

CURRICULUM VITAE
Merry L. Lindsey, Ph.D.

Date of Preparation: January 2013

I. GENERAL INFORMATION

A. Personal Data:

Citizenship Status: US Citizen

Office Address: University of Mississippi Medical Center
2500 North State Street, Room G351-04
Jackson, MS 39216-4505
Phone 601-815-1329
Fax 601-984-1817

Email: mllindsey@umc.edu

Place of Birth: Stuart, FL

B. Education:

YEAR	DEGREE	MAJOR	INSTITUTION/LOCATION
1988-1992	B.A.	Biology with Chemistry and English Minors	Boston University, Boston, MA

1994-1999 Ph.D. Cardiovascular Sciences Baylor College of Medicine, Houston, TX
Dissertation Title: MMP 9 Expression and Activation Following Myocardial Ischemia/Reperfusion
Dissertation Advisor: Mark L. Entman, M.D.

C. Postgraduate Training:

1999-2002 Postdoctoral Fellowship Harvard Medical School and Brigham and Women's Hospital
Boston, MA

Supported in part by an NRSA postdoctoral fellowship

Fellowship Advisor: Richard T. Lee, M.D.

D. Academic Appointments:

2013-present Professor and Director of the Jackson Center for Heart Research, Department of Physiology and Biophysics, University of Mississippi Medical Center, Jackson, MS

2013-present Full Member, School of Graduate Studies, University of Mississippi Medical Center, Jackson, MS

2013-present Research Health Scientist, Research and Medicine Services, G.V. (Sonny) Montgomery Veterans Affairs Medical Center, Jackson, MS

2012-2013 Professor with Tenure, Department of Medicine, Division of Geriatrics, Gerontology and Palliative Medicine Division (primary appointment), and Department of Cellular and Structural Biology (cross-appointment), The University of Texas Health Science Center at San Antonio.

2010-2012 Associate Professor with Tenure, Department of Medicine, Division of Geriatrics, Gerontology and Palliative Medicine Division (primary appointment), and Department of Cellular and Structural Biology (cross-appointment), The University of Texas Health Science Center at San Antonio.

2010-2012 Research Health Scientist, South Texas Veterans Health Care System, San Antonio, TX

2009-2010 Associate Professor with Tenure, Department of Medicine, Cardiology Division (primary appointment), and Department of Cellular and Structural Biology (cross-appointment), The University of Texas Health Science Center at San Antonio

2009-2010 Interim Assistant Dean for Medical Student Research Programs, School of Medicine, The University of Texas Health Science Center at San Antonio

2005-present Graduate Faculty Member, Cell and Structural Biology, Biochemistry, Biomedical Engineering, and Physiology Graduate Programs, The Graduate School of Biomedical Sciences, The University of Texas Health Science Center at San Antonio

2005-2013 Faculty Member, The Sam and Ann Barshop Center for Longevity and Aging Studies, The University of Texas Health Science Center at San Antonio

2005-2009 Assistant Professor (Tenure-Track), Department of Medicine, Cardiology Division (primary appointment); Department of Cellular and Structural Biology (cross-appointment), The University of Texas Health Science Center at San Antonio

2002-2005 Assistant Professor (Tenure-Track), Department of Surgery, Medical University of South Carolina

2003-2005 Assistant Professor (Tenure-Track), Department of Cell and Molecular Pharmacology and Experimental Therapeutics (dual appointment), Medical University of South Carolina

2004-2007 Member (2004-2007) and Associate Member (2002-2004), Graduate Faculty, College of Graduate Studies, Program in Molecular and Cellular Biology and Pathobiology, MUSC

E. Other Employment:

1992- 1994 Research Technician II, Department of Molecular Physiology and Biophysics, Baylor College of Medicine, Houston, TX. Arthur M. Brown, M.D., Ph.D., supervisor

F. Honors and Awards:

1. 1999 Cover Photo Contest Winner, The Graduate School of Biomedical Sciences Graduate Student Symposium, Baylor College of Medicine.
2. 1999 Finalist for the North American Vascular Biology Organization (NAVBO) young investigator award, Federation of American Societies for Experimental Biology meeting, Washington, D.C. "PMNs are the early source of MMP 9 following myocardial I/R injury."
3. 2001 Trainee Abstract Award, Council on Basic Cardiovascular Sciences, American Heart Association Meeting, Anaheim, CA. "Selective MMP Inhibition Stimulates Angiogenesis and Reduces LV Remodeling Post MI in Rabbits."
4. 2005 Undergraduate Mentor Award, Winthrop University College of Arts and Sciences.
5. 2010 Leading Light Award, for exemplary leadership and outstanding achievement in healthcare, Healthcare Businesswomen's Association, San Antonio Chapter.

Awards for research excellence by technicians and students supervised:

1. Danielle K. Goshorn, technician. "Changes in Specific MMP Levels and Fibroblast Function Accompany the Age-related Increase in LV Mass." Finalist for the Scientific Sessions Poster Competition in Basic Science, American Heart Association Meeting, New Orleans, LA, 2004.
2. W. Chase Corn, M.D. student. "MMP-7 Levels During Acute and Chronic Phases of Left Ventricular Remodeling". Finalist for the poster competition, Student Research Day, Medical University of South Carolina, 2004.
3. Joseph T. Mingoia, M.D. student. "Identifying MMP-9 Substrates in the Myocardium Using in Silico Degradomics". South Carolina Medical Association Foundation Research Essay Scholarship Winner, 2005. (\$2000 scholarship award)
4. C. Russell Horres III, high school student. "Effects of MMP-9, MMP-7, and MCP-1 Deletion on Macrophage Phagocytic Potential and Differentiation." South Carolina Junior Academy of Science Annual Meeting in Columbia, SC, March 10, 2006. Fifth Place in the Oral Presentation Competition in the Biochemistry category. (\$50 prize)
5. Elizabeth Lopez, high school student. "Age-Related Cardiac Sarcopenia". Based on her achievements, we applied for and successfully obtained a research supplement to my R01 for her to work in my laboratory for the summers of 2007 and 2008. Based on her summer 2007 work, she also won several science fair awards for the 2007-2008 school year.
6. Sarah McCurdy, biology major at St. Mary's University. Sarah was awarded 1st place for the Science, Engineering, and Technology category at the St. Mary's 2008 Research Symposium. In addition, she was selected as 1 of 24 undergraduates in the United States to be awarded the American Physiological Society Undergraduate Summer Research Fellowship for the summer of 2008 (<http://www.the-aps.org/education/ugsr/2008awards.asp>). Her abstract was 1 of 6 abstracts from 113 selected for oral presentation for the Department of Medicine Research Day (May 13, 2008). She was awarded 1st place for her category: Resident/Medical Student. She was the only undergraduate who participated on Research Day among all the other Clinical Fellows, Junior Faculty, Post-Doctoral Fellows, Resident/Medical Students, and Health Services Physicians.
7. Ying Ann Chiao, PhD student. Was named a Translational Science Training Scholar, UTHSCSA, 2009-2010. Won the Young Investigator Award, Oral Presentation (1st Prize), Thirteen Annual Scientific Meeting of Institute of Cardiovascular Science and Medicine, 2009. Received the 2011 Cardiovascular Section Research Recognition Award recipient by the American Physiology Society (9 of 116 applicants received an award). Won the Research Day Award (post-doctoral fellows/graduate student category) at the 14th Annual Medicine Research Day, UTHSCSA, 2011. Won the Paul Horowitz Award for the best Biochemistry graduate student in 2011. Won the Joe H. Ward, Jr., and Bettie B. Ward Award for Excellence in the Study of the Biology of Aging in recognition of outstanding achievements in aging research as a graduate student in 2011. Was a finalist for the FGTB Young Investigator Award for the AHA in 2011.
8. Ganesh Halade, PhD, postdoctoral fellow. Won the Sukhir Gupta Young Scientist Award from the Association of Scientists of Indian Origin (ASIOA) in 2012. Was the sole recipient of the Barbara H. Bowman Award from UT Health Science Center San Antonio as an outstanding Postdoctoral Fellow in 2010.
9. Trevi Ramirez, BA- technician (was accepted into MD/PhD program at UTHSCSA). Won first place for the student category for the 2012 Department of Medicine Research Day poster competition.

II. TEACHING**A. Classroom/Laboratory:**

Year(s)	Course Title / Block Hours/Number of Students student evaluation score:	S*/L** Avg±SD; scale: 1=best; 5=worst	Hours/ Class/Lab	Role
2011	MEDI5075 (Scientific Communication) Social Networking to Promote Your Science		1.5	Lecturer
2009-2010	INTD 5081 Topics in Cardiovascular Research	Graduate School	1.5	Team Teacher
2008-2010	CSBL 6090 Seminar; chaired the weekly journal club for the Department of Cellular and Structural Biology	Graduate School/	1	Chair
2008-present	BIOC 6015 (Metabolic Disorders)/ 3/ 9 -2008: co-directed this course, which involved grading oral presentations & mock grant proposals; also taught the extracellular matrices in metabolic disorders lecture student evaluation score: -2011: directed this course	Graduate School/ Graduate	2	Co-Director
2008; 2010	CSBL 6021 (Animal Models)/ 3/ 3 - 2008: taught 2 lectures: 1) Ways to Assess Cardiovascular Function in Mice; and 2) Surgical Models of Cardiac Disease; this involved 16 hours of preparation student evaluation score: - 2010: taught 1 lecture: Models of Cardiovascular Disease in Mice; this involved 8 hours of preparation	Graduate School/ Graduate	3	Lecturer
2008	BME 6203 (Physiology for Engineers)/ 3/ 5 -taught 2 lectures on cardiac output, blood flow, and blood pressure; this involved 10 hours of preparation student evaluation score:	Graduate School/ Graduate	2.5	Lecturer
2006-2010	INTD 5000 (Cell Biology)/ 3/35-40 Fundamentals of Biomedical Sciences -Fall 2007: taught extracellular matrix and integrin lectures student evaluation score: -Fall 2008-2010: taught extracellular matrix and integrin lecture 2008 student evaluation score: 2009: student evaluation score:	Graduate School/ Graduate	1	Lecturer
	INTD 5007 (Cell Biology) Core III (Cell Biology)/3/ 37 -Spring 2006: taught the extracellular matrix and integrins lecture (1.5 hrs) -Spring 2007: taught the extracellular matrix and integrins lectures (3 hrs)	Graduate School/ Graduate	3	Lecturer
	INTD5006 (Principle of Cellular and Molecular Biology) -Fall 2009: taught extracellular matrix and integrins lecture (n=1 student)	Graduate/ Dental School	3	Lecturer
2006-2009	CSBL 5095 Experimental Design and Data Analysis/ 2 / 30 2006: taught the regression analysis and correlation lecture 2007-8: taught 4-5 lectures (10 hours of lectures) 2007 student evaluation score: 2008 student evaluation score: 2009 student evaluation score:	Graduate School/ Graduate	2	Lecturer

