# **CURRICULUM VITAE**

NAME George Warren Booz, Ph.D., F.A.H.A.

**CITIZENSHIP** USA

### **ADDRESS**

University of Mississippi Medical Center Department of Pharmacology and Toxicology 2500 North State Street Jackson, MS 39216-4505

TEL: 601-984-4401FAX: 601-984-1637Email: gbooz@umc.edu

<b>EDUCATION</b>	AND POST-C	PADIIATE	TRAINING
EDUCATION	AND FUSIN	TRADUATE	DAIMING

B.S. in Biology	1972 – 1976	St. Joseph's University
M.S. in Physiology	1977 – 1981	Philadelphia, PA University of Pennsylvania Philadelphia, PA
Computer Science	1983 – 1986	Drexel University Evening College Philadelphia, PA
Ph.D. in Pharmacology	1986 – 1990	Thomas Jefferson University Philadelphia, PA
Postdoctoral Fellow	9/90 – 6/94	Weis Center for Research Geisinger Clinic Danville, PA
NON-FACULTY POSITIONS		_ a,
Associate Scientist	7/94 – 5/96	Weis Center for Research Geisinger Clinic
Research Scientist-1	6/96 – 6/97	Weis Center for Research Geisinger Clinic
FACULTY POSITIONS		
Instructor	7/97 – 6/98	Department of Cellular and Molecular Physiology Pennsylvania State University College of Medicine Weis Center for Research
Assistant Professor	6/98 – 5/99	Department of Cellular and Molecular Physiology Pennsylvania State University Coll. of Med., Weis Center for Research
Assistant Professor	5/99 – 9/02	Department of Internal Medicine Texas A & M University System HSC College of Medicine Cardiovascular Research Institute Division of Molecular Cardiology
Research Physiologist (WOC)	09/00 – 10/08	The Central Texas Veterans Health Care System

		Page 2 of 25
Assistant Professor	9/02 - 10/08	Department of Internal Medicine
		Texas A & M University System HSC
		College of Medicine
		Cardiovascular Research Institute
		Division of Molecular Cardiology
Assistant Professor	5/03 – 1/06	Department of Medical Physiology
(cross-appointment)		Texas A & M University System HSC
	- /	College of Medicine
Member	6/03 – 10/08	Pulmonary and Critical Care Medicine
		Scott & White Hospital and Clinics
		The Texas A & M University
Manakan	40/00 40/00	System HSC College of Medicine
Member	10/03 – 10/08	Graduate Faculty
		Texas A&M Univ. System HSC
		College of Medicine Medical Sciences Program
Assistant Professor	10/05 – 10/06	Department of Biology
(Adjunct)	10/00 10/00	University of Mary Hardin-Baylor
(Adjunct)		Belton, TX
Associate Professor	11/3/08 - present	Department of Pharmacology and
	•	Toxicology, The University of Mississippi
		Medical Center, School of Medicine
Member	1/13/09 – present	Graduate Faculty
		The University of Mississippi
		Medical Center, School of Graduate
		Studies in the Health Sciences

# **RESEARCH SUPPORT**

### Submitted

NIH: 1R01HL137883-01

Transition from Endothelial Inflammation to Diastolic Dysfunction in HFpEF

07/01/2017 - 06/30/2022 PI: George Booz, PhD

Total Requested: \$1,906,250.00

NIH: 1R01HL139569-01

Targeting inflammation in HFpEF cardiac remodeling

12/01/2017 - 11/30/2022 PI: George Booz, PhD

Total Requested: \$1,937,500.00

### Completed

7/1/08 – 6/30/14	National Heart, Lung, and Blood Institute
1/1/00 0/30/1 <del>1</del>	National Ficalt. Edita. and Diood institute

Regulation of IL-6-Type Cytokine Cardioprotective Signaling in the

Ischemic Heart

Principal Investigator: George Booz Co-Investigators: Roy Duhé, Mazen Kurdi

Total Direct Costs: \$1,225,676

8/1/09 – 7/31/11 National Heart, Lung, and Blood Institute

Recovery Act Administrative Supplement to RO1: Postdoctoral Fellow

Principal Investigator: George Booz

	Page 3 of 25
	Total Direct Costs: \$178,800
5/1/09 - 4/30/10	Intramural Research Support Program
	Antioxidant Hydrogel POSS-Catechin Nanocomposites for Stem
	Cell Cardiac Survival
	Principal Investigator: George Booz
	Total Direct Costs: \$25,000
10/1/08 – 9/30/10	ProStem Biotech Inc.
10/1/00 0/00/10	Improving the Therapeutic Potential of Umbilical Cord Blood Stem
	Cells for Cardiac Repair
	Principal Investigator: George Booz
	Co-Investigator: Mazen Kurdi
	Total Direct Costs: \$240,000
	Amount paid: \$64,000
6/1/07 - 5/31/08	S&W Research Foundation Grant
0/1/07 = 5/31/06	
	Role of JAK signaling in diabetic cardiomyopathy
	Principal Investigator: George Booz
	Co-Investigators: Syed Naqvi, Roy Duhe
44/47/00 44/40/07	Total Direct Costs: \$40,000
11/17/06 — 11/16/07	S&W Research Foundation Grant
	Role of Calcitonin-Gene Related Peptide in Ischemia/Reperfusion
	Injury
	Principal Investigator: Khurshed Katki
	Co-Investigators: Mazen Kurdi, George W. Booz
	Total Direct Costs: \$40,000
7/1/05 — 6/30/06	S&W Research Foundation Grant
	Regulation of Non-Small Cell Cancer Apoptosis by Interferon-γ
	Principal Investigator: George Booz
	Co-Investigators: Richard E. Winn, Gagan Prakash
-1.10.1	Total Direct Costs: \$39,988
7/1/04 — 6/30/06	American Heart Association, Texas Affiliate
	Role of STAT3 in Defining IL-6 Signaling in Myocardial Infarction
	Principal Investigator: George W. Booz
	Total Direct Costs: \$124,000
8/3/03 – 8/2/05	VA VISN17
	STAT3 Transcriptional Regulation of Cardiac Myocyte Growth
	Principal Investigator: George W. Booz
	Total Direct Costs: \$100,000
3/1/04 – 2/28/05	S&W Research Foundation Grant
	Antioncogenic Potential of GRIM-19 in Human Non-Small-Cell Lung
	Cancer Cells
	Principal Investigator: Richard E. Winn
	Co-Investigators: George Booz, Steve Maxwell, Christopher Spradley
	Total Direct Costs: \$40,000
10/1/03 – /30/04	S&W Research Foundation Grant
	Role of STAT Transcription Factors in Apoptosis of Human Non-
	Small-Cell Lung Cancer Cells
	Principal Investigator: George W. Booz
	Co-Investigator: Nikhat Salamat
	Total Direct Costs: \$40,000
7/1/99 - 6/30/03	National Institutes of Health (HL44883)
	Regulation of Cardiac Hypertrophy by Angiotensins.
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Principal Investigator: Kenneth M. Baker

Co-Investigators: David E. Dostal, George W. Booz

Total Direct Costs: \$980,000

7/1/98 – 6/30/03 National Heart, Lung, and Blood Institute (HL58439)

