HISTORY

T C O M
research notes

volume 2, number 3

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Texas College of Osteopathic Medicine

March - April, 1987

RECEIVED
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RESEARCH PROPOSALS SUBMITTED MARCH - APRIL, 1987

FFS "Adrenergic Mechanisms and Aqueous Humor Dynamics" (1 year) **Edward E. Elko, Ph.D.** (Department of Pharmacology).

NIH "BRSG Small Instrumentation Program" institutional application (1 year) **H. Fred Downey, Ph.D.** (Department of Physiology).

AACOM "Health Career Opportunities Program" institutional application (1 year) **Richard Sinclair, Ph.D.** (Student Affairs)

JDF "Synthesis of Basement Membrane Components and Their Relationship to Aldose Reductase Activity in the Bovine Lens Epithelial Cell" (2nd year of 2 year award) **Patrick Cammarata, Ph.D.** (Department of Anatomy).

NIDA "Cocaine, Intrinsic Myocardial and Coronary Actions" (5 years) **James Caffrey, Ph.D.** (Department of Physiology).

NIADA "Targeting Antivirals for Treatment of AIDS Patients" (3 years) **Dan Dimitrijevich, Ph.D. and Lois Allen, Ph.D.** (Department of Microbiology/Immunology).

NIDA "Drugs of Abuse in Autoimmune Mice" (5 years) **Konrad Retz, Ph.D.** (Department of Pharmacology).

NIDA "Cocaine Dependency and Anxiety" (5 years) **Harbans Lal, Ph.D.** (Department of Pharmacology).

FGL "Medetomidine and It's Analogues as Efficacious Antiglaucoma Drugs" **Edward E. Elko, Ph.D.** and **Thomas Yorio, Ph.D.** (Department of Pharmacology)

TOTAL FUNDING REQUESTED **$ 2,027,353**

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RESEARCH AWARDS RECEIVED MARCH - APRIL, 1987

ROBERT BOURDAGE, PH.D. "Muscle-mediated transport mechanism of rabbit oviduct" National Institute of Child Health and Human Development (second year of three year award) $38,273 (Department of Anatomy).

MEB 1-858 Camp Bowie at Montgomery
(817) 735-2561

Fort Worth, TX 76107-2690
Mary Spijkerman, Editor

H. FRED DOWNEY, PH.D. "Regional non-ischemic myocardial hypoxia" National Heart, Lung and Blood Institute (third year of five year award) $125,919 (Department of Physiology)

BEN G. HARRIS, PH.D. "Regulation of metabolism in parasitic helminths" National Institute of Allergy and Infectious Diseases (second year of three year award) $142,177 (Department of Biochemistry).

ROBERT W. GRACY, PH.D. "Biodegradation of oxidized regenerated celluloses" Johnson & Johnson (one year - open) $17,050 (Department of Biochemistry).

ROBERT W. GRACY, PH.D. "Consultation - amino acid synthesis" Parke Davis/Division of Warner Lambert (one year - open) $10,000 (Department of Biochemistry).

CARL E. JONES, PH.D. "Anti-infarction effects in the denervated heart" National Heart, Lung and Blood Institute (last year of five year award) $69,974 (Department of Physiology).

ANDRAS G. LACKO, PH.D. "Biomedical Research Support Grant" institutional award, NIH - Division of Research Resources (fifth year awarded to TCOM) $53,611 (Department of Biochemistry).

ANDRAS G. LACKO, PH.D. "Minority High School Student Research Apprentice Program" institutional award, NIH - Division of Research Resources (fourth year awarded to TCOM) $4,500 (Department of Biochemistry).

S/D AUDREY RENOUF and **FRANK PAPA, D.O.** "Examiner attitudes toward sexual assault survivors" National Fund for Medical Education - Smith Kline Beckman Medical Perspectives Fellowship (one year) $1,927 (Division of Emergency Medicine).

RICHARD SINCLAIR, PH.D. "Health Career Opportunities Program" institutional award, AACOM (one year award) $146,273 (Department of Student Affairs).

TOTAL FUNDING RECEIVED **$ 609,704**

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PRESENTATIONS AT MEETINGS

The following papers were presented at the AOA Research Conference which was held in Clearwater Beach, FL, March 5-8, 1987:

"Biomechanical considerations in postural realignment" by Michael L. Kuchera, D.O. (KCOM) and Robert E. Irvin, D.O. (Department of Manipulative Medicine).

"A student oriented computer-based learning resource and information management tool" by Frank Papa, D.O. and Steve Myers, M.S. (Division of Emergency Medicine).

"Site specific detection of the subjective effects of cocaine in rats" by Douglas Wood, M.S. and Michael Emmett-Oglesby, Ph.D. (Department of Pharmacology).

