



National Heart Foundation Grant Awards: 1976 - 2006

**American Health Assistance Foundation
22512 Gateway Center Drive • Clarksburg, Maryland 20871
(301) 948-3244 • (800) 437-2423 • Fax (301) 258-9454**

Eric Anthony Accili, Ph.D.

Institution: Simon Fraser University
Burnaby, Canada
Project: Molecular Regulation of the Cardiac Pacemaker Channel
Duration: April 1, 1999 - March 31, 2000
Award: \$7,500

Institution: Simon Fraser University
Burnaby, Canada
Project: Molecular Regulation of Cardiac Pacemaker Channels
Duration: April 1, 2000 - March 31, 2001
Award: \$30,000

Huzoor Akbar, Ph.D.

Institution: Ohio University College of Osteopathic Medicine
Athens, Ohio
Project: Mechanisms of Platelet/Vascular Abnormalities in Hypertension
Duration: April 1, 1988 - March 31, 1989
Award: \$21,000

Institution: Ohio University College of Osteopathic Medicine
Athens, Ohio
Project: Mechanisms of Abnormal Platelet Function in Hypertension
Duration: April 1, 1989 - March 31, 1990
Award: \$25,000

Publications:

✓ Akbar, H., Dean, T., and Kornhauser, R. (1993) Increased Platelet Reactivity to Prostaglandin E1 in Hypertension is Linked with Altered Signal Transduction. *Am. J. Hypertens.* 6:857-862.

✓ Akbar, H., Kundu, N., and Kornhauser, R. (1993) Normal Thrombin Binding Leads to Greater Fibrinogen Binding and Increased Platelet Aggregation in Spontaneously Hypertensive Rats. *Life Sci.* 53:1967-1974.

Bradley T. Andresen, Ph.D.

Institution: Georgetown University
Washington, District of Columbia
Project: Function of Polymorphisms in the RGS Domain of GRK4
Duration: April 1, 2006 - March 31, 2007
Award: \$25,000

Suleiman Bahouth, Ph.D.

Institution: University of Tennessee Health Science Center
Memphis, Tennessee
Project: Hormonal Regulation of Beta-Adrenergic Receptor Biosynthesis
Duration: April 1, 1989 - March 31, 1990
Award: \$25,000

Publications:

- ✓ Bahouth, S.W. (1991) Thyroid Hormones Transcriptionally Regulate the Beta1-Adrenergic Receptor Gene in Cultured Ventricular Myocytes. *J. Biol. Chem.* 266:15863-15869.
- ✗ Bahouth, S.W. (1991) Triiodothyronine Regulates Beta1-Adrenergic Receptors in Cultured Rat Ventricular Myocytes. *Clin. Biotechnol.* 3:101-109.
- ✓ Bahouth, S.W., Wang, H.Y., and Malbon, C.C. (1991) Immunological Approaches for Probing Receptor Structure and Function. *Trends Pharmacol. Sci.* 12:338-343.
- ✓ Bahouth, S.W. (1992) Effects of Chemical and Surgical Sympathectomy on Expression of Beta-Adrenergic Receptors and Guanine Nucleotide-Binding Proteins in Rat Submandibular Glands. *Mol. Pharmacol.* 42:971-981.
- ✓ Bahouth, S.W., and Lopez, S. (1992) Insulin Desensitized Beta 1-Adrenergic Receptor-Mediated Stimulation of Adenylyl Cyclase in SK-N-MC Cells. *Life Sci.* 51:PL271-PL276.

Wally J. Bartfay, Ph.D.

Institution: Queen's University School of Nursing
Kingston, Canada
Project: Selenium Status and Iron Overload Cardiomyopathies
Duration: April 1, 2001 - March 31, 2002
Award: \$20,700

Edwin L. Bierman, M.D.

Institution: University of Washington
Seattle, Washington
Project: Effects of HDL Glycosylation on Cholesterol Efflux
Duration: April 1, 1989 - March 31, 1990
Award: \$25,000

Publications:

- ✓ Duell, P.B., and Bierman, E.L. (1991) Enzymatic Glycosylation of HDL Inhibits HLD Receptor-Mediated Cholesterol Efflux. *Diabetes*, 40(3):377-384.

Duell, P.P., Oram, J.F., and Bierman, E.L. (1990) Nonenzymatic Glycosylation of HDL Resulting in Inhibition of High-Affinity Binding to Cultured Human Fibroblasts. Diabetes 39(10):1257-1263.

Richard L. Brennan, Ph.D.

Institution: Oregon Health Sciences University
Portland, Oregon
Project: X-ray Studies on Singly Crosslinked Human Hemoglobin
Duration: April 1, 1990 - March 31, 1991
Award: \$20,000

Gregory L. Brower, D.V.M., Ph.D.

Institution: Auburn University
Auburn, Alabama
Project: Mechanisms of Angiotensin II Induced Myocardial Necrosis
Duration: April 1, 2000 - March 31, 2001
Award: \$25,000

Stephanie J. Bryant, Ph.D.

Institution: The University of Colorado
Boulder, Colorado
Project: Novel Polymeric Supports for Cardiac Muscle Regeneration
Duration: April 1, 2006 - March 31, 2007
Award: \$25,000

Maria L. Burgess, Ph.D.

Institution: University of Illinois
Urbana, Illinois
Project: Heart Function, Food Restriction, and Physical Activity
Duration: April 1, 1997 - March 31, 1998
Award: \$14,300

Institution: Boston University
Boston, Massachusetts
Project: Heart Function and Cardiac Matrix Expression in Aging
Duration: April 1, 1998 - March 31, 1999
Award: \$15,000

Publications:

Burgess ML, McCrea JM, Hendrick HL. Age-Associated Changes in Cardiac Matrix and Integrins. Mechanisms of aging and development, in press 2001.

Burgess ML, Terracio L, Hirozane T, Borg TK. Differential Integrin Expression by Cardiac Fibroblasts from Hypertensive and Exercise-Trained Rat Hearts. Cardiovascular Pathology, under second revision.

Burgess ML, Whitehead TR, Mantell SK, Gahl A. Modulation of Violation Running by Adult-Onset Caloric Restriction in Mice. Journal of Applied Psychology, in preparation.

Burgess ML, Whitehead TR, Mantell SK, Gahl A. Ability of Adult-Onset Caloric Restriction to Modulate Extracellular Matrix Protein Expression of the Heart. American Journal of Psychology, in preparation.

Whitehead TR, DeBiase VM, Schwartzman IN, Olszewski HL, Margansky W, Dembo M, Burgess ML. Regulation of Cardiac Fibroblast Phenotype and Behavior by the Extracellular Matrix: Effects of Intrinsic Aging. Molecular Biology of the Cell, in preparation (to be submitted May 30, 2001).

Deborah Burstein, Ph.D.

Institution: Beth Israel Hospital
Boston, Massachusetts

Project: MRI of Coronary Artery Flow in Isolated and In Vivo Hearts

Duration: April 1, 1990 - March 31, 1991

Award: \$15,000

Publications:

✓ Burstein, D. (1991) MR Imaging of Coronary Artery Flow in Isolated and In Vivo Hearts. J. Mol. Res. Imaging 1:337-346.

Steven E. Cala, Ph.D.

Institution: Wayne State University
Detroit, Michigan

Project: Function of Phospholemman in Heart

Duration: April 1, 1999 - March 31, 2000

Award: \$22,500

Gerald O. Carrier, Ph.D.

Institution: Medical College of Georgia
Augusta, Georgia

Project: Adrenoceptors and Vascular Deterioration in Diabetes Mellitus

Duration: April 1, 1986 - March 31, 1987

Award: \$1,897 (nothing on file)

Wayne E. Carver, Ph.D.

Institution: University of South Carolina School of Medicine
Columbia, South Carolina
Project: Role of Integrins in Transduction of Mechanical Force
Duration: April 1, 1993 - March 31, 1994
Award: \$13,400

Publications:

- Carver, W., Molano, I., Reaves, T.A., Borg, T.K., and Terracio, L. (1995) Role of the $\alpha 1 \beta 1$ Complex in Collagen Gel Contraction In Vitro by Fibroblasts. *J. Cell. Physiol.* 165:425-437.
- Carver, W., Terracio, L., and Borg, T.K. Cell-matrix interactions: Matrix Receptors in the Development and Maintenance of the Heart. In: *Molecular Biology of Collagen Matrix in the Heart*, M. Eghbali-Webb, ed. R.G. Landes, Co., 1995, pp. 41-59.
- Carver, W., Terracio, L. and Borg, T.K. Extracellular Matrix Maturation and Heart Formation. In: *Development of the Cardiovascular System: Molecules to Organisms*, W. Burggren and B. Keller, eds. Cambridge University Press, New York, 1997.

Chi-Wing Chow, Ph.D.

Institution: Albert Einstein College of Medicine
Bronx, New York
Project: Regulation of Transcription Factor NFATc4 by p38 MAP Kinase
Duration: April 1, 2001 - March 31, 2002
Award: \$25,000

Publications:

- Yang, T.C., Ziong, Q., Enslin, H., Davis, R.J. and Chow, C.W. (2002) Phosphorylation of NFATc4 by p38 Mitogen-Activated Kinases. *Mol. Cell. Biol.* 22:3892-3904.

Catherine F. Clarke, Ph.D.

Institution: University of California
Los Angeles, California
Project: Characterization of a Prenyltransferase Gene Family
Duration: April 1, 1989 - March 31, 1990
Award: \$25,000

Publications:

Teruya, J.H., Kutsunai, S.Y., Spear, D.H., Edwards, P.A., et al. (1990) Testis Specific Transcription Initiation Sites of Rat Farnesyl Pyrophosphate Synthetase mRNA. *Mol. Cell. Biol.* 10:2315-2326.

Teruya, J.H., Salido, E.C., Edwards, P.A., and Clarke, C. F. (1991) Testis specific transcripts of rat farnesyl pyrophosphate synthetase are developmentally regulated and localized to haploid germ cells. *Biol. Reprod.* 44:663-671.

J. Douglas Coffin, Ph.D.

Institution: McLaughlin Research Institute
Great Falls, Montana
Project: In Vitro Transgenesis to Study Endothelial Cell Growth
Duration: April 1, 1994 - March 31, 1995
Award: \$15,000

P. Macke Consigny, Ph.D.

Institution: Medical College of Pennsylvania
Philadelphia, Pennsylvania
Project: Effects of Angioplasty on Canine Coronary Arteries
Duration: June 1, 1987 - May 30, 1988
Award: \$24,000

Institution: Thomas Jefferson University Hospital
Philadelphia, Pennsylvania
Project: Effects of Balloon Angioplasty and Laser Thermal Angioplasty
Duration: April 1, 1988 - March 31, 1989
Award: \$20,000

Publications:

Consigny, P., Macke, G.A., and Gardiner, A.G. Jr. (1991) Atherosclerotic Rabbit Iliac Arteries: Comparison of Balloon Angioplasty and Laser-Assisted Balloon Angioplasty. *J. Vasc. Interv. Radiol.* 2:253-260.

Consigny, P.M., Teitelbaum, G.P., Gardiner, G.A. Jr., and Kerns, W.D. (1989) Effects of Thermal Laser Angioplasty on Arterial Contractions and Biomechanics. *Cardiovasc. Interv. Radiol.* 12:83-87.

Gardiner, G.A. J., and Consigny, P.M. (1991) Effects of Thermal Energy on the Arterial Wall. *Semin. Interv. Radiol.* 8:94-99.

Jonathan Cordeiro, Ph.D.