Year(s)	Course Title / Block Hours/Number of Students student evaluation score:	S*/L** Avg±SD; scale: 1=best; 5=worst	Hours/ Class/Lab	Role
2005-present	CSBL 6048/3/10 Biology of Aging Course -2005; 2008-2011: taught the cardiovascular aging lecture 2008 student evaluation score: 1.20±0.31 (n=12 student responses in 1 lecture) 2009 student evaluation score: 1.27±0.27 (n=12 student responses in 1 lecture) 2010 student evaluation score: 1.26±0.38 (n=10 student responses in 1 lecture) 2011 student evaluation score: 1.16±0.19 (n=9 student responses in 1 lecture)	Graduate School/ Graduate	1	Lecturer
2007-2008	Research Course 3/1; ST3300W -Supervised Sarah McCurdy 8 hrs/ week for Fall 2007 and Spring 2008 semesters	St. Mary's University/ Undergraduate	0/8	Instructor
2007-2008	Basic Survival Skills: Stuff you need to know no matter what you end up doing -This is a 6-8 week mini-course taught Wednesdays 5-6:30 pm in the summer to 10 students in the B-Sure program and the Cardiology summer students (high school, medical, and graduate); topics include ethics, time management, literature review, manuscript writing, and PowerPoint presentations, 2007 student evaluation score: 1.58±0.16 (n=42 student responses in 4 lectures) 2008 student evaluation score: 1.45±0.11 (n=69 student responses in 5 lectures)	Graduate School/ Undergraduate	non-credit	Course Director
2007-2008	CSB Mock Proposal Grader 2007: "The different roles of JNK isoforms in inflammation/ obesity induced insulin resistance"; Student: Xiaoban Xin 2008: "The Role of Bone Morphogenetic Protein 2 In Regulating Mesenchymal Stem Cells Fate" Student: Wuchen Yang -includes grading written and oral components as a practice for the oral qualifying exam	Graduate School	3	Grader
2007	CSB Practice Grant- Hypothesis and aims review	Graduate School	2.5	Co-Reviewer/ Lecturer
2007	CSB Student Library Paper "The Nonreproductive Effects Of Estrogen"; Student: Margaux Salas	Graduate School/ Graduate	2 (non-contact)	Grader
2006	Medicine/Cardiovascular Disease Core Curriculum Conf -topic: extracellular matrix and integrins	Medical School/ Medical	1	Lecturer
2006-2011	Biology for Bioengineers/ 3 -taught the proteomics lecture 2008 student evaluation score: 1.43±0.29 (n=8 student responses in 1 lecture) 2009 student evaluation score: 1.64±0.83 (n=15 student responses in 1 lecture)	Graduate School/ Graduate	1.5	Lecturer
2004	Integrative Biology of the Cardiovascular System/3/<10 -taught the critical thinking skills lecture	Graduate School/ Graduate	1	Lecturer
1996	Physiology/3/<20	Medical School/ Graduate	3/wk	Teaching Assistant

<u>Laboratory Rotations</u> (Each rotation involved daily to weekly meetings to discuss, plan, and evaluate experiments.)	
2005	CGS 720/721: Laboratory Rotation School: Medical University of South Carolina College of Graduate Studies Level: G Class hours: 0 Laboratory hours: full-time Role: Mentored PhD candidate <u>Ira Matthew Mains</u> for a one semester rotation in my laboratory. This rotation resulted in two authorships for Matt on manuscripts from my laboratory.
2006	BIOC 6097: Laboratory Rotation School: UTHSCSA Level: G Class hours: 0 Laboratory hours: full-time Role: Mentored PhD candidate <u>Harjinder Singh</u> for a 5 week rotation in my laboratory.
2007	PHYL 6097: Laboratory Rotation School: UTHSCSA Level: G Class hours: 0 Laboratory hours: full-time Role: Mentored PhD candidate <u>Huimin Liu</u> for a rotation in my laboratory.
2007	CSBL 6097: Laboratory Rotation School: UTHSCSA Level: G Class hours: 0 Laboratory hours: full-time Role: Mentored PhD candidate <u>Jessica Ibarra</u> for an 8 week rotation in my laboratory. Jessica joined my laboratory for her dissertation work.
2007	BIOC 6097: Laboratory Rotation School: UTHSCSA Level: G Class hours: 0 Laboratory hours: full-time Role: Mentored PhD candidate <u>Hongzhi Chen</u> for a five week rotation in my laboratory.
2008	BIOC 6097: Laboratory Rotation School: UTHSCSA Level: G Class Hours: 0 Laboratory hours: full-time Role: Mentored PhD candidate <u>Ying Ann Chiao</u> for 2 rotations in my laboratory from Jan – July 2008.
2008	ORTO 6002: Laboratory Rotation School: UTHSCSA Level: G Class Hours: 0 Laboratory hours: full-time Role: Mentored PhD candidate <u>Michou Kelley</u> to rotations in my laboratory from Dec 2007- Sept 2008.
2008	CSBL 6097: Laboratory Rotation School: UTHSCSA Level: G Class hours: 0 Laboratory hours: full-time Role: Mentored PhD candidate <u>Jamila Momand</u> for an 8 week rotation in my laboratory.
2009	BIOC 6097: Laboratory Rotation School: UTHSCSA Level: G Class Hours: 0 Laboratory hours: full-time Role: Mentored PhD candidate <u>Lishi Sun</u> for a rotation in my laboratory from Jan – Feb 2009.
2009	INTD 6097: Laboratory Rotation School: UTHSCSA Level: G Class Hours: 0 Laboratory hours: full-time Role: Mentored DDS/PhD candidate <u>Suzette Laing</u> for a 6 week rotation in my laboratory from Nov 2009.
2010	INTD 6097: Laboratory Rotation School: UTHSCSA Level: G Class Hours: 0 Laboratory hours: full-time Role: Mentored PhD candidate <u>Nicolle Patterson</u> for a 6 week rotation in my laboratory from Feb 2010.
2010	INTD 6097: Laboratory Rotation School: UTHSCSA Level: G Class Hours: 0 Laboratory hours: full-time Role: Mentored PhD candidate <u>Kelly Grimes</u> for a 6 week rotation in my laboratory from Sept 2010.

B. Instructional Development:

1. Formal Study to Improve Teaching, Research, and Administrative Abilities:

- 2006 “Minority Scientists: Where are They? Should We Care?” workshop; received credit for 1 professional development hour.
- 2006 “Leaks in the Pipeline: Do Faculty Mend Them or Create Them?” workshop; received credit for 1 professional development hour.
- 2006 “ABC’s of Gen X, Y, & Z” workshop; received credit for 5 professional development hours.

- 2006 Attended the 2006 Summer Training Course in Experimental Aging Research, an NIA-sponsored training course- only 19 of >50 applicants were invited to attend.
- 2006 UTHSCSA Teaching Excellence Course (UTEC) for professional development, sponsored by the Division of Educational Research and Development; received 26 hours of faculty development training to develop and practice key teaching skills.
- 2007 "Using the Logic Model in Grant Development" workshop; received credit for 2 professional development hours.
- 2007 "National Leadership Workshop on Mentoring Women in Biomedical Careers: Mentoring is Everybody's Business"; November 27-28, 2007; NIH Campus, Natcher Conference Center, Bethesda, MD.
- 2011 "Conducting Clinical Research"; UTHSCSA.

C. Direction of Masters' Theses and Ph.D. Dissertations, Membership on Supervising Committees, and Supervision of Pre-doctoral Students and Postdoctoral Fellows:

1. Masters' Theses Directed:

2010-present Dissertation Committee Chair

Student: Nicolle Patterson
 Department: Biochemistry (Molecular Biophysics and Biochemistry Track)
 Degree: Ph.D.
 Thesis Title: TBA

2. Ph.D. Dissertations Directed:

2007-2009 Dissertation Committee Chair

Student: Jessica Ibarra
 Department: Cellular and Structural Biology
 Degree: Ph.D.
 Thesis Title: Matrix Metalloproteinase-9 Roles in Left Ventricular Remodeling and Macrophage Function in Mice

2008-2011 Dissertation Committee Chair

Student: Ying Ann Chiao
 Department: Biochemistry (Metabolism and Metabolic Disorders Track)
 Degree: Ph.D.
 Thesis Title: The Role of MMP-9 in Cardiac Aging

3. Membership on Supervising Committees:

2002-2003 Thesis Committee Member

Student: Robert E. Stroud
 Department: Physiology and Neuroscience (MUSC)
 Degree: M.S.
 Thesis Title: Plasma Monitoring of the Myocardial Specific Tissue Inhibitor of Metalloproteinase-4 Following Alcohol-Induced Myocardial Infarction in Hypertrophic Obstructive Cardiomyopathy

2008-2008 Thesis Committee Member

Student: Marcello Pilia
 Department: Mechanical Engineering, UTSA
 Degree: M.S.
 Thesis Title: Left Ventricular Mechanical Properties Post-Myocardial Infarction and the Role of Matrix Metalloproteinase-9

2008-2011 Thesis Committee Member

Student: Tao Kang
 Department: Cellular and Structural Biology, UTHSCSA
 Degree: M.S.
 Thesis Title: Crosstalk between Extracellular Matrix/ Collagen and Prostaglandin E₂-induced Signal Pathways in Regulation of Aromatase Expression in Adipose Stromal Cells

2011 Thesis Committee Member

Student: Yang Zhao
 Department: Department of Mechanical Engineering, UTSA
 Degree: M.S.
 Thesis Title: Arterial Wall Remodeling Under Buckling in Organ Culture

2011 Thesis Committee Member

Student: Nguyen Nguyen
 Department: Department of Electrical and Computer Engineering, UTSA
 Degree: M.S.
 Thesis Title: Targeting Myocardial Infarction-Specific Protein Interactions Using Computational Analyses

2012 Thesis Committee Member

Student: Justin Moreno
 Department: Department of Mechanical Engineering, UTSA
 Degree: M.S.
 Thesis Title: The effects of pulmonary hypertension on the mechanical properties of arteries in Cav-1^{-/-} mice

2004-2007 Dissertation Committee Member

Student: Anne M. Deschamps
 Department: Molecular and Cellular Biology and Pathobiology (MUSC)
 Degree: Ph.D.
 Thesis Title: Mechanisms of Induction, Activation, and Trafficking of Myocardial Membrane Type-1 Matrix Metalloproteinase in Ischemia and Reperfusion

2006-2010 Dissertation Committee Member

Student: Beili Zhu
 Department: Joint Program in Biomedical Engineering (UTSA/UTHSCSA)
 Degree: Ph.D.
 Thesis Title: Establishing Atherosclerosis Occlusion in Porcine Coronary Artery

2006-2008 Dissertation Committee Member

Student: Yong-Ung Lee
 Department: Joint Program in Biomedical Engineering (UTSA/UTHSCSA)
 Degree: Ph.D.
 Thesis Title: Effects of Axial Stretch and Wall Injury on Intimal Hyperplasia in Arteries

2007-2008 Dissertation Committee Member

Student: Maggie M. Beranek
 Department: Joint Program in Biomedical Engineering (UTSA/UTHSCSA)
 Degree: Ph.D. (Graduated May 2008)
 Thesis Title: Overcoming Restenosis: A Combinational Surface to Improve Vascular Device Biocompatibility

2007-2011 Dissertation Committee Member

Student: Danika Hayman
 Department: Joint Program in Biomedical Engineering (UTSA/UTHSCSA)
 Degree: Ph.D.
 Thesis Title: Pulsatile Pressure: its effect on arterial structure and function

2007-2011 Dissertation Committee Member

Student: Chi Fung Lee
 Department: Biochemistry (UTHSCSA)
 Degree: Ph.D.
 Thesis Title: The Role of NADPH Oxidase 4 in Macrophage Function and Atherosclerosis

2008-2011 Dissertation Committee Member

Student: Avione Northcutt
 Department: Joint Program in Biomedical Engineering (UTSA/UTHSCSA)
 Degree: Ph.D.
 Thesis Title: Determining the Critical Buckling Pressure of Blood Vessels through Modeling and In Vitro Experiments

2009-2011 Dissertation Committee Member

Student: Pramod Kumar Mishra
 Department: Microbiology and Immunology
 Degree: Ph.D.
 Thesis Title: Mechanism of leukocyte trafficking into the central nervous system during murine neurocysticercosis

2008-present Dissertation Committee Member

Student: Angela R. Sanchez
 Department: Cellular and Structural Biology (UTHSCSA)
 Degree: Ph.D.
 Thesis Title: Temperature Regulated Proteases in Longevity

2008-2012 Dissertation Committee Member

Student: Sarah Ullevig
 Department: Biochemistry (Metabolism and Metabolic Disorders Track)
 Degree: Ph.D.
 Thesis Title: Phytochemicals as Modulators of Thiol Oxidative Stress and Monocyte Recruitment

