withdrawal and cross tolerance in rats made dependent on chlordiazepoxide"

G.A. Rowan, and M. W. Emmett-Oglesby. "Discriminative stimulus properties of flumazenil during chronic chlordiazepoxide treatment"

RECENT RESEARCH AWARDS

FRANK J. PAPA, D.O. AND JAY H. SHORES, Ph.D., PROJECT DIRECTOR, (Department of Medical Education) "Expert Systems Based Clinical Tutorial Project" Department of Education - The Comprehensive Program, Fund for the Improvement of Postsecondary Education (FIPSE), 09/01/90 - 08/31/91, \$92,826.

EXTERNAL GRANT PROPOSALS SUBMITTED

November 1, 1990 - November 30, 1990

JOHN R. BOWLING, D.O., (Department of General and Family Practice) "Predoctoral Training in Family Practice" PHS - Bureau of Health Professions, 07/01/91 - 06/30/94, \$519,970.

MICHAEL B. CLEARFIELD, D.O., (Department of Medicine) "Prolonged and Exaggerated Post-prandial Hyperlipidemia as an Indicator of CHD Risk" American Osteopathic Association, 09/01/1991 - 08/31/92, \$18,000.

H. FRED DOWNEY, Ph.D., (Department of Physiology) "American Physiological Society of High School Science Teachers Research in Physiology Program" American Physiological Society, 06/01/91 - 08/15/91, \$3,250.

H. FRED DOWNEY, Ph.D., (Department of Physiology) "Introduction to Experimental Physiology for High School Science Students" Texas Education Agency and Grandbury Independent School District, 09/01/91 - 05/31/92, \$15,000.

BEN G. HARRIS, Ph.D., (Department of Biochemistry) "Minority High School Student Research Apprentice Program" NIH - National Center for Research Resources, 03/01/91 - 02/29/92, \$17,000.

JANICE A. KNEBL, D.O., (Department of Medicine) "Improving Functional Ability in the Elderly by Osteopathic Manipulative Treatment" American Osteopathic Association, 09/01/91 - 08/31/92, \$17,850.

ANDRAS G. LACKO, Ph.D., (Department of Biochemistry) "Alteration of Plasma Components in Alzheimer's Disease" American Health Assistance Foundation, 04/01/91 - 03/31/93, \$99,750.

ROBERT T. MALLET, Ph.D., (Department of Physiology) "Calcium Homeostasis in Postischemic 'Stunned' Myocardium" American Health Assistance Foundation, 04/01/91 - 03/31/93, \$30,000.

RAYMOND M. PERTUSI, D.O., (Department of Medicine) "Mechanism of Altered Poly(ADP-ribose) Metabolism in Systemic Lupus Erythematosus" American Osteopathic Association, 09/01/91 - 08/31/92, \$16,918.

PETER B. RAVEN, Ph.D., (Department of Physiology) "Education of Scientists in Cardiovascular Regulation" NIH - NHLBI, 07/01/91 - 06/30/92, \$55,391.

PETER B. RAVEN, Ph.D., (Department of Physiology) "Validation of the Portable Cosmed K2 Oxygen Uptake/Heart Rate Telemetry System Based on Studies of Anaerobic and Aerobic Arm and Leg Exercise for Use in the Evaluation of Spaceflight IVA and EVA Work Tasks and Exercise Routines" NASA, 02/01/91 - 01/31/92, \$51,000.

PETER B. RAVEN, Ph.D., (Department of Physiology) "The Immunological Effects of Exercise on HIV+ Subjects" American College of Sports Medicine Foundation, 07/-01/91 - 06/30/92, \$18,220.

KONRAD W. SCHEEL, Ph.D., (Department of Physiology) "Effects of Decreased Venous Pressure on Coronary Perfusion" American Osteopathic Association, 09/01/91 - 08/31/92, \$15,143.