Institution: Masonic Medical Research Laboratory
Utica, New York
Project: Identification and Role of K⁺ Currents in Purkinje Cells

Duration: April 1, 2004 - March 31, 2005
Award: \$22,500

Institution: Masonic Medical Research Laboratory
Utica, New York
Project: Identification and Role of K⁺ currents in Purkinje Cells
Duration: April 1, 2005 - March 31, 2006
Award: \$25,000

Publications:

- Cordeiro, J.M., Dumaine, R., Brugada, R., Hong, K., Borggrefe M., Gaita F., Antzelevitch C., (2004) Mutation N588K in HERG Underlies the Short QT Syndrome and Renders Ikr Resistant to Class III Antiarrhythmic Agents. Heart Rhythm 1: S92
- Cordeiro J.M., Gaetano W.S., Greene L., Antzelevitch C., (2004) Electrical and Mechanical Transmural Heterogeneity Serves to Synchronize Contraction Across the Canine Left Ventricle Wall. Heart Rhythm 1: S125
- Haufe V., Cordeiro J.M., Zimmer T., Wu Y.S., Benndorf K., Dumaine R. (2005) Contribution of Neuronal Sodium Channels to the Cardiac Fast Sodium Current I_{Na} is Greater in Dog Heart Purkinje Fibers than in Ventricles. Cardiovascular Res. 65 117-127
- Cordeiro, J.M., Brugada, R., Wu, Y.S., Hong, K., Dumaine R., (2005) Modulation of I_{kr} Inactivation by Mutation N588K in KCNH2: A link to Arrhythmogenesis in Short QT Syndrome. Cardiovascular Research. (In Press)
- Spitzer, K.W., Pollard A.E., Yag, L., Zanjboni, M., Cordeiro, J.M., Huelsing, D.J. (2005) Cell-to cell Electrical Interactions During Early and Late Repolarization. Journal of Cardiovascular Electrophysiology.
- Haufe V., Schiccitano S., Cordeiro J.M., Wu Y.S., Zimmer T., Dumaine R., (2005) Contribution of Neuronal Sodium Channels to the Cardiac Fast Sodium Current I_{Na} in Dog Heart. Biophysical Journal 88: 603a.
- Cordeiro J.M., (2005) K⁺ Current Differences in Purkinje Cells Isolated from Rabbit and Dog Heart. Biophysical Journal 88: 474a.

William Craelius, Ph.D.

Institution: Brooklyn VA Medical Center
Brooklyn, New York
Project: Prognostic Value of Rhythms in Heart Rate and Blood Pressure
Duration: April 1, 1987 - March 31, 1988
Award: \$25,000

Institution: SUNY Health Science Center
Brooklyn, New York
Project: Prognostic Value of Rhythms in Heart Rate and Blood Pressure
Duration: April 1, 1988 - March 31, 1989
Award: \$20,000

 Publications:

- Craelius, W., Restivo, M., and El-Sherif, N. (1987) Signal Processing Options for Detecting Conduction Abnormalities in Ischemic Ventricles. *J. Electrocardiol. Suppl. Oct.* 1987:119-124.
- Craelius, W., and Restivo, M., Fiducial formulae for fidelity, Chapter 2. In: *High Resolution Electrocardiology*, N. El-Sherif, ed. Futura Press, Mt. Kisco, NY, 1991, pp. 1-29.
- Curcie, D., and Craelius, W. Recognition of Individual Heart Rate Patterns with Cepstral Vectors, *Biol. Cybern.* 1977; 77(2): 103-9.
- Craelius, W., Tangella, M., and Akay, M. (1992) Heart Rate Variability as an Index of Autonomic Imbalance in Patients Following Myocardial Infarction. *Medical and Biological Engineering and Computing* 30:385-388.
- Bekheit, S., Tangella, M., El-Sakr, R.A., Craelius, W., and El-Sherif, N. (1990) Use of Heart Rate Spectral Analysis to Measure Effects of Calcium Channel Blockers on Autonomic Nervous System. *Am. J. Cardiol.* 119:79-85.
- El-Sherif, N., Restivo, M., Craelius, W., Henkin, R., et al. The High Resolution Electrocardiogram. Basic and Clinical Aspects. In: *Cardiac Pacing and Electrophysiology*, N. El-Sherif and P. Samet, eds., W.B. Saunders, 1990, pp. 349-372.
- Akay, M., Craelius, W., and Welkowitz, W. (1990) High Resolution Electrocardiography by Spectral Analysis, *Proceedings IEEE. Engineering in Medicine and Biology*, 12:1167-68.
- Tangella, M., Li, J.K.J., and Craelius, W. (1989) Measurement of Autonomic Balance in Patients following Myocardial Infarction. *Proc. IEEE Eng. Med. Biol.* 11:1761-1762.

Richard A. Currie, Ph.D.

Institution: University of Colorado Health Science Center
Denver, Colorado
Project: Regulation of Human Lipoprotein Lipase Gene Transcription
Duration: April 1, 1991 - March 31, 1992
Award: \$15,000

Institution: University of Colorado Health Science Center
Denver, Colorado
Project: Regulation of Human Lipoprotein Lipase Gene Transcription
Duration: April 1, 1992 - March 31, 1992
Award: \$15,000

 Publications:

Bush, E., and Currie, R.A. (1992) Determination of Transcription Factor Isoelectric Point by Two-Dimensional Native Isoelectric Focusing and Electrophoretic Mobility Shift Analysis. *Anal. Biochem.* 206:189-194.

Elaine C. Davis, Ph.D.

Institution: Washington University
St. Louis, Missouri
Project: Characterization of Elastic Fibers in Aortic Aneurism
Duration: April 1, 1996 - March 31, 1997
Award: \$15,000

Andrea I. Doseff, Ph.D.

Institution: The Ohio State University
Columbus, Ohio
Project: Regulatory Mechanisms of Human Monocyte Apoptosis by IL-4
Duration: April 1, 2004 - March 31, 2005
Award: \$25,000

James G. Drewett, Ph.D.

Institution: Medical College of Wisconsin
Milwaukee, Wisconsin
Project: Guanylyl Cyclase Effects on Adrenal Cell Steroidogenesis
Duration: April 1, 1994 - March 31, 1995
Award: \$15,000

Publications:

Olson, L.J., Knych, E.T. Jr., Herzig, T.C., and Drewett, J.G. (1997) Selective Guanylyl Cyclase Inhibitor Reverses Nitric Oxide-Induced Vasorelaxation. *Hypertension* 29:254-261.

Michael D. Ehlers, Ph.D., M.D.

Institution: Duke University Medical Center
Durham, North Carolina
Project: Developing NMDA Receptor Inactivating Peptides
Duration: April 1, 2000 - March 31, 2001
Award: \$30,000

Publications:

Scott, D.B., Blanpied, T.A., Swanson, G.T., Zhang, C, Ehlers, M.D. (2001). An NMDA Receptor ER Retention Signal Regulated by Phosphorylation and Alternative Splicing. *J. Neurosci.* 21:3063-3072.

Ehlers, M.D. Reinsertion or Degradation of AMPA Receptors Determined by Activity-Dependent Endocytic Sorting. *Neuron* 28 (2000):511-525.

Sarah K. England, Ph.D.

Institution: The University of Iowa
Iowa City, Iowa

Project: Kv Channel Subunit Composition in Cerebral Arteries

Duration: April 1, 1998 - March 31, 1999

Award: \$15,000

Dennis W. Foreman, Ph.D.

Institution: The Ohio State University
Columbus, Ohio

Project: Characterization of Human Coronary Arterial Calcification

Duration: April 1, 1986 - March 31, 1987

Award: \$37,464

Institution: The Ohio State University
Columbus, Ohio

Project: Characterization of Human Coronary Arterial Calcification

Duration: April 1, 1987 - March 31, 1988

Award: \$33,000

Publications:

Foreman, D.W., Mitchell, J.C. and Baker, P.B. (1989) Physical Chemical Evidence of Structural Weakness in Coronary Arterial Calcification. *Cardiovasc. Res.* 23:64-69.

Foreman, D.W., and Fulkerson, P.K. (1987) Crystallochemical Characteristics of the Inorganic Phase of Human Calcific Aortic Valvar Stenosis. *Cardiovascular Research.* 21(10):761-765.

Stanley Fowler, Ph.D.

Institution: University of South Carolina
Columbia, South Carolina

Project: Cell Populations in Accelerated Atherosclerosis

Duration: April 1, 1984 - March 31, 1988

Award: \$341,243

Publications:

- Fowler, S.D., Brown, W.J., Warfel, J., and Greenspan, P. (1987) Use of Nile Red for the Rapid In Situ Quantitation of Lipids on Thin-Layer Chromatograms. *J. Lipid Res.* 28:1225-1232.
- Nachtigal, M., Greenspan, P., Terracio, L., and Fowler, S.D. (1987) Transformation of Rabbit Arterial Smooth Muscle Cells with Simian Virus 40. *Arch. Virol.* 95:225-235.
- Folwer, S.C., Mayer, E.P., and Greenspan, P. (1987) Foam Cells and Atherogenesis. *Ann. NY Acad. Sci.* 454:79-90.
- Greenspan, P., Mayer, E.P., and Fowler, S.D. (1985) Nile Red: Selective Fluorescent Stain for Intracellular Lipid Droplets. *J. Cell. Biol.* 100:965-973.
- Greenspan, P., and Fowler, S.D. (1985) Spectrofluorometric Studies of the Lipid Probe Nile red. *J. Lipid Res.* 26:781-789.
- Fowler, S.D., and Greenspan, P. (1985) Application for Nile Red, a Fluorescent Hydrophobic Probe, for the Detection of Neutral Lipid Deposits in Tissue Sections. *J. Histochem. Cytochem.* 33:833-836.

Nisha Garg, Ph.D.

Institution: University of Texas Medical Branch
Galveston, Texas

Project: Metabolic Disorders in Chagasic Cardiomyopathy

Duration: April 1, 2002 - March 31, 2003

Award: \$25,000

Publications:

Nisha Garg, Vsevolod L. Popov, John Papaconstantinou. Profiling Gene Transcription Reveals a Deficiency of Mitochondrial Oxidative Phosphorylation in Trypanosoma Cruzi-Infected Murine Hearts: Implications in Chagasic Myocarditis Development. *Biochimica et Biophysica Acta* 62211 (2003) 1-15

Mark A. Gerhardt, M.D., Ph.D.

Institution: The Ohio State University
Columbus, Ohio

Project: PKA-Phosphorylation of B2-Adrenergic Receptors in CHF

Duration: April 1, 2006 - March 31, 2007

Award: \$25,000

Gary Gerstenblith, M.D.

Institution: The Johns Hopkins Hospital
Baltimore, Maryland

Project: Optimal Ionic Conditions for Myocardial Recovery Following Ischemia

Duration: October 20, 1983 - March 31, 1988

Award: \$220,578

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Publications:

- Renlund, D.G., Gerstenblith, G., Lakatta, E.G., et al. (1984) Perfusate Sodium During Ischemia Modifies Post-Ischemic Functional and Metabolic Recovery in the Rabbit Heart. *J. Mol. Cell Cardiol.* 16:795-801.
- Renlund, D.G., Lakatta, E.G., Mellits, E.D., and Gerstenblith, G. (1985) Calcium-Dependent Enhancement of Myocardial Diastolic Tone and Energy Utilization Dissociates Systolic Work. *Circ. Res.* 57:876-888.
- Pelikan, P.C.D., Weisfeldt, M.L., Jacobus, W.E., Miceli, M.V., et al. (1986) Acute Doxorubicin Cardiotoxicity. *J. Cardiovasc. Pharm.* 8:1058-1066.
- Renlund, D.G., Lakatta, E.G., and Gerstenblith, G. Sodium Modulation of Resting Force, Contractile Properties, and Metabolism with Particular Emphasis on its Role in the Development of Calcium Overload States. In: *Myocardial and Skeletal Muscle Bioenergetics*. N. Brautbar, ed. Plenum Publishing Corp., New York, 1986, pp. 601-615.