2010-present Dissertation Committee Member

Student: Andrew Voorhees
 Department: Biomedical Engineering
 Degree: Ph.D.
 Thesis Title: TBD

2011-present Dissertation Committee Member

Student: Celia Macias
 Department: Biomedical Engineering
 Degree: Ph.D.
 Thesis Title: Non-Polymeric Coatings for Drug Eluting Stents

2011-present Dissertation Committee Member

Student: Yunji Wang
 Department: Electrical and Computer Engineering
 Degree: Ph.D.
 Thesis Title: TBD

2012-present Dissertation Committee Member

Student: Haihui Pan
 Department: Molecular Medicine
 Degree: Ph.D.
 Thesis Title: TBD

2011 Dissertation Committee Member

Student: Nguyen Nguyen
 Department: Department of Electrical and Computer Engineering, UTSA
 Degree: Ph.D.
 Thesis Title: TBD

4. Membership on Supervising Committees:2012-present External Examiner for Dissertation Committee

Student: Vijay Kandalam
 Department: Physiology
 University: University of Alberta, Canada
 Degree: Ph.D.
 Thesis Title: The Role of TIMPs in Heart Disease

5. Pre-doctoral Students Supervised:High School Students:

1. C. Russell Horres III (Summer 2005; junior at Porter-Gaud School, Charleston, SC; South Carolina Governor's School for Science and Mathematics, Summer Program for Research Interns).
2. Elizabeth Lopez (Summers 2006-2008; June 12, 2008- graduated from John Jay Science and Engineering Academy, San Antonio, TX; UTHSCSA Summer Program for Research).
3. Reanna Witherspoon (Summers 2009-present; Voelcker Academy at UTHSCSA)

Undergraduate Students:

1. Christopher Keller (Summer 1997; Baylor College of Medicine SMART Program); resulted in authorship on 1 manuscript.
2. Kyle Wedin (Summer 1998; Baylor College of Medicine SMART Program); resulted in authorship on 1 manuscript.
3. Anjali Verghese (School Year 2001-2002; Massachusetts Institute of Technology student); resulted in authorship on 1 manuscript.
4. Shafara Dozier (Summer 2003; Medical University of South Carolina Summer Undergraduate Research Program); resulted in first authorship on 1 manuscript.
5. Shenikqua Bouges (Summer 2004; Medical University of South Carolina Summer Undergraduate Research Program); resulted in authorship on 1 manuscript.
6. Sarah Rozinek (Summer 2006; St. Mary's University and UTHSCSA Summer Research Program).
7. Harrison Davis (Summer 2006; UTHSCSA Biomedical Summer Undergraduate Research Experience (B-Sure) Program).

8. Rachel Finn (School Year 2006-2007; student volunteer)
9. Jesse Garcia (School Year 2006-2007; student volunteer)
10. Crystal Samaniego (Summer 2007; UTHSCSA Biomedical Summer Undergraduate Research Experience (B-Sure) Program).
11. Sarah McCurdy (Summer 2007- Summer 2008; student volunteer)- Sarah volunteered 20 hours per week in my laboratory during Summer 2007 and 10 hours per week during the Fall 2007 and Spring 2008 semesters. Sarah was 1 of 24 students from around the US to be accepted for the Summer 2008 American Physiological Society Undergraduate Fellowship, which provided her a stipend to work in my laboratory.
12. Joaquin Cigarroa IV (Summer 2008; UTHSCSA Physiology Summer Undergraduate Research Experience (PURE) Program); was accepted to UTHSCSA Medical School (Fall 2009)
13. Trevi Ramirez (April 2010- June 2010; student volunteer- in July 2010, Trevi transferred to a research assistant position in my lab)
14. Daniel Levin (August 2010-July 2011; student volunteer- July 2011, Dan enrolled in UTHSCSA School of Medicine)

Medical Students:

1. Robert Leonardi (Summer 2003; MUSC Medical Student Summer Research Program); resulted in authorship on 1 manuscript. Dr. Leonardi matched to the Duke University Internal Medicine Residency Program.
2. John Payne (Summer 2003; MUSC Medical Student Summer Research Program); resulted in authorship on 1 manuscript. Dr. Payne matched to the Emory University Ophthalmology Residency Program.
3. William Chase Corn (Summer 2004; MUSC Medical Student Summer Research Program).
4. Joseph T. Mingoia (Fall 2004, Biochemistry Course Research Elective and Summer 2005); resulted in authorship on multiple manuscripts.
5. Jessica Lambert (Summer 2006; UTHSCSA Medical Student Summer Research Program); resulted in authorship on 1 research article and 1 review article.
6. Christian Corbitt (Summer 2006; UTHSCSA Medical Student Summer Research Program); resulted in authorship on 1 review article.
7. Arvin Bansal (Summer 2007; UTHSCSA Medical Student Summer Research Program).
8. Jamie Berger (Fall 2007; UTHSCSA 4th year medical student); resulted in authorship on 1 research article.
9. Paul Gravel (Fall 2007; UTHSCSA 4th year medical student).
10. Vinh Nguyen (Summer 2008; UTHSCSA Medical Student Summer Research and MD with Distinction in Research Programs).
11. Roger Dikdan (July 2008- May 2009; UTHSCSA 2nd year medical student).
12. Steven Kim (May-June 2009; UTHSCSA 3rd year medical student).
13. Tariq Dayah (Summer 2009; UTHSCSA Medical Student Summer Research Program)
14. Nicolas Spampinato (Jan 2010 present; UTHSCSA Medical Student Volunteer)
15. Serena Michelle Okoronkwo (Summer 2011; UTHSCSA medical student; Medical Student Training in Aging Research (MSTAR) program)
16. James R. Heaberlin (Summer 2012; UTHSCSA medical student; Medical Student Training in Aging Research (MSTAR) program)
17. Daniel Levin (Summer 2012; UTHSCSA summer medical student research program)

6. Post-doctoral Fellows Supervised:

Primary (Current):

1. Ganesh Halade, Ph.D. (Sept 2010- present)
2. Yonggang Ma, Ph.D. (Oct 2010- present)
3. Lisandra de Castro Bras, Ph.D. (June 2011- present)
4. Kristine DeLeon, PhD (September 2011- present)
5. Rugmani Padmanabhan (December 2011- present)
6. YaoJun Li (February 2012- present)
7. Andriy Yabluchanskiy (April 2012- present)

Primary (Past):

1. Jianhua Zhang, M.D., Ph.D. (Sept 2009- April 2011)
2. Patricia Shamhart, Ph.D. (Sept 2010- July 2011)
3. Rogelio Zamilpa, Ph.D. (Dec 2007- March 2012)

Co-Mentor (Current):

1. Deborah Zamora, Ph.D. (June 2009-present)
2. Jennifer Chesnutt (Aug 2010- present)

Co-Mentor (Past):

1. Amina El Jamali, Ph.D. (Dec 2007- June 2010)
2. Trista Robichaud, Ph.D. (June 2009- Dec 2010)

Residents:

1. Rushit Kanakia (February 2009- March 2009)
2. Tejas Patel (November 2009- January 2010)

8. Junior Faculty Mentored:

1. Claude Jourdan Le Saux, PhD
2. Gregory J. Aune, MD, PhD

III. RESEARCH

* peer reviewed; ¥ ML Lindsey is the corresponding author; funded by: (1) NHLBI HHSN26820100036C (N01-HV-00244) for the UTHSCSA Cardiovascular Proteomics Center, (2) NIH R01-HL-75360, (3) VA Merit, (4) Max and Minnie Tomerlin Voelcker Fund, (5) Novartis, (6) Health Resources and Services Administration, (7) AHA 0855119F, and (8) Morrison Trust F0685300.

A. Bibliography**1. Books and/or chapters:**

1. Youker KA, Frangogiannis N, **Lindsey ML**, Smith CW, and Entman ML. Adhesion Molecule Induction and Expression in Neutrophil Induced Myocardial Injury. In *The Role of Immune Mechanisms in Cardiovascular Disease*; H.P. Schultheiss and P. Schwimmbeck, Eds.; Springer. 125-137. (1997). *
2. Frangogiannis NG, Burns AR, Perrard JL, Youker KA, **Lindsey ML**, Mendoza LH, Michael LH, Ballantyne CM, Smith CW, and Entman ML. Evolving role of the mast cell in the acute and healing phase of an experimental canine myocardial infarction. In *Coronary Microcirculation during Myocardial Ischemia and Reperfusion*. Haunso S, Aldershvile J, Svendsen JH (eds). Munksgaard International Publishers; 41: 287-293. (1997). *
3. Youker KA, Birdsall HH, Frangogiannis NG, Kumar AG, **Lindsey ML**, Ballantyne CM, Smith CW, Rossen RD, and Entman ML. Phagocytes in Ischemic Injury. In *Phagocytes: Biological and Clinical Aspects*. Rodolfo Peoletti, Antonia Notario, and Giovanni Ricevuti, Eds.; Annals of the New York Academy of Sciences 832:243-265. (Dec 15, 1997). *
4. Lin J, and **Lindsey ML**. MMP Roles in the Initiation and Progression of Cardiac Remodelling Leading to Congestive Heart Failure. In *Matrix metalloproteinases in tissue remodeling and inflammation*. V Lagente and E Boichot, Eds.; Birkhauser. (2008). (2) *
5. Jin Y and **Lindsey M**. Multi-Scale Modeling and Analysis of Left Ventricular Remodeling Post Myocardial Infarction: Integration of Experimental and Computational Approaches. Book chapter in "Machine Learning", IntecWeb,(2009). (2,7,8) *
6. Zamilpa R, Chiao YA, Dai Q, Bansal A, and **Lindsey ML**. Cardiac Fibroblast Functions Following Myocardial Infarction: Cause and Effect Roles of MMPs and TIMPs. Book chapter in "The Cardiac Fibroblast", Neil A. Turner, Editor. Research Signpost. (2011). (2,7,8) *¥
7. DeLeon K, de Castro Bras L, Ma Y, Halade G, and **Lindsey ML**. Extracellular matrix biomarkers of adverse remodeling after myocardial infarction. Book chapter in "Cardiac Remodeling: Molecular Mechanisms", Dr. B. I. Jugdutt and Dr. N.S. Dhalla, Editors. Springer. (in press, 2012). (1, 2, 3, 4) *¥
8. Zamilpa R, Zhang J, Chiao YA, de Castro Bras L, Halade G, Ma Y, Hacker SO, and **Lindsey ML**. Cardiac Wound Healing Post-Myocardial Infarction: A Novel Method to Target Extracellular Matrix Remodeling in the Left Ventricle. Book chapter in "Wound Regeneration and Repair: Methods and Protocols", Tereance Myers and Robert G. Gourdie, Editors. Methods in Molecular Biology, Humana Press. (in press, 2012). (1, 2, 3, 4) *¥

2. Papers published or in press

1. Kumar AG, Ballantyne CM, Michael LH, Kukielka GL, Youker KA, **Lindsey ML**, Hawkins HK, Birdsall HH, Mackay CR, LaRosa GJ, Rossen RD, Smith CW, and Entman ML. Induction of Monocyte Chemoattractant Protein-1 in the Small Veins of the Ischemic and Reperfused Canine Myocardium. *Circulation* 95:693-700. (1997).*
2. Dreyer WJ, Burns AR, Phillips SC, **Lindsey ML**, Jackson P, and Kukielka GL. Intercellular Adhesion Molecule-1 Regulation in the Canine Lung After Cardiopulmonary Bypass. *Journal of Thoracic and Cardiovascular Surgery* 115:689-699. (1998).*
3. Frangogiannis NG, **Lindsey ML**, Michael LH, Youker KA, Bressler RB, Mendoza LH, Spengler RN, Smith CW, and Entman ML. Resident Cardiac Mast Cells Degranulate and Release Preformed TNF- α Initiating the Cytokine Cascade in Experimental Canine Myocardial Ischemia/ Reperfusion. *Circulation* 98(7):699-710. (1998).*
4. Frangogiannis NG, Perrard JL, Mendoza LH, Burns AR, **Lindsey ML**, Ballantyne CM, Michael LH, Smith CW, and Entman ML. Stem Cell Factor Induction is Associated with Mast Cell Accumulation Following Canine Myocardial Ischemia and Reperfusion. *Circulation* 98(7):687-698. (1998).*
5. Senzaki H, Paolucci N, Gluzband YA, **Lindsey ML**, Janicki JS, Crow MT, Kass DA. β -Blockade Prevents Sustained Metalloproteinase Activation and Diastolic Stiffening Induced by Angiotensin II Combined with Evolving Cardiac Dysfunction. *Circulation Research* 86:807-815. (2000).*

