

# Research Notes<sup>TCOM</sup>

Volume 8, Number 6

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## New Competition for Advanced Research - Advanced Technology Programs - 1993

**Notice of Intent to Submit:**  
**Due in Research Office June 11, 1993.**  
**Final Proposals:**  
**Postmark Deadline of July 14, 1993.**

The Notice of Intent to Submit is required and must be forwarded to the Texas Higher Education Coordinating Board through the TCOM Research Office. Copies of the Program Announcements to prepare grant proposals are available in the Research Office. The 70th Legislature (1987) of the State of Texas created the ARP/ATP as complementary, statewide programs. The ARP supports research designed to attract and retain the best students and researchers and help provide the knowledge base needed for innovation. The ATP is designed to promote the state's economic growth and diversification by increasing the number and quality of scientists and engineers in Texas, including minorities and women; industry; creating new products and services; and attracting new industries to Texas. In 1993 three different types of awards will be made: Advanced Research Program Research Grants; Advanced Technology Program Research Grants; and Advanced Technology Program Development and Transfer Grants. Approximately \$20 million will be available for ARP grants and \$40 million for the two ATP competitions. In the 1991 competition there were 1,698 proposals submitted to the ARP, approximately 170 awards, with a success rate of 10 percent. There were 1,408 proposals submitted to the ATP, approximately 222 awards, with a success rate of 15.8 percent.

## TCOM Sets Record in External and Cumulative Awards

### TCOM Blue Book of Grant Funding 1991-1992 Now Available

The TCOM Blue Book of Grant Funding 1991-1992 is now available from the Research Office. This 28-page booklet contains all of the extramural awards, internal awards such as the Texas Research Enhancement Program, and proposal submissions organized by academic and clinical units. Each award entry has the principal investigator's name, degree, title of project, source of funding, start and ending dates for the first year of the project, and total dollars awarded.

There is also data that measures the external award dollars for sponsored project activity by unit for the three most recent fiscal years.

This was a record year for TCOM with 77 external awards totalling \$5,057,018 for the 1991-1992 fiscal year and active cumulative awards of \$17,024,107.

## Substance Abuse Institute of North Texas Established at Texas College of Osteopathic Medicine

The Substance Abuse Institute of North Texas (SAINT) has recently been established through the joint efforts of the TCOM Departments of Pharmacology and Psychiatry.

The institute is a consortium of scientists and other professionals from TCOM and the greater North Texas area who have expertise in clinical and preclinical research that focuses on the prevention and

treatment of substance abuse.

The public inauguration of SAINT was marked by an all-day substance abuse conference at TCOM on May 7th entitled "Where Science and Addiction Meet - Forum 1993."

Forum 1993 was an important educational experience for anyone concerned with alcoholism, substance abuse and related diseases.



# • RESEARCH AWARDS & GRANT SUBMISSIONS •

## RECENT TCOM AWARDS

**William W. Barrow, Ph.D.**, (Department of Microbiology and Immunology), "Studies on AIDS-Related Opportunistic Pathogens," Senior International Fellowship, National Institutes of Health - Fogarty International Center, 03/10/93 - 06/10/93, \$12,488.

**Steve P. Buchanan, D.O.**, (Department of Obstetrics and Gynecology), "A Multi-center, Double-Blind, Placebo-Controlled, Randomized Study to Determine the Relief of Hot Flashes and Urogenital Symptoms in Postmenopausal Women Treated With Sequential Estradiol-Gestodene Combinations," Berlex Laboratories, Inc., 03/01/93 - 02/28/94, \$32,778.

**James L. Caffrey, Ph.D.**, (Department of Physiology), "Intrinsic Cardiac Enkephalins and Autonomic Control," American Heart Association, Texas Affiliate, Inc., 07/01/93 - 06/30/94, \$41,788.

**Robert L. Kaman, Ph.D.**, (Department of Physiology), "Outcome Evaluation of the PSE&G Health Promotion Program," American Corporate Health Programs, Inc., 06/01/93 - 05/31/94, \$60,000.

**Robert T. Mallet, Ph.D.**, (Department of Physiology), "Subcellular Mechanisms for Pyruvate Protection of *In situ* Myocardium," 07/01/93 - 06/30/94, \$35,200.

