



T C O M research notes

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RESEARCH AWARDS RECEIVED - NOVEMBER - DECEMBER, 1986

PATRICK CAMMARATA, PH.D., "Structural Molecule Interaction of Lens Cell-Lens Capsule" Special Visual Sciences Research Award - NEI (third year of three), \$38,509 from 12/01/86-11/30/87 (Department of Anatomy).

ANDRAS LACKO, PH.D., "Enzyme/Substrate Interactions of the Lecithin Cholesterol Acyltransferase Reaction" Collaborative Research Grants Program - NATO Scientific Affairs Division, \$3,500 from 12/01/86 - 11/30/87 (Department of Biochemistry).

PETER B. RAVEN, PH.D., "Exercise Training and Baroreceptor Function" NHLBI (first year of four), \$109,282 from 12/01/86 - 11/30/87 (Department of Physiology).

KONRAD W. SCHEEL, PH.D. "Mechanism of Coronary Vascular Adaptation" NHLBI (second year of five), \$136,000 from 12/01/86 - 11/30/87 (Department of Physiology)

TOTAL FUNDING THIS PERIOD

\$287,291

RESEARCH PROPOSALS SUBMITTED NOVEMBER - DECEMBER, 1986

- "Neuromuscular Responses to Manipulative Treatment and Postural Balancing" (1 year) **DAVID BARKER, PH.D.** and **ROBERT IRVIN, D.O.** (Departments of Physiology/Manipulative Medicine).
- "Processing of AIDS Related Mycobacterial Antigens" (5 years) **WILLIAM BARROW, PH.D.** (Department of Microbiology / Immunology).
- A - "Endogenous Opiate Interactions with the Sympathetic Innervation of the Heart" (1 year) **JAMES CAFFREY, PH.D.** (Department of Physiology).
- NEI - "Aldose Reductase in Basal Lamina-Eicosanoid Dysfunction" (5 years) **PATRICK CAMMARATA, PH.D** (Department of Anatomy).
- NHLBI - "Minority Hypertension Research Development Grant" (1 Year) **EDWARD E. ELKO, PH.D.** (Department of Pharmacology).
- AOA - "Autoimmunity, Aging and Habituation Memory" (1 year) **MICHAEL FORSTER, PH.D.** (Department of Pharmacology).

- ACS - "Adjunctive Therapeutic Role of Hyperbaric Oxygen in Treatment of Patients with Lung Cancer on Intensive Antineoplastic Treatment" (2 years) **ROBERT GARMON, D.O.** (Department of Medicine).
- NIA - "Molecular Basis for 'Abnormal' Proteins in Aging Cells" (5 years) **ROBERT W. GRACY, PH.D.** (Department of Biochemistry).
- AOA - "Endurance Training Alters Baroreceptor Control System" (1 year) **PATRICIA GWIRTZ, PH.D.** (Department of Physiology).
- NIH - "Exercise Training and Coronary Vascular Responsiveness" (5 years) **PATRICIA GWIRTZ, PH.D.** (Department of Physiology).
- NSF - "Alteration of Baroreceptor Control Systems During Exercise Training" (2 years) **PATRICIA GWIRTZ, PH.D.** (Department of Physiology).
- AOA - "Mechanisms of Immune Modulation during Murine Behavioral Despair" (1 year) **ELIZABETH HARRIS, PH.D.** (Department of Microbiology /Immunology).
- AOA - "Visceral and Musculoskeletal Reflexes: Effects on Cardiac and Coronary Function" (1 year) **CARL JONES, PH.D.** (Department of Physiology).
- NIH - "Substrate Specificity of LCAT" (5 years) **ANDRAS G. LACKO, PH.D.** (Department of Biochemistry).
- NIH - "Minority High School Student Research Apprentice Program" (1 year) **ANDRAS G. LACKO, PH.D.** (Department of Biochemistry).
- AOA - "Study of Plasma Cholesterol Homeostasis" (1 year) **ANDRAS G. LACKO, PH.D.** (Department of Biochemistry).
- VESTRA-SUBCO, INC. - "Development of a Home Cholesterol Kit" (contract 1 year) **ANDRAS G. LACKO, PH.D.** (Department of Biochemistry).
- NIH - "Biomedical Research Support Grant" (1 year) **ANDRAS G. LACKO, PH.D.** (Department of Biochemistry).
- AMERICAN FOUNDATION FOR AGING RESEARCH - "Age-Related Alterations of Plasma Cholesterol Metabolism" (1 year) **ANDRAS G. LACKO, PH.D.** (Department of Biochemistry).
- CIBA-GEIGY - "Effectiveness of CGS 9895 and CGS 9896 in Alleviating Diazepam Withdrawal" (continuing) **HARBANS LAL, PH.D.** (Department of Pharmacology).
- FARMOS GROUP, LTD. - "Methomidine's Efficacy" (continuing) **HARBANS LAL, PH.D.** (Department of Pharmacology).
- NIH - "Characterization of Ethanol Withdrawal" (1 year) **HARBANS LAL, PH.D.** (Department of Pharmacology).