6. Frangogiannis NG, Mendoza LH, **Lindsey ML**, Ballantyne CM, Michael LH, Smith CW, and Entman ML. IL-10 is induced in the reperfused myocardium and may modulate the reaction to injury. *Journal of Immunology* 165(5):2798-808. (2000).*
7. Dreyer WJ, Phillips SC, **Lindsey ML**, Jackson P, Bowles NE, Michael LH, and Entman ML. Interleukin 6 induction in the canine myocardium after cardiopulmonary bypass. *Journal of Thoracic and Cardiovascular Surgery* 120(2):256-63. (2000).*
8. Ducharme A, Frantz S, Aikawa M, Rabkin E, **Lindsey M**, Rohde LE, Schoen FJ, Kelly RA, Werb Z, Libby P, and Lee RT. Targeted deletion of matrix metalloproteinase-9 attenuates left ventricular enlargement and collagen accumulation after experimental myocardial infarction. *Journal of Clinical Investigation* 106(1):55-62. (2000).*
9. **Lindsey M**, Wedin K, Brown MD, Keller C, Evans AJ, Smolen J, Burns AR, Rossen RD, Michael LH, and Entman ML. Matrix-Dependent Mechanism of Neutrophil-Mediated Release and Activation of MMP 9 in Myocardial Ischemia/Reperfusion. *Circulation* 103: 2181-2187. (2001).*
10. Scherrer-Crosbie M, Ullrich R, Bloch KD, Nakajima H, Nasser B, Aretz HT, **Lindsey ML**, Vancon A-C, Huang PL, Lee RT, Zapol WM, and Picard MH. Endothelial nitric oxide synthase limits left ventricular remodeling after myocardial infarction in mice. *Circulation* 104: 1286-1291. (2001).*
11. **Lindsey ML**, Gannon J, Aikawa M, Schoen FJ, Rabkin E, Lopresti-Morrow L, Crawford J, Black S, Libby P, Mitchell PG, and Lee RT. Selective Matrix Metalloproteinase Inhibition Reduces LV Remodeling But Does Not Inhibit Angiogenesis Following Myocardial Infarction. *Circulation* 105: 753-758. (2002).*
12. **Lindsey ML**, Yoshioka J, MacGillivray C, Muangman S, Gannon J, Verghese A, Aikawa M, Libby P, Krane SM, and Lee RT. Effect of a Cleavage-Resistant Collagen Mutation on Left Ventricular Remodeling. *Circulation Research*, 93(3): p. 238-245. (2003).*
13. Stroud RE, Deschamps AM, Lowry AS, Hardin AE, Mukherjee R, **Lindsey ML**, Ramamoorthy S, Zile MR, Spencer WH, and Spinale FG. Plasma Monitoring of the Myocardial Specific Tissue Inhibitor of Metalloproteinase-4 Following Alcohol-Induced Myocardial Infarction in Hypertrophic Obstructive Cardiomyopathy. *Journal of Cardiac Failure*, 11(2): 124-130. (2005)*
14. **Lindsey ML**, Goshorn DK, Squires CE, Escobar GP, Hendrick JW, Mingoia JT, Sweterlitsch SE, and Spinale FG. Age-Dependent Changes in Myocardial Matrix Metalloproteinase / Tissue Inhibitor of Metalloproteinase (MMP/TIMP) Profiles and Fibroblast Function. *Cardiovascular Research*, 66: 410-419. (2005).* ¥ **This article was quoted in the SAGE KE article "Environmental Movement" by Mitch Leslie, Sci. Aging Knowl. Environ., 2006 (7): nf9.**
15. Ikonomidis J.S., Barbour J.R., Amani Z., Stroud R.E., Herron A.R., McClister, Jr. D.M., Camens S.E., **Lindsey M.L.**, Mukherjee R., and Spinale F.G. Effects of Deletion of the Matrix Metalloproteinase-9 Gene on the Development of Murine Thoracic Aortic Aneurysms. *Circulation*, 112(9 Supplement): I242-248. (2005).*
16. Squires CE, Escobar GP, Payne JF, Leonardi RA, Goshorn DK, Sheats N.J., Mains I.M., Mingoia JT, Flack EC, and **Lindsey ML**. Altered Fibroblast Function Following Myocardial Infarction. *Journal of Molecular and Cellular Cardiology*, 39(4): 699-707. (2005). * ¥ **A figure from this article was selected for the cover art.**
17. **Lindsey ML**, Escobar GP, Dobrucki LW, Goshorn DK, Bouges S., Mingoia JT, McClister Jr. DM, Su H, Gannon J, MacGillivray C, Lee RT, Sinusas AJ, and Spinale FG. Matrix Metalloproteinase-9 Gene Deletion Facilitates Angiogenesis Following Myocardial Infarction. *American Journal of Physiology (Heart and Circulation Physiology)*, 290(1): H232-239. (2006)* ¥ (2)
18. **Lindsey ML**, Goshorn DK, Comte-Walters S, Hendrick JW, Hapke E, Zile MR, and Schey K. A Multidimensional Approach to Identify Hypertrophy-Associated Proteins. *Proteomics*, 6(7):2225-2235. (2006)* ¥ (2)
19. Flack EC, **Lindsey ML**, Squires CE, Kaplan BS, Stroud RE, Clark LL, Escobar GP, Yarbrough WM, and Spinale FG. Alterations in cultured myocardial fibroblast function following the development of left ventricular failure. *Journal of Molecular and Cellular Cardiology*, 40(4): 474-483. (2006) (2)
20. **Lindsey ML**, Escobar GP, Mukherjee R, Goshorn DK, Sheats NJ, Bruce JA, Mains IM, Hendrick JW, Hewett KW, Gourdie RG, Matrisian LM, and Spinale FG. Matrix Metalloproteinase-7 Affects Connexin 43 Levels, Electrical Conduction, and Survival Following Myocardial Infarction. *Circulation*, 113:2919-2928. (2006).* ¥ (2)
21. Dozier S, Escobar GP, and **Lindsey ML**. Matrix Metalloproteinase (MMP)-7 activates MMP-8 but not MMP-13. *Medicinal Chemistry*, 2: 523-526. (2006) * ¥ (2)
22. Lin J, **Lindsey ML**, Zhu B, Agrawal CM, and Bailey SR. Effects of Surface Modified Scaffolds on the Growth and Differentiation of Mouse Adipose-Derived Stromal Cells. *Journal of Tissue Engineering and Regenerative Medicine*, 1: 211-217. (2007).*(2)
23. Dai Q, Lin J, Craig T, Chou Y-M, Hinojosa-Laborde C, and **Lindsey ML**. Estrogen Effects on Matrix Metalloproteinase (MMP)-13 and MMP-14 Regulation of Left Ventricular Mass in Dahl Salt-induced Hypertension. *Gender Medicine*, 5(1):74-85. (2008) * ¥ (2) PMID:18420168
24. Dai Q, Escobar GP, Hakala K, Lambert J, Weintraub ST, and **Lindsey ML**. The Left Ventricle Proteome Differentiates Middle-aged and Old Left Ventricles in Mice. *Journal of Proteome Research*, 7(2): 756-765. (2008) * ¥ (2) PMID:18166010

25. Lin J, Lopez EF, Jin Y, Van Remmen H, Bauch T, Han HC, and **Lindsey ML**. Age-Related Cardiac Muscle Sarcopenia: Combining experimental and mathematical modeling to identify mechanisms. *Experimental Gerontology*, 43(4):296-306. (2008). * ¥ (2,7,8) PMID:18221848
26. Jin Y and **Lindsey ML**. Stability Analysis of Genetic Regulatory Networks with Additive Noises. *BMC Genomics*, 9 (Suppl 1):S21: 1-9. (20 March 2008). * ¥ (2,7,8) Lin J, Davis HB, Dai Q, Chou Y-M, Craig T, Hinojosa-Laborde C, and **Lindsey ML**. Effects of Early and Late Chronic Pressure Overload on Extracellular Matrix Remodeling, *Hypertension Research*, 31(6): 1225-31. (June 2008). * ¥ (2) PMID:18716372
27. Jin Y, Berger J, Escobar GP, Dai Q, and **Lindsey ML**. "Combined Experimental and Mathematical Modeling of Macrophage Driven Left Ventricle Remodeling Post MI", *Proceeding of IEEE International Conferences on Machine Learning and Cybernetics*, 4012-7, July 12-15 in Kunming, China. (2008) * (2)
28. Bokov AF, **Lindsey ML**, Khodr C, Sabia MR, and Richardson AG. Long-lived Ames Dwarf Mice Are Resistant to Chemical Stressors. *J Gerontol: Series A*, 64(8):819-27. (Aug 2009) * (2) PMID:19414510
29. Yao Q, Hayman DM, Dai Q, **Lindsey ML**, and Han HC. Alterations of Pulse Pressure Stimulate Arterial Wall Matrix Remodeling. *J Biomech*, 131(10):101011. (Oct 2009) * (2) PMID:19831481
30. Chiao YA, Zamilpa R, Lopez EF, Dai Q, Escobar GP, Hakala K, Weintraub ST, **Lindsey ML**. In vivo Matrix Metalloproteinase-7 Substrates Identified in the Left Ventricle Post-Myocardial Infarction Using Proteomics. *J Prot Res*, 9(5): 2649-57. (May 7, 2010). * ¥ (2,4,7,8) PMID:20232908
31. Zamilpa R, Lopez EF, Chiao YA, Dai Q, Escobar GP, Hakala K, Weintraub ST, and **Lindsey ML**. Proteomic Analysis Identifies In vivo Candidate Matrix Metalloproteinase-9 Substrates in the Left Ventricle Post-Myocardial Infarction. *Prteomics*, 10(11): 2214-23. (June 2010). * ¥ (2,7,8) PMID:20354994
32. Wang Y, Han HC, Yang JY, **Lindsey ML**, and Jin Y. A conceptual cellular interaction model of left ventricular remodelling post-MI: dynamic network with exit-entry competition strategy. *BMC Systems Biology* 4 (Suppl 1): S5 (2010). * (2,7,8) PMID:20522255
33. Bansal A, Dai Q, Chiao YA, Hakala KW, Zhang JQ, Weintraub ST, **Lindsey ML**. Proteomic Analysis Reveals Late Exercise Effects on Cardiac Remodeling Following Myocardial Infarction. *Journal of Proteomics*, 73(10): 2041-9. (2010) * ¥ (2,4,7) PMID:20601275
34. Halade GV, Williams PJ, **Lindsey ML**, and Fernandes G. Fish oil decreases inflammation and reduces cardiac remodeling in rosiglitazone treated aging mice. *Pharmacological Research*, 63(4):300-307 (2011). * (2) PMID:21193042
35. Zamilpa R, Kanakia R, Cigarroa IV J, Dai Q, Escobar GP, Martinez H, Jimenez F, Ahuja SS, and **Lindsey ML**. CC chemokine receptor 5 deletion impairs macrophage activation and induces adverse remodeling following myocardial infarction. *American Journal of Physiology (Heart and Circulation Physiology)*, 300(4):H1418-26 (2011). * ¥ (2,3,4,7) PMID: 21297029. **This article was featured on the www.MDLinx.com site on 2/21/11. MDLinx is the world's most up-to-date index of articles that matter in the daily lives of physicians and other healthcare professionals.**
36. Jin YF, Han HC, Berger J, Dai Q and Lindsey ML. Combining Experimental and Mathematical Modeling to Reveal Mechanisms of Macrophage-Dependent Left Ventricular Remodeling. *BMC Systems Biology*, 5(1):60 (2011). * (1,2,7,8) PMID: 21545710
37. Nguyen N, Chiao YA, Huang Y, Gao SJ, **Lindsey ML**, Chen Y, and Jin Y. Temporal Clustering of Gene Expression Patterns Using Short-Time Segments. *International Journal of Technology Management*, in press (2011). * (1,2,7,8)
38. McCurdy SM, Dai Q, Zhang J, Zamilpa R, Ramirez TA, Dayah T, Nguyen N, Jin Y, Bradshaw AD, and **Lindsey ML**. SPARC Mediates Early Extracellular Matrix Remodeling Following Myocardial Infarction. *American Journal of Physiology (Heart and Circulation Physiology)*, 301(2):H497-505 (2011). * ¥ (2,4,7) PMID:21602472 **Highlighted in Extracellular Matrix News on 5/26/11: <http://www.connexoncreative.com/publications/archives/ECM220.aspx>**
39. Chiao YA, Dai Q, Zhang J, Lin J, Lopez EF, Ahuja SS, Chou YM, **Lindsey ML**, and Jin YF. Multi-analyte Profiling Reveals MMP-9 and MCP-1 as Plasma Biomarkers of Cardiac Aging. *Circ Cardiovasc Genet*. 4:455-462 (2011). * ¥ (1,2,3,4,6) PMID:21685172.
40. Miyasato S, Loeffler J, Shohet R, Zhang J, **Lindsey ML**, and Le Saux CT. Caveolin-1 modulates TGF- β 1 signaling in cardiac remodeling. *Matrix Biology*. 30(5-6):318-29 (2011). * (2)
41. Ma Y, Chiao YA, Zhang J, Manicone AM, Jin Y-F, and **Lindsey ML**. Matrix Metalloproteinase-28 Deletion Amplifies Inflammatory and Extracellular Matrix Responses to Cardiac Aging. *Microscopy and Microanalysis*. 18(1): 81-90 (2012). * ¥ (1,2,3,4,6)
42. Ghasemi O, **Lindsey ML**, Yang T, Nguyen N, Huang Y, Jin YF. Bayesian Parameter Estimation for Nonlinear Modeling of Biological Pathways. *BMC Systems Biology*, 5 (Suppl 3):S9 (2011). PMID:22784628 * (1,2,3,4)
43. Yoshioka J, Chutkow WA, Lee S, Kim JB, Yan J, Tian R, **Lindsey ML**, Feener EP, Seidman CE, Seidman JG, Lee RT. Deletion of thioredoxin-interacting protein in mice impairs mitochondrial function but protects the myocardium from ischemia-reperfusion injury. *J Clin Invest*. 122(1):267-79. (2012). * (1) PMID:22201682
44. Grimes KM, Lindsey ML, Gelfond JA, Buffenstein R. Getting to the heart of the matter: age-related changes in diastolic heart function in the longest-lived rodent, the naked mole rat. *J Gerontol A Biol Sci Med Sci*. Apr;67(4):384-94. (2012) PMID:22367435. * (3,4)