**Ben G. Harris, Ph.D.**, (Research Office), "Minority High School Student Research Apprentice Program," Institutional Award from the National Center for Research Resources - National Institutes of Health, 03/01/93 - 02/28/94, \$17,000.

**Peter B. Raven, Ph.D.**, (Department of Physiology), "Alterations in Human Baroreceptor-reflex Function Following Active Detraining," National Aeronautics and Space Administration, 05/01/93 - 04/30/1994, \$60,000.

**Tony Romeo, Ph.D.**, (Department of Microbiology and Immunology), "Bacterial Glycogen Synthesis: Regulation and Biological Function," National Science Foundation, 04/15/93 - 09/30/94, \$56,220.

**Bernard R. Rubin, D.O.**, (Department of Medicine), "A Multicenter Double-Blind, Fixed Dose Study of CP-72, 133 versus Piroxicam in Patients with Rheumatoid Arthritis or Osteoarthritis," Pfizer, Inc., \$39,360.

**Daniel J. Schneider, M.D., M.P.H.**, (Department of Public Health and Preventive Medicine), "College of Public Health and Public Health Policy Planning and Organization Grant," Amon G. Carter Foundation, 03/01/93 - 02/28/94, \$15,000.

**Xiangrong Shi, Ph.D.**, (Department of Physiology), "Interaction of Baroreceptor Populations in Blood Pressure Regulation: Effect of Fitness," American Heart Association, Texas Affiliate, Inc., 07/01/93 - 06/30/94, \$41,701.

**Ming-Chi Wu, Ph.D.**, (Department of Biochemistry and Molecular Biology),

"Preliminary Study of Feasibility of Isolation of Erythropoietin and Epidermal Growth Factor from Natural Sources," Taitung Enterprise Corp., 04/01/93 - 08/31/93, \$25,000.

**TOTAL AWARDS: \$436,534**

## RECENT SUBMISSIONS

**Steve P. Buchanan, D.O.**, (Department of Obstetrics and Gynecology), "A Multi-center, Double-Blind, Placebo Controlled, Randomized Study to Determine the Relief of Hot Flashes and Urogenital Symptoms in Postmenopausal Women Treated with Sequential Estradiol-Gestodene Combinations," Berlex Laboratories, Inc. \$32,778.

**Paul F. Cook, Ph.D.** (Department of Microbiology and Immunology), "Study of Kinetic and Chemical Mechanisms of Enzymes," National Institutes of Health - National Institute of General Medical Sciences, \$140,634.

**Ladislav Dory, Ph.D.**, (Department of Biochemistry and Molecular Biology), "Regulation of ApoE Expression in Macrophages," National Institutes of Health, \$393,895.

**H. Fred Downey, Ph.D.**, (Department of Physiology), "Regional, Non-ischemic Myocardial Hypoxia," National Institutes of Health - National Heart, Lung, and Blood Institute, \$179,796.

**Brian H. Föresman, D.O.**, (Department of Medicine), and **Sheela C. Mistry, Student Doctor**, "HIV Senopositivity and *Mycobacterium tuberculosis* in Metropolitan Centers," \$2,500.

**Patricia A. Gwartz, Ph.D.**, (Department of Physiology), "Adrenergic Limitation of Coronary Flow During Exercise," National Institutes of Health - National Heart, Lung, and Blood Institute, \$147,886.

**Robert W. Gracy, Ph.D.**, (Department of Biochemistry and Molecular Biology), "Extramural Research Facilities Construction Project," National Institutes of Health - National Eye Institute, \$657,548.

**Carl E. Jones, Ph.D.**, (Department of Physiology), "Anti-infarction Effects in the Denervated Heart," National Institutes of Health - National Heart, Lung and Blood Institute, \$176,611.

**Harbans Lal, Ph.D.**, (Department of Pharmacology), "Neurobehavioral and Immunological Markers of Aging," National Institutes of Health - National Institute on Aging, \$106,604.

**John D. Lane, Ph.D.**, (Department of Pharmacology), "Assessment of Potential Cocaine Medications Using the Rat Self-Administration Model," National Institutes of Health - National Institute of Drug Abuse, \$1,531,210.