- AOA - "Chronic Administration and Withdrawal from Cocaine: A Behavioral Analysis of Anxiogenic Effects" (1 year) **HARBANS LAL, PH.D.** and **S/D DOUGLAS WOOD** (Department of Pharmacology).
- NOF - "Field Study of the Efficacy of Prophylactic Knee Braces" (1 year) **RAY MOSS, PH.D.** and **CHRISTOPHER MANN, D.O.** (Department of Public Health and Preventive Medicine).
- NIH - "Regulation and Reactivity of the H4 Protein Kinase" (5 years) **RUTHANN MASARACCHIA, PH.D.** (Department of Biochemistry).
- AOA - "Regulation of Potassium Channels in the Heart by Muscarinic Receptors" (1 year) **EUGENE QUIST, PH.D.** (Department of Pharmacology).
- TANDY FOUNDATION - "Role of Hyperbaric Oxygen Therapy in the Treatment of Neurological and Perfusion Disorders" (2 years) **PETER B. RAVEN, PH.D.** (Department of Physiology).
- BRISTOL-MYERS, CO. - "Evaluation of Potential Drugs for Improvement of Cognition" (1 year) **KONRAD RETZ, PH.D.** (Department of Pharmacology).
- AOA - "Homeostatic REGulation of Inflammation in Rheumatoid Arthritis" (1 year) **BERNARD RUBIN, D.O.** (Department of Medicine).
- NATIONAL LEUKEMIA ASSOCIATION - "Regulation of Leukemia Cell Differentiation in In Vitro and In vivo Model" (2 years) **MING-CHI WU, PH.D.** (Department of Biochemistry)
- NIH - "Colony-Stimulating Factors and Modulation of Myelopoiesis" (5 years) **MING-CHI WU, PH.D.** (Department of Biochemistry).
- AOA - "Cellular Mechanisms in the Autonomic Control of the Intraocular Pressure" (1 year) **THOMAS YORIO, PH.D.** (Department of Pharmacology).
- AOA - "Effects of Eicosanoids on Epithelial Acidification and Morphology" BURROUGHS WELLCOME FELLOWSHIP (1 year) **THOMAS YORIO, PH.D.** and **S/D RAY PAGE** (Department of Pharmacology).

TOTAL FUNDING REQUESTED

\$4,754,213

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PRESENTATIONS AT MEETINGS

The 1986 Meeting for the Society for Neuroscience was held in Washington DC, November 9-14. The following papers were presented by the members of the Department of Pharmacology:

"Temporal Decay of Memory for T-Maze Escape Learning by Mice: A Novel Procedure Which Detects Memory-Enhancing Drugs" presented by Konrad Retz (other authors: Michael Forster, M. Popper, S. Paul and Harbans Lal).