KONRAD W. SCHEEL, Ph.D., (Department of Physiology) "The Effects of Coronary Venous Pressures on Coronary Perfusion" Lizanell and Colbert Coldwell Foundation, 04/01/1991 - 03/31/92, \$19,985.

TOM YORIO, Ph.D., SENIOR ADVISOR, AND YING JIN, M.D., Ph.D., **PRINCIPAL INVESTIGATOR** (Department of Pharmacology) "Cellular Mechanisms of Alpha2 agonist-induced ocular hypotension" American Health Assistance Foundation, 04/01/91 - 03/31/92, \$24,900.

STEPHEN WEIS, D.O., (Department of Medicine) "Regulation of High Density Lipoprotein (HDL) Levels" American Osteopathic Association, 09/01/91 - 08/31/92, \$18,000.

NEW NSF APPLICATION GUIDE AND FORMS

The new National Science Foundation application guide entitled *Grants for Research and Education in Science and Engineering*, NSF 90-77, replaces 83-57, should now be used for all grant applications to NSF. There are some important changes to the new cover sheet page, a new form entitled *Disclosure of Lobbying Activities*, and minor changes to other forms. These application booklets also provide instructions on how to prepare an NSF grant proposal. Copies are available from the Research Office.

MERIT REVIEW AT NSF

The National Science Foundation has just published a "Report of the Merit Review Task Force" that summarizes the recommended changes to the proposal application process. The short-term recommendations include: simplify budgets for individual investigator proposals; simplify proposal preparation and review (shorter proposals); automate processing of all continuing grant increments; implement use of Standard NSF Forms and electronic mail review templates; critically assess current practices at all levels; eliminate requirement for six-month extension memo. This report is available from the TCOM Research Office.

SPOTLIGHT ON RESEARCH

STANLEY R. INGMAN, Ph.D., Research Coordinator for Human Development and Gerontology at the University of North Texas and TCOM, is interested in project development, especially intercampus projects. Dr. Ingman can be reached at the Center for Studies in Aging (817) 565-2298 or through the Department of Medicine at TCOM (817) 735-2053. Professor Ingman recently received two grant awards just prior to his arrival at UNT. One grant was awarded through the Missouri Division on Aging, Department of Social Services entitled "Long Term Care Planning Initiative for Missouri" from the United States Administration on Aging. Dr. Ingman will serve as a consultant for this two-year planning effort in Missouri and he is beginning to develop a similar project in the State of Texas. Another project entitled "The Quality of Life of Nursing Home Residents: Use of Psychoactive Medications" was funded by The Retirement Research Foundation to analyze psychoactive drug prescribing among Medicaid patients in Missouri nursing homes.

NEW NIH/ADAMHA PEER REVIEW CONSULTANT FILE

The National Institutes of Health (NIH) and the Alcohol, Drug Abuse, and Mental Health Administration (ADAMHA) have established a new consultant file of peer reviewers. Reviewers will be selected from a national pool of scientists who are engaged in basic or applied research. Data from qualified respondents will be entered into a new computerized NIH/ADAMHA data base. This unique data base will be used as one source from which candidates for membership on NIH/ADAMHA committees and for other peer review activities are drawn. All qualified scientists are requested to participate. Scientists who are interested in participating should respond by letter requesting a copy of the NIH/ADAMHA Consultant File Information Form. Your request should be sent to: NIH/ADAMHA Consultant File, 4733 Bethesda Avenue, Suite 725, Department 02, Bethesda, MD 20814.

FUNDING OPPORTUNITIES

AMERICAN HEART ASSOCIATION, Texas Affiliate, Inc.