"The relationship between chronic cocaine use and anxiety in an animal model" by Douglas Wood, M.S., Michael Emmett-Oglesby, Ph.D., and Harbans Lal, Ph.D. (Department of Pharmacology).

"Aerobic and anaerobic metabolism of bovine ciliary process: effects of metabolic and transport inhibitors" by Thomas Yorio, Ph.D. (Department of Pharmacology), S. Braunagel, Ph.D., and G.C.Y. Chiou, Ph.D. (Texas A&M).

Several members of the Physiology Department attended and presented papers at the 71st Annual Meeting of the Federation of American Societies for Experimental Biology which was held in Washington, D.C., March 29-April 2. A total of 12 presentations were by the Physiology Department and the papers are published in Federation Proceedings.

"Effects of adenosine analogs on isolated renal and coronary arteries" by Richard Sinclair.

"Overlap of coronary perfusion territories in normal canine hearts" by H. Fred Downey, S. Yonekura, N. Watanabe and A.G. Williams.

"Nitroglycerine accelerates recovery from coronary collateral regression" by N. Watanabe, S. Yonekura, A.G. Williams, K.W. Scheel and H. Fred Downey.

"Transmural variation in autoregulation of coronary blood flow in right ventricular myocardium" by S. Yonekura, N. Watanabe, A.G. Williams and H. Fred Downey.

"Coronary sympathetic constriction impedes myocardial function during partial coronary occlusion" by I.Y.S. Liang, C.S. Elsken, K.A. Carroll, M.A. Maulsby and Carl E. Jones.

"Adenosine deaminase attenuates norepinephrine mediated demand hyperemia in canine myocardium" by G.F. Merrill, N. Watanabe. S. Yonekura, C.E. Jones and H. Fred Downey. (Note: Dr. Merrill has been on sabbatical from Rutgers Medical

School and worked in Dr. Downey's lab)

"Right ventricular hypertrophy with peripheral hypertension" by K.W. Scheel, S. Williams, J.S. Bravenec and S. Wood. (Note: S. Wood, D.O. was a resident in the Department of Medicine)

"Regional segment function in the autoregulating and vasodilated isolated heart" by H.J. Mass, K.W. Scheel S. Williams and J.S. Bravenec.

"Effects of intracoronary cigarette smoke on coronary blood flow and myocardial contractile function" by A.G. Williams, N. Watanabe, S. Yonekura, D.P. Grice and H. Fred Downey.

"Comparative effects of alpha-1 and alpha-2 adrenoreceptors in modulation of coronary flow during exercise" by R. Strader, C.E. Jones and P.A. Gwirtz.

"Augmentation of coronary flow improves myocardial function in exercise" by P.A. Gwirtz, C.E. Jones M. Hamrick and J. Caffrey.

"Hemodynamic effects of -6 degrees tilt on chronically instrumented exercise-trained dogs" by W.G. Squires, S.A Nunally, T.A. Branden (Texas Lutheran College), M. Smith and P.B. Raven.

Presentations by faculty at other meetings included:

Elizabeth Harris, Ph.D., Department of Microbiology/Immunology, presented "A method to study mind vs disease: an animal model of behavioral despair demonstrates that impaired immunity accompanies learned helplessness" at the Texas Women's Scholars Symposium in Austin, TX.

Peter B. Raven, Ph.D., Department of Physiology, presented a special seminar titled "Exercise and baroreceptor function" at the Mt. Sinai Hospital in New York City. The presentation was sponsored by the Greater New York REgional Chapter of the American College of Sport's Medicine. Dr. Raven is President-Elect of the National ACSM.

Thomas Yorio, Ph.D., Department of Pharmacology, attended the winter Prostaglandin Conference in Orlando, FL and presented "Prostaglandins and epithelial cell morphology".

H. Fred Downey, Ph.D., Department of Physiology, attended the 34th Annual Conference of the Microcirculatory Society in Washington, DC where he chaired a session on Microvascular Pathophysiology and presented a report on "Distribution of coronary blood flow after "complete" coronary embolization: Evidence from microvascular collaterals." This report was co-authored by Konrad Scheel, Ph.D.

PUBLICATIONS

Raven, P.B., M.L. Smith, D.L. Hudson, and H.M. Graitzer, "The effects of exercise training on factors affecting orthostatic tolerance" Physiologist 30: Suppl. S-147 - S-150 (1987).

REVISION TO GRANT TRANSMITAL FORM

Effective **May 1, 1987** there is a required page 2 to the Grant Transmital Form. This page consists of a **LAY SUMMARY,** not to exceed 100 words in length. A memo explaining the change and copies of the second page were sent to Department Chairmen last week. Please check with the cognizant individual in the department to obtain the form. NO GRANT WILL BE TRANSMITTED FOR SIGNATURE IF THE LAY SUMMARY IS NOT ATTACHED.