Novel Signaling Pathways for Angiotensin II in The Heart

Principal Investigator: Kenneth M. Baker

Co-Investigator: George W. Booz

Total direct costs: \$999.457

7/1/96 – 6/30/98 American Heart Association, Pennsylvania Affiliate

Role of the AT2 Receptor in Angiotensin II-Induced Hypertrophy of

Cardiac Mvocvtes

Principal Investigator, George W. Booz

Total Direct Costs: \$70,000

9/1/94 – 8/31/95 American Heart Association, Pennsylvania Affiliate

Relative Contribution of Protein Kinase C Isozymes to Hypertrophic

Growth of Cardiac Myocytes

Principal Investigator, George W. Booz

Total Direct Costs: \$35,000 Total Direct Costs: \$25,000

7/1/91 – 6/30/94 National Heart, Lung, and Blood Institute

National Research Service Award, HL08477

Mechanisms of Angiotensin-Induced Cardiac Hypertrophy

Total Direct Costs: \$81,200

### PUBLIC AND PROFESSIONAL SERVICE

### **Grant Reviewer (Ad hoc)**

VA Merit Review Proposals, 1994 – 2000

U.S. Civilian Research & Development Foundation (CRDF), 2005

AIBS: US Army Medical Research and Materiel Command (USAMRMC), 2005 - 2007

FAMRI Center of Excellence Award, 2006

FAMRI Center of Excellence Award, 2006

FAMRI Re-Review, 2007

FAMRI Center of Excellence Award (Re-Review), 2012

FAMRI Richmond Center of Excellence progress report, 2013

FAMRI Richmond Center of Excellence progress report, 2014

FAMRI Richmond Center of Excellence progress report, 2015

National Medical Research Council (Singapore), 2006

The National Research Program on Cardiovascular Diseases (Inserm/French National Institute for Health and Medical Research) and The French Society of Arterial Hypertension, 2007

GENOPAT Program - Molecular Pathophysiology: From Rare to Common Diseases, Proposals submitted to French National Research Agency (Inserm/French National Institute for Health and Medical Research) in association with the French Association against Myopathies, 2009

Italian Ministry of Health, Directorate for Health and Technologies Research, 2009

Italian Ministry of Health, 'Young Italian Researchers Call', 2010

Italian Ministry of Health, 2011,2012,2013

French National Research Agency, "BlueSky and Young Researchers Programmes" 2011

French National Research Agency, Call for projects: White - SVSE 1 - Physiology, pathophysiology, public health, 2012

Pathophysiology Section of the French National Research Agency in the Exploratory and Emerging Research Department, 2013

French National Research Agency, generic call for proposals 2014: pre-proposal evaluation CARIPARO Foundation. 2012

AIBS/FAMRI Clinical Innovator Award, 2012, 2013

Genomics and Immunology Research Laboratory within the USDA Beltsville Human Nutrition Research Center, project plan "Health promoting roles of food bio-active phenolic compounds on obesity-altered heart and kidney functions and physiology", 2013

The South Dakota State University College of Pharmacy, 2014

AHA Collaborative Science Award Letter of Intent, 2014

Italian Ministry of Health - National Call Biomedical Research, 2014

FY15 Peer Reviewed Medical Research Program (PRMRP) for the Department of Defense Congressionally Directed Medical Research Programs - Discovery Cardiovascular Health

### **Grant Review Panels**

NHLBI Program Project Review Panel, Spring 2004

NHLBI Program Project Review Panel, Sept. 2004,

NHLBI Program Project Review Panel, Jan. 2005, Sept. 2005

NHLBI Program Project Review Panel, Feb. 2006, Sept. 2007

American Institute of Biological Sciences -

FAMRI (Flight Attendant Medical Research Institute):

- Panel Molecular basis of cancers associated with second hand smoke: 2005
- Panel Molecular basis of diseases (non-cancer) associated with second hand smoke: 2004, 2006, 2007
- Panel Cardiovascular Diseases: 2008

American Heart Association

Cardiac Biology/Regulation - Basic & Clinical / Translational:

Region 3, Spring 2009 & Spring 2010

Region 2 and 3, Fall 2010

Region 2 and 3, Spring 2011

Region 2 and 3. Fall 2011

Region 2 and 3, Spring 2012

Cardiac Bio BSc 1: Fall 2012

Cardiac Bio Reg - BSci 3: Spring, 2013 (co-chairperson)

Cardiac Bio Reg - BSci 3: Fall, 2013 (co-chairperson)

Cardiac Bio Reg - BSci 3: Spring, 2014 (co-chairperson)

Cardiac Bio Reg - BSci 6: Fall, 2014 (co-chairperson)

Cardiac Bio Reg - BSci 3: Spring, 2015 (chairperson)

Cardiac Bio Reg - BSci 3: Spring, 2016 (chairperson)

Cardiac Bio Reg - BSci 3: Fall, 2016 (chairperson)

National Heart, Lung, and Blood Institute

NHLBI P30 Review (ARRA funds), 2009

NHLBI Special Emphasis Panel – Research Centers at Minority-Serving Institutions

Basic Research in Calcific Aortic Valve Disease (R01); April 4, 2012.

NHLBI P50 Review - RFA-NHLBI Research Centers at Minority Serving Institutions - Phase II. December 2012

FY15 Peer Reviewed Medical Research Program (PRMRP) for the Department of Defense Congressionally Directed Medical Research Programs: Peer review panel - Programs in cardiovascular health, Fall 2015

### **Site Visits**

2010 FAMRI Julius B. Richmond Center of Excellence at the American Academy of Pediatrics, Elk Grove Village, Illinois

### **Committees**

Institutional Review Board (Human Studies Subcommittee) of the Central Texas Veterans Health Care System, 2000 – 2006

Publications Committee, Council for High Blood Pressure Research (Ad Hoc), 2003 – 2006

Radioisotope Protocol Review Committee of the Central Texas Veterans Health Care System, 2004 – 9/25/08

Subcommittee on Research Safety of the Central Texas Veterans Health Care System, 2004 – 2008; Chair, 10/1/06 – 9/25/08

Research and Development (R&D) Committee of the Central Texas Veterans Health Care System, 2006 – 9/25/08

Public Affairs Committee (Alternate), The American Physiological Society, 2005 – 2006 Institutional Biosafety Committee (*Ex-Officio*), Texas A&M University, 2006 – June 2007 Institutional Biosafety Committee, Texas A&M University, June 2007 – 9/25/08

Admissions Committee for the Graduate Program in Pharmacology and Toxicology, The University of Mississippi Medical Center, 2010 – 2012

Graduate Program Committee, Dept. Pharmacology, The University of Mississippi Medical Center, 2012 – present

Faculty Search Committee, Department of Pharmacology and Toxicology, The University of Mississippi Medical Center, 2010

Faculty Recruitment Committee, Department of Pharmacology and Toxicology, The University of Mississippi Medical Center, 2012 – 2016 (Chair)

Pharmacology Education/Graduate Curriculum Committee, Department of Pharmacology and Toxicology, The University of Mississippi Medical Center, 2010 - 2012

Professional Education Committee, Department of Pharmacology and Toxicology, The University of Mississippi Medical Center, 2012 – 2016

Strategic Planning Committee (Department of Pharmacology and Toxicology), 2017 – present SFRBM Nominations/Leadership Development Committee. 2010 – present

# Memberships

American Heart Association, 1991 - present

American Stroke Association, 2003 - present

Council for High Blood Pressure Research, 2003 - present

Society for Free Radical Biology and Medicine, 2009 - present

Biochemical Society, 2015 - present

Mount Desert Island Biological Laboratory,

Associate, 1977 - 1990

Full, 1990 - present

American Physiological Society, 1991 - 2016

American Society for Cell Biology, 2004 - 2016

International Society for Heart Research, 1994 - 2016

Heart Failure Society of America, 2004 - 2016

European Cytokine Society, 2012 - 2014

American Society of Hypertension, 2003 – 2011

The Texas Chapter of the American Society of Hypertension, 2003 - 2008

New York Academy of Sciences, 1995 - 2011

American Thoracic Society, 2004 - 2011

Member	
2009 - 2015	Center for Excellence in Cardiovascular
	Renal Research, University of
	Mississippi Medical Center
2010 - 2014	Women's Health Research Center
	University of Mississippi Medical Center
2013 - 2014	Mississippi Center for Heart Research at
	UMMC

### **EDITORIAL DUTIES**

Associate Editor: 2013 – present
Associate Editor: 2014 – present
Reviews Editor: 2015 – present

Senior Editor: 2009 – 2013 Congestive Heart Failure

Section Editor: 2007 – 2013 Congestive Heart Failure: Translational Research

Guest Editor: 2007 Journal of Cardiovascular Pharmacology

Review Series - Novel Drugs Targeting Hypertension:

Renin Inhibitors and Bevond

2010 Journal of Cardiovascular Pharmacology

Review Series - Novel Drugs Targeting Hypertension: A

Follow Up

2011 Congestive Heart Failure

Review Series - Mitochondria and Heart Failure

### **Editorial Boards:**

2003-present Hypertension 2004-present Journal of Cardiovascular Pharmacology 2005-2013 Congestive Heart Failure 2008-2012 Cardiovascular Research 2014-present Cardiovascular Research 2009-present Free Radical Biology and Medicine 2013-present European Journal of Pharmacology 2015-present Clinical Science

## **Ad Hoc Reviewer**

Hypertension, Journal of Molecular and Cellular Cardiology, Circulation, Journal of Clinical Investigation, Circulation Research, American Journal of Physiology: Heart and Circulatory Physiology, American Journal of Physiology: Regulatory, Integrative and Comparative Physiology, Journal of Applied Physiology, Journal of Cardiovascular Pharmacology, Expert Opinion on Emerging Drugs, The International Journal of Biochemistry and Cell Biology, American Journal of Hypertension, Molecular and Cellular Biochemistry, Regulatory Peptides, Journal of the American College of Cardiology, Cardiovascular Research, Biochemical Pharmacology; Acta Pharmacologica Sinica, American journal of Pathology; Congestive Heart Failure; American Journal of Physiology: Cell Physiology; Physiological Genomics; American Journal of Physiology: Endocrinology and Metabolism; British Journal of Pharmacology; Endocrine; Clinical and Experimental Pharmacology and Physiology; Endocrinology; Free Radical Biology and Medicine; Apoptosis; Cardiovascular Drugs and Therapy; Experimental Cell Research; European Journal of Pharmacology; Phytotherapy Research; Experimental Gerontology;

Experimental Lung Research; Circulation: Heart Failure; Journal of Cellular Physiology; Biomedical Materials; PLOS ONE; European Journal of Heart Failure; JAK STAT, Journal of the Saudi Heart Association; Pharmacological Research; BBA - Molecular Cell Research; Expert Opinion On Pharmacotherapy; Environmental Toxicology and Pharmacology.

Hypertension - Proceedings of the Inter-American Society of Hypertension, 2003-2008 Hypertension - Proceedings of the Council for High Blood Pressure Research, 2003-2008 AHA Abstract Reviewer – Scientific Sessions 2004 - 2010 Abstract Reviewer –

- 16th Annual Meeting of the Society for Free Radical Biology and Medicine (SFRBM), 2009
- 17th Annual Meeting of the Society for Free Radical Biology and Medicine and Society for Free Radical Research International XV Biennial Meeting, 2010
- SFRBM's 18th Annual Meeting, 2011
- SFRBM's 19th Annual Meeting, 2012
- SFRBM's 20th Annual Meeting, 2013
- SFRBM's 21th Annual Meeting, 2014
- SFRBM's 22th Annual Meeting, 2015
- Joint Meeting of the European Society of Hypertension and International Society of Hypertension, 2014

### **PRESENTATIONS**

- 1990 FASEB, N-Carbobenzoxy-glycyl-L-phenylalaninamide Inhibits Both Basal and Contraction-Initiated 2-Deoxyglucose Uptake by Frog Muscle (Seminar)
- 1992 FASEB, Angiotensin II Binding Sites on Hepatocyte Nuclei (Poster)
- 1993 Weis Center, Role of PKC in the Mitogenic Effect of All on Rat Cardiac Fibroblasts (Seminar)
- 1994 Weis Center, Involvement of Protein Kinase C and Calcium in Angiotensin II-Induced Mitogenesis of Cardiac Fibroblasts (Seminar)
  - APS Conference, Signal Transduction and Gene Regulation, San Francisco, Role of Protein Kinase C in Angiotensin II-Induced Mitogenesis of Neonatal Rat Cardiac Fibroblasts (Poster)
- 1995 Weis Center, Angiotensin II-Induced Cardiac Hypertrophy: A Role for the Type II Receptor? (Seminar)
  - Annual Fall Conference and Scientific Sessions of the Council for High Blood Pressure Research, AT2 Receptor Blockade Augments Angiotensin II-Induced Cardiomyocyte Hypertrophy (Seminar)
  - Dept. of Medical Pharmacology and Toxicology, Texas A&M University School of Medicine, *Role of Angiotensin II in Cardiac Hypertrophy and Remodeling* (Seminar)
- 1997 Dept. of Physiology, University of Florida, School of Medicine, Opposing Roles of the Angiotensin II Receptor Subtypes in Cardiac Hypertrophy (Seminar)
  - Weis Center, Opposing Roles of the Angiotensin II Receptor Subtypes in Cardiac Hypertrophy (Seminar)
  - College of Pharmacy, Division of Pharmacology and Experimental Therapeutics, University of Kentucky, Opposing Roles of the Angiotensin II Receptor Subtypes in Cardiac Hypertrophy (Seminar)
  - Children's Hospital Medical Center, Division of Pulmonary Medicine, Allergy, and Clinical Immunology, University of Cincinnati, *Opposing Roles of the Angiotensin II Receptor Subtypes in Cardiac Hypertrophy* (Seminar)

- 1998 H. Lee Moffitt Cancer Center and Research Institute, *Cardiac Actions of Angiotensin II* (Seminar)
- 2001 American College of Cardiology, Annual Scientific Session

  Angiotensin II modulates gp130 signaling in cardiac myocytes by tyrosine phosphatase activation (Poster).
- 2001 Annual Fall Conference and Scientific Sessions of the Council for High Blood Pressure Research, Endothelin-1 inhibits activation of the LIF receptor in cardiomyocytes (Poster).
- 2003 AHA Scientific Conference on Molecular Mechanisms of Growth, Death and Regeneration in the Myocardium: Basic Biology and Insights into Ischemic Heart Disease and Heart Failure, Role for  $\beta$ -arrestins, but not GRKs, in angiotensin II-induced internalization of  $AT_1$  (Poster).
- 2004 American College of Cardiology, Annual Scientific Session,
  Rescue of Internalization-Impaired Angiotensin II AT1 Mutants by β-Arrestin
  Overexpression (Poster).
- 2004 Heart Failure Society of America, 8th Annual Scientific Meeting

  Molecular Mechanisms of IL-6-Related-Cytokine STAT3 Regulation in

  Cardiac Myocytes (Poster).
- 2004 Annual Fall Conference and Scientific Sessions of the Council for High Blood
  Pressure Research
  The Anti-Inflammatory Agent Parthenolide has Differential and Independent
  Effects on Jak-STAT and ERK Signaling in Cardiac Myocytes (Poster).
- 2004 American Society for Cell Biology
  Interferon-γ has a Potent Cytostatic Effect via STAT1 Activation on the A549
  Human Lung Cancer Cell Line (Poster)
- 2005 Heart Failure Society of America, 9th Annual Scientific Meeting
  Parthenolide induces oxidative stress in cardiomyocytes: Differential
  activation of mitochondrial and NADPH oxidases (Poster).
- 2005 University of Mississippi Medical Center, Department of Physiology & Biophysics

  Making the Best of IL-6-Type Cytokines in the Stressed Heart: From STAT3
  to SOCS3 to ROS.
- 2007 XIX World Congress of the ISHR Bologna (Italy)

  Oxidative stress blocks activation of JAK-STAT signaling in cardiac myocytes (Poster).
- 2007 Department of Cell & Developmental Biology and Anatomy, School of Medicine
  University of South Carolina

  JAK-STAT Signaling in the Heart Novel Insights into Regulation
- 2007 The 6<sup>th</sup> Annual Symposium: The Cutting Edge Cardiology for the Future, Long Beach Memorial Medical Center, Long Beach, California *PARP Inhibitors in Heart Failure: Translational Medicine in Progress*
- 2008 University of Mississippi Medical Center, Department of Pharmacology and Toxicology

  JAK-STAT Signaling in the Injured and Failing Heart
- 2008 TTUHSC School of Pharmacy, Department of Pharmaceutical Sciences