Cardiovascular Research Program, Grants-in-aid, 1991-92. Supports research in cardiovascular function and diseases, including stroke, or in related fundamental problems. Support is available for all basic disciplines, including physiology, biochemistry and pathology, as well as for epidemiological, clinical and behavioral studies as they apply to the prevention or treatment of cardiovascular disease. The program is designed primarily for young investigators beginning their independent research careers. Applications will be considered from senior investigators if they are experiencing a demonstrable funding hiatus or substantially changing direction in their research careers. Application requirements include: 1) doctoral degree; 2) U.S. citizenship, H-1 visa or permanent residence visa; and 3) full-time faculty appointment. Grant application packets are available from the research office. Please read the Guidelines and Instructions carefully before completing the application forms. Applications that are late or do not conform to the guidelines will be returned without review. Early submission of an application is desirable because clarification of details is possible at this time. **DEADLINE: Must be postmarked by January 23, 1991.**

THE SMOKELESS TOBACCO RESEARCH COUNCIL, INC.

Grants-in-Aid - Funds are available to support research into questions of smokeless tobacco and health. Areas of relevant research include the elucidation of the etiology and pathogenesis of diseases claimed to be associated with smokeless tobacco. More information is available from the Research Office. Contact: The Smokeless Tobacco Research Council, Inc., 420 Lexington Avenue, New York, NY 10170, (212) 697-3485. **DEADLINES: December 31, June 30.**

FORD FOUNDATION GRANTS - In the area of population the foundation supports programs to strengthen reproductive health, the quality of family planning care, contraceptive safety, and the management of gynecological infections and sexually transmitted diseases. Additional information is available in the Research Office. Ford Foundation, Office of the Secretary, 320 East 43rd Street, New York, NY 10017, (212) 573-5169. **DEADLINE: NONE.**

THE ALZHEIMER'S DISEASE AND RELATED DISORDERS ASSOCIATION

Investigator-Initiated Research Grants - Support is provided for individual research projects that study the biological, clinical, and social/behavioral research relevant to degenerative brain diseases such as Alzheimer's Disease but must have the potential to add to our knowledge about relevant issues. Maximum \$45,000 per year for two or three years. Contact: Medical & Scientific Affairs, Alzheimer's Association, 70 East Lake Street - Suite 600, Chicago, IL 60601 or call (312) 853-3060. **DEADLINE: January 15, 1991.**

THE PROCTOR & GAMBLE COMPANY

University Exploratory Research Program - Funds are available to support exploratory research within the broad areas of the biological sciences. These proposals should be in new areas of emerging science of mutual interest to the university scientist and Proctor & Gamble. Programmatic information is available from the Research Office or contact (202) 872-1300. **DEADLINE: January 1, 1991.**

AMERICAN FEDERATION FOR AGING, INC.

Biomedical Research in Gerontology and Geriatrics - AFAR supports basic and clinical research on all biomedical aspects of aging. AFAR is especially interested in research dealing with the basic mechanisms of aging, the role of aging in predisposing to disease and such age-related disorders as incontinence, memory loss and confusion, and sensory failure. Proposals from investigators entering the field of aging are especially welcome. Applicants must be citizens or permanent residents of the U.S. with an M.D. or Ph.D. degree. More information is available from the Research Office or contact (212) 570-2090. **DEADLINE: January 15, 1991.**

AMERICAN INSTITUTE FOR CANCER RESEARCH

Small Grant - The institute funds feasibility studies in support of new hypotheses to increase our understanding of the role of dietary and nutritional factors in the etiology, pathogenesis or treatment of cancer. The funding limit for small grants is \$10,000 for total direct costs for one year, non-renewable. Additional information is available from the Research Office or contact (202) 328-7744. **DEADLINE: February 1, 1991.**

ALCOHOLIC BEVERAGE MEDICAL RESEARCH FOUNDATION

Research Grants - The missions of this foundation is to contribute new knowledge toward the prevention of alcohol misuse and alcoholism. Additional information is available from the Research Office or contact (301) 327-0361. **DEADLINE: February 1, 1991.**

AMERICAN CANCER SOCIETY

Research Development Program Grants - Applications must be in basic or clinical research. Grants are awarded to provide rapid funding for a variety of critical and urgent needs in scientific investigations related to cancer which cannot be supported quickly through the Society's other grant programs. Grants are usually made for a period of up to twelve months and in amounts under \$75,000. **DEADLINE: NONE.**