Patricia A. Gwartz, Ph.D.

Institution: Texas College of Osteopathic Medicine
Fort Worth, Texas

Project: Daily Exercise Reduces Cardiac Dysfunction During Ischemia

Duration: April 1, 1989 - March 31, 1990

Award: \$25,000

Christina B. Harbury, M.D.

Institution: University of Illinois Medical Center
Chicago, Illinois

Project: Role of Platelets in Accelerated Diabetic Atherosclerosis

Duration: April 1, 1984 - March 31, 1987

Award: \$122,236

Institution: University of Illinois Medical Center
Chicago, Illinois

Project: Platelet Secretion in Atherosclerosis

Duration: April 1, 1988 - March 31, 1989

Award: \$22,500

Aslam Hassan, Ph.D.

Institution: University of Illinois
Urbana, Illinois

Project: Development of Cholesterol Homeostasis

Duration: April 1, 1987 - March 31, 1988

Award: \$6,669

Publications:

- Hassan, A.S. (1988) Effects of Chronic Inhibition of Glutathione Biosynthesis on Cholesterol and Bile Acid Metabolism in Rats. *Biochim. Biophys. Acta.* 963:131-138.
- Dahlem, A.M., Hassan, A.S., Swanson, S.P., Carmichael, W.W., and Beasley, V.R. (1989) A Model System for Studying Intestinal Absorption of Microcystin-A, a Hepatotoxic Peptide from the Cyanobacterium *Microcystis Aeruginosa*, in the rat. *Pharm. Toxicol.* 64:177-181.
- Coddington, K.A., Swanson, S.P., Hassan, A.S., and Buck, W.B. (1989) Enterohepatic Circulation of T-2 Toxin Metabolites in the Rat. *Drug Metab. Disp.* 17:600-605.
- Abbott, L.C., Nejad, H.H., Bottje, W.G., and Hassan, A.S. (1990) Glutathione Levels in Specific Brain Regions of Genetically Epileptic (tg/tg) Mice. *Brain Res. Bull.* 25:629-631.
- Manohar, M., and Hassan, A.S. (1990) Diaphragm Does Not Produce Ammonia or Lactate During High-Intensity Short-Term Exercise. *Am. J. Physiol.* 259 (Heart and Circ. Physiol. 28):H1185-1189.
- Manohar, M., and Hassan, A.S. (1991) Diaphragmatic Energetics During Prolonged Exhaustive Exercise. *Am. Rev. Respir. Dis.* 144:415-418.
- Schaeffer, D.J., Tehseen, W.M., Johnson, L.R., McLaughlin, G.L., et al. (1991) Co-Carcinogenesis Between Cadmium and Aroclor 1254 in Planarians is Enhanced by Inhibition of Glutathione Synthesis. *Quality Assurance: Good Practice, Regulation and Law* 1:31-41.
- Hassan, A.S., Bunick, D., Lund, L.A., and Bottje, W.G. (1992) Glutathione and Bile Acid Synthesis. The effect of GSH content of HepG2 cells on the activity and mRNA content of Cholesterol 7 α -hydroxylase. *Biochem. Pharm.* 44:1475-1477.
- Hassan, A.S., Bunick, D., St. Denis, S.H., and Lund, L.A. (1993) Glutathione and Bile Acid Synthesis II. Effect of hepatic GSH content on the activity and MRNA levels of cholesterol 7 α -hydroxylase in the rat. *Biochem. Pharm.* 46:555-556.

Joseph A. Hill, M.D., Ph.D.

Institution: University of Iowa
Iowa City, Iowa

Project: Electrical Remodeling of Hypertrophy: Role of Calcineurin

Duration: April 1, 2000 - March 31, 2001

Award: \$30,000

Theodore M. Hollis, Ph.D.

Institution: Pennsylvania State University
University Park, Pennsylvania

Project: Histamine Metabolism and Diabetes in Atherosclerosis

Duration: November 1, 1980 - March 31, 1989

Award: \$944,915

Publications:

- Hollis, T.M., Kern, J.A., Enea, N.A., and Cosgarea, S.A.J. (1985) Changes in Plasma Histamine Concentration in the Streptozotocin-Diabetic Rat. *Exp. Mol. Pathol.* 43:90-96.
- Hollis, T.M., Enea, N.E., and Kern, J.A. (1984) Time-Dependent Changes in Aortic Albumin Permeability Characteristics in Experimental Diabetes. *Exp. Mol. Pathol.* 41:207-217.
- Hollis, T.A., and Strickberger, S.A. (1985) Inhibition of Aortic Histamine Synthesis by Alpha-Hydrazinohistidine Inhibits Increased Aortic Albumin Accumulation in Experimental Diabetes. *Diabetologica* 28:282-285.
- Carroll, W.J., and Hollis, T.M. (1985) Aortic Histamine Synthesis and Aortic Albumin Accumulation in Diabetes: Activity-Uptake Relationships. *Exp. Mol. Pathol.* 42:344-352.

Jay R. Hove, Ph.D.

Institution: California Institute of Technology
Pasadena, California
Project: Inducing Reversible Stenoses for Hemodynamic Studies
Duration: April 1, 2003 - March 31, 2004
Award: \$25,000

Tzung Hsiai, M.D., Ph.D.

Institution: University of Southern California
Los Angeles, California
Project: Flow Regulation of Oxidative Stress Mediated by Vascular Endothelium
Duration: April 1, 2003 - March 31, 2004
Award: \$25,000

Institution: University of Southern California
Los Angeles, California
Project: Flow Regulation of Oxidative Stress
Duration: April 1, 2005 - March 31, 2006
Award: \$25,000

Publications:

- Li C., Lei B., Tang T., Zhang D., Rouhanizadeh M., Hsiai T. and Zhou C. Chemical Gating of In₂O₃ Nanowires by Organic and Bio Molecules. *Applied Physics Letter*, Vol. 83 (19), 014-6. (2003)
- Hwang J., Ing M, Salazar A., Lassegue B., Griending K., Navab M., Sevanian A., Hsiai T. Pulsatile vs. Oscillatory Shear Stress Regulates NADPH Oxidase Subunit: Implication for Native LDL Oxidation. "Circulation Research" 93:1225-1232. (2003)

Hsiai T., Ing M., Salazar A., Cho S.K., Wong P., Hama S., Navab M., Demer L., Ho C.M.
Monocyte Recruitment to Endothelial Cells in Response to Oscillatory Shear Stress.
"The FASEB" Journal. - Vol. 17:1648-1657. (2003)

Hsiai T., Salazar A., Ing M.A., Cho S.K., Wang P.K., Navab M., Demer L., Ho C.M. –
Micro Sensors: Linking Inflammatory Responses with Oscillatory Shear Stress.
Annals of Biomedical Engineering. Vol. 32(2): 189-201.(2004)

Ing, M., Hwang, J., Salemi, S., DeMaio, L., Bross, J. Marcu, L., Sevanian, A., Hsiai, T.,
Induction of NADPH Oxidase Subunit, Nox4, by Ox-PAPC: Implications of
NAD(P)H Autofluorescence and MMP Expression, Arteriosclerosis Thrombosis &
Vascular Biology. (In revision)

L. DeMaio, A. Sevanian, and T. Hsiai. Oxidized Lipid-Mediated Tight Junction Protein
Expression and Phosphorylation in Endothelial Cells. Arteriosclerosis, Thrombosis &
Vascular Biology.

Larisa M. Humma, Pharm.D.

Institution: University of Illinois at Chicago
Chicago, Illinois
Project: Cyclooxygenase-1 Genotype and Aspirin Response in Stroke
Duration: April 1, 2004 - March 31, 2005
Award: \$50,000

Kaikobad J. Irani, M.D.

Institution: The Johns Hopkins University
Baltimore, Maryland
Project: RhoA-Mediated, Redox-Sensitive Regulation of Smooth Muscle Cell
Duration: April 1, 1999 - March 31, 2000
Award: \$22,500

Harold P. Jones, Ph.D.

Institution: University of South Alabama
Mobile, Alabama
Project: Xanthine Oxidase-Mediated Reperfusion Injury in the Heart
Duration: April 1, 1987 - March 31, 1988
Award: \$24,000

Institution: University of South Alabama
Mobile, Alabama
Project: Xanthine Oxidase-Mediated Reperfusion Injury in the Heart
Duration: April 1, 1988 - March 31, 1989

Award: \$20,000

Stanley D. Kalsner, Ph.D.

Institution: City University of New York
New York, New York

Project: Release of Stored Vasoactive Amines and Coronary Artery Spasm

Duration: April 1, 1987 - March 31, 1988

Award: \$25,000

Institution: City University of New York
New York, New York

Project: Release of Stored Vasoactive Amines and Coronary Artery Spasm

Duration: April 1, 1988 - March 31, 1989

Award: \$20,000

Institution: City University of New York
New York, New York

Project: Release of Stored Vasoactive Amines and Coronary Artery Spasm

Duration: April 1, 1989 - March 31, 1990

Award: \$25,000

Publications:

Kalsner, S., and Quillan, M. (1989) Nonneurogenic Relaxation to Field Stimulation in Coronary Arteries. *J. Pharm. Exp. Ther.* 250:461-469.

John C. Kermode, Ph.D.

Institution: University of Mississippi Medical Center
Jackson, Mississippi

Project: von Willebrand Factor-Induced Platelet Calcium Signal

Duration: April 1, 1997 - March 31, 1998

Award: \$14,956

Institution: University of Mississippi Medical Center
Jackson, Mississippi

Project: von Willebrand Factor-Induced Platelet Calcium Signal

Duration: April 1, 1998 - March 31, 1999

Award: \$14,991

Publications:

Kermode, J.C., Zheng, Q., and Milner, E.P. Marked Temperature Dependence of the Platelet Calcium Signal Induced by Human von Willebrand Factor. *Blood*, 94, 199-207.

Raouf A. Khalil, M.D., Ph.D.

Institution: University of Mississippi Medical Center
Jackson, Mississippi
Project: Mechanisms of Eicosanoids-Induced Coronary Hyperactivity
Duration: April 1, 1997 - March 31, 1998
Award: \$15,000

Willem Kolff, M.D.