  JAK-STAT Signaling in the Injured and Failing Heart
- 2009 University of Mississippi Medical Center, SURE Seminar, *Mending a Broken Heart:*New Approaches to Heart Failure Prevention or Reversal
- 2010 University of Mississippi Medical Center, Department of Physiology and Biophysics, Hydrogels as a Platform for Stem Cell Delivery to the Heart
- 2010 University of Mississippi Medical Center, Department of Pharmacology and Toxicology, Can the protective actions of JAK-STAT in the heart be exploited

- therapeutically?
- 2010 University of Mississippi Medical Center, Department of Biochemistry, *Uncovering the Versatility of STAT3 in Endothelial Cells*.
- 2011 University of Mississippi Medical Center, Department of Pharmacology and Toxicology, Work In Progress 2011: Understanding JAK-STAT in the Heart
- 2012 Department of Pharmacology, University of Mississippi School of Pharmacy, Redox-Sensitivity of STAT3: Implications for Heart Failure
- 2012 University of Mississippi Medical Center, Department of Pharmacology and Toxicology, *Redox-Sensitivity of STAT3: Implications for Heart Failure*
- 2012 Division of Cardiology, Department of Medicine, The Johns Hopkins University, Redox-Sensitivity of STAT3: Implications for Heart Failure

# By members of the lab:

- 2004 CHEST (American College of Chest Physicians)

  Activation of STAT1 BY IFN-γ Inhibits Growth of Human Non-Small Cell Lung

  Cancer Cells (Poster).
- 2005 CHEST (American College of Chest Physicians)

  Role of STAT1 in the Permissive Effect of Interferon-γ on FAS-Induced

  Apoptosis of Non-Small Cell Lung Cancer Cells
- 2005 XXVIIth Annual Meeting of the North American Section of the International Society for Heart Research New Orleans, LA May 12 15, 2005 "Cardiovascular Disease and Health". Anti-inflammatory parthenolide inhibits JAK1 activation in cardiac myocytes but induces oxidative stress (Poster).
- 2006 ATS International Conference in San Diego, California, May 19th-24th. Role for STAT3 in Apoptosis Signaling by Interferon-γ in Human Nonsmall Cell Lung Cancer A549 Cells (Poster).
- 2010 High Blood Pressure Research 2010 Scientific Sessions, Washington D.C.
  Nitroxyl activates redox-sensitive stress signaling in endothelial cells and has anti-inflammatory actions (Poster; Carlos Zgheib).
- 2010 High Blood Pressure Research 2010 Scientific Sessions, Washington D.C. PP2A plays a critical role determining the endothelial cell gene expression profile of leukemia inhibitory factor (LIF). (Oral; Carlos Zgheib).
- 2010 ASCB 50th Annual Meeting, Philadelphia, PA. Sodium Selenate Enhances Endothelial Cell STAT3 Tyrosine Phosphorylation and DNA Binding. (Poster; Hani Alturkmani/ Carlos Zgheib).
- 2011 EB2011, Washington, DC. Transient Receptor Potential Type C Channels Play a Critical Role in Angiogenesis (Poster; Fouad Zouein).
- 2012 EB2012, San Diego, CA, DUAL ROLE OF STAT3 IN HYPERTENSION-INDUCED CARDIAC REMODELING (Poster; Fouad Zouein).
- 2012 CHBPR 2012, Washington, DC. STAT3 Affects Myofibrillar Structure and Its Loss May Contribute to Heart Failure in Hypertension (Oral; Fouad Zouein).
- 2012 CHBPR 2012, Washington, DC. Acyloxy Nitroso Compounds Inhibit LIF Signaling in Endothelial Cells and Cardiac Myocytes: Evidence That STAT3 Signaling is Redox-Sensitive. (Poster; Carlos Zgheib).
- 2013 CHBPR 2013, New Orleans, LA. Role of STAT3 in Collagen Deposition and Organization in the Normal and Hypertensive Heart (Poster; Fouad Zouein).
- 2015 AHA's Council on Hypertension 2015 Scientific Sessions conference in Washington, D.C. Importance of the C-Terminal Transactivation Domain of STAT3 in Hypertension-Induced Cardiac Hypertrophy (Oral; Fouad

# Zouein).

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HONO	RS AND AWARDS	
	1972 - 1976	Dean's List, St. Joseph's University
	1972 - 1976	Presidential Scholarship, St. Joseph's University
	1977 - 1980	National Research Service Award
		University of Pennsylvania
	1983 - 1986	Dean's List, Drexel University
	1986 - 1987	Foerderer Fellow, Thomas Jefferson University
	1988	Summer Fellowship
		American Heart Association, Maine Chapter
	1988 - 1989	Speck Fellowship, Thomas Jefferson University
	1988 & 1977	Student Scholarship
		Mt. Desert Island Biological Laboratory
	1989 - 1990	University Fellowship
		Thomas Jefferson University
	1990	Fellowship
		Mt. Desert Island Biological Laboratory
	1990	Elected Member
		Mt. Desert Island Biological Laboratory
	2003	Editorial Board, Hypertension
	2004	Top Ten Hypertension Reviewer
	2004	Fellow of the American Heart Association/American Stroke
		Association
	2004	Editorial Board, Journal of Cardiovascular Pharmacology
	2005 – 2006	Adjunct Assistant Professor of Biology, Mary Hardin Baylor University
	2005	Editorial Board, Congestive Heart Failure
	2008	Consulting Editor/Editorial Board, Cardiovascular Research
	2009	Editorial Board, Free Radical Biology and Medicine
	2009	Excellence in Research Award at the University of Mississippi
		Medical Center, Bronze Level
	2010	Excellence in Research Award at the University of Mississippi
		Medical Center, Gold Level
	2011	Cardiovascular Research, Certificate of Appreciation (100
		manuscripts)
	2012	Hypertension, Certificate of appreciation as a top reviewer
	2013	F1000Prime Faculty Member (Cardiovascular Pharmacology)
	2013	Hypertension, Certificate of appreciation as top reviewer
	2013	HBPR 2013, Co-chair of session: Cardiac Hypertrophy and
		Dysfunction
	2013	Editorial Board, European Journal of Pharmacology
	2014	Editorial Board, Cardiovascular Research
	2014	Top Ten Hypertension Reviewer
As N	Mentor	
	2004	Nikhat Salamat, M.D., Best Lung Cancer Poster, CHEST Meeting
	2005	Christopher Spradley, M.D., Young Investigator Award, CHEST Meeting
	2005	Mazen Kurdi, Ph.D., Young Investigator Best Oral Presentation, 1st
		Annual Retreat of the Texas A&M University System Health
		• •

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2000	Science Center Cardiovascular Research Institute
2009	Joshua Burkhart, M1 Medical Student, Recipient: Dean's Summer Medical Research Fellowship
2010	Fouad Zouein, 1st year graduate student, poster award recipient:
	Model system for investigating the role of transient receptor
2011	potential type C channels in angiogenesis.
2011	Carlos Zgheib, 1st place poster at Research Day at the University of Mississippi Medical Center: Zgheib C., Zouein F., Chidiac R.,
	Kurdi M Booz G.W. Calyculin A Reveals Serine/Threonine
	Phosphatase PP1 as a Regulatory Nodal Point in Canonical
	STAT3 Signaling of Human Microvascular Endothelial Cells.
2011	Fouad Zouein, AHA Scientific Sessions Travel Award–PVD
	council workshop- Orlando, Florida
2012	Fouad Zouein, School of Health Related Professions Research
	Day - 1st place award for outstanding research
2012	Fouad Zouein, recipient of a 2012 Research Mini-Fellowship from
	the Society for Free Radical Biology and Medicine (SFRBM) for his
0040	study entitled Cardiac Mitochondrial ROS Production
2013	Fouad Zouein. Junior Initiative Award from the European Cytokine
	Society for his review article "LIF and the Heart: Just Another Brick in the Wall?" Fouad A. Zouein, Mazen Kurdi, and George W.
	Booz
2014	Fouad A. Zouein, Ph.D., Regions Graduate Research Award
2014	Venkata Ramana Vaka, recipient of a 2014 Research Mini-
	Fellowship from the Society for Free Radical Biology and Medicine (SFRBM)
	(or indivi)

# **COLLABORATIONS**

Roy J. Duhe, Ph.D. Professor Department of Pharmacology and Toxicology The University of Mississippi Medical Center 2008 - 2013