SUCCESS STORY FOR THE MINORITY HYPERTENSION RESEARCH SUMMER DEVELOPMENT PROGRAM (MHRSDP)

Dr. Abdul J. Mia, a participant for several years in the MHRSDP, has just received funding notification for a five year Minority School Faculty Development Award from NHLBI totaling $341,136. Dr. Mia's mentor for this project will be Thomas Yorio, Ph.D., Department of Pharmacology, who is also the Co-Director with Dr. Edward Elko of the MHRSDP. Dr. Mia will be working with Dr. Yorio on this project and collaborating with Dr. Larry Oakford, Department of Anatomy.

RESEARCH NEWS AND NOTES

The 31st Annual American Osteopathic Association Research Conference was held March 5-8, 1987 in Clearwater Beach, FL. Participants attending from TCOM were Ben Harris, Institutional Representative and Associate Dean for Research), Russ Gamber (C.O.R.E.), Frank Papa (Emergency Medicine), Peter Raven (Physiology), Douglas Wood and Tom Yorio (Pharmacology) and Kim Korr (Medical Education and C.O.R.E.). A total of 53 presentations were made.

H. Fred Downey, Ph.D., Professor of Physiology, chaired two sessions of the FASEB meeting held in Washington, D.C.

HOT NEWS FLASHES

Animal Welfare Act Regulations

The USDA is very close to publishing regulations pursuant to the Animal Welfare Act. The regulations will actually be published in three parts. Part I of the regulations would change the responsibilities of the Animal Care Committee by requiring two inspections per year of animal facilities. Part I would also expand on responsibilities of the Animal Care Committee. Part II would detail procedures required for the exercising of dogs and Part III would detail new Primate regulations. Part II and Part III will be published at a later date.

HHS 398 Application Packet Revisions

The HHS 398 application packet will soon be modified. It will no longer require HHS 596 form, certification of IRB review and approval, with the

initial submission of a grant application. It will, in contrast, require the investigator to provide the most recent date of IRB review and approval within the application. There will be no additional signature required from the institutional official empowered to sign current 596 forms. If an activity has not been reviewed by the IRB, the investigator would indicate the "pending" status of the IRB and a follow-up HHS 596 would be required within the 60 day period after initial submission, with the signature of the institutional official.

Grant applications for the **American Institute for Cancer Research** are available in the Research Office. The next deadline for applications is July 1, 1987. The AICR is interested in funding research clearly relevant to an understanding of the effects of dietary and nutritional practices on the onset, development, and treatment of cancer. The Institute's funds will be devoted to studies on cancer prevention and medically-accepted research investigation into the role of nutrition for the cancer patient. Fundamental laboratory investigations are welcome if they inquire into the molecular and/or subcellular mechanism(s) of carcinogenesis for specific and important dietary constituents. Applications must be written to indicate they are clearly within the scope of AICR's research priorities in order to be funded.

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FACULTY PROFILE

IRVIN M. KORR, PH.D.

Irvin (Kim) M. Korr, Ph.D. has been laying down challenges for the osteopathic profession for the past forty two years. His commitment to osteopathy is unchallenged as are his scientific credentials. He has continually related each scientific premise to the basic question of health and disease in the human body. His life is a reflection of his philosophy which is based on "the inherent health-maintaining and health restoring mechanisms, thereby helping the patient to do his/her own best job of staying and getting well."

Educationally, Kim is a product of Ivy League schools, having received his degrees from the University of Pennsylvania (B.A. and M.A.) and Princeton University (Ph.D.). He selected a prestigious post-doctoral fellowship at Princeton which enhanced his reputation in cellular physiology and then an offer from the New York University College of Medicine to join their faculty. Kim's research specialty at NYUCOM became renal physiology and he had the advantage of working with pioneers such as Homer Smith and James Shannon.

With the onset of World War II, Kim was recruited by the War Department and the Office of Scientific Research and Development to determine the feasibility of matching the demands which were being placed on a human being to the technical advances which were being made resulting from the war effort. This work was conducted at Columbia University College of Physicians and Surgeons, Princeton University and Fort Monmouth (NJ) Signal Laboratories. Kim was no

longer operating in the realm of classical physiology. Suddenly everything was application to enhance survival.

In 1945, Ralph Girard, a physiologist at the University of Michigan, contacted Kim and asked him to consider affiliating himself with a small medical college in Kirksville, MO. Dr. Girard said that something exciting was happening there and that Kim should investigate it. The rest is history.