Institution: University of Utah
Salt Lake City, Utah
Project: Artificial Heart Program
Duration: February 1, 1981 - January 31, 1982
Award: \$54,332

Institution: University of Utah
Salt Lake City, Utah
Project: Artificial Heart Program
Duration: March 1, 1982 - February 28, 1983
Award: \$25,000

Institution: University of Utah
Salt Lake City, Utah
Project: Artificial Heart Program
Duration: April 1, 1983 - March 31, 1984
Award: \$10,000

Institution: University of Utah
Salt Lake City, Utah
Project: Attempts to Eliminate Thromboemboli from Artificial Hearts
Duration: April 1, 1986 - March 31, 1987
Award: \$25,000

Institution: University of Utah
Salt Lake City, Utah
Project: Thrombus-Free Elastomer Valves
Duration: April 1, 1987 - March 31, 1988
Award: \$25,000

Institution: University of Utah

Project: Salt Lake City, Utah
Elastomer Artificial Heart Valves
Duration: April 1, 1988 - March 31, 1989
Award: \$20,000

Publications:

- Kolff, W.J. (1984) Artificial Organs Beyond the First 40 Years. *Life Support Systems* 2:1-14.
- Kolff, W.J. Obscure Projects. In: *Artificial Organs*. J.D. Andrade, ed. VCH Publishers, New York, 1987, pp. 712-723.
- Kolff, W.J. (1984) What Next in Artificial Organs? *Vet. Surg.* 13:271-274.
- Kolff, W.J. (1988) Experiences and Practical Considerations for the Future of Artificial Hearts and of Mankind. *Artif. Organs* 12:89-111.
- Hughes, D.S., Butler, M.D., Holmberg, D.L., et al. (1985) Comparative Hematological Data. *Trans. Am. Soc. Artif. Intern. Organs* 31:224-229.
- Pantalos, G.M., et al. (incl. W.J. Kolff). (1988) Development of Smaller Artificial Ventricles and Valves made by Vacuum Forming. *Int. J. Artif. Organs* 11:373-380.
- Yu, L.S., Yuan, B., Bishop, D., Topaz, S., et al. (1989) New Polyurethane Valves in new Soft Artificial Hearts. *Trans. Am. Soc. Artif. Organs* 35:301-304.
- Kolff, W.J., and Yu, L.S. (1989) The Return of Elastomer Valves. *Ann. Thorac. Surg.* 48:S98-99.
- Kolff, W.J. (1990) Artificial Kidney and Artificial Heart: Further Considerations. *Int. J. Artif. Organs* 13:404-406.
- Kolff, W.J. The Future of Artificial Organs and of Us All. In: *Artificial Organs*. J.D. Andrade, ed. VCH Publishers, New York, 1987, pp. 723-744.
- Kolff, W.J. (1987) Artificial Organs - Forty Years and Beyond. *Trans. Am. Soc. Artif. Intern. Organs* 29:6-24.
- Kolff, W.J. (1990) The Invention of the Artificial Heart. *Int. J. Artif. Organs* 13:396-403.
- Hastings, W.L., Aaron, J.L., Deneris, J., Kessler, T.R., et al. (1981) A Retrospective Study of Eight Valves Surviving Five Months on the Pneumatic Total Artificial Heart. *Trans. ASAIO* 27:71-75.
- Jarvik, R.K., Kessler, T.R., McGill, L.D., Olsen, et al. (1981) Determinants of Pannus Formation in Long-Surviving Artificial Heart in Calves and Its Prevention. *Trans. ASAIO* 27:90-95.
- Olsen, D.B., DeVries, W.C., Oyer, P.E., Reitz, B.A., et al. (1981) Artificial Heart-Implantation, Later Cardiac Transplantation in the Calf. *Trans of ASAIO* 27:132-136.
- Lioi, A.P., Nielsen, S.D., Olsen, D.B., et al. (1981) Are the Jarvik Artificial Ventricles Limited by Inflow Resistance? *J. Artif. Organs* 5(2):118-124.
- Mochizuki, T., Lawson, J.H., Olsen, D.B., Fukumasu, H., et al. (1981) A Seven-Month Survival of a Calf with an Artificial Heart Designed for Human Use. *J. Artif. Organs* 5(2):125-131.
- Olsen, D.B., DeVries, W.C., Kolff, W.J. (1981) The Experimental Artificial Heart in Transition to the Clinical Area. *ISAO Meeting, J. Artif. Organs* 5:548-549.
- Huvers, F.C., Nielsen, S., Wilshaw, P., Olsen, D.B., and Kolff, W.J. (1981) A New Method of Measuring Cardiac Output of the Jarvik -5 Artificial Heart. *Reports, Netherlands Heart Association*, pp. 155-156.

- Maat, A., Kolff, W.J., and Olsen, D.B.(1981) Elective Period in the Artificial Heart Research Laboratories. Reports, Netherlands-Heart Association, pp. 157-158.
- Olsen, D.B. (1981) The Total Artificial Heart: Yesterday, Today and Tomorrow. J. Artif. Organs, 5 (Suppl.):31-35.
- Olsen, D.B., DeVdes, W.C., and Kolff, W.J. (1981) The Experimental Total Artificial Heart in Transition to the Clinical Area. J. Artif. Organs 5(Suppl.):548-549.
- Kolff, W.J. (1982) For the Clinical Application of the Artificial Heart. (point of view). Heart Transplantation 1(2):159-160.

Robert D. Koos, Ph.D.

Institution: University of Miami School of Medicine
Miami, Florida

Project: Hypoxia-Induced Myocardial Proteins

Duration: April 9, 1987 - April 8, 1988

Award: \$1,995

James W. Leahy, Ph.D.

Institution: University of California
Berkeley, California

Project: Squalene Synthase Inhibitors as Hypocholesterolemics

Duration: April 1, 1994 - March 31, 1995

Award: \$15,000

Edward J. Lesnefsky, M.D.

Institution: University of Colorado Health Science Center
Denver, Colorado

Project: Biochemical Indices of Oxygen Radical Injury

Duration: April 1, 1988 - March 31, 1989

Award: \$22,500

Institution: University of Colorado Health Science Center
Denver, Colorado

Project: Biochemical Indices of Oxygen Radical Injury

Duration: April 1, 1989 - March 31, 1990

Award: \$25,000

Publications:

- Lesnefsky, E.J., Repine, J.E., and Horwitz, L.D. (1990) Deferoxamine Pre-Treatment Reduces Canine Infarct Size and Oxidative Injury. J. Pharmacol. Exp. Therap. 253:1103-1109.

- Lesnefsky, E.J., Hedlund, B.E., Hallaway, P.E., and Horwitz, L.D. (1990) High-Dose Iron-Chelator Therapy During Reperfusion with Deferoxamine-Hydroxyethyl Starch Conjugate Fails to Reduce Canine Infarct Size. *J. Cardiovasc. Pharm.* 16(4):523-8.
- Lesnefsky, E.J., Repine, J.E., and Horwitz, L.D. (1989) Oxidation and Release of Glutathione from Myocardium during Early Reperfusion. *Free Radicals Biology and Medicine.* 7:31-35.
- Lesnefsky, E.J., Dauber, I.M., and Horwitz, L.D. (1991) Myocardial Sulfhydryl Pool Alterations Occur During Reperfusion Following Brief and Prolonged Myocardial Ischemia. *In vivo. Circulation Research.* 68:605-612.
- Lesnefsky, E.J., Williams, G.R., Rubinstein, J.D., et al. (1991) Hydrogen Peroxide Decreases Effective Refractory Period in the Isolated Heart. *Free Radical Biology & Medicine* 11:529-535.

Roger Lewis, Ph.D.

Institution: University of Nevada
Reno, Nevada

Project: Characterization of Aortic RNase

Duration: April 1, 1988 - March 31, 1989

Award: \$11,000

Shi Liu, Ph.D.

Institution: University of Arkansas for Medical Sciences
Little Rock, Arkansas

Project: Mechanism for Modulation of Cardiac L-type Ca Current

Duration: April 1, 1995 - March 31, 1996

Award: \$14,996

Institution: University of Arkansas for Medical Sciences
Little Rock, Arkansas

Project: Modulation of Cardiac L-type Ca Current by TNF-alpha

Duration: April 1, 1996 - March 31, 1997

Award: \$15,000

Publications:

- ✓ Liu, S.J. and R.H. Kennedy. Adrenergic Activation of L-type Ca Current in Rat Ventricular Myocytes: Perforated Patch-Clamp Recordings. *American Journal of Physiology* 274:H2203-H2207.
- ✓ McHowat, J., S. Liu and M.H. Creer. Selective Hydrolysis of Plasmalogen Phospholipids by Ca-Independent PLA2 in Hypoxic Ventricular Myocytes. *American Journal of Physiology* 274:C1727-C1737.

- ✓ Liu, S.J. and J. McHowat. Stimulation of Different Phospholipases A2 by Tumor Necrosis Factor- α and Interleukin-1 β in Adult Rat Ventricular Myocytes. *American Journal of Physiology* 44 (4): H1462-H1472.
- ✓ Liu, S.J., WeiGuo Zhou and R.H. Kennedy. Suppression of β -adrenergic Responsiveness of L-type Ca^{2+} Channel Current by Interleukin-1 β in Adult Rat Ventricular Myocytes. *American Journal of Physiology* 276:H141-H148.
- ✓ Liu, S.J., Michael H. Creer, and J. McHowat. Alterations in Ca^{2+} and K^{+} Currents by Lysoplasmalogen in Adult Rabbit Ventricular Myocytes. *American Journal of Physiology* (in Preparation).

Sean M. Lynch, Ph.D.

Institution: Midwestern University
 Downers Grove, Illinois
 Project: Mediation of Metal Ion-Dependent LDL Oxidation by Thiols
 Duration: April 1, 1997 - March 31, 1998
 Award: \$15,000

Gary E. Lyons, Ph.D.

Institution: University of Wisconsin Medical School
 Madison, Wisconsin
 Project: Molecular Basis of Cardiac Myogenesis in Embryonic Mice
 Duration: April 1, 1992 - March 31, 1993
 Award: \$15,000

Alana K. Majors, Ph.D.

Institution: Allegheny University of the Health Sciences
 Pittsburgh, Pennsylvania
 Project: Effects of Homocysteine on Arterial Collagen
 Duration: April 1, 1998 - March 31, 1999
 Award: \$15,000

George V. Mann, M.D.

Institution: Vanderbilt University School of Medicine
 Nashville, Tennessee
 Project: A Surrogate Vitamin C for Preventing Diabetic Angiopathy
 Duration: April 1, 1983 - March 31, 1987
 Award: \$171,251

Eduardo Marban, M.D., Ph.D.

Institution: The Johns Hopkins University School of Medicine
Baltimore, Maryland
Project: Role of Cell Calcium in Myocardial Ischemic Injury
Duration: April 1, 1989 - March 31, 1999
Award: \$24,986

Publications:

- ✓ Koresune, Y., and Marban, E. (1990) Mechanism of Ischemic Contracture in Ferret Hearts: Relative Roles of $[Ca^{2+}]_i$ Elevation and ATP Depletion. *Am. J. Physiol.* 258:H9-H16.
- ✓ Koresune, Y., and Marban, E. (1989) Cell Calcium in the Pathophysiology of Ventricular Fibrillation and in the Pathogenesis of Post-Arrhythmic Contractile Dysfunction. *Circulation* 80:369-379.
- ✓ Marban, E., Koresune, Y., Corretti, M., Chacko, V.P. and Kusuoka, H. (1989) Calcium and Its Role in Myocardial Cell Injury During Ischemia and Reperfusion. *Circulation* 80:IV-17-IV-22.
- ✓ Marban, E., Kitakaze, M., Koresune, Y., Yue, D.T., Chacko, V.P., and Pike, M.M. (1990) Quantification of $[Ca^{2+}]_i$ in perfused hearts: Critical Evaluation of the 5F-BAPTA and Nuclear Magnetic Resonance Method as Applied to the Study of Ischemia and Reperfusion. *Circulation Research* 66:1255-1267.
- ✓ Kusuoka, H., Koresune, Y., Chacko, V.P., Weisfeldt, M.L., and Marban, E. (1990) Excitation-Contraction Coupling in Postischemic Myocardium: Does Failure of Activator Ca^{2+} Transients Underlie "Stunning"? *Circulation Research* 66:1268-1276.
- ✓ Cingolani, H.E., Koresune, Y., and Marban, E. (1990) Recovery of Contractility and Intracellular PH During Respiratory Acidosis in Ferret Hearts: Role of Na^+/H^+ Exchange. *American Journal of Physiology* 259 (Heart and Circulatory Physiology 28):H843-H848.
- ✓ Marban, E., and Koresune, Y. (1990) Cell Calcium, Oncogenes, and Hypertrophy. *Hypertension* 15:652-658.
- ✓ Koresune, Y., and Marban, E. (1990) Relative Roles of Ca^{2+} -Dependent and Ca^{2+} -Independent Mechanisms in Hypoxic Contractile Dysfunction. *Circulation* 82:528-535.
- ✓ Koresune, Y., Corretti, M., Kusuoka, H., and Marban, E. (1991) Mechanism of Ischemic Contractile Failure: Inexcitability, Metabolite Accumulation, or Vascular Collapse? *Circulation Research* 68:255-262.
- ✓ Corretti, M., Koresune, Y., Kusuoka, H., Chacko, V.P., Zweier, J.L., and Marban, E. (1991) Glycolytic Inhibition and Calcium Overload as Consequences of Exogenously-Generated Free Radicals in Rabbit Hearts. *Journal of Clinical Investigation* 88:1014-1025.
- ✓ Jeremy, R.W., Koresune, Y., Marban, E., and Becker, L.C. (1992) Relation Between Glycolysis and Calcium Homeostasis in Postischemic Myocardium. *Circulation Research* 70:1180-1190.