Mazen Kurdi, Ph.D.
Professor
Department of Chemistry and Biochemistry
The Lebanese University
2008 - present

Istvan Arany, Ph.D., C.Sc. Professor of Pediatrics Department of Pediatrics, Division of Pediatric Nephrology University of Mississippi Medical Center 2010 - 2014

Kenneth Liechty, MD Associate Professor of Pediatric Surgery Department of Surgery University of Mississippi Medical Center 2010 - 2012 Nazareno Paolocci, MD, PhD Assistant Professor of Medicine Division of Cardiology Johns Hopkins University 2010 – present

Edward J. Lesnefsky, MD, FACC, FAHA Division of Cardiology Professor of Medicine and Biochemistry Virginia Commonwealth University Chief, Cardiology Section McGuire Veterans Affairs Medical Center Richmond, VA 23249 2014 – present

# **TEACHING ACTIVITIES (classroom or teaching laboratory)**

1974 Cell Physiology Laboratory, University of Pennsylvania Graduate Faculty
1989 Blood Bank Techniques Laboratory, Thomas Jefferson University

# The Texas A&M University System Health Science Center Graduate Faculty and College of Medicine

2	2003-2007	MPHY 606, Advanced Cardiovascular Biology: Signal Transduction in Heart
2	2003-2007	Failure MSCI 601, Principles of Medical Science (Part 1): Biomembranes, Membrane
		Transport
2	2003-2005	MSCI 689, Advanced Topics in Cell Signaling: G-Protein Receptor Signaling,
		Cytokine Receptor Signaling
2	2006	MSCI 612, Current Topics in Cell Signaling: G-Protein Receptor Signaling,
		Cytokine Receptor Signaling
2	2004	MPHY 901, Medical Physiology: Adrenal Glands, Hypothalamus/Pituitary
		Gland, Endocrine Pancreas, Thyroid Gland, Calcium and Phosphate
		Metabolism
2	2004-2007	MSCI 602, Principles of Medical Science (Part 2): Thyroid, Endocrine
		Pancreas, Adrenal Gland and Calcium Regulation
2	2004	S&W Fellows Course: Cytokines & Heart Failure
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### Course coordinator

2006 MSCI 612, Current Topics in Cell Signaling

# University of Mississippi School of Medicine and School of Graduate Studies in the Health Sciences

Spring 2009 – present	PH652: Advanced Topics in Pharmacology
Fall 2009 – present	PH723: Mechanisms of Drug Action; Cardiovascular
	Pharmacology (Three 2-hour lectures)
Fall 2009 – present	PH620/722: Introduction To Pharmacology & Therapeutics
·	(Medical Pharmacology): Heart Failure, Vasodilators and Rx
	of Angina Pectoris (Two 1-hour lectures)

Spring 2010 – present PH626/726: Pharmacology (Dental)/Fundamental

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Pharmacology: Cardiac Physiology Overview, Heart Failure,

Angina

Spring 2010 Pharm 790: Special Topics in Pharmacology and Toxicology

(4 credits)

Spring 2016 – present Research Tools Genomics Technologies PH724:

Mitochondria in cell signaling; Approaches for their study, 3

4th Year Pharm Medical Elective 2017 – present

### Course coordinator

2014 -2015 PH723: Mechanisms of Drug Action

### OTHER TEACHING OR MENTORING ACTIVITIES

Scientific Partner, 2009 - present The Master's Program in Cardiovascular Pharmacology The Lebanese University Beirut, Lebanon

Preclinical Advisor, 2013 – present 3-4 M1 and 3-4 M2 Students

# Research Mentor - Pulmonary Fellows, Scott & White Hospital and Cardiovascular Research Institute, Texas A&M College of Medicine

2003 - 2005 Nikhat Salamat, M.D.

Role of STAT Transcription Factors in Apoptosis of Human Non-

Small-Cell Lung Cancer Cells

Christopher Spradley, M.D. 2003 - 2005

Antioncogenic Potential of GRIM-19 in Human Non-Small-Cell Lung

Cancer Cells

2005 - 2006 Gagan Prakash, M.D.

Regulation of Non-Small Cell Cancer Apoptosis by Interferon-y

### **Post-Doctoral Fellows**

& 8/1/08-9/18/08

2004 - 2008	Mazen Kurdi, Ph.D.
2009 – 2011	Thomas Sebastian, Ph.D.
2015	Fouad A. Zouein, Ph.D.
2015 – 2017	Raffaele Altara, Ph.D.

# **Technicians, Graduate Students, and Summer Students**

2000 – 2004	Jonathan Day, B.Sc.	Technician I, II
2003 – 2005	J. Ryan Brewer, B.S.	Technician I
2004 – 2005	Jeremy Nickolai, B.S.	Technician 1
2003	Kelly Culver	Summer Student
5/04 - 1/05	William White	College Student
5/04 - 12/04	Nathan Guthrie	College Student
2004 (fall)	Samantha Bruce	Graduate Student

Graduate Student (Rotation) 2004 (fall)

6/28/07-8/31/07 Carlos Zgheib Masters Student, Holy Spirit University,

Lebanon

6/28/07-8/31/07 Marita Faddoul Masters Student, Holy Spirit University,

		Tage 15 01 25
6/28/07-8/31/07	Youssef Bou Assy	Lebanon Masters Student, Holy Spirit University,
0/20/07 0/31/07	Toussel Dou Assy	Lebanon
8/1/08-9/18/08	Hovig Khachadourian	Undergraduate, Holy Spirit University,
	· ·	Lebanon
1/1/09-7/10/09	Marilyn Burke	Graduate Student, Dept.
		Pharmacology
		and Toxicology, University of
		Mississippi School of Medicine
Summer 2009	Joshua Burkhart	M1 Medical Student, University of
		Mississippi School of Medicine
		The role of SOCS3 in modulating IL-6
		type cytokine signaling in mouse
Cummar 2000	Oignli (Log) Tign	coronary endothelial cells
Summer 2009	Qianli (Lee) Tian	High School Student Summer Undergraduate Research
		Experience (SURE) participant
		Isolating CD34 <sup>+</sup> Stem Cells from
		Umbilical Cord Blood for Cardiac Repair
7/2009-8/2010	Fouad Zouein	Research Technician II, University of
1,2000 0,2010		Mississippi School of Medicine
Summer 2009	Rony Chidiac	Masters Student, Holy Spirit University,
	•	Lebanon
		Summer Undergraduate Research
		The Utility of Anti-Oxidant Hydrogels for
		Stem Cell Delivery to the Heart
8/2010–11/2013	Fouad Zouein	Graduate Student: Medical
		Pharmacology, University of
00/0000		Mississippi School of Medicine
08/20092012	Carlos Zgheib	Graduate Student: Medical
		Pharmacology, University of
7/8/10–9/23/10	Hani Jamal Alturkmani	Mississippi Medical Center 3 <sup>rd</sup> year medical student
1/0/10-3/23/10	Halli Salliai Alturkillalli	Alfaisal University, College of Medicine
7/1/11–9/23/11	Hani Jamal Alturkmani	4 <sup>th</sup> year medical student
., .,		Alfaisal University, College of Medicine
	Nour Eddin F. Alshaaer	3 <sup>rd</sup> year medical student
		Alfaisal University, College of Medicine
6/1/12-8/15/12	Charles Powell	SURE Student
		University of Mississippi
9/1/11–8/30/12	Kathryn Cooper	Technician I
6/1/13–8/15/13	Charles Powell	SURE Student
=	5	University of Mississippi
1/1/12–5/1/12	Barak Gunter	Graduate Student, Medical
		Pharmacology/Psychiatry and
5/5/12 0/45/42 P	Venkata Ramana Vaka	Human Behavior Graduate Student: Medical
5/5/13–9/15/13 & 5/13/14–9/1/15	venkala Kamana vaka	Pharmacology, University of
J/ 13/ 1 <del>4-8</del> / 1/ 13		Mississippi Medical Center
		mississippi medical Celllel