**John C. Licciardone, D.O.**, (Department of Public Health and Preventive Medicine), "Establishment of a Primary Care Research

Network Through Faculty Development," American Association of Colleges of Osteopathic Medicine, FOCUS PROJECT, \$29,993.

**Robert R. Lucetke, Ph.D.**, (Department of Pharmacology), "Immunotherapeutic Strategy for the Treatment of Tricyclic Antidepressant Overdose," The National Alliance for the Mentally Ill - Theodore and Vada Stanley Foundation Research Award, \$90,000.

**Michael W. Martin, Ph.D.**, (Department of Pharmacology), "Ethanol Induced Desensitization of Adenosine Receptors," National Institutes of Health, \$414,707.

**Walter J. McConathy, Ph.D.**, (Department of Medicine), "Interactions of Lp (a) with Subendothelial Cell Matrix," National Institutes of Health - National Heart Lung and Blood Institute, \$239,319.

**Walter J. McConathy, Ph.D.**, (Department of Medicine), "Apolipoprotein C-III and Plasma Triglyceride Levels," National Institutes of Health - National Heart, Lung, and Blood Institute, \$1,036,564.

**Stephen Moorman, Ph.D.**, (Department of Anatomy and Cell Biology), "In vitro Neurotoxicity Testing," The John Hopkins Center for Alternatives to Animal Testing, \$29,440.

**Edward L. Orr, Ph.D.**, (Department of Anatomy and Cell Biology), and **Martin T. Taylor, Student Doctor**, "Regulation of Arachnoid Barrier Cell Function in Cerebrospinal Fluid Outflow," Southern Medical Association, \$2,500.

**Edward L. Orr, Ph.D.**, (Department of Anatomy and Cell Biology), and **Mark D. Filidei, Student Doctor**, "Mast Cell Modulation of Blood Glucose in Diabetic Rats: A Pilot Study," Southern Medical Association, \$2,500.

**Peter B. Raven, Ph.D.**, (Department of Physiology), "Alterations in Human Baroreceptor-Reflex Function Following Active Detraining," National Aeronautics and Space Administration, 05/01/93 - 04/30/94, \$59,400.

**Peter B. Raven, Ph.D.**, (Department of Physiology), "Training in Integrative Physiology," National Institutes of Health - National Heart, Lung, and Blood Institute, \$482,031.

**Peter B. Raven, Ph.D.**, (Department of Physiology), "Baroreflexes and Orthostatism: A Fitness Effect," National Institutes of Health - National Heart, Lung and Blood Institute, \$124,123.

**Victoria L. Rudick, Ph.D.**, (Department of Anatomy and Cell Biology), "Response of the Golgi Complex to Changing Secretory Demands," National Science Foundation, \$372,760.

**Ming-Chi Wu, Ph.D.**, (Department of Biochemistry and Molecular Biology), "Preliminary Study of Feasibility of Isolation of Erythropoietin and Epidermal Growth Factor from Natural Sources," Taitung Enterprise Corp., \$25,000.

**Total Funding Requested: \$6,277,789**



## Student Research Apprentice Wins Award

**Kaustubh Joshi**, a student at the High School of Medical Professions at North Side High School, Fort Worth Independent School District, worked in the laboratory of **Stephen R. Grant, Ph.D.**, Department of Biochemistry and Molecular Biology, as part of the High School Student Research Apprentice Program from June 15 through August 7, 1992.

Mr. Joshi's research project was entitled "Subcloning of the Human Granulocyte Colony Stimulating Factor from the Bacterial Plasmid PUC 18 to the Baculovirus Shuttle Vector 1392."

This project was entered in the North Side High School Science Fair and placed 1st in Biochemistry. It also received the Best of Fair award.

This project also won 1st place from the Tarrant District Society for Medical Technology at the Fort Worth Regional Science Fair, held at Texas Christian University on April 2, 1993.

## Teacher Wins Fellowship

**Stephen R. Grant, Ph.D.**, Department of Biochemistry and Molecular Biology and **Kimberly A. Krueger of Paschal High School**, received the American Society for Biochemistry High School Teacher Fellowship Award for \$5,500 to support full-time research beginning in June, 1993.