"Age-Dependent Declines in Reflexive and Motor Capabilities: Similarities Between Senescent C57BL/6NNIA and Young Autoimmune Mice" presented by Michael Forster (other authors: M. Popper, S. Paul, Konrad Retz and Harbans Lal).

"Low Dose Pentylenetetrazol Discrimination Established By a Stimulus-Fading Technique" presented by Cynthia M. Harris (other author: Harbans Lal).

"A Subjective Effect of Diazepam Withdrawal Is Enhanced By Bicuculline" presented by Smart O. Idemudia (other authors: Diane Mathis, Harbans Lal and Cynthia Harris).

"A Subjective Effect of Diazepam Withdrawal Is Blocked By Phenobarbital" presented by Diane Mathis (other authors: Cynthia Harris, Smart Idemudia, Michael Emmett-Oglesby and Harbans Lal).

"The Effects of Chronic Apomorphine and Blockade By Sulpiride To The Discriminative Stimulus Properties of Cocaine" presented by Doug Wood (other author: Michael Emmett-Oglesby).

"Anxiolytic Activity of Ethanol Demonstrated in Pentylenetetrazol Discrimination" presented by Harbans Lal (other authors: Dan Benjamin and Cynthia Harris).

"Intraamygdala and Intracerebroventricular (ICV) Midazolam and RO5-3663: Effects on the Interoceptive Discriminative Stimulus Produced by Pentylenetetrazol" presented by Dan Benjamin (other authors: Michael Emmett-Oglesby and Harbans Lal).

Presentations made at other meetings included:

"The Relationship of the Estrous Cycle on Herpes Simplex Virus Type 2 Susceptibility in Female Mice" by A.G. Teepe, L.B. Allen and E.F. Harris presented at the Texas Branch of the American Society for Microbiology at Temple, TX on October 24, 1986.

"Decreased Mitogenic Response of Murine Spleen Cells Following Intraperitoneal Injection of Serovar-Specific Glycopeptidolipid Antigen from the Mycobacterium avium complex" by Lucilla Hooper and William Barrow presented at the "Host Defenses and Immunomodulation to Intracellular Pathogens" symposium sponsored by the Eastern Pennsylvania Branch of the American Society for Microbiology, Philadelphia, PA in November.

"ADP-ribosylation Inhibitors as Potentiators of Antitumor Drugs" at a meeting of the Texas Drug Development Consortium at Bourne, TX in November. Dr. Jacobson also chaired a session on "Pre-Clinical Pharmacology of Antitumor Agents" at this meeting.

PAPERS PUBLISHED AND SUBMITTED FOR PUBLICATION

Gwirtz, P., H. Mass, C.E. Jones and S Overn, "Alpha-1-adrenergic constriction limits coronary blood flow and cardiac function in running dogs" American Journal of Physiology, 250:H1117-H1126, 1986.

Gwirtz, P. and H. Mass, "Modulation of synchrony of left ventricular contraction by regional adrenergic stimulation in conscious dogs" American Journal of Physiology, 251:H490-H495, 1986.

Hooper, L.C., M.M. Johnson, V.R. Khera and W.W. Barrow, "Macrophage uptake and retention of radiolabeled glycopeptidolipid antigens associated with the superficial L1 layer of Mycobacterium intracellulare serovar 20" Infection and Immunity, 54:133-141 (October, 1986).

Hooper, L.C., U.D. Duncan, C.A. Lee, E.F. Harris and W.W. Barrow "Inflammatory and Immunosuppressive properties of glycopeptidolipid antigens associated with the Mycobacterium avium complex" submitted to Journal of Leprosy, November, 1986.

McAndrew, J.D. and H.F. Downey, "Blood flow to acutely ischemic myocardium during pericardial tamponade: Dominant influence of aortic blood pressure" Cardiovascular Research 20:822-827, 1986.