### Ph.D. Thesis Advisor

Dr. Carlos Zgheib (2009-2012), "Regulation of Inflammatory JAK-STAT Signaling: Implications For Cardiac Repair and Remodeling"

Dr. Fouad Zouein (2010-2013), "Importance of STAT3 in Hypertension-Induced Remodeling of the Heart"

### **Thesis Committees**

2007–2008	Joana Dado, Masters The Graduate School of Biomedical Sciences
	The Texas A&M University System Health Science Center College of Medicine
2009–2012	Chetan Patil, Doctoral Student, Medical Pharmacology School of Graduate Studies in the Health Sciences University of Mississippi Medical Center
2011–2012	Carlos Zgheib, Doctoral Student, Medical Pharmacology School of Graduate Studies in the Health Sciences University of Mississippi Medical Center
2012-2013	Fouad A. Zouein, Doctoral Student, Medical Pharmacology School of Graduate Studies in the Health Sciences University of Mississippi Medical Center
2013	Kandis V. Backus, Doctoral Student, Medical Pharmacology School of Graduate Studies in the Health Sciences University of Mississippi Medical Center
2014-present	Barak Gunter, Doctoral Student, Psychiatry and Human Behavior School of Graduate Studies in the Health Sciences University of Mississippi Medical Center
2015-present	Xiaochen "Alex" He, Doctoral Student, Medical Pharmacology School of Graduate Studies in the Health Sciences University of Mississippi Medical Center

# **TAMHSC Division of Molecular Cardiology Activities**

2004 – 2005 Organizer and Chair, Heart and Lung Focus Group

# The Texas A&M University System Heath Science Center

2005	Judge, 10 <sup>th</sup> Annual Heath Science Center Research Symposium
2006	Poster Judge, 2 <sup>nd</sup> Annual Cardiovascular Research Institute Retreat
2007	Poster Judge, 3rd Annual Cardiovascular Research Institute Retreat

# The University of Mississippi Medical Center

ne University of Mississippi Medical Center		
2009	Poster Judge, Research Day, School of Graduate Studies in the	
	Health Sciences	
2009 – present	Grants In Progress, Department of Pharmacology and	
	Toxicology	
2015	Poster Judge, Research Day, School of Graduate Studies in the	
	Health Sciences	

### **PUBLICATIONS**

### Citation indices

Citations 3621 h-index 26 i10-index 45

### **Research Articles**

- 1. Pritchard JB, **Booz G**, Kleinzeller A. Renal sugar transport in the winter flounder. V. Secretion of 2-deoxy-D-galactose. *Am. J. Physiol.* 234: F424-431, 1978.
- 2. Pritchard JB, **Booz G**, Kleinzeller A. Renal sugar transport in the winter flounder. VI. Reabsorption of D-mannose. *Am. J. Physiol.* 242: F415-422, 1982.
- 3. Kleinzeller A, Forrest JN, Cha C-J, Goldstein J, **Booz G**. Cell solute composition and potassium effects in slices of the rectal gland of the dogfish shark (*Squalus acanthias*). *J. Comp. Physiol.* 155B: 145-153, 1985.
- 4. Ziyadeh FN, Feldman GM, **Booz GW**, Kleinzeller A. Taurine and cell volume maintenance in the shark rectal gland: Cellular fluxes and kinetics. *Biochim. Biophys. Acta* 943: 43-52, 1988.
- 5. Feldman GM, Ziyadeh FN, Mills JW, **Booz GW**, Kleinzeller A. Propionate induces cell swelling and K<sup>+</sup> accumulation in shark rectal gland. *Am. J. Physiol.* 257: C377-C384, 1989.
- 6. Kleinzeller A, **Booz GW**, Mills JW, Ziyadeh FN. pCMBS-induced swelling of dogfish (*Squalus acanthias*) rectal gland cells: Role of the Na<sup>+</sup>,K<sup>+</sup>-ATPase and the cytoskeleton. *Biochim. Biophys. Acta* 1025: 21-31, 1990.
- 7. **Booz GW**, Conrad KM, Hess AL, Singer HA, Baker KM. Angiotensin II binding sites on hepatocyte nuclei. *Endocrinology* 130:3641-3649, 1992.
- 8. **Booz GW**, Bianchi CP. Stimulation-enhanced 3-O-methylglucose efflux from the frog sartorius: Kinetics and properties of the system. *Biochim. Biophys. Acta* 1109: 132-140, 1992.
- 9. **Booz GW**, Bianchi CP. 2-Deoxyglucose transport by the frog sartorius: Effects of electrical stimulation and N-carbobenzoxy-glycyl-L-phenylalaninamide. *Comp. Biochem. Physiol.* 106A: 471-477, 1993.
- 10. Schorb W, **Booz GW**, Dostal DE, Conrad KM, Chang KC, Baker KM. Angiotensin II is mitogenic in neonatal rat cardiac fibroblasts. *Circ. Res.* 72: 1245-1254, 1993.
- 11. **Booz GW**, Dostal DE, Singer HA, Baker KM. Involvement of protein kinase C and Ca<sup>2+</sup> in angiotensin II-induced mitogenesis of cardiac fibroblasts. *Am. J. Physiol.* 267: C1308-C1318, 1994.
- 12. **Booz GW**, Taher M, Baker KM, Singer HA. Angiotensin II-induces phosphatidic acid formation in neonatal rat cardiac fibroblasts: Evaluation of the roles of phospholipases C and D. *Mol. Cell. Biochem.* 141: 135-143, 1994.
- 13. **Booz GW**, Baker KM. Protein kinase C in angiotensin II signalling in cardiac fibroblasts: Role in the mitogenic response. *Ann. N.Y. Acad. Sci.* 752: 158-167, 1995.
- 14. Thomas WG, Baker KM, **Booz GW**, Thekkumkara TJ. Evidence against a role for protein kinase C in the regulation of the angiotensin II (AT<sub>1A</sub>) receptor. *Eur. J. Pharmacol.* 295: 119-122, 1996.
- 15. **Booz GW**, Baker KM. Role of type 1 and type 2 angiotensin receptors in angiotensin II-induced cardiomyocyte hypertrophy. *Hypertension* 28: 635-640,1996.
- 16. **Booz GW**, Carl LL, Baker KM. Amplification of angiotensin II signaling in cardiac myocytes by adenovirus-mediated overexpression of the AT1 receptor. *Ann. N.Y. Acad. Sci.* 874: 20-26, 1999.
- 17. **Booz GW**, Dostal DE, Baker KM. Paracrine actions of cardiac fibroblasts on cardiomyocytes: Implications for the cardiac renin-angiotensin system. *Am. J. Cardiol.* 83:44H-47H, 1999.