Martha J. Marvin, Ph.D.

Institution: Albany Medical College
Albany, New York
Project: Molecular Mechanisms of Cardiac Commitment
Duration: April 1, 2005 - March 31, 2006
Award: \$25,000

Jane McHowat, Ph.D.

Institution: St. Louis University School of Medicine
St. Louis, Missouri
Project: Plasmalogen-Selective PLA2 Activation in Ischemia
Duration: April 1, 1995 - March 31, 1996
Award: \$15,000

Publications:

- ✓ McHowat, J., Jones, J.H., and Creer, M.H. (1996) Quantitation of Individual Phospholipid Molecular Species by UV Absorption Measurements. *J. Lipid Res.* 37:2450-2460.
- McHowat, J., Jones, J.H., and Creer, M.H. A Gradient-Elution, Reverse Phase High Performance Liquid Chromatographic Technique for the Separation of Individual Phospholipid Molecular Species. *J Chromatogr B.* 1997; 702, 21-32.
- McHowat, J., and Liu, S. (1997) Interleukin-1beta Stimulates Phospholipase A2 Activity in Adult Rat Ventricular Myocytes, *Am. J. Physiol.* 272:C450-C456.

Mark P. McLean, Ph.D.

Institution: University of South Florida
Tampa, Florida
Project: Hepatic Sterol Carrier Protein-2 Expression and Function
Duration: April 1, 1993 - March 31, 1994
Award: \$15,000

Institution: University of South Florida
Tampa, Florida
Project: Hepatic Sterol Carrier Protein-2 Expression & Function
Duration: April 1, 1994 - March 31, 1995
Award: \$15,000

Publications:

- ✓ McLean, M.P., Billheimer, J.Y., Warden, K.J., and Irby, R.B. (1995) Differential Expression of Hepatic Sterol Carrier Proteins in the Streptozotocin-Treated Diabetic Rat. *Endocrinology* 136:3360-3368.
- McLean, M.P., Zhao, Z., and Ness, G.C. (1995) Decreased Hepatic LDL-Receptor, 3-Hydroxy-3-Methylglutaryl Coenzyme A Reductase and Sterol Carrier Protein-2

Expression is Associated with Pregnancy Loss in the Streptozotocin Treated Diabetic Rat. *Endo.*

✓ McLean, M.P., Bilheimer, J.T., Warden, K.J., and Irby, R.B. (1995) Prostaglandin F-2alpha Mediates Ovarian Sterol Carrier Protein-2 Expression in Leuteolysis. *Endocrinology* 136(11):4963-72.

✓ McLean, M.P., Warden, K.J., Sandhoff, T.W., et al. (1996) Altered Ovarian Sterol Carrier Protein Expression in the Pregnant Streptozotocin-Treated Diabetic Rat. *Biol. Reprod.* 55:38-46.

McLean, M.P., Zhao, Z., and Ness, G.C. (1995) Reduced Hepatic LDL-Receptor, 3-Hydroxy-3-Methylglutaryl Coenzyme A Reductase and Sterol Carrier Protein-2 Expression is Associated with Pregnancy Loss in the Diabetic Rat. *Endocrine* 3:695-703.

McLean, M.P., Nanjo, K., Irby, R.B., et al. (1995) Reduced Hepatic Sterol Carrier Protein-2 Expression in the Streptozotocin Treated Diabetic Rat. *Endocrine* 3:563-571.

Nick Menhart, Ph.D.

Institution: Loyola University Chicago
Chicago, Illinois
Project: Conformational Changes of Plasminogen
Duration: April 1, 1998 - March 31, 1999
Award: \$14,960

Stephen L. Minger, Ph.D.

Institution: University of Kentucky
Lexington, Kentucky
Project: Calpain and Excitotoxicity in Focal Cerebral Ischemia
Duration: April 1, 1996 - March 31, 1997
Award: \$15,000

Publications:

✓ Pettigrew, L.C., Holtz, M.L., Craddock, S.D., Minger, S.L., et al. (1996) Microtubular Proteolysis in focal cerebral ischemia. *J. Cereb. Blood Flow Metab.* 16:1189-1202.

Minger, S.L., Geddes, J.W., Holtz, M.L., Craddock, S.D., Whiteheart, S.W., Siman, R.G., Pettigrew, L.G. Glutamate receptor antagonists inhibit calpain-mediated cytoskeletal proteolysis in focal cerebral ischemia. *Brain Res.* 810:181-199.

Kenji Murata, Ph.D.

Institution: University of California, Davis
Davis, California
Project: Cardiac Abnormalities Induced by Protein 4.1R Deficiency
Duration: April 1, 2006 - March 31, 2007

Award: \$24,997

S. Jamal Mustafa, Ph.D.

Institution: East Carolina University
Greenville, North Carolina

Project: Characterization of Adenosine Receptors in Human Coronary Arteries

Duration: April 1, 1987 - March 30, 1988

Award: \$25,000

Institution: East Carolina University
Greenville, North Carolina

Project: Characterization of Adenosine Receptors in Human Coronary Arteries

Duration: April 1, 1988 - August 31, 1989

Award: \$20,000

Publications:

Sabouni, M.H., and Mustafa, S.J. (1989) Effects of Adenosine Analogs and Ouabain on Rhythmicity in Human Coronary Artery. *Eur. J. Pharmacol.* 168:271-276.

Ramagopal, M.V., Chitwood, R.W. Jr., and Mustafa, S.J. (1988) Evidence for an A2 Adenosine Receptor in Human Coronary Arteries. *Eur. J. Pharmacol.* 151:483-486.

Sabouni, M.H., Ramagopal, M.V., and Mustafa, S.J. (1989) Roles of Calcium and the Endothelium in the Relaxations Produced by 5'-N-Ethylcarboxamidoadenosine NECA. *Eur. J. Pharmacol.* 166:311-314.

Maria Nurminskaya, Ph.D.

Institution: Tufts University
Boston, Massachusetts

Project: Evaluation of TGases as Regulators of VSMC Calcification

Duration: April 1, 2005 - March 31, 2006

Award: \$25,000

Institution: Tufts University
Boston, Massachusetts

Project: Evaluation of TGases as Regulators of VSMC Calcification

Duration: April 1, 2006 – March 31, 2007

Award: \$25,000

Paul Pantano, Ph.D.

Institution: University of Texas at Dallas

Richardson, Texas
Project: Novel Luminescence-Based Imaging Biosensors
Duration: April 1, 1997 - March 31, 1998
Award: \$15,000

✓ Publications:

- Pantano, P. and Dam, T.H. (1999). Nanotip Array Photoimprint Lithography. Review of Scientific Instruments. Vol.70, Number 10.
- Dam, T.H. and Pantano, P. Nanotip Array Photoimprint Lithography, Review of Scientific Instrumentation, 70, 3982-3986.
- Khan, S.S., Jin, E.S., Sojic, N. and Pantano, P. A Fluorescence-Based Imaging Fiber Electrode Chemical Sensor for Hydrogen Peroxide, Analytica Chimica Acta, 404, 213-221.
- ✓ Zhao, Y., Radford, N.B. and Pantano, P. In Situ Fiber-Optic Oxygen Consumption Measurement from a Working Mouse Heart, Analytical Chemistry, 71, 3887-3893.
- Zhao, Y; Zhao, P; Sherry, A.D. and Pantano, P. (2000) Simultaneous Fiber-Optic Oxygen Consumption and Metabolic NMR Measurements from a Beating Rat Heart, American Journal of Physiology.
- Liu, Y.H.; Dam, T.H. and Pantano, P. (2000) ApH-Sensitive Nanotip Array Imaging Sensor, Analytica Chimica Acta.

Dennis M. Peffley, Ph.D.

Institution: University of Tennessee School of Medicine
Memphis, Tennessee
Project: Regulation of 3-Hydroxy-3-Methylglutaryl Coenzyme A Reductase
Duration: April 1, 1988 - March 31, 1989
Award: \$21,000

Institution: University of Tennessee School of Medicine
Memphis, Tennessee
Project: Regulation of HMG-CoA Reductase Gene Expression
Duration: April 1, 1989 - March 31, 1990
Award: \$25,000

Publications:

- Peffley, D., Leonard, S., vonGunten, C., and Sinensky, M. (1988) Further Characterization of a Somatic Cell Mutant Defective in the Regulation of 3-hydroxy-methylglutaryl Coenzyme A. Som. Cell Mol. Genet. 14:527-539.

Galen Pieper, Ph.D.

Institution: Medical College of Wisconsin
Milwaukee, Wisconsin
Project: Role of Eicosanoids on Coronary Vascular Reactivity in Diabetes

Duration: April 1, 1986 - March 31, 1987
Award: \$26,765

Institution: Medical College of Wisconsin
Milwaukee, Wisconsin
Project: Role of Eicosanoids on Coronary Vascular Reactivity in Diabetes
Duration: April 1, 1987 - March 31, 1988
Award: \$30,000

Institution: Medical College of Wisconsin
Milwaukee, Wisconsin
Project: Role of Eicosanoids on Coronary Vascular Reactivity in Diabetes
Duration: April 1, 1988 - March 31, 1989
Award: \$22,433

Institution: Medical College of Wisconsin
Milwaukee, Wisconsin
Project: Role of Eicosanoids on Coronary Vascular Reactivity in Diabetes
Duration: April 1, 1989 - March 31, 1990
Award: \$24,399

Publications:

- ✓ Pieper, G.M., and Gross, G.J. (1988) Oxygen Free Radicals Abolish Endothelium-Dependent Relaxation in Diabetic Rat Aorta. *Am. J. Physiol.* 255:H825-H833.
- ✓ Pieper, G.M. Alterations in Reperfusion-Stimulated Prostacyclin Release by the Diabetic Heart. In: *The Diabetic Heart*, M. Nagano and N.S. Dhalla, eds. Raven Press, New York, 1991, pp. 465-483.
- Pieper, G.M., and Gross, G.J. (1991) Endothelial Dysfunction in Diabetes. In: *Cardiovascular Significance of Endothelium-Derived Vasoactive Factors*. G.M. Rubanyi, ed. Futura Publishing Co., Mount Kisco, New York, pp. 223-249.
- ✓ Pieper, G.M., and Gross, G.J. (1989) Diabetes Alters Postischemic Response to a Prostacyclin Mimetic. *Am. J. Physiol.* 256:H1353-H1360.
- Pieper, G.M. (1988) Superoxide Dismutase plus Catalase Improves Post-Ischaemic Recovery in the Diabetic Heart. *Cardiovasc. Res.* 22:916-926.
- ✗ Pieper, G.M., and Gross, G.J. (1990) Priming by Platelet-Activating Factor of Neutrophil-Induced Impairment of Endothelium-Dependent Relaxation. *J. Vasc. Med. Biol.* 2:56-61.
- ✓ Pieper, G.M., and Gross, G.J. (1990) Differential Response of Postischemic Myocardium to a Thromboxane-Mimetic. *Eicosanoids* 3:127-133.
- ✓ Pieper, G.M. (1990) Arachidonic Acid Causes Postischemic Dysfunction in Control but not Diabetic Hearts. *Am. J. Physiol.* 258 (Heart and Circulatory Physiology 27):H923-H930.