During his thirty year tenure at Kirksville College of Osteopathic Medicine, Kim Korr not only enhanced his reputation as a scientist by publishing credible data, by obtaining excellent extramural funding for his research and by building a department that was recognized for its scientific soundness, but he came to truly believe that osteopathic principles are biologically sound and aesthetically beautiful. He considers them to be the basic guide to practice for the critically thinking physician. These principles reformed Kim's life style and his approach to life. He really practices what he preaches. To listen to him talk of the inherent healing powers of the human body and reference the "physician within" each of us, makes one want to believe and to share in this vision. It makes great sense when he says that medicine cannot impart health to one and that one must conserve and build on what one is given.

Kim has received many honors both as a scientist and as an educator during his long career. One of the most prestigious awards given by the osteopathic profession was presented to him at the AOA Research Conference in March when he was named the 1987 recipient of the Gutensohn-Denslow award for outstanding contributions to osteopathic education and research.

Perhaps Kim Korr can best be described in his own words, "having lived well, I can expect to die young - - when I'm very old." There is a message there for all who care to hear.

NEW GUIDELINES AVAILABLE IN RESEARCH OFFICE

For those who may be interested the following information is available in the Research Office:

New program support information from the National Institute of Mental Health on "EXTRAMURAL RESEARCH SUPPORT PROGRAMS"

and

Superfund Hazardous Substances Basic Research and Training Grant Program

and

The Final Report of the NSF Advisory Committee on Merit Review

ADAMHA FIRST AWARDS

Applications for ADAMHA "FIRST" awards should be accompanied by seven (7) collated sets of appendix material instead of the 3 sets as stated in the September, 1986 program announcement.

ADAMHA SMALL GRANT PROGRAM

The Alcohol, Drug Abuse and Mental Health Administration announces a **SMALL GRANT PROGRAM** to provide research support of up to $25,000 (direct costs). Support is limited to one year and is not renewable. Applications may be submitted at any time. Applications will be assigned for review for scientific merit by the Small Grant Review Committee which meets four times a year (March, June, September, December). Approximately 5-6 months should be allowed between submission of application and the desired starting date of the grant.

Guidelines are available in the Research Office.

BALANCED DIET SLOWS OSTEOPOROSIS

Although calcium supplements may help, it seems the best way to hinder the bone deterioration resulting from osteoporosis may be to eat a well balanced diet, according to a study in the December issue of The American Journal of Clinical Nutrition. According to one of the study's investigators, Nancy E. Johnson, Ph.D., Professor and Chairman of the Department of Food Science and Human Nutrition at the University of Hawaii in Honolulu, a group of women between the ages of 35 and 65 reported the kinds of food they ate over a three year period. Half took a calcium supplement. The researchers measured the density of three types of bones in the women's arms, using single-photon absorptiometry. The women who took the supplement lost slightly less bone in the humerus, than did the women who did not take the supplement. The women who ate a well balanced diet - containing adequate amounts of calories, protein, calcium, phosphorus, zinc and folate - lost less radius arm bone than the women on the supplement.

CALL FOR PAPERS

The 60th Scientific Sessions of the **American Heart Association** will be held November 16-19, 1987 at the Anaheim Convention Center, Anaheim, CA. The sessions encompass three and one-half days of invited lectures and investigative reports. Simultaneous presentations represent all fields of cardiovascular disease and related disciplines, including cardiovascular nursing research. Abstracts selected for presentation will be published as a supplement to the October 1987 issue of Circulation. Postmark deadline for submitting abstract and scientific exhibit applications is May 11, 1987. **CONTACT FOR APPLICATION:** American Heart Association, Coordinator for Scientific Sessions, 7320 Greenville Avenue, Dallas, TX 75231

MEETINGS OF INTEREST

May 12-15, 1987	Computer Applications in Medicine and Health Care in San Francisco, CA
May 14-17, 1987	44th Annual Meeting of the American Geriatrics Society and the 8th Annual Meeting of the Federation for Aging Research in New Orleans, LA.
June 4-9, 1987	47th Annual Meeting and Scientific Sessions of the American Diabetes Association in Indianapolis, IN.
June 7-11, 1987	American Society of Biological Chemists in Philadelphia, PA.

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GRANT OPPORTUNITIES

NIH - Animal Research Methods - NIA/NIH invites grant applications for the support of development and validation of research methods that do not use animals, use fewer animals, or produce less pain and distress in research animals. The support mechanism for this program will be the traditional investigator-initiated research grant. Applications due **June 1** and **October 1**. **CONTACT:** DeWitt Hazzard, Resource Development, Biomedical and Clinical Medicine, Bldg. 31, Rm 5C19, Bethesda, MD 20892 (301) 496-6402.