## Recent TCOM Publications



**Dorris, R. L.** and Vi Truong. 1993. Locomotor Effects of Nitrous Oxide in Mice: Requirement of Newly Synthesized and Main Intraneuronal Storage Pools of Dopamine. *Jour. Pharm. and Pharmac.* 45: 315-316.

**Yorio, T.** and L. Frazier. 1992. Eicosanoids: Their Function in Renal Epithelial Ion Transport. In: *Proc. Soc. Exp. Biol. & Med.* 291: 229-243.

## RECENT TCOM RESEARCH ACTIVITIES

**Thomas Yorio, Ph.D.**, Department of Pharmacology, recently presented a paper at the Federation of American Societies for Experimental Biology entitled "Evidence of Endocytosis in Toad Urinary Bladders as Revealed by SEM," coauthored with Abdul J. Mia, Ph.D., Jarvis Christian College, **Larry Oakford, Ph.D.**, Department of Anatomy and Cell Biology, Hailey Yancy and Amanda Davidson, Jarvis Christain College.

**Sushanta Mallick, Ph.D.**, Department of Pharmacology, recently presented a paper at the Federation of American Societies for Experimental Biology entitled "Heterogeneity of Brain-Reactive Autoantibodies in Aging C57BL/6 Mice," co-authored with **Robert R. Luedtke, Ph.D.**, **Michael J. Forster, Ph.D.**, and **Harbans Lal, Ph.D.**, Department of Pharmacology.

**Yaprak Egilmez, M.D., Ph.D.**, a post-doctoral fellow in the laboratory of **Michael W. Emmett-Oglesby, Ph.D.**, Department of Pharmacology, has been awarded an International Research Fellowship through the National Institute of Drug Abuse INVEST Program. INVEST is a private organization that works closely with NIDA to bring scholars from foreign countries to the research laboratories of NIDA grantees for postdoctoral research training. Dr. Egilmez plans to establish a neuroscience group and a behavioral pharmacology laboratory in her homeland of Turkey, in the Department of Pharmacology, Hacettepe University, Ankara. This research project is funded in part through a grant proposal entitled "Dopamine Release During Cocaine Self-Administration."

**H. Fred Downey, Ph.D.**, Department of Physiology, with members of his research group, recently attended the Federation of American Societies for Experimental Biology and gave the following presentations:

**Bai, X.-J., A. G. Williams, Jr., W. -L. Fan, and H. F. Downey.** 1993. Coronary Pressure-flow Autoregulation Protects Myocardium from Pressure-induced Changes in Oxygen Demand. *FASEB J.* 7: A317.

**Gao, A., S.-C. Lee, and H. F. Downey.** 1993. Adenosine Decreases Oxygen Consumption of Control and Isoproterenol Stimulated Minced Canine Myocardium. *FASEB J.* 7: A326.

**Huckabee, K. D., M. M. Muncy, A. G. Williams, Jr., and H. F. Downey.** 1993. Effects of Nicotine on Regional Blood Flow in the Cheek and Tongue of Anesthetized Dogs. *FASEB J.* 7: A761.

**Lee, S.-C., Z. Gao, H.F. Downey, and C. E. Jones.** 1993. Chronic Sympathectomy does not Change Basal Myocardial Oxygen Demand and its Response to Isoproterenol. *FASEB J.* 7: A623.

**Mallet, R. T., W.-L. Fan, T. Iwamoto, and H. F. Downey.** 1993. Pyruvate-enhanced Regional Function and Energetics in Post-ischemic Canine Myocardium. *FASEB J.* 7: A326.

**Iwamoto, T., X.-J. Bai, A. G. Williams, Jr., and H. F. Downey.** 1993. High-flow Ischemia Preconditions Canine Myocardium Against Subsequent Ischemia. *FASEB J.* 7: A418.

**Williams, A. G., Jr., K. D. Huckabee, M. M. Muncy, T. Barnes, and H. F. Downey.** 1993. Effects of Snuff on Blood Flow to Pancreas of the Anesthetized Dog. *FASEB J.* 7: A24.