Jon R. Polansky, M.D.

Institution: University of California

Project: San Francisco, California
Oxidative Damage in Vascular Injury
Duration: April 1, 1985 - March 31, 1986
Award: \$49,617

Institution: University of California
San Francisco, California
Project: Oxidative Damage in Vascular Injury
Duration: April 1, 1986 - March 31, 1987
Award: \$51,900

Institution: University of California
San Francisco, California
Project: Oxidative Damage in Vascular Injury
Duration: April 1, 1987 - March 31, 1988
Award: \$39,000

Publications:

- Yun, A.J., Murphy, C.G., Polansky, J.R., Newsome, D.A., and Alvarado, J.A. (1989) Proteins Secreted by Human Trabecular Cells. Glucocorticoid and other effects. *Invest. Ophthalmol. Vis. Sci.* 30(9):2012-2022.
- ✓ Polansky, J.R., Kurtz, R.M., Alvarado, J.A., Weinreb, R.N., and Mitchell, M.D. (1989) Eicosanoid Production and Glucocorticoid Regulatory Mechanisms in Cultured Human Trabecular Meshwork Cells. *Prog. Clin. Biol. Res.* 312:113-38
- ✓ Shirato, S., Murphy, C.G., Bloom, E., Franse-Carman, L., Maglio, M.T., Polansky, J.R., and Alvarado, J.A. (1989) Kinetics of Phagocytosis in Trabecular Meshwork Cells. *Flow Cytometry and Morphometry. Invest. Ophthalmol. Vis. Sci.* 30(12):2499-2511.
- ✓ Polansky, J.R. HTM Cell Culture Model for Steroid Effect on Intracocular Pressure. In: *Basic Aspects of Glaucoma Research III.* L. Drecol and Rohen, eds. Schattauer Press, 1993, pp. 307-318.
- ✓ Fauss, D.J. Bloom, E., Lui, G.M., Kurtz, R., and Polansky, J.R. Glucocorticoid (GC) Effects on HTM Cells. In: *Basic aspects of Glaucoma Research III.* Schattauer Press, 1993, pp. 319-330.
- ✓ Nguyen, T.D. Huang, W. Bloom, E., and Polansky, J.R. Glucocorticoid (GC) Effects on HTM Cells: Molecular Biology Approaches. In: *Basic Aspects of Glaucoma Research III,* Schattauer Press, 1993, pp. 331-344.
- ✓ Polansky, J.R., Kurtz, R., Bloom, E., et al. Glucocorticoid Receptors and Steroid Glaucoma Mechanisms. In: *Receptor Biology and Glaucoma.* D.R. Anderson, and S.M. Drance, eds. Fogliazza Publishers, Milano. 1994. pp 273-299.
- ✓ Polansky, J.R., and Alvarado, J. Cellular Mechanisms Influencing Aqueous Humor Outflow. In: *Principles and Practice of Ophthalmology.* Albert and Jakobiec, eds. Saunders, Phila, 1994, pp226-251.
- ✓ Polansky, J.R., Fauss, D.J., and Nguyen, T.D. (1995) Ophthalmic Corticosteroids and Steroid Glaucoma Mechanisms. *NA Clinics Ophthalmol.* pp215-228.

Kenneth Pomerantz, Ph.D.

Institution: Cornell University Medical College
New York, New York
Project: Eicosanoids and Regulation of Vascular Cholesterol Metabolism

Duration: April 1, 1987 - March 31, 1988
Award: \$25,000

Institution: Cornell University Medical College
New York, New York
Project: Eicosanoids and Regulation of Vascular Cholesterol Metabolism
Duration: April 1, 1988 - March 31, 1989
Award: \$20,000

Institution: Cornell University Medical College
New York, New York
Project: Eicosanoids and Regulation of Vascular Cholesterol Metabolism
Duration: April 1, 1989 - March 31, 1990
Award: \$25,000

Publications:

- ✓ Pomerantz, K.B., and Hajjar, D.P. (1989) Eicosanoids in Regulation of Arterial Smooth Muscle Cell Phenotype, Proliferative Capacity, and Cholesterol Metabolism. *Arteriosclerosis* 9:1-17.
- ✓ Hajjar, D.P., Marcus, Pomerantz, K.B., et al. Arterial Cell Interactions: Mechanistic Studies Related to Eicosanoid and Growth Factor-Induced Alterations in Cholesterol Metabolism. In: *Eicosanoids, Apolipoproteins, Lipoprotein Particles, and Atherosclerosis*. C. Malmendier and P. Alaupovic, eds. Plenum Pub. Co., New York, 1988, pp. 37-45.
- ✓ Pomerantz, K., and Hajjar, D. Role of Eicosanoids and the Cytokine Network in Transmembrane Signaling in Vascular Cells. In: *Cell-Cell Interactions in the Release of Inflammatory Mediators*. P. Wong, and C. Serhan, eds. Plenum Press, New York, 1991, pp. 159-183.
- ✓ Hajjar, D., Pomerantz, K., and Nicholson, A. Signal Transduction in the Arterial Wall: Role of Eicosanoids and the Cytokine Network in the Regulation of Cholesterol Metabolism. In: *Molecular Biology of Atherosclerosis*. Raven Press, 1991, pp. 31-40.
- ✓ Hajjar, D., Cowburn, D., and Pomerantz, K. (1992) Molecular Motions and Thermotropic Behavior of Cholesteryl Esters and Triacylglycerols in Virally-Infected Arterial Cells: a Deuterium NMR Study. *Biophys. Chem.* 43:255-263.
- ✓ Hajjar, D., and Pomerantz, K. (1992) Signal Transduction in Atherosclerosis: Integration of Cytokines and the Eicosanoid Network. *FASEB J.* 6:2933-2941.
- ✓ Pomerantz, K., Hajjar, D., Levi, R., and Gross, S. (1993) Cholesterol-Enrichment of Arterial Smooth Muscle Cells Upregulates Cytokine-Induced Nitric Oxide Synthesis. *Biochem. Biophys. Res. Comm.* 191:103-109.
- ✓ Pomerantz, K., and Hajjar, D. (1993) Eicosanoid Metabolism in Cholesterol-Enriched Arterial Smooth Muscle Cells - Evidence for Reduced Post-Transcriptional Processing

of Cyclooxygenase-I, and Reduced Cyclooxygenase-II Gene Expression. *Biochem.* 32:13624-13635.

Pomerantz, K., Nicholson, A., and Hajjar, D. (1995) Signal Transduction in Atherosclerosis: Second Messengers and Regulation of Cellular Cholesterol Trafficking. *Adv. Exp. Med. Biol.* 369:49-67.

Pomerantz, K., and Hajjar, D. (1989) Cholesterol-Eicosanoid Metabolic Relationships in Arterial Smooth Muscle Cells. Reduced Arachidonate Release with Concomitant Decrease in Cyclooxygenase Products. *J. Lipid Res.* 30(8):1219-31.

Thomas M. Price, M.D.

Institution: Greenville Hospital System/Clemson
Clemson, South Carolina
Project: Estrogen Regulation of Lipoprotein Lipase
Duration: April 1, 1995 - March 31, 1996
Award: \$14,360

Institution: Greenville Hospital System/Clemson
Clemson, South Carolina
Project: Estrogen Regulation of Lipoprotein Lipase
Duration: April 1, 1996 - March 31, 1997
Award: \$14,800

Publications:

Price, T.M., O'Brien, S.N., Welter, B.H., et al. Estrogen Regulation of Adipose Tissue Lipoprotein Lipase-Possible Mechanism of Body Fat Distribution. Charles A. Hunter Prize Thesis Award, The American Gynecological and Obstetrical Society, Oct., 1996.
O'Brien, S.N., Mantzke, K., Kilgore, M., and Price, T.M. (1996) Relationship between Adipose Stromal-Vascular Cells and Adipocytes in Human Adipose Tissue. *Anal. Quant. Cytol. Histo.* 18:137-143.

Daniel Rader, M.D.

Institution: University of Pennsylvania School of Medicine
Philadelphia, Pennsylvania
Project: Effect of ApoA-1 Gene Transfer on Atherosclerotic Lesions
Duration: April 1, 1995 - March 31, 1996
Award: \$14,963

Publications:

Rader, D.J. Gene Therapy for Atherosclerosis. *International Journal of Clinical and Laboratory Research* 27:35-43; 1997
Tsukamoto, K., Hiester, K., Smith, P., Usher, D., Glich, J., Rader, D.J. Comparison of Human ApoA-1 Expression in Mouse Models of Atherosclerosis after Gene Transfer Using a Second Generation Adenovirus. *J Lipid Research* 38:1869-1876; 1997

Tangirala,R, Tsukamoto,K, Chun, SH, Usher,D, Pure,E, Rader, DJ. Regression of Atherosclerosis Induced by Liver-Directed Gene Transfer of Apolipoprotein A-1 in Mice. *Circulation* 100:1816-1822, 1999.

K.N.N. Reddy, Ph.D.

Institution: University of Southern California
Los Angeles, California
Project: Synthetic Streptokinase in the Treatment of Coronary Heart Disease
Duration: April 1, 1987 - March 31, 1988
Award: \$28,000


 Publications:

Reddy, K.N. (1988) Streptokinase: Biochemistry and Clinical Application. *Enzyme* 40:79-89.

H. Alan Rowe, Ph.D.

Institution: Norfolk State University
Norfolk, Virginia
Project: The Role of Arterial Proteoglycans in Atherosclerosis
Duration: April 1, 1986 - March 31, 1987
Award: \$38,326


Publications:

 Brown, M. and Rowe, A. (1988) *Enzyme Kinetics*. *J. Chem. Ed.* 65:548-549.

Joseph C. Ruiz, Ph.D.

Institution: The Wistar Institute
Philadelphia, Pennsylvania
Project: Molecular Analysis of Heart Formation
Duration: April 1, 1995 - March 31, 1996
Award: \$15,000

Publications:

 Weinstein, D.C., Rahman, S.M., Ruiz, J.C., and Hemmati-Brivanlou, A. (1996) Embryonic Expression of Eph Signaling Factors in *Xenopus*. *Mechanisms of Development* 57: 133-144.

Jill Rulfs, Ph.D.

Institution: Worcester Polytechnic Institute

Worcester, Massachusetts
Project: Establishment of an Immortal, Differentiated Cardiomyocyte Cell Line
Duration: April 1, 1991 - March 31, 1992
Award: \$15,000

Publications:

✓ Miller, C., Rulfs, J., Jaspers, S.R., et al. (1994) Transformation of Adult Ventricular Myocytes with the Temperature Sensitive A58 (tsA58) Mutant of the SV40 Large T Antigen. Mol. Cell. Biochem. 136:29-34.

Antonio E. Rusinol, Ph.D.

Institution: East Tennessee State University
Johnson City, Tennessee
Project: Regulation of Assembly of Intestinal Lipoproteins
Duration: April 1, 1997 - March 31, 1998
Award: \$14,928

Samir F. Saba, M.D.

Project: University of Pittsburgh
Pittsburgh, Pennsylvania
Project: Cardiac Resynchronization in Heart Failure
Duration: April 1, 2004 - March 31, 2005
Award: \$25,000

Judith D. Schaechter, Ph.D.