RESEARCH NOTES AND NEWS

Harbans Lal, Ph.D., Chairman of the Department of Pharmacology, was elected President of the Society for the Stimulus Properties of Drugs. The SSPD is an international society of scientists engaged in the study of the subjective effects (euphoria, dysphoria, anxiety, depression, pain, etc.) of drugs. Dr. Lal is a founding member of the society which was formed ten years ago. The society holds two national meetings every year and one international meeting every third year. Dr. Lal's research and clinical contributions are in the areas of neuropharmacology and mental illness.

Gary Wise, Ph.D., Professor and Chairman of Anatomy, has been invited to make a presentation at the International Conference on the Biological Mechanisms of Tooth Eruption and Root Resorption which will be held in Columbus, Ohio in November, 1987.

AAALAC SITE VISIT

The Animal Facilities will have a site visit by representatives of AAALAC on February 3, 1987. The site visit team will physically inspect our facilities, laboratories and review records. Please cooperate in any way possible if information is requested.

INSTITUTIONAL REVIEW BOARD FOR PROTECTION OF HUMAN SUBJECTS

Dr. Peter Raven, Chairman of the IRB, reminds all researchers that protocols involving the use of human subjects in research, must be reviewed by the Institutional Review Board prior to an application being submitted to a granting agency. The IRB meets on the first Tuesday of every month and all protocols (with the correct number of copies) should be submitted at least five (5) working days prior to the meeting. Protocols are reviewed on an individual basis and blanket approvals for related work is not given.

AOA TARGETS LOW BACK PAIN FOR RESEARCH STUDY

The AOA Bureau of Research recently targeted for study the efficacy of osteopathic manipulative therapy on low back pain. Funds from the AOA Bureau of Research will be combined with a recent \$90,000 grant from the Quad City Osteopathic Foundation to launch Phase I of the study, the design of a clinical research protocol for a multi-clinical site study.

The panel designing the protocol for the low back pain study will be chaired by Dr. Myron S. Magen, Dean of the College of Osteopathic Medicine, Michigan State University, and will include six technical experts, drawn from within and without the osteopathic profession, who are experienced in the development of clinical trial studies. These include an epidemiologist with significant experience in relevant biostatistical procedures, a neurologist with both clinical research and practice experience, an orthopedic surgeon with a background in industrial medicine, and an osteopathic physician with significant expertise in the study of manipulation. Three additional technical experts would review and critique the work of the panel at various stages.

It is estimated that design of Phase I of the project will take approximately one year. This would be followed by two to three years of pilot field tests in several typical clinical settings. If those tests show further study is warranted, a national clinical trial spanning at least three years would then be proposed.

NAVY SEEKS PROPOSALS FOR NEW BIOLOGY INITIATIVES

The Office of Naval Research has announced a new basic research effort in the November 10, 1986 issue of Commerce and Business Daily

- * **Integrative Biology Program** - Proposals focusing on the integrative and regulatory physiology of brain regions involved in homeostatic responses to environmental stimuli.

Due: No Deadline

CONTACT: Dr. Frank Hempel
(202) 696-4054

SALARIES AND WAGES INFORMATION FOR NIH PROPOSALS

Proposal budgets need not reveal individual salaries to outside reviewers. The National Institutes of Health has published procedures for providing individual salary information to agency staff only. (NIH Instruction Sheet for PHS 398 Rev. 5/82). Use the following guidelines for withholding salary information:

An applicant organization has the option to having specific salary, fringe benefit amounts for individuals omitted from the copies of the application that are made available to outside reviewing groups. If the applicant organization elects to exercise this option, use asterisks on the original and six copies of the application to indicate those individuals for whom salaries and fringe benefits are being requested: the subtotals must still be shown. In addition, submit an additional copy of **page 4** of the application, completed in full with the asterisks replaced by the amount of the salary and fringe benefits requested for each individual listed. This budget page will be reserved for internal PHS staff use only

TRAVEL ON FEDERAL GRANTS AND CONTRACTS

If you include travel in your proposal budget, it would be wise to include the following statement on your budget page: "FEDERAL PER DIEM RATES FOR HIGH COST AREAS REQUESTED WHERE APPLICABLE". If you fail to include this statement, you will be reimbursed at the State of Texas per diem rates, which are generally lower than the federal rates.