**Robert W. Gracy, Ph.D.**, Department of Biochemistry and Molecular Biology, and the Texas Institute for Research and Education on Aging hosted Dr. Leonid A. Gavrillov, Principal Research Scientist, A. N. Belozersky Institute, Moscow State University, Moscow Russia. Dr. Gavrillov gave a talk entitled "The Biology of Life Span: A Quantitative Approach" that represented his recent research published in a book by the same title. He is in the United States as guest of the Fourth International Conference on Anticarcinogenesis and Radiation Protection, John Hopkins University, Barros Research Institute and Wayne State University.



## • FUNDING OPPORTUNITIES •

The federal government has issued a publication entitled "Program Information Package for Defense Technology Conversion, Reinvestment, and Transition Assistance" which describes nine major technology program areas that will be funding grants expected to total \$472 million.

The majority of these programs are manufacturing oriented, however, the agencies participating in this program, the Advanced Research Projects Agency, the Department of Energy/Defense Programs, the Department of Commerce's National Institute of Standards and Technology, the National Science Foundation, and the National Aeronautics and Space Administration, have some research programs that may be of interest to biomedical researchers. This program requires a "quality" cost match of 50 percent. The ARP/ATP funding from the Texas High Education Coordinating Board grants can be used to meet this matching requirement. **The planned deadline for receipt of applications is July 23, 1993.**

### NATIONAL SCIENCE FOUNDATION

NSF is accepting brief proposals for small-scale exploratory and high-risk research in all fields funded by the foundation. Under this new program entitled "Small Grants for Exploratory Research (SGER), funding will be at the discretion of program officers, who will evaluate proposals without the usual external review. NSF urges interested applicants to contact appropriate program officers before submitting grant proposals. Areas of interest are: preliminary research on untested and novel ideas; research in emerging areas; new approaches to "old" research topics; multidisciplinary work, particularly crossing NSF program boundaries; urgent research that requires immediate data collection or access to information, facilities or specialized equipment; and other activities that could catalyze rapid and innovative advances. The maximum award is \$50,000. NSF encourages investigators without prior NSF support

to apply, so this should give new investigators a better chance to get their research ideas funded. NSF officials have said that the most common reason for declining applications was that they were not judged risky, novel or urgent enough.

**There are no deadlines.**

### ARTHRITIS FOUNDATION RESEARCH PROGRAMS

**The deadline for all of these programs is September 1, 1993. Application forms are available in the Research Office.**

The **Physician Scientist Development Award** supports physicians without significant prior research experience to embark on careers in biomedical and/or clinical research related to the understanding of arthritis and the rheumatic diseases. DO's are eligible for this program.

The **Clinical Science Grant** supports high-quality, original clinical research on problems closely related to the diagnosis, prognosis, management, and health care delivery and epidemiology of adults and children with arthritis and related rheumatic diseases.

The **Biomedical Science Grant** supports biomedical research closely related to understanding the etiology, pathogenic mechanisms and control of arthritis and related rheumatic diseases in adults and children. A list of awards for this program for 1993-94 is available in the Research Office.

The **New Investigator Grant for Arthritis Health Professionals** supports innovative research projects for the period between completion of doctorate work and establishment as an independent investigator.

The **Arthritis Investigator Award** provides support to physicians and scientists for the period between completion of postdoctoral fellowship training and establishment as an independent investigator. Applicants must hold an M.D., Ph.D. or equivalent degree and have

demonstrated distinction and productivity in research.

The **Postdoctoral Fellowship** provides stipend support for the early years of the necessary training period.

The **Doctoral Dissertation Award for Arthritis Health Professionals** supports advance research training in investigative or clinical teacher careers as they relate to rheumatic diseases.

### INTERNATIONAL SCIENCE FOUNDATION TRAVEL GRANT PROGRAM

This program supports travel grants to enable a limited number of scientists from the former Soviet Union and the Baltic States to travel abroad to attend international scientific conferences. Applications will be accepted at the Foundation's New York office from conference organizers. Applications will not be accepted from scientists wishing to travel.

**Applications must be received six weeks prior to the conference date.** Program guidelines and application forms are available in the Research Office.

### WEIGHT WATCHERS GRANT PROGRAM

The Weight Watchers Foundation, Inc. supports research that promotes a greater understanding of obesity and its health risks. **Deadlines for applications are July 1 and December 1.**

The 1992 Annual Report that contains a list of grant awardees is available in the Research Office.

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