- 18. Dostal DE, **Booz GW**, Baker KM. Regulation of angiotensinogen gene expression and protein in neonatal rat cardiac fibroblasts by glucocorticoid and β-adrenergic stimulation. *Basic Res. Cardiol.* 95: 485-491, 2000.
- 19. Fukuzawa J, **Booz GW**, Hunt RA, Shimizu N, Karoor V, Baker KM, Dostal DE. Cardiotrophin-1 increases angiotensinogen mRNA in rat cardiac myocytes through STAT3: an autocrine loop for hypertrophy. *Hypertension* 35: 1191-1196, 2000.
- 20. **Booz GW**, Day JNE, Speth R, Baker KM. Cytokine G-protein signaling crosstalk in cardiomyocytes: attenuation of Jak-STAT activation by endothelin-1. *Mol. Cell. Biochem.* 240:39-46. 2002.
- 21. **Booz GW**, Day NE, Baker KM. Angiotensin II effects on STAT3 phosphorylation in cardiomyocytes: Evidence for Erk-dependent Tyr705 dephosphorylation. *Basic Res. Cardiol.* 98: 33-38, 2003.
- 22. Steinle JJ, **Booz GW**, Meininger CJ, Day JNE, Granger HJ. β<sub>3</sub>-Adrenergic receptors regulate retinal endothelial cell migration and proliferation. *J. Biol. Chem.* 278: 20681-20686, 2003.
- 23. Kule CE, Karoor V, Day JNE, Thomas WG, Baker KM, Acker KA, **Booz GW**. Agonist-dependent internalization of the angiotensin II type one receptor (AT<sub>1</sub>): Role of C-terminus phosphorylation in recruitment of β-arrestins. *Reg. Peptides* 120: 141-148, 2004
- 24. Baker KM, Chernin MI, Schreiber T, Sanghi S, Haiderzaidi S, **Booz GW**, Dostal DE, Kumar R. Evidence of a novel intracrine mechanism in angiotensin II-induced cardiac hypertrophy. *Reg. Peptides* 120: 5-13, 2004.
- 25. Kurdi M, **Booz GW**. Evidence that IL-6-Type Cytokine Signaling in Cardiomyocytes is Inhibited by Oxidative Stress: Parthenolide Targets JAK1 Activation by Generating ROS. *J. Cell. Physiol.* 212: 424-431, 2007
- 26. Kurdi M, **Booz GW**. Jak1 inhibition, but not STAT1 knockdown, blocks the synergistic IFNγ-and Fas-Induced apoptosis of human non-small cell lung cancer A549 cells. *J. Interferon Cytokine Res.* 27: 16-24, 2007.
- 27. Kurdi M, Bowers MC, Dado J, **Booz GW**. Parthenolide induces a distinct pattern of oxidative stress in cardiac myocytes. *Free Radic Biol Med.* 42: 474-481, 2007.
- 28. Kurdi M, Sivakumaran V, Duhé RJ, Aon MA, Paolocci N, **Booz GW**. Depletion of Cellular Glutathione Modulates LIF-Induced JAK1-STAT3 Signaling in Cardiac Myocytes. *Int J Biochem Cell Biol.* 2012:44:2106-15.
- 29. Arany I, Reed DK, Grifoni SC, Chandrashekar K, **Booz GW**, Juncos LA. A novel U-STAT3-dependent mechanism mediates the deleterious effects of chronic nicotine exposure on renal injury. *Am J Physiol Renal Physiol* 2012;302:F722-9.
- 30. Zgheib C, Zouein FA, Chidiac R, Kurdi M, **Booz GW**. Calyculin A Reveals Serine/Threonine Phosphatase PP1 as a Regulatory Nodal Point in Canonical STAT3 Signaling of Human Microvascular Endothelial Cells *J. Interferon Cytokine Res.* 2012;32:87-94
- 31. Smith JK, Patil CN, Patlolla S, Gunter BW, **Booz GW**, Duhé RJ. Identification of a redox-sensitive switch within the JAK2 catalytic domain. *Free Radic Biol Med* 2012;52:1101-10.
- 32. Alturkmani HJ, Zgheib C, Zouein FA, Alshaaer NEF, Kurdi M, **Booz GW**. Selenate Enhances STAT3 Transcriptional Activity in Endothelial Cells: Differential Actions of Selenate and Selenite on LIF Cytokine Signaling and Cell Viability *J Inorg Biochem*. 2012;109:9-15.
- 33. Zgheib C, Kurdi M, Zouein FA, Gunter BW, Stanley BA, Zgheib J, Romero DG, King SB, Paolocci N, **Booz GW**. Acyloxy Nitroso Compounds Inhibit LIF Signaling in Endothelial Cells and Cardiac Myocytes: Evidence that STAT3 Signaling is Redox-Sensitive. *PLoS One*. 2012;7:e43313.
- 34. Zgheib C, Zouein FA, Kurdi M, Booz GW. Chronic treatment of mice with leukemia inhibitory

- factor does not induce cardiac remodeling but improves heart function. *Eur Cytokine Ne*tw. 2012;23:191-7.
- 35. Zouein FA, Zgheib C, Hamza S, Fuseler JW, Hall JE, Soljancic A, Lopez-Ruiz A, Kurdi M, **Booz GW**. Protective Role of STAT3 in Early-Stage Hypertension-Induced Cardiac Remodeling Revealed by Mice Lacking STAT3 Serine 727 Phosphorylation. *Hyper Res* 2013;36:496-503.
- 36. Werner T, Dombrowski S, Zgheib C, Zouein FA, Keen HL, Kurdi M, **Booz GW**. Elucidating functional context within microarray data by integrated transcription factor focused geneinteraction and regulatory network analysis. *Eur Cytokine Netw* 2013;24:75-90.
- 37. Zouein FA, Duhé RJ, Arrany I, Shirey K, Hosler JP, Liu H, Saad I, Kurdi M, **Booz GW**. Loss of STAT3 in mouse embryonic fibroblasts reveals its janus-like actions on mitochondrial function and cell viability. *Cytokine* 2014;66:7-16.
- 38. Zouein FA, Kurdi M, **Booz GW**, Fuseler JW. Applying Fractal Dimension and Image Analysis to Quantify Fibrotic Collagen Deposition and Organization in the Normal and Hypertensive Heart. Microsc Microanal 2014;20:1134-1144.
- 39. Zeng H, Vaka R, He X, **Booz GW**, Chen JX. High Fat Diet Induces Cardiac Remodeling and Dysfunction: Assessment of the Role Played by SIRT3 Loss. *J Cell Mol Med*. 2015;19:1847-1856.
- 40. Altara R, Manca M, Hessel MH, Gu Y, van Vark LJ, Akkerhuis M, Staessen JA, Struijker-Boudier HAJ, **Booz GW**, Blankesteijn WM. CXCL10 Is a Circulating Inflammatory Marker in Patients with Advanced Heart Failure: a Pilot Study. J Cardiovasc Transl Res. 2016;9:302-14. doi: 10.1007/s12265-016-9703-3. PubMed PMID: 27271043.
- 41. Altara R, Harmancey R, Didion SP, Booz GW, Zouein FA. Cardiac STAT3 Deficiency Impairs Contractility and Metabolic Homeostasis in Hypertension. Front Pharmacol. 2016;7:436. PubMed PMID: 27899891; PubMed Central PMCID: PMC5110511.

# **Review Articles**

- 1. Baker KM, **Booz GW**, Dostal DE. Cardiac actions of angiotensin II: Role of an intracardiac reninangiotensin system. *Ann. Rev. Physiol.* 54: 227-241, 1992.
- 2. **Booz GW**, Dostal DE, Baker KM. Regulation of cardiac second messengers by angiotensins. In: *Cardiac Renin-Angiotensin System* (1<sup>st</sup> ed), edited by K. Lindpaintner and D. Ganten. New York: Futura Medical Publishers, 1994, p. 101-124.
- 3. Dostal DE, **Booz GW**, Baker KM. Cellular and subcellular localization of elements of the cardiac renin-angiotensin system. In: *Cardiac Renin-Angiotensin System* (1<sup>st</sup> ed), edited by K. Lindpaintner and D. Ganten. New York: Futura Medical Publishers, 1994, p. 1-21.
- 4. **Booz GW**, Baker KM. Molecular signalling mechanisms controlling the growth and function of cardiac fibroblasts. *Cardiovasc. Res.* 30: 537-543, 1995.
- 5. Dostal DE, **Booz GW**, Baker KM. Angiotensin II signalling pathways in cardiac fibroblasts: Conventional versus novel mechanisms in mediating cardiac growth and function. *Mol. Cell. Biochem.* 157: 15-21, 1996.
- 6. **Booz GW**, Baker KM. Role of the renin-angiotensin system in the pathophysiology of cardiac remodeling. *Blood Pressure* 5 (Suppl 2): 10-18, 1996.
- 7. **Booz GW**, Baker KM. Actions of angiotensin II on isolated cardiac myocytes. *Heart Failure Reviews* 3: 125-130, 1998.
- 8. **Booz GW**, Fukuzawa J, Dostal DE, Baker KM. Angiotensin and cytokine receptor crosstalk in modulation of cardiomyocyte hypertrophy. Heart 33:174-179, 2001.