GENERAL INFORMATION ON FIRST AWARDS

NIH has amended and supplemented the announcement for the **FIRST** awards. The principal changes and additions involve: (a) eligibility (exceptions to the basic rule that PIs must be first-time PHS awardees); (b) the carryover of funds from one budget period to the next; (c) no-cost extensions; (d) concurrent PHS support during the period of **FIRST** awards. In addition, the new announcement includes a clarification of the 20 page limit for the application narrative. The **deadlines** are unchanged: **February 1, June 1 and October 1**. For specific information regarding these changes, please contact the Institute of interest directly.

Commencing with the February 2, 1987 receipt date, **FIRST** applications submitted to NIH in which the PI requests less than 5 years of support will not be further processed by the Referral Office of the Division of Research Grants until the applicant is contacted and adds the remaining years of support, requests that the proposal be designated an R01, or withdraws the application.

NEW PUBLICATION AVAILABLE

The Research Office has received the DIRECTORY OF JAPANESE COMPANY LABORATORIES WILLING TO RECEIVE AMERICAN RESEARCHERS. This document, compiled and published by the Tokyo Office of the U.S. National Science Foundation, is a guide for American scientists who may be interested in a research stay in a Japanese laboratory. More specifically, the Directory deals with laboratories funded by private companies. It is available for use in Rm. 1-860.

HUMANE EDUCATION SOCIETY FIGHTS ANIMAL RESEARCH USE

The National Education Society, a powerful animal activist group, has called on President Reagan and both houses of Congress "to insist that research efforts funded by taxpayer dollars use animals as little as possible, preferably not at all". In a full page ad that ran in The Washington Times on October 20, the group urged that the President and Congress also do everything in their power to stop the suffering of animals used in research and product testing, claiming that hundreds of non-animal testing methods already existed, many of which are more effective than animal tests. The letter also urged the enactment of the Toricelli bill (HR 5486), which would create a national center to review all proposals seeking to use animals for research.

OSTEOPOROSIS HANDBOOK AVAILABLE

The recently revised booklet Osteoporosis: Cause, Treatment, Prevention is now available from NIH's National Institute of Arthritis, Musculoskeletal and Skin Diseases (NIAMS). This 44-page booklet explains what osteoporosis is, lists several possible causes of the condition, and describes ways to prevent and perhaps treat it.

For copies send a stamped, self-addressed envelope with 44 cents postage to:

Osteoporosis Booklet
NIAMS
National Institutes of Health
Building 31, Room 9A04
Bethesda, MD 20892

RESEARCH CAREER DEVELOPMENT AWARDS TO INCREASE IN NUMBER

Showing major gains in the new NIH budget, as approved by Congress, are research career development awards and the grab bag of projects that falls into the category of "other" other research. This includes such things as advanced career training in fields the various institutes want especially to encourage and demonstration projects of various kinds.

The number of RCDA's is expected to rise to 1,472 this year, up from 1,270 in 1986 and 1,315 in 1985. The RCDA numbers fell off in

1986 primarily because of a decision the year before to raise the salary cap to \$40,000 from \$30,000. NIH's regular research training program is to be restored to the 1985 level, 10,574 trainee slots versus 10,624 then. The number dipped in 1986 because of the Gramm-Rudman law.

NIH COOL TOWARD OIG BUT AWARDEES IN FAVOR OF IT

There is some confusion in the scientific community over NCI's Outstanding Investigator Grant and NIH's Merit Award. The OIG is a seven year award, for which investigators must apply. It is a short application, which is reviewed by mail by a panel of peers specifically selected for each application. OIG is intended to provide stable support for scientists with track records, with great potential, and who may be doing "risky" research.

The Merit Award is a five year grant. Investigators do not apply; instead, staff selects the potential awardees, who undergo project by project review. It is not for "risky" research.