45. de Castro Brás LE, DeLeon KY, Ma Y, Dai Q, Hakala K, Weintraub ST, and Lindsey ML. Plasma Fractionation Enriches Post-Myocardial Infarction Samples Prior to Proteomics Analysis. *International Journal of Proteomics*, Volume 2012, Article ID 397103 (2012). * ¥ (1,2,3,4)
46. Ramirez TA, Jourdan-LeSaux C, Joy A, Zhang J, Dai Q, Mifflin S, and **Lindsey ML**. Chronic and Intermittent Hypoxia Differentially Regulate Left Ventricular Inflammatory and Extracellular Matrix Responses. *Hypertension Research*. 35(8):811-8 (2012). PMID 22495609 * ¥ (1,2,3,4)
47. Yang T, Chiao YA, Wang Y, Voorhees A, Han HC, **Lindsey ML**, and Jin YF. Mathematical modeling of left ventricular geometry changes in aging mice. *BMC Systems Biology*, in press (2012). * (1, 2,3,4)
48. Yang T, Chiao YA, Wang Y, Voorhees A, Han HC, **Lindsey ML**, Jin YF. Mathematical modeling of left ventricular dimensional changes in mice during aging. *BMC Syst Biol*. 2012;6 Suppl 3:S10. PMID:23281647 * (1,2,3,4)
49. Ma Y, Zhang X, Bao H, Mi S, Cai W, Yan H, Wang Q, Wang Z, Yan J, Fan G, Lindsey ML, and Hu Z. Toll-Like Receptor (TLR) 2 and TLR4 Differentially Regulate Doxorubicin Induced Cardiomyopathy in Mice. *PLOS One*. 7(7):e40763 (2012). PMID 22808256 * ¥ (1,2)
50. Wang Y, Yang T, Ma Y, Halade GV, Zhang J, Lindsey ML, and Jin Y-F. Mathematical modeling and stability analysis of macrophage activation in left ventricular remodeling post-myocardial infarction. *BMC Genomics*. Oct 26;13 Suppl 6:S6-21 (2012). PMID:23134700 * (1,2,3,4)
51. Zamilpa R, Ibarra J, de Castro Brás LE, Ramirez TA, Nguyen N, Halade GV, Zhang J, Dai Q, Dayah T, Chiao YA, Lowell W, Ahuja SS, D'Armiento J, Jin YF, and **Lindsey ML**. Transgenic overexpression of matrix metalloproteinase-9 in macrophages attenuates the inflammatory response and improves left ventricular function post-myocardial infarction. *J Mol Cell Cardiol*. Nov; 53(5):599-608 (2012). PMID:22884843. * ¥ (1,2,3,4)
52. Chiao YA, Ramirez TA, Zamilpa R, Okoronkwo SM, Dai Q, Zhang J, Jin Y-F, and **Lindsey ML**. Matrix Metalloproteinase-9 Deletion Attenuates Myocardial Fibrosis and Diastolic Dysfunction in Ageing Mice. *Cardiovascular Research*. Dec 1;96(3):444-55 (2012). PMID:22918978 * ¥ (1,2,3,4)
53. Hayman DM, Xiao Y, Yao Q, Jiang Z, **Lindsey ML**, and Han H-C. Alterations in Pulse Pressure Affect Artery Function. *Cellular and Molecular Bioengineering*. Dec 1;5(4):474-487 (2012). PMID:23243477. * (1,2)
54. Ma Y, Halade GV, Zhang J, Ramirez TA, Levin D, Voorhees A, Jin Y-F, Han H-C, Manicone AM, and Lindsey ML. Matrix Metalloproteinase-28 Deletion Exacerbates Cardiac Dysfunction and Rupture Following Myocardial Infarction in Mice by Inhibiting M2 Macrophage Activation. *Circulation Research*. In press (2013). * (1,2,3,4)

3. Abstracts

1. Dreyer WJ, **Lindsey ML**, Jackson P, Phillips SC. Evidence for interleukin-6 and intercellular adhesion molecule-1 induction in the canine myocardium following cardiopulmonary bypass. *Circulation* 1996;96(8) Supp:1619. American Heart Association, Orlando, FL. (1996) *
2. Frangogiannis NG, Perrard JL, Mendoza LH, Youker KA, **Lindsey ML**, Ballantyne CM, Michael LH, Smith CW, and Entman ML. Evolving Role of the Mast Cell in Myocardial Ischemic and Reperfusion. The Alfred Benzon Symposium No 41. Coronary Microcirculation during Ischemia and Reperfusion, Copenhagen, Denmark, August 18-22. (1996) *
3. **Lindsey ML**, Evans AJ, Keller CR, Jackson P, Funk E, Michael LH, Entman ML. MMP 9 expression and activation in myocardial ischemia/reperfusion. *Circulation* 1998;98(17):1840. American Heart Association Scientific Sessions, Dallas, TX. (1998) *
4. **Lindsey ML**, Keller CR, Jackson P, Funk E, Michael LH, Entman ML. MMP 9 is expressed in PMNs following ischemia/reperfusion injury. *FASEB J* 1998;12(5) Part II:A799. The Federation of the American Society of Experimental Biologists Annual Meeting, San Francisco, CA. (1998) *
5. Gwechenberger M, **Lindsey ML**, Mendoza L, Thurmon L, Smith CW, Michael LH, Entman ML. The early induction of oncostatin M in myocardial I/R injury may regulate healing. *Circulation* 1998;98(17):1260. American Heart Association Scientific Sessions, Dallas, TX. (1998) *
6. **Lindsey ML**, Wedin KE, Brown MD, Jackson P, Rossen RD, Michael LH, Entman ML. PMNs are the early source of MMP 9 following myocardial I/R injury. *FASEB J* 1999;13(4):A206. The Federation of the American Society of Experimental Biologists Annual Meeting, Washington, DC. (1999) *
7. Scherrer-Crosbie, M, Ullrich, R, Bloch, KD, Nakajima, H, Aretz, HT, **Lindsey, ML**, Vancon, A-C, Lee, RT, Zapol, WM, Picard, MH. Nitric Oxide Synthase 3 Limits Left Ventricular Remodeling after Myocardial Infarction in Mice. *Circulation* 102(18): II195. American Heart Association, New Orleans, LA. (2000) *
8. **Lindsey, ML**, Gannon, J, Aikawa, M, Schoen, FJ, Rabkin, E, Black, SC, Libby, P, Mitchell, PG, Lee, RT. Selective MMP Inhibition Stimulates Angiogenesis and Reduces LV Remodeling Post MI in Rabbits. *Circulation* American Heart Association, Anaheim, CA. (2001) *
9. **Lindsey, ML**, Yoshioka, J, Aikawa, M, and Lee, RT. The Effect of a Cleavage-Resistant Collagen Mutation on Left Ventricular Remodeling. *Circulation*. American Heart Association, Chicago, IL (2002) *
10. Escobar, GP, Hendrick J, Leiser J.S, Sample JA, Dowdy KB, Sweterlitsch SE, Mingoia JT, Matrisian L, and **Lindsey ML**. MMP-7 Deletion Improves Survival Post-MI. *Heart Failure Society of America*, Las Vegas, NV. (2003) *