- 9. **Booz GW**, Day JNE, Baker KM. Interplay between the cardiac renin angiotensin system and JAK-STAT Signaling: Role in cardiac hypertrophy, ischemia/reperfusion dysfunction, and heart failure. *J. Mol. Cell. Cardiol.* 34:1443-1453, 2002.
- 10. **Booz GW**. Putting the Brakes on Cardiac Hypertrophy: Exploiting the Intrinsic NO-cGMP Counter-Regulatory System. *Hypertension* 45: 341-346, 2005.
- 11. Kurdi M, De Mello WC, **Booz GW**. Working outside the system: An update on the unconventional behavior of the renin-angiotensin system components. *Int. J. Biochem. Cell Biol.* 37:1357-1367, 2005.
- 12. Kurdi M, **Booz GW**. Can the protective actions of JAK-STAT in the heart be exploited therapeutically? Parsing the regulation of IL-6-type cytokine signaling. *J. Cardiovasc. Pharmacol.* 50: 126-141. 2007.
- 13. **Booz GW**. PARP Inhibitors and Heart Failure: Translational medicine caught in the act. *Congest. Heart Fail.* 13:105-12, 2007.
- 14. Kurdi M, **Booz GW**. G-CSF-Based Stem Cell Therapy for the Heart *Unresolved Issues*. Part A: Paracrine Actions, Mobilization, Delivery. *Congest. Heart Fail*. 13: 221-227, 2007.
- 15. Kurdi M, **Booz GW**. G-CSF-Based Stem Cell Therapy *Unresolved Issues*. Part B. *Congest. Heart Fail*. 2007;13:347-51
- 16. Kurdi M, **Booz GW**. JAK redux A second look at the regulation and role of JAK kinases in the heart. *Am J Physiol Heart Circ Physiol* 2009;297:H1545-56.
- 17. Kurdi M, Chidiac R, Hoemann C, Zouein F, Zgheib C, **Booz GW**. Hydrogels as a platform for stem cell delivery to the heart. *Congest Heart Failure*. 2010;16(3):132-135.
- 18. Kurdi M, **Booz GW**. Deciphering STAT3 Signaling In the Heart: Plasticity and Vascular Inflammation. *Congest Heart Failure*. 2010;16:234-238
- 19. **Booz GW**. Cannabidiol as an emergent therapeutic strategy for lessening the impact of inflammation on oxidative stress. *Free Radic Biol Med* 2011;51:1054–1061.
- 20. Kurdi M, **Booz GW**. New Take on the Role of Angiotensin II in Cardiac Hypertrophy and Fibrosis. *Hypertension* 2011;57:1034-8.
- 21. Kurdi M, **Booz GW**. Three 4-letter words of hypertension-related cardiac hypertrophy: TRPC, mTOR, and HDAC. *J Mol Cell Cardiol* 2011;50:964-71.
- 22. Zouein FA, Duhe RJ, **Booz GW**. JAKs go nuclear: Emerging role of nuclear JAK1 and JAK2 in gene expression and cell growth. *Growth Factors* 2011;29:245-52
- 23. Zgheib C, Zouein FA, Kurdi M, **Booz GW**. Differential STAT3 Signaling in the Heart: Impact of Concurrent Signals and Oxidative Stress. *JAK-STAT* 2012;1:102-111.
- 24. Zouein FA, Zgheib C, Liechty KW, **Booz GW**. Post-Infarct biomaterials, left ventricular remodeling, and heart failure: Is good good enough? *Congest Heart Failure* 2012;18:284-90.
- 25. Zouein FA, Kurdi M, **Booz GW**. LIF and the Heart: Just Another Brick in the Wall? *Eur Cytokine Netw.* 2013;24:11-9.
- 26. Zouein FA, Kurdi M, **Booz GW**. Dancing rhinos in stilettos: The amazing saga of the genomic and nongenomic actions of STAT3 in the heart. *JAK-STAT* 2013; 2:e24352.
- 27. Zouein FZ, de Castro Brás LE, da Costa DV, Lindsey ML, Kurdi M, **Booz GW**. Heart Failure with Preserved Ejection Fraction: Emerging Drug Strategies. *J Cardiovasc Pharmacol* 2013;62:13-21.
- 28. Zouein FA, **Booz GW**. AAV-Mediated Gene Therapy Cure for Heart Failure: Enhancing Contractility and Calcium Handling. *F1000* 2013;5:27.
- 29. Altara R, Manca M, Sabra R, Eid AA, **Booz GW**, Zouein FA. Temporal cardiac remodeling post-myocardial infarction: dynamics and prognostic implications in personalized medicine. *Heart Fail Rev.* 2015 Oct 23. [Epub ahead of print] PubMed PMID: 26498937.
- 30. Zouein FA, Altara R, Chen Q, Lesnefsky EJ, Kurdi M and Booz GW. Pivotal Importance of

- STAT3 in Protecting the Heart from Acute and Chronic Stress: New Advancement and Unresolved Issues. *Front Cardiovasc Med* 2015;2:36. doi: 10.3389/fcvm.2015.00036
- 31. Altara R, Manca M, Brandão RD, Zeidan A, **Booz GW**, Zouein FA. Emerging Importance of Chemokine Receptor CXCR3 and Its Ligands in Cardiovascular Diseases. *Clin Sci (Lond)*. 2016;130:463-78.
- 32. Fan F, Ge Y, Lv W, Elliott MR, Muroya Y, Hirata T, **Booz GW**, Roman RJ. Molecular mechanisms and cell signaling of 20-hydroxyeicosatetraenoic acid in vascular pathophysiology. Front Biosci (Landmark Ed). 2016;21:1427-1463.
- 33. Altara R, Mallat Z, Booz GW, Zouein FA. The CXCL10/CXCR3 Axis and Cardiac Inflammation: Implications for Immunotherapy to Treat Infectious and Noninfectious Diseases of the Heart. J Immunol Res. 2016;2016:4396368. PubMed PMID: 27795961; PubMed Central PMCID: PMC5066021.
- 34. Kaplan A, Altara R, Eid A, Booz GW, Zouein FA. Update on the Protective Role of Regulatory T Cells in Myocardial Infarction: A Promising Therapy to Repair the Heart. J Cardiovasc Pharmacol. 2016;68:401-413. PubMed PMID: 27941502.
- 35. Kaplan A, Abidi E, Ghali R, Kobeissy F, Booz GW, Zouein FA. Functional, Cellular, and Molecular Remodeling of the Heart under Influence of Tobacco Smoke (Under Review).
- 36. Altara R, Giordano M, Sjaastad-Nordén E, Cataliotti A, Kurdi M, Bajestani SN, Booz GW. Targeting Obesity and Diabetes to Treat HFpEF. Invited review (Submitted).

### **Editorial Commentaries**

- 1. **Booz GW**. The cardiac angiotensin AT2 receptor, what exactly does it do? *Hypertension*. 43: 1162-1163, 2004.
- 2. **Booz GW**. Growing old, angiotensin II, cardiac hypertrophy, and death: making the connection with p66<sup>Shc</sup>. *Hypertension* 46: 259-260, 2005.
- 3. **Booz GW**. Impact of T-Lymphocytes on Cardiac Remodeling in Hypertension: More Questions than Answers. *Hypertension* 2006;48(1):31-2.
- 4. **Booz GW**. Review of: Heart Failure: Molecules, Mechanisms, and Therapeutic Targets, (Novartis Foundation Symposium 274). *Congest. Heart Failure* 2007;13:62-63.
- 5. **Booz GW**. Devising New Drugs for the Treatment of Hypertension "Novel Drugs Targeting Hypertension: Renin Inhibitors and Beyond" *J. Cardiovasc. Pharmacol.* 2007;50:1-2.
- 6. Kurdi M, **Booz GW**. Growing hearts by the bushel. *Congest. Heart Failure* 2008;14:95-96.
- 7. **Booz GW**. Novel drugs targeting hypertension revisited. *J Cardiovasc Pharmacol.* 2010;56:213-4.
- 8. Kurdi M, **Booz GW**. Focus on Mitochondria Dysfunction and Dysregulation in Heart Failure: Towards New Therapeutic Strategies to Improve Heart Function. *Congest. Heart Failure* 2011;17:255-6.
- 9. Zouein FA, Kurdi M, **Booz GW**. HSPA12B and Repairing the Heart: Beauty in Simplicity. *Cardiovasc Res.* 2013;99:587-589.
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