Institution: Massachusetts General Hospital
Charlestown, Massachusetts
Project: A High Resolution fMRI Study of Sensorimotor Recovery after Cortical Stroke
Duration: April 1, 2001 - March 31, 2002
Award: \$25,000

✓ Publications:

Schaechter, J.D., Dijkhuizen, R.M., Rosen, B.R., Moore, C.I. Tactile Stimulation Activates Motor Cortical Areas in Stroke Patients. Soc. Neurosci Abstr. 31(2001) 31:624.13
Dijkhuizen, R.D., Moore, C.I., Glessner, M., Rosen, B.R., Schaechter, J.D. Cortical Surface-Based Functional MRI Analysis of Somatosensory and Motor Activation Patterns in Chronic Stroke Patients. Proceedings of the International Society for Magnetic Resonance in Medicine. 10th Science Meeting and Exhibition, (2002):1529

Gregory G. Schwartz, Ph.D.

Institution: University of California, San Francisco
San Francisco, California
Project: Physiologic Consequences of Limiting Reactive Hyperemia
Duration: April 1, 1990 - March 31, 1991
Award: \$20,000

Publications:

Schwartz, G.G., Schaefer, S., Trocha, S.D., Steinman, S., et al. (1991) Metabolic and Functional Consequences of Blunted Myocardial Reactive Hyperemia. *Am. J. Physiol.* 261(3 Pt 2):H892-900.

Jorge L. Sepulveda, M.D., Ph.D.

Institution: University of Pittsburgh
Pittsburg, Pennsylvania
Project: Transcription in Regulation of Heart Failure
Duration: April 1, 2001 - March 31, 2002
Award: \$25,000

Publications:

✓ Sepulveda, J.L., Vlahopoulos, S., Iyer, D., Belaguli, N., Schwartz, R.J. Combinatorial Expression of GATA4, Nkx2-5, and Serum Response Factor Directs Early Cardiac Gene Activity. *J. Biol. Chem.* 277 (2002): 25775-25782.

Charles D. Smith, Ph.D.

Institution: Cancer Research Center of Hawaii
Honolulu, Hawaii
Project: Molecular Control of Smooth Muscle Cell Growth
Duration: April 1, 1992 - March 31, 1992
Award: \$11,250

Richard W. Stremel, Ph.D.

Institution: University of Louisville School of Medicine
Louisville, Kentucky
Project: Brainstem Convergence of Cardiac and Gallbladder Disease
Duration: April 1, 1990 - March 31, 1991
Award: \$20,000

✓ Publications:

Richard, C.A., and Stremel, R.W. (1990) Involvement of the Raphe in the Respiratory Effects of Gigantocellular Area Activation. *Brain Res. Bull.* 25:19-23.

Whitescarver, S.A., Roberts, A.M., Stremel, R.W., Jimenez, A.E., and Passmore, J.C.
(1991) Nicotine Impairs Reflex Renal Nerve and Respiratory Activity in DOCA-Salt
Rats. Hypertension 17(2):179-86.

Papasani V. Subbaiah, Ph.D.

Institution: Rush-Presbyterian St. Luke's Medical Center
Chicago, Illinois
Project: Risk Factors for Atherosclerosis in Nephrotic Syndrome
Duration: April 1, 1990 - March 31, 1991
Award: \$15,000

Yuichiro J. Suzuki, Ph.D.

Institution: USDA HNRCA at Tufts University
Boston, Massachusetts
Project: Calcium Activation of Oxidant Signaling in Cardiomyocytes
Duration: April 1, 1998 - March 31, 1999
Award: \$14,814

Pamela D. Swan, Ph.D.

Institution: Arizona State University
Tempe, Arizona
Project: Sustainable Exercise and CHD Risk in Women
Duration: April 1, 1999 - March 31, 2000
Award: \$22,500

Gopi Tejwani, Ph.D.

Institution: The Ohio State University School of Medicine
Columbus, Ohio
Project: Involvement of Endorphins in Cardiovascular Diseases
Duration: April 1, 1987 - March 31, 1988
Award: \$25,000

Institution: The Ohio State University School of Medicine
Columbus, Ohio
Project: Involvement of Endorphins in Cardiovascular Diseases
Duration: April 1, 1988 - March 31, 1989
Award: \$20,000

Publications:

Bhargava, H.N., Natwyshyn, G.A., Hanissian, S., and Tejwani, G.A. (1988) Opioid Peptides in Pituitary Gland, Brain Regions and Peripheral Tissues of Spontaneously Hypertensive and Wistar-Kyoto Normotensive Rats. *Brain Res.* 440:330-340.

Andre Terzic, M.D., Ph.D.

Institution: Mayo Clinic
Rochester, Minnesota
Project: Mechanisms of Cardiac ATP-Sensitive K⁺ Channel Regulation
Duration: April 1, 1994 - March 31, 1995
Award: \$15,000

Institution: Mayo Clinic
Rochester, Minnesota
Project: Mechanisms of Cardiac ATP-Sensitive K⁺ Channel Regulation
Duration: April 1, 1995 - March 31, 1996
Award: \$15,000

Publications:

- ✓ Terzic, A., Tung, R.T., and Kurachi, Y. (1994) Nucleotide Regulation of ATP Sensitive Potassium Channels. *Cardiovasc. Res.* 28:746-753.
- ✓ Terzic, A., Jahangir, A., Kurachi, Y. (1994) HOE-234, a Second Generation K⁺ Channel Opener, Antagonizes the ATP-Dependent Gating of Cardiac ATP-Sensitive K⁺ Channels. *J. Pharm. Exp. Ther.* 268:818-825.
- ✓ Terzic, A., Findlay, I., Hosoya, Y., and Kurachi, Y. (1994) Dualistic Behavior of ATP-Sensitive K⁺ Channels Toward Intracellular Nucleoside Diphosphates. *Neuron* 12:1049-1058.
- ✓ Terzic, A., Tung, R.T., Inanobe, A., Katada, T., and Kurachi, Y. (1994) G Proteins Activate ATP-Sensitive K⁺ Channels by Antagonizing the ATP-Dependent Gating. *Neuron* 12:885-893.
- ✗ Terzic, A., Findlay, I., Hosoya, Y., and Kurachi, Y. (1994) Dualistic Behavior of ATP-Sensitive K⁺ Channels Toward Intracellular Nucleoside Diphosphates. *Neuron* 12:1049-1058.
- ✓ Yamada, M., Terzic, A., Kurachi, Y. (1994) Regulation of K⁺ Channels by G Protein Subunits and Arachidonic Acid Metabolites. *Methods Enzymol.* 238:394-422.
- ✗ Terzic, A., Tung, R.T., Inanobe, A., Katada, T., and Kurachi, Y. (1994) G-proteins Activate ATP-sensitive K⁺ Channels by Antagonizing ATP-Dependent Gating. *Neuron* 12:885-893.
- ✓ Jahangir, A., Terzic, A., and Kurachi, Y. (1994) Intracellular Acidification and ADP Enhanced Nicorandil Induction of ATP Sensitive Potassium Channel Current in Cardiomyocytes. *Cardiovasc. Res.* 28:831-835.
- ✓ Terzic, A., Jahangir, A., and Kurachi, Y. (1995) Cardiac ATP-Sensitive K⁺ Channels: Regulation by Intracellular Nucleotides and Potassium Channel Opening Drugs. *Am. J. Physiol.* 269:C525-C545.
- ✓ Lopez, J.R., Jovanovic, A., and Terzic, A. (1995) Spontaneous Calcium Waves Without Contraction in Cardiac Myocytes. *Biochem. Biophys. Res. Comm.* 214:781-787.

- ✓ Jovanovic, A., and Terzic, A. (1995) Diadenosine-Hexaphosphate is an Inhibitory Ligand of Myocardial ATP-Sensitive K⁺ Channels. *Eur. J. Pharmacol.* 286:R1-R2.
- ✓ Jovanovic, A., and Terzic, A. (1996) Diadenosine-Tetraphosphate Induced Inhibition of ATP-sensitive K⁺ Channels in Patches Excised from Ventricular Myocytes. *Br. J. Pharmacol.* 117:233-235.
- ✓ Jovanovic, A., Alekseev, A.E., and Terzic, A. (1996) Cardiac ATP-Sensitive K⁺ Channel: A Target for Diadenosine 5',5'-P₁,P₅-Pentaphosphate. *Naunyn-Schmiedeberg's Arch. Pharmacol.* 241-244.
- ✓ Lopez, J.R., Ghanbari, R.A., and Terzic, A. (1996) A K(ATP) Channel Opener Protects Cardiomyocytes From Ca²⁺ Waves - A Laser Confocal Microscope Study. *Am. J. Physiol.* 39:H1384-H1389.
- ✓ Lopez, J.R., Jahangir, R., Jahangir, A., Shen, W.K., and Terzic, A. (1996) Potassium Channel Openers Prevent Potassium-Induced Calcium Loading of Cardiac Cells: Possible Implications in Cardioplegia. *J. Thorac. Cardiovasc. Surg.* 112(3):820-31.
- ✓ Jovanovic, A., Lopez, J.R., and Terzic, A. (1996) Cytosolic Ca²⁺ Domain-Dependent Protective Action of Adenosine in Cardiomyocytes. *Eur. J. Pharmacol.* 298:63-69.
- ✓ Alekseev, A.E., Jovanovic, A., Lopez, J.R., and Terzic, A. (1996) Adenosine Slows the Rate of K⁺-Induced Membrane Depolarization in Ventricular Cardiomyocytes: Possible Implication in Hyperkalemic Cardioplegia. *J. Molec. Cell Cardiol.* 28:1193-1202.
- ✓ Terzic, A., and Kurachi, Y. (1996) Actin Microfilament-Disrupters Activate ATP-Sensitive K⁺-Channels by Antagonizing ATP-Dependent Gating in Membrane Patches Excised from Guinea-Pig Ventricular, Myocytes. *J. Physiol. Lond.* 492:395-404.
- ✓ Jovanovic, A., Zhang, S., Alekseev, A.E., and Terzic, A. (1996) Diadenosine Polyphosphate-Induced Inhibition of Cardiac K(ATP) Channels: Operative State-Dependent Regulation by a Nucleoside Diphosphate. *Pflugers Archiv. Eur. J. Physiol.* 431:800-802.
- ✓ Lopez, J.R., and Terzic, A. (1996) Inositol 1,4,5-Trisphosphate Induced Ca²⁺ Release is Regulated by Cytosolic Ca²⁺ in Intact Skeletal Muscle. *Pflugers Archiv. Eur. J. Physiol.* 432(5):782-90.
- ✓ Brady, P., Zhang, S., Lopez, J.R., Jovanovic, A., et al. (1996) Dual Effect of Glyburide, An Antagonist of KATP Channels, on Metabolic Inhibition-Induced Ca²⁺ Loading in Cardiomyocytes. *Eur. J. Pharmacol.* 308(3):343-9.
- ✗ Jovanovic, A., Alekseev, A.E., and Terzic, A. (1996) Cardiac ATP-Sensitive K⁺ Channel: A Target for Diadenosine 5',5"-P₁,P₅-Pentaphosphate. *Naunyn-Schmiedeberg's Arch. Pharmacol.* 353: 241-244.
- Alekseev, A.E., Markevitch, N.I., Korystova, A.F., Terzic, A., and Kokoz, Yu. M. (1996): Comparative Analysis of the Kinetic Characteristics of L-Type Calcium Channels in Cardiac Cells of Hibernators. *Biophys. J.* 70: 786-797.

Andrew M. Thorburn, D.Phil.

Institution: Ecclews Institute of Human Genetics
 Salt Lake City, Utah
 Project: MAP Kinase in Cardiac Cell Hypertrophy
 Duration: April 1, 1995 - March 31, 1996

Award: \$14,969

Zoltan I. Ungvari, M.D., Ph.D.