11. Squires CE, Escobar GP, Chapman RE, Hendrick J, Sample JA, Sweterlitsch SE, Mingoia JT, Spinale FG and **Lindsey ML**. Functional Alterations in Myocardial Fibroblasts from Ischemic Myocardium. Heart Failure Society of America, Las Vegas, NV. (2003) *
12. **Lindsey ML**, Escobar GP, Chapman RE, Patrick D, Hendrick J, Dowdy KB, Squires C, Sweterlitsch SE, Mingoia JT, Spinale FG. Age-Dependent Cellular and Molecular Mechanisms of Functional Alterations in Left Ventricle Structure and Function. Heart Failure Society of America, Las Vegas, NV. (2003) *
13. Payne, J.F., Patrick, D.K., Escobar, G.P., Leonardi, R.A., Squires, C., Spinale, F., and **Lindsey, M.L.** Functional Alterations in Myocardial Fibroblasts from Ischemic Myocardium. Student Research Day, Medical University of South Carolina. (2003) *
14. Leonardi, R.A., Patrick, D.K., Escobar, G.P., Payne, J.F., Squires, C., Spinale, F., and **Lindsey, M.L.** 2-Dimensional Electrophoretic Analysis of Total Protein Extracted from Post-MI Macrophages and Fibroblasts. Student Research Day, Medical University of South Carolina. (2003) *
15. Escobar GP, Hendrick J., Leiser J.S., Sample J.A., Dowdy K.B., Sweterlitsch S.E., Mingoia J.T., Matrisian L.M., and **Lindsey ML**. Matrix Metalloproteinase-7 Attenuates Left Ventricular Remodeling Post-Myocardial Infarction. Circulation. American Heart Association, Orlando. (2003) *
16. Squires CE, Escobar GP, Hendrick JK, Mingoia JT, Spinale FG and **Lindsey ML**. Age-Dependent Alterations in Myocardial Fibroblast Phenotypes. Medical University of South Carolina, Charleston, SC, Center on Aging 1st Annual Aging Research Day. (2004) *
17. Patrick DK, Escobar GP, Hendrick JK, Mingoia JT, Spinale FG and **Lindsey ML**. Age-Dependent Alterations in Left Ventricular Extracellular Matrix Profiles. Medical University of South Carolina, Charleston, SC, Center on Aging 1st Annual Aging Research Day. (2004) *
18. Escobar GP, Hendrick JK, Mingoia JT, Sweterlitsch S, Spinale FG and **Lindsey ML**. Age-Dependent Alterations in Left Ventricular Structure. Medical University of South Carolina, Charleston, SC, Center on Aging 1st Annual Aging Research Day. (2004) *
19. Corn, WC, Hardin, AE, Goshorn, DK, Herron, AR, Escobar, GP, Hendrick, J, Clark, LL, Zile, M.R., Spinale, F.G., and **Lindsey, ML**. "MMP-7 Levels During Acute and Chronic Phases of Left Ventricular Remodeling." Student Research Day, Medical University of South Carolina. (2004) *
20. Escobar GP, Mukherjee R, Dozier S, Hendrick JW, Goshorn DK, Sweterlitsch SE, Clark LL, Mingoia JT, Bruce JA, Sample JA, Matrisian LM, Spinale FG, and **Lindsey ML**. Matrix Metalloproteinase-7 Deletion Improves Survival and Myocardial Conduction Following Myocardial Infarction. Circulation. American Heart Association, New Orleans (2004)*
21. Goshorn DK, Squires CE, Escobar GP, Hendrick JW, Mingoia JT, Sweterlitsch SE, Spinale FG, and **Lindsey ML**. Changes in Specific MMP Levels and Fibroblast Function Accompany the Age-related Increase in LV Mass. Circulation. American Heart Association, New Orleans. (2004) *
22. Dobrucki LW, **Lindsey ML**, Song J, Escobar GP, Su H, Bourke BN, Mendizabel M, Spinale FG, Sinusas AJ. Matrix metalloproteinase-9 gene deletion enhances angiogenesis following myocardial infarction. J Nucl Cardiol 12:S15. (2005) *
23. Mingoia, J.T. and **Lindsey, ML**. Identifying MMP-9 Substrates in the Myocardium using Degradomic Technology. The Gordon Research Conference on Matrix Metalloproteinases, Big Sky, MT. (Aug 28- Sept 2, 2005) *
24. Escobar, G.P., Sheats, N.J., Mains, I.M., McClister Jr, D.M., and **Lindsey, M.L.** Connexin 43 is a Novel Matrix Metalloproteinase-7 Substrate: In Silico, In Vitro, and In Vivo Cleavage Analyses. Circulation. American Heart Association, Dallas. (2005) *
25. Bonnema, D.D., Webb, C.S., Leonardi, A.H., McClure, C.D., Clark, L.L., Stroud, R.E., Corn, W.C., **Lindsey, M.L.**, Finklea, L., Zile, M.R., and Spinale, F.G. A Specific Temporal Profile of Matrix Metalloproteinase Release Occurs in Patients Following Myocardial Infarction: Relation to Left Ventricular Remodeling. Circulation. American Heart Association, Dallas. (2005) *
26. Horres III, C.R. and **Lindsey, M.L.** Effects of MMP-9, MMP-7, and MCP-1 Deletion on Macrophage Phagocytic Potential and Differentiation. Seventeenth Annual Research Colloquium of the South Carolina Governor's School for Science and Mathematics in Hartsville, SC. (February 4, 2006)
27. Horres III, C.R. and **Lindsey, M.L.** Effects of MMP-9, MMP-7, and MCP-1 Deletion on Macrophage Phagocytic Potential and Differentiation. South Carolina Junior Academy of Science Annual Meeting in Columbia, SC. (March 10, 2006). Mr. Horres was a summer high school student in my laboratory. This presentation won Fifth Place in the Oral Presentation Competition in the Biochemistry category.
28. **Lindsey, M.L.**, Matrisian, L.M., and Escobar, G.P. Effects of matrix metalloproteinase-7 (MMP-7) on myocardial fibroblast proliferation and migration following myocardial infarction. FASEB Journal. Experimental Biology, San Francisco. (2006).* This abstract was 1 of 4 selected from the poster session for an oral presentation at the Featured Topic symposium, "Fibroblasts and Myofibroblasts: function and tissue repair".
29. Dai, Q., Craig, T., Hinojosa-Laborde, C., and **Lindsey, M.L.** Estrogen Effects on Left Ventricular Hypertrophy and Matrix Metalloproteinase Profiles in Dahl Salt-induced Hypertension. 9th Annual Medicine Research Day, Department of Medicine, UTHSCSA. (2006)

30. Escobar, G.P., and **Lindsey, M.L.** Matrix Metalloproteinase-7 Affects Connexin-43 Levels, Electrical Conduction, and Survival Following Myocardial Infarction (MI). 9th Annual Medicine Research Day, Department of Medicine, UTHSCSA. (2006)
31. Lee, Y-U., Johnson, K., Lin, J., **Lindsey, M.L.**, Sprague, E.A., and Han, H-C. Effects of Axial Stretch and Wall Injury on Intimal Hyperplasia in Arteries Cultured for Seven Days. Biomedical Engineering Society Annual Fall meeting, Chicago, IL. (Oct 11-14, 2006) *
32. Corbitt, C.A., Escobar, G.P., Lin, J., **Lindsey, M.L.**, and Chandrasekar, B. Interleukin-18 Roles in Post-Infarct Myocardial Remodeling. Sixth Annual Medical Student Research Day, The University of Texas Health Science Center at San Antonio, TX. (September 25, 2006).
33. Lambert, J.M., Dai, Q., Hakala, K., Weintraub, S.T., Escobar, G.P., and **Lindsey, M.L.** Age-Dependent Myocardial Protein Changes. Sixth Annual Medical Student Research Day, The University of Texas Health Science Center at San Antonio, TX. (September 25, 2006)
34. Dai, Q., Craig, T., Hinojosa-Laborde, C., and **Lindsey, M.L.** Estrogen Effects on Left Ventricular Hypertrophy and Matrix Metalloproteinase Profiles in Dahl Salt-induced Hypertension. 60th Annual Fall Conference and Scientific Sessions of the Council for High Blood Pressure Research in association with the Council on the Kidney in Cardiovascular Disease, San Antonio, TX. (Oct 4-7, 2006) *
35. Escobar, G.P., and **Lindsey, M.L.** Multi-Analyte Profiling of Post-Myocardial Infarction Plasma Samples. FASEB. Experimental Biology, Washington DC. (2007) * Also presented at the 10th Annual Medicine Research Day, Department of Medicine, UTHSCSA. (2007)
36. Lin, J., Lopez, E., Van Remmen, H., Freeman, G.L., and **Lindsey, M.L.** Age-Related Cardiac Sarcopenia. FASEB Journal. Experimental Biology, Washington DC. (2007) * Also presented at the 10th Annual Medicine Research Day, Department of Medicine, UTHSCSA. (2007)
37. Dai, Q., Davis, H., Chou, Y-M., Craig, T., Hinojosa-Laborde, C., and **Lindsey, M.L.** Effects of Acute and Chronic Pressure Overload on Myocardial MMP and TIMP Levels. FASEB Journal. Experimental Biology, Washington DC. (2007) * (also presented at the 10th Annual Medicine Research Day, Department of Medicine, UTHSCSA. (2007).
38. Han H-C, Jin Y, Lin J, Lopez L, Van Remmen H, Bauch T, and **Lindsey M.L.** Mathematical Modeling of Left Ventricular Remodeling in Aging Mice. Biomedical Engineering Society (BMES) Annual Fall Meeting, Los Angeles, CA. (2007) *
39. **Lindsey M.L.**, Lin J, Lopez L, Jin Y, Van Remmen H, Bauch T, and Han H-C. Age-Related Cardiac Muscle Sarcopenia in Mice. Circulation. American Heart Association, Orlando. (2007) *
40. Escobar GP, Dai Q, and **Lindsey M.L.** Tissue Inhibitor of Metalloproteinase-1 Levels Predict Left Ventricular Dilation Following Myocardial Infarction in Mice. FASEB Journal. Experimental Biology, San Diego, CA. (2008) *
41. Escobar GP, Dai Q, and **Lindsey M.L.** Extracellular Matrix Gene Changes in Cardiac Fibroblasts Stimulated with Transforming Growth Factor β . FASEB Journal. Experimental Biology, San Diego, CA. (2008) *
42. McCurdy S, Kelley M, Escobar GP, and **Lindsey ML.** The Role of Secreted Protein, Acidic, and Rich in Cysteine in Left Ventricle Remodeling. Poster presentation at the 2008 St. Mary's University Symposium (1st Place Winner for Science, Engineering, and Technology Category) and Oral presentation at the 11th Annual Medicine Research Day, Department of Medicine, UTHSCSA (was 1 of 6 from 113 abstracts selected for oral presentation; 1st Place Winner for the Resident/Medical Student Oral Presenter Category). (2008)
43. Yao Q, Hayman D, Dai Q, **Lindsey ML**, and Han HC. The Mechanism of Pulse Pressure Affecting the Permeability of Arteries. 2008 Summer Bioengineering Conference, Marco Island, FL. (2008) *
44. Zamilpa R, Chiao YA, Lopez EF, Dai Q, Escobar GP, Weintraub ST, and **Lindsey ML.** Applying Extracellular Matrix Degradomics to Identify Novel MMP-9 Substrates in the Post-Myocardial Infarction Left Ventricle. Jackson Cardiovascular-Renal Meeting, Jackson, MS. (2008) *
45. Zamilpa R, Lopez EF, Dai Q, Escobar GP, Weintraub ST, and **Lindsey ML.** Proteomic Analysis Identifies *In vivo* Matrix Metalloproteinase-9 Substrates in the Left Ventricle Post-Myocardial Infarction. American Heart Association Scientific Sessions, New Orleans, LA. (2008) * Also presented at our 12th Annual Research Day, San Antonio, TX. (2009)
46. Zhang J, Joy A, Dai Q, Mifflin SW, and **Lindsey ML.** Differential Changes of BNIP3 and Beclin-1 During the Right Ventricle Response to Sustained or Intermittent Hypoxia. Experimental Biology 2010, Anaheim, CA. (2010) * Also presented at the 2010 Department of Medicine Research Day.
47. Joy A, Zhang J, Dai Q, Mifflin SW, and **Lindsey ML.** Differences in Lung and Right Ventricle Responses to Sustained and Intermittent Hypoxia. Experimental Biology 2010, Anaheim, CA. (2010) * Annie Joy is a 7th grade science teacher at Driscoll Middle School who participated in the APS Frontiers in Physiology Professional Development Fellowship and spent Summer 2009 in my laboratory.
48. Zamilpa R, Cigarroa J, Dai Q, Escobar GP, Jimenez F, Martinez HG, Ahuja SS, **Lindsey ML.** CCR5 deletion impairs the post-myocardial infarction inflammatory response. Experimental Biology, New Orleans, LA (2009). Also presented at The Annual Terry M. Mikiten, Ph.D. Graduate Student Research Forum. (2009) *

49. McCurdy S and **Lindsey ML**. SPARC Mediates Early Extracellular Matrix Remodeling Following Myocardial Infarction. Experimental Biology, New Orleans, LA (2009). Also presented at The Annual Terry M. Mikiten, Ph.D. Graduate Student Research Forum. (2009)
50. Zamilpa R, Kanakia R, Cigarroa J, Martinez HG, Jimenez F, Ahuja SS, **Lindsey ML**. CC Chemokine receptor 5 directs macrophage function following myocardial infarction. Experimental Biology, Anaheim, CA (2010)
51. Jin Y, Jordan D, Dai Q, and **Lindsey ML**. Mathematical Modeling of Macrophage Driven Left Ventricular Remodeling. International Joint Conference on Bioinformatics, Systems Biology and Intelligent Computing, Shanghai, China. (2009)
52. Hayman DM, Yao Q, Gireud MB, Dai Q, **Lindsey ML**, Han HC (2009). Changes in pulse pressure alter arterial wall permeability. ASME Summer Bioengineering Conference, Lake Tahoe, CA, June 2009.
53. Hayman D, Yao Q, Dai Q, **Lindsey ML**, Han HC (2009). Pulse Pressure Affects Arterial Permeability and MMP-9. BMES Pittsburgh, PA. (Oct. 2009)
54. Chiao YA, Zamilpa R, Dai Q, Montes M and **Lindsey ML**. Matrix metalloproteinase-9 (MMP-9) deletion slows cardiac aging, 13th Annual Scientific Meeting of the Institute of Cardiovascular Science and Medicine, Hong Kong. (2009)
55. Chiao YA, Zamilpa R, Dai Q, Montes M and **Lindsey ML**. Matrix metalloproteinase-9 (MMP-9) deletion slows cardiac aging. The Annual Terry M. Mikiten, Ph.D. Graduate Student Research Forum. (2009). Also presented at the Nathan Shock Conference on Aging, San Antonio. (2009)
56. Chiao YA, Zamilpa R, Dai Q, and **Lindsey ML**. Matrix metalloproteinase (MMP)-9 deletion slows cardiac aging, Experimental Biology Meeting, New Orleans. (2009). Also presented for Medicine Research Day, UTHSCSA. (2009)
57. Ibarra JM, Dai Q, Zamilpa R, Chiao YA, Lopez EF, D'Armiento J, **Lindsey ML**. Macrophage –Specific Transgenic Expression of Matrix Metalloproteinase-9 Improves Left Ventricular Function Following Myocardial Infarction in mice. Terry Mikiten Graduate Student Research Forum, Graduate School of Biomedical Sciences (2009); Also presented as an oral presentation for 12th Annual Medicine Research Day, Department of Medicine, UTHSCSA. (2009)
58. Chiao YA, Jin Y, Dai Q, Chou Y-M, and **Lindsey ML**. Multi-analyte Profiling Reveals MCP-1 and MMP-9 as Plasma Biomarkers of Cardiac Aging. Experimental Biology Meeting, Anaheim. (2010). This abstract was selected for oral presentation at EB. This abstract was also presented at the 2010 Department of Medicine Research Day and at the 2010 Barshop Institute Student Research Day, where it was also selected for oral presentation.
59. Zamilpa R, Kanakia R, Cigarroa IV J, Martinez H, Jimenez F, Ahuja SS, and **Lindsey ML**. CC chemokines receptor 5 directs macrophage function following myocardial infarction. Experimental Biology Meeting, Anaheim. (2010). This abstract was also presented at the 2010 Department of Medicine Research Day.
60. McCurdy SM, Dai Q, Bradshaw AD, and **Lindsey ML**. SPARC regulates early fibroblast responses to myocardial infarction. Experimental Biology, Anaheim. (2010). This abstract was selected for oral presentation.
61. Jin Y, Han H, Berger J, Dai Q, and **Lindsey ML**. Combining experimental and mathematical modeling to reveal mechanisms of macrophage-dependent left ventricular remodeling. Experimental Biology Meeting, Anaheim. (2010)
62. Wang Y, Han H, Yang J, **Lindsey ML**, and Jin Y. A conceptual cellular interaction model of left ventricular remodeling: dynamic network with exit-entry evolution strategy. Experimental Biology Meeting, Anaheim. (2010)
63. Chiao YA, Zamilpa R, Zhang J, and **Lindsey ML**. MMP-9 Regulates Inflammatory Gene Expression in the Aging Left Ventricle, Society for Leukocyte Biology Annual Meeting, Vancouver, Canada. (2010).
64. Zamilpa R, Chiao YA, Dai Q, Zhang J, Hakala K, Ahuja SS, Weintraub ST, and **Lindsey ML**. Proteomic Identification of ECM Biomarkers for Adverse Cardiac Remodeling Post-MI. Matrix Biology Biennial Meeting, Charleston, SC. (2010).
65. Zamilpa R, Kanakia R, Cigarroa IV J, Martinez H, Jimenez F, Ahuja SS, and **Lindsey ML**. CC Chemokine Receptor 5 Deletion Prevents Macrophage Activation and Collagen Turnover Following Myocardial Infarction. American Heart Association Scientific Sessions, Chicago. (2010). This abstract was selected for oral presentation.
66. Chiao YA, Jin Y, Zamilpa R, Dai Q, Ramirez TA, Zhang J, and **Lindsey ML**. Matrix Metalloproteinase-9 Deletion Differentially Regulates Extracellular Matrix Gene Levels and Attenuates Age-related Diastolic Dysfunction in Mice. Keystone Symposia, "Extracellular Matrix and Cardiovascular Remodeling (B2)", Tahoe City, NV. (2011).
67. Zamilpa R, Ramirez TA, Dai Q, Chiao YA, Zhang J, and **Lindsey ML**. Transgenic Expression of Matrix Metalloproteinase -9 in Macrophages Improves LV Function and Differentially Regulates Extracellular Matrix Gene Levels Post-MI. Keystone Symposia, "Extracellular Matrix and Cardiovascular Remodeling (B2)", Tahoe City, NV. (2011).
68. Chiao YA, Jin Y, Shamhart P, Zamilpa R, Dai Q, Ramirez TA, Zhang J, and **Lindsey ML**. Matrix Metalloproteinase-9 Deletion Attenuates Age-related Periostin Induction and Diastolic Dysfunction in Mice. Experimental Biology, Washington DC. (2011). This abstract was selected for oral presentation.
69. Hayman D, **Lindsey ML**, and Han HC. The Effect of Pulse Pressure on Arterial Wall Permeability and Stiffness. American Society of Mechanical Engineers SBC Conference, 2011.
70. Hayman D, **Lindsey ML**, Han HC (2011). The effect of pulse pressure on arterial wall permeability and stiffness. ASME Summer Bioengineering Conference, Farmington, PA, June 2011. *
71. Xiao Y, Zhao Y, Hayman D, **Lindsey ML**, Han HC (2011). Biomechanical stress-induced arterial buckling promotes NF- κ B activation that regulates cell proliferations in porcine carotid arteries perfused ex vivo. BMES Hartsfield, CT.

Oct 14-16, 2011. *

72. Zamilpa R, Ibarra J, Dai Q, Dayah T, Nguyen N, Zhang J, Ahuja SS, D'Armiento J, Jin Y-F, and **Lindsey ML**. Matrix Metalloproteinase-9 Overexpression in Macrophages Improves Ventricular Function by Regulating the Inflammatory and Fibrotic Responses Post-Myocardial Infarction. American Heart Association Scientific Sessions, Orlando, FL. (2011). This abstract was selected for oral presentation in the Experimental Myocardial Infarction session.
73. Ma Y, Zhang J, Manicone A, and **Lindsey ML**. Matrix Metalloproteinase-28 Deletion Preserves Cardiac Function Following Myocardial Infarction in Mice. American Heart Association Scientific Sessions, Orlando, FL. (2011).
74. Bhatnagar H, Ji L, **Lindsey ML**, and LeSaux C. Caveolin-1-dependent Inhibition of Transforming Growth Factor- β Pathway Alters Inflammation Post Myocardial Infarction. American Heart Association Scientific Sessions, Orlando, FL. (2011).
75. Chiao, YA (finalist), Jin Y-F, Shamhart P, Zamilpa R, Dai Q, Ramirez TA, Zhang J, and **Lindsey ML**. Matrix Metalloproteinase-9 Deletion Attenuates Myocardial Fibrosis and Diastolic Dysfunction in Aging Mice. American Heart Association Scientific Sessions, Orlando, FL. (2011). This abstract was selected for oral presentation in the Functional Genomics and Translational Biology Young Investigator Award session.
76. Wang Y, Ma Y, Halade G, **Lindsey ML**, and Jin Y-F. Mathematical modeling of macrophage activation post myocardial infarction. IEEE GENSIPS 2011, San Antonio, TX (2011).
77. Nguyen N, Zhang X, Wang Y, Han HC, Chilton R, Lange R, **Lindsey ML**, and Jin Y-F. Targeting myocardial infarction-specific protein-protein interaction network with computational approaches. IEEE GENSIPS 2011, San Antonio, TX (2011).
78. Ramirez TA, Jourdan-LeSaux C, Joy A, Zhang J, Dai Q, Mifflin S, and **Lindsey ML**. Chronic and intermittent hypoxia differentially regulate the left ventricular inflammatory and extracellular matrix responses. FASEB J March 29, 2012 26:874.9. This abstract was also presented at the 2012 Department of Medicine Research Day, and Trevi Ramirez won the first place award for her poster.
79. de Castro Bras LE, Dai Q, Zamilpa R, Fields GB, Weintraub ST, and **Lindsey ML**. MMP-9 Generated Collagen I C-propeptides Alter Cardiac Fibroblast Function. FASEB J March 29, 2012 26:1059.3
80. Ma Y, Zhang J, Ramirez TA, Manicone AM, and **Lindsey ML**. Matrix Metalloproteinase-28 Deletion Attenuates Short-term Left Ventricular Dysfunction but Exacerbates Cardiac Rupture Post-Myocardial Infarction in Mice FASEB J March 29, 2012 26:1060.1
81. Halade GV, Ramirez TA, Zhang J, Hensler JG, Jin Y-F, and **Lindsey ML**. Brain-Derived Neurotrophic Factor Intensifies the Early Inflammatory Response After Myocardial Infarction. FASEB J March 29, 2012 26:1057.29
82. Zamilpa R, Ramirez TA, Dai Q, Dayah T, Nguyen N, Zhang J, Ahuja SS, D'Armiento J, Jin Y-F, and **Lindsey ML**. MMP-9 overexpression in macrophages regulates the post-myocardial infarction inflammatory response through SCYE1. FASEB J March 29, 2012 26:399.2
83. De Castro Brás L, DeLeon K, Dai Q, Ma Y, Halade GV, Hakala K, Weintraub ST, and **Lindsey ML**. Proteomic Profiling of Fractionated Post-myocardial Infarction Plasma Identifies MMP-9 Dependent Markers. 60th ASMS Conference on Mass Spectrometry, Vancouver, Canada (May 21, 2012).
84. Ma Y, Jin YF, Zhang J, Ramirez TA, Voorhees A, Manicone AM, Han H-C, and **Lindsey ML**. Matrix Metalloproteinase-28 Deletion Aggravates Left Ventricular Dysfunction and Rupture Post-Myocardial Infarction in Mice. World Congress on Medical Physics and Biomedical Engineering, Beijing, China (May 28, 2012). This abstract was selected for oral presentation.
85. Okoronkwo SM, Chiao YA, and **Lindsey ML**. Matrix Metalloproteinase-9 Deletion Attenuates Age-Related Diastolic Dysfunction and Myocardial Collagen Deposition. 2012 American Geriatrics Society (AGS) Annual Scientific Meeting, Seattle, WA (May 2012). Ms. Okoronkwo received a travel award to present this poster.
86. de Castro Brás LE, DeLeon KY, Ma Y, Dai Q, Hakala K, Weintraub ST, and **Lindsey ML**. "Proteomic Analysis of Fractionated Plasma Identifies Alpha-2 Macroglobulin as an MMP-9 Dependent Marker Post-Myocardial Infarction". 9th Siena Meeting – From Genome to Proteome 2012, Siena, Italy (August 2012).
87. de Castro Bras LE, DeLeon KY, Dai Q, Fields GB, Weintraub ST, and **Lindsey ML**. MMP-9 Generated Collagen I C-terminus Peptides Enhance Cardiac Fibroblast Wound Healing Response. Circulation. 126(21_MeetingAbstracts): p. A16016. Scientific Sessions (November 2012). This abstract was selected for oral presentation.
88. Grimes KM, Chiao YA, Lindsey ML, and Buffenstein R. Cardiac Function in an Extraordinarily Long-lived Rodent, the Naked Mole-rat. Circulation. 2012; 126(21_MeetingAbstracts): p. A9857. Scientific Sessions (November 2012).
89. Ma Y, Halade GV, Zhang J, Ramirez TA, Voorhees A, Manicone AM, Jin Y-F, Han H-C, and **Lindsey ML**. Matrix Metalloproteinase-28 Deletion Exacerbates Cardiac Dysfunction and Rupture Following Myocardial Infarction in Mice. Circulation. 2012; 126(21_MeetingAbstracts): p. A15381. Scientific Sessions (November 2012).
90. Halade GV, Ma Y, Ramirez RA, Zhang J, Dai Q, Hensler J, Lopez EF, Jin Y-F, and **Lindsey ML**. Reduced BDNF Attenuates Early Inflammation and Improves Long-term Survival Following Myocardial Infarction in Mice. Circulation. 2012; 126(21_MeetingAbstracts): p. A12452. Scientific Sessions (November 2012).

Reviews and editorials

1. Frangogiannis, NG, Youker, KA, Rossen, RD, Gwechenberger, M, **Lindsey, ML**, Mendoza, LH, Michael, LH, Ballantyne, CM, Smith, CW, and Entman, ML, Cytokines and the Microcirculation in Ischemia and Reperfusion. *Journal of Molecular and Cellular Cardiology* 30:2567-2576. (1998) *
2. **Lindsey, M** and Lee, RT. MMP Inhibition as a Potential Therapeutic Strategy for CHF. *Drug News and Perspectives* 13(6): 350-354. (2000) *
3. **Lindsey, ML**, Mann, DL, Entman, ML, and Spinale, FG. Extracellular matrix remodeling following myocardial injury. *Annals of Medicine*, **35**(5): p. 316 - 326. (2003) * ¥
4. **Lindsey, ML**. MMP Induction and Inhibition in Myocardial Infarction. *Heart Failure Reviews*, 9(1): 1-17.(2004) * ¥
5. **Lindsey, ML** and Spinale, FG. Targeting matrix remodeling in cardiac hypertrophy and heart failure. *Drug Discovery Today: Therapeutic Strategies*, Volume 2, Issue 3: 253-258. (2005) * ¥
6. **Lindsey, ML** and Freeman, G.L. β -blockade in Heart Failure: Adding SENIORS to the Mix. *European Heart Journal*, 27(5): 506-507. (2006) * ¥ (2)
7. **Lindsey, ML**. Novel strategies to delineate matrix metalloproteinase (MMP)-substrate relationships and identify targets to block MMP activity. *Mini-Reviews in Medicinal Chemistry*, 6:1243-1248. (2006) * ¥ (2)
8. Hinojosa-Laborde, C, and **Lindsey, ML**. Aging Modifies the Cardiac Response to Estrogen: a new dimension to hormone replacement therapy. *Hypertension*, 48: 1-2. (2006) * ¥ (2)
9. Corbitt, CA, Lin, J., and **Lindsey, ML**. Mechanisms to Inhibit Matrix Metalloproteinase Activity: Where are we in the development of clinically relevant inhibitors?" *Recent Patents on Anti-Cancer Drug Discovery*, 2:135-142. (2007) * ¥ (2)
10. Ahuja, SS, Estrada, CA, and **Lindsey, ML**. Cross talk between CTLA-4 and IL-12 in Cytotoxic T Lymphocyte Mediated Myocarditis: adding another link to the chain. *Circulation Research*, 101: 218-220. (2007) * ¥ (2)
11. Jin Y, Han HC, and **Lindsey ML**. ACE Inhibitors to Block MMP-9 Activity: New Functions for Old Inhibitors. *JMCC*, 43(6): 664-666. (2007) * ¥ (2)
12. Kaludercic N, **Lindsey ML**, Tavazzi B, Lazzarino G, and Paolucci N. Inhibiting metalloproteases with PD 166793 in heart failure: impact on cardiac remodeling and beyond. *Cardiovascular Drug Reviews*, 26(1): 24-37. (2008) * (2)
13. Lambert JM, Lopez EF, and **Lindsey ML**. Macrophage Roles Following Myocardial Infarction. *International Journal of Cardiology*, 130(2): 147-58. (2008) * ¥ (2)
14. Zamilpa R and **Lindsey ML**. AMP activated protein kinase 2 Protection During Hypertension-Induced Hypertrophy: A Common Mediator in the Signaling Crossroads. *Hypertension*, 52(5):813-5. (2008) * ¥ (2) PMID:18838620
15. Lange RA and **Lindsey ML**. HDL-Cholesterol Levels and Cardiovascular Risk: AcCETPing the Context. *European Heart Journal*, 29:2708-9. (2008) * ¥ (2,7) PMID:18957471
16. Zamilpa R, Chilton RJ, and **Lindsey ML**. $\text{TNF}\alpha$ Converting Enzyme Roles in Hypertension- Induced Hypertrophy: Look Both Ways When Crossing the Street. *Hypertension*, 54(3):471-2 (2009) * ¥ (2,7,8) PMID:19581499
17. Ahmed HS and **Lindsey ML**. Titin Phosphorylation: Myocardial Passive Stiffness Regulated by the Intracellular Giant. *Circ. Res.* 105(7): p. 611-613. (2009) * ¥ (2,4,7,8) PMID:19797191
18. Zamilpa R and **Lindsey ML**. Extracellular matrix turnover and signaling during cardiac remodeling following MI: causes and consequences. *Journal of Molecular and Cellular Cardiology*, 48(3):558-63 (2010) * ¥ (2,7,8) PMID:19559709
19. **Lindsey ML** and Borg TK. Understanding the role of the extracellular matrix in cardiovascular development and disease: Where do we go from here? *Journal of Molecular and Cellular Cardiology*, 48(3):431-2 (2010) * ¥ (2,4,7,8) (introduction for the special issue). PMID:19781548
20. Zhang J, Erikson JM, and **Lindsey ML**. Going Out On a Lmcd1 Limb: a new way to block calcineurin activity. *Hypertension*, 55(2):231-2. (2010) * ¥ (2,4,7) PMID:20026762
21. Chiao YC, Jin Y, and **Lindsey ML**. Tipping the Extracellular Matrix Balance During Heart Failure Progression: Do we always go right? *Cardiology*, 116(2):130-2. (2010) * ¥ (2,3,4,5,7) PMID:20606425
22. Jourdan-LeSaux C, Zhang J, and **Lindsey ML**. Extracellular Matrix Roles During Cardiac Repair. *Life Sciences*, 87:391-400. (2010). * ¥ (2,3,4,7) PMID:20670633
23. Rodriguez KA, Wywial E, Perez VI, Lambert AJ, Edrey YH, Lewis KN, Grimes K, **Lindsey ML**, Brand MD, Buffenstein R. Walking the Oxidative Stress Tightrope: A Perspective from the Naked Mole-Rat, the Longest Living Rodent. *Curr Pharm Des*, 17(22):2290-307 (2011). * (2,3,4) PMID:21736541
24. Chiao YA, Dai Q, Zhang J, Lin J, Lopez EF, Ahuja SS, Chou YM, **Lindsey ML**, Jin YF. Response to letter by Lee regarding article, "Multi-analyte profiling reveals matrix metalloproteinase-9 and monocyte chemotactic protein-1 as plasma biomarkers of cardiac aging". *Circ Cardiovasc Genet.* 2011 Dec 1;4(6):e31.(2011) (1,2,3,4,6) PMID:22187455
25. **Lindsey ML** and Zamilpa R. Temporal and Spatial Expression of Matrix Metalloproteinases and Tissue Inhibitors of Metalloproteinases Following Myocardial Infarction. *Cardiovascular Therapeutics*, 30(1):31-41 (2012). * (2,4,7,8) PMID20645986
26. Halade GV, Jin YF, and **Lindsey ML**. Roles of saturated vs. polyunsaturated fat in heart failure survival: not all fats are created equal. *Cardiovasc Res*, 93(1):4-5 (2012) * ¥ (1,2,3,4) PMID: 22068160

27. **Lindsey ML** and Borg TK. Extracellular Matrix and Cardiovascular Remodeling: Using microscopy to delineate mechanisms. *Microscopy and Microanalysis*, 18(1):1-2 (2012). * ¥ (1,2,3,4)
28. DeLeon KY, de Castro Brás L, Lange RA, and **Lindsey ML**. "Extracellular Matrix Proteomics in Cardiac Ischemia/Reperfusion: the Search is On." *Circulation*, 125(6):746-8. (2012). * ¥ (1,2,3,4)
29. **Lindsey ML**, Weintraub ST, Lange RA. Using Extracellular Matrix Proteomics to Understand Left Ventricular Remodeling. *Circ Cardiovasc Genet*. 5:01-07 (2012). * ¥ (1,2,3,4)
30. Ma Y, Chilton RJ, and **Lindsey ML**. Heart Rate Reduction: an Old and Novel Candidate Heart Failure Therapy. *Hypertension*, 59: 908-910 (2012). * ¥ (1,2,3,4)
31. de Castro Brás L, DeLeon KY, and **Lindsey ML**. Women are different: the role of coupling factor 6 in blood pressure regulation. *Hypertension Research*, 35:485-6 (2012). * ¥ (1,2,3,4)
32. Ma Y, **Lindsey ML**, and Halade GV. DHA derivatives of fish oil as dietary supplements: a nutrition-based drug discovery approach for therapies to prevent metabolic cardiotoxicity. *Expert Opin Drug Discov*. Aug 7(8):711-21 (2012) PMID: 22724444 * (1,2,3,4)
33. Ma Y, Halade GV, and Lindsey ML. Extracellular Matrix and Fibroblast Communication Following Myocardial Infarction. *Journal of Cardiovascular Translational Research*. 5(6):848-7 (2012). * ¥ (1,2,3,4)
34. Iyer RP, Patterson NL, Fields GB, **Lindsey ML**. The History of Matrix Metalloproteinases (MMPs): Milestones, Myths, and Misperceptions. *Am J Physiol Heart Circ Physiol*. Oct; 303(8):H919-30 (2012) PMID: 22904159 * ¥ (1,2,3,4)
35. Ma Y, Yabluchanskiy A, **Lindsey ML**, and Chilton RJ. Is Isolated Systolic Hypertension Worse than Combined Systolic/Diastolic Hypertension. *The Journal of Clinical Hypertension*. Nov 14(11):808-9 (2012). PMID:23126357 * (1,2,3,4)
36. Yabluchanskiy A, Li Y, Chilton RJ, and **Lindsey ML**. Matrix metalloproteinases: drug targets for myocardial infarction. *Curr Drug Targets*. (in press, 2013) PMID:23316962 * (1,2,3,4)

4. Other:

Invited Lectures and Presentations:

1. Cardiology Division Seminar Series, Brigham and Women's Hospital, Boston, MA. (2000)
2. Vascular Research Division Seminar Series, Brigham and Women's Hospital, Boston, MA. (2002).
3. Grand Rounds, Cardiovascular Disease Division, University of