Institution: New York Medical College
Valhalla, New York
Project: Anti Aging Cardiovascular Effects of Tace Inhibition
Duration: April 1, 2004 - March 31, 2005
Award: \$25,000

 Publications:

Ungvari Z, Csiszar A, Kaley G., Vascular Inflammation in Aging. Herz. 2004; 29:733-740
Csiszar A., Smith K.E., Koller A., Kaley G., Edwards J.G., Ungvari Z. Regulation of BMP-2 Expression in Endothelial Cells: Role of NF-kB Activation by TNF& H2O2 and High Intravascular Pressure. Circulation 2005: 111 (18) 2364-72
Csiszar A. Pacher P., Kaley G., Ungvari, Z., Role of Oxidative and Nitrosative Stress, Longevity Genes and Poly (ADP-ribose) Polymerase in Cardiovascular Dysfunction Associated with Aging. Curr. Cardiovascular Pharmacol. (In Press)

Sandra Gayle Velleman, Ph.D.

Institution: The Ohio State University
Wooster, Ohio
Project: Role of Proteoglycans in Atherosclerosis
Duration: April 1, 1999 - March 31, 2000
Award: \$22,500

 Publications:

Jarrold, B.J., Bacon, W.L., Velleman, S.G. Expression and Localization of the Proteoglycan Decorin During the Progression of Cholesterol - Induced Atherosclerosis in Japanese Quail: Implications for Interaction with Collagen Type I and Lipoproteins. Atherosclerosis 146 (1999) 299-308
Velleman, S.G., McCormick, R.J., Ely.D., Jarrold, B.B., Patterson, R.A., Scott, C.B., Daneshvar, H., and Bacon, W.L. Collagen Characteristics and Organization During the Progression of Cholesterol-Induced Atherosclerosis in Japanese Quail. Proceedings for the Society of Experimental Biology and Medicine (2000)

Anthony Verlangieri, Ph.D.

Institution: University of Mississippi School of Pharmacy
Oxford, Mississippi
Project: Atherosclerosis Research
Duration: April 1, 1976 - March 31, 1979
Award: \$160,000

Institution: University of Mississippi School of Pharmacy
Oxford, Mississippi
Project: Primate Atherosclerosis Intervention Study
Duration: September 1, 1979 - June 30, 1987
Award: \$981,900

Institution: University of Mississippi School of Pharmacy
Oxford, Mississippi
Project: Interaction of Hyperglycemia and Ascorbate in Diabetic Angiopathies
Duration: March 1, 1982 - February 28, 1984
Award: \$121,537

Institution: University of Mississippi School of Pharmacy
Oxford, Mississippi
Project: Interaction of Hyperglycemia and Ascorbate in Diabetic Angiopathies
Duration: March 1, 1984 - February 28, 1987
Award: \$183,008

Institution: University of Mississippi School of Pharmacy
Oxford, Mississippi
Project: Primate Atherosclerosis Intervention Study
Duration: April 1, 1987 - March 31, 1990
Award: \$214,033

Institution: University of Mississippi School of Pharmacy
Oxford, Mississippi
Project: Interaction of Hyperglycemia and Ascorbate in Diabetic Angiopathies
Duration: April 1, 1987 - March 31, 1988
Award: \$50,000

Institution: University of Mississippi School of Pharmacy
Oxford, Mississippi
Project: Interaction of Hyperglycemia and Ascorbic Acid in Diabetic Angiopathies
Duration: April 1, 1988 - February 21, 1989
Award: \$44,228

Publications:

✓ Kapeghian, J.C., and Verlangieri, A.J. (1984) The Effects of Glucose on Ascorbic Acid Uptake in Heart Endothelial Cells: Possible Pathogenesis of Diabetic Angiopathies. Life Sci. 34:577-584.

- ✓ Schlosser, M.J., and Verlangieri, A.J. (1988) Intimal Permeability Evaluated in a Short-Term Organ Culture of Diabetic Guinea Pig Aorta. *Artery* 15:304-315.
- ✗ Verlangieri, A.J., Bush, M.J., and Kapeghian, J.C. (1984) Duplex Ultrasound Analysis of the Carotid Arteries in *Macaca Fascicularis*. *J. Cardiovasc. Ultrasonography* 3:293-302
- ✓ Schlosser, M.J., Kapeghian, J.C., and Verlangieri, A.J. (1984) Effects of Streptozotocin in the Male Guinea Pig: a Potential Animal Model for Studying Diabetes. *Life Sci.* 35:649-655.
- ✓ Verlangieri, A.J., Kapeghian, J.C., el-Dean, S., and Bush, M. (1985) Fruit and Vegetable Consumption and Cardiovascular Mortality. *Med. Hypotheses* 16:7-15.
- ✓ Schlosser, M.J., Kapeghian, J.C., and Verlangieri, A.J. (1987) Selected Physical and Biochemical Parameters in the Streptozotocin-Treated Guinea Pig: Insights into the Diabetic Guinea Pig Model. *Life Sci.* 41:1345-1353.
- ✓ Kapeghian, J.C., Bush, M.J., and Verlangieri, A.J. (1984) Changes in Selected Serum Biochemical and EKG Values with Age in *Cynomolgus* Macaques. *J. Med. Primatol.* 13:283-288.
- ✓ Verlangieri, A.J., DePriest, J.C., and Kapeghian, J.C. (1985) Normal Serum Biochemical, Hematological, and EKG Parameters in Anesthetized Adult Male *Macaca Fascicularis* and *Macaca Arctoides*. *Lab. Anim. Sci.* 35:63-66.
- ✓ Verlangieri, A.J., and Sestito, J. (1981) Effect of Insulin on Ascorbic Acid Uptake by Heart Endothelial Cells: Possible Relationship to Retinal Atherogenesis. *Life Sci.* 29:5-9.
- ✓ Kapeghian, J.C., and Verlangieri, A.J. (1984) Effects of Primaquine on Serum Biochemical and Hematological Parameters in Anesthetized *Macaca Fascicularis*. *J. Med. Primatol.* 13:97-103.
- ✓ Bush, M.J., and Verlangieri, A.J. (1985) Diet-Induced Changes in Selected Clinical Chemistry Parameters in *M. Fascicularis*. *Res. Comm. Chem. Path. Pharm.* 50:267-279.
- ✓ Verlangieri, A.J., Cardin, B.A., and Bush, M. (1985) The Interaction of Aortic Glycosaminoglycans and 3H-Inulin Endothelial Permeability. *Res. Comm. Chem. Path. Pharm.* 47:85-96.
- ✓ Verlangieri, A.J., and Steven, J.W. (1979) L-Ascorbic Acid: Effects on Aortic Glycosaminoglycan 35S Incorporation in Rabbit-Induced Atherogenesis. *Blood Vessels* 16:177-185.

Karen L. Vikstrom, Ph.D.

Institution: SUNY Health Science Center
 Syracuse, New York
 Project: Molecular Analysis of Cardiomyopathy-Associated Genes
 Duration: April 1, 1998 - March 31, 1999
 Award: \$15,000

Roi A. Wallis, M.D.

Institution: Sepulveda VA Medical Center
 Sepulveda, California

Project: Hypoxic Neuroprotection with ADP-ribosylation Inhibitors

Duration: April 1, 1994 - March 31, 1995

Award: \$15,000

Mary T. Walsh, Ph.D.

Institution: Boston University
Boston, Massachusetts

Project: Carbohydrate's Role in Structure and Function of ApoB

Duration: April 1, 1992 - March 31, 1993

Award: \$15,000

Zhiguo Wang, Ph.D.

Institution: Montreal Heart Institute
Montreal, Canada

Project: Subtype Mechanism of Alpha Adrenoceptor Modulation of Ion Channel

Duration: April 1, 1999 - March 31, 2000

Award: \$22,500

Margaret T. Weis, Ph.D.

Institution: Philadelphia College of Pharmacy and Science
Philadelphia, Pennsylvania

Project: Magnesium and Cardiac Arachidonic Acid Metabolism

Duration: April 1, 1989 - March 31, 1990

Award: \$24,967

Richard E. White, Ph.D.

Institution: Wright State University School of Medicine
Dayton, Ohio

Project: Regulation of Coronary Artery Ion Channels by Adenosine

Duration: April 1, 1993 - March 31, 1994

Award: \$14,950

Publications:

- ✓ White, R.E., Darkow, D.J., and Lang, J.L. (1995) Estrogen Relaxes Coronary Arteries by Opening BKCa Channels through a cGMP-Dependent Mechanism. *Circ. Res.* 77:936-942.

Christopher J. Wingard, Ph.D.

Institution: Medical College of Georgia
Augusta, Georgia
Project: Nitrovasodilator Modulation of Arterial Function
Duration: April 1, 2000 - March 31, 2001
Award: \$30,000

Publications:

Wingard CJ, Lewis R, Mills, TM "Erection and NO Override the Vasoconstrictive Effect of α -Adrenergic Stimulation in the Rat Penile Vasculature " Dept of Physiology, Surgery (Urology) and The Vascular Biology Center Medical College of Georgia (no date)
Running Title:NO suppression of Adrenergic Vasoconstriction.
Chitaley K, Wingard CJ, Webb RC, Branam H, Stopper, VS, Lewis RW, Mills TM
Antagonism of Rho-kinase stimulates rat penile erection via a nitric oxide-independent pathway. Nature Medicine Vol 7, Number 1, 119-122 January 2001.

Mark J. Winn, Ph.D.

Institution: University of Alabama at Birmingham
Birmingham, Alabama
Project: The Role of the Anticoagulant Peptide Protein C
Duration: April 1, 1991 - March 31, 1992
Award: \$15,000

Institution: University of Alabama at Birmingham
Birmingham, Alabama
Project: Does Protein C Reduce Endothelium Damage After Injury?
Duration: April 1, 1992 - March 31, 1993
Award: \$15,000

Benjamin Wizel, Ph.D.

Institution: The University of Texas Health Center at Tyler
Tyler, Texas
Project: CTL Responses to Chlamydia Pneumoniae HLA A2 Transgenic Mice
Duration: April 1, 2001 - March 31, 2002
Award: \$25,000

Xiao Qiang Yao, Ph.D.

Institution: Chinese University of Hong Kong
Shatin, China
Project: Prosperity and Role of Endothelial CNG Channel
Duration: April 1, 1999 - March 31, 2000
Award: \$15,000

Publications:

✓ Yao, X., Kwan, H.Y., Chan, F.L., Chan, N.W.K., Huang Y. A Protein Kinase G-Sensitive Channel Mediates Flow-Induced Ca Influx into Vascular Endothelial Cell. FASEB Journal, issue of May 2000, Vol. 14.

Frank Yin, M.D., Ph.D.

Institution: Johns Hopkins Hospital
Baltimore, Maryland
Project: Arterial Function in Hypertension
Duration: April 9, 1987 - March 1, 1988
Award: \$2,669

Publications:

✓ Yin, F.C.P., Brin, K.P., Ting, C.T., and Pyeritz, R. (1989) Arterial hemodynamic indexes in Marfan's syndrome. Circulation 79:854-862.
✓ Liu, Z., Ting, C.T., Zhu, S., and Yin, F.C.P. (1989) Aortic compliance in human hypertension. Hypertension 14:129-136.

Tony Zerbe, M.D.

Institution: Presbyterian University Hospital
Pittsburgh, Pennsylvania
Project: An In Vitro Model of Atherosclerosis
Duration: April 1, 1991 - March 31, 1992
Award: \$15,000

Juming Zhong, D.V.M., Ph.D.

Institution: Auburn University
Auburn University, Alabama
Project: Gs Protein Subunits and Cardiac L-Type Calcium Channels

Duration: April 1, 2002 - March 31, 2003
Award: \$25,000

Nicholas P. Ziats, Ph.D.

Institution: Case Western Reserve University
Cleveland, Ohio
Project: Human Vascular Graft Cytokine/Growth Factor Expression
Duration: April 1, 1993 - March 31, 1994
Award: \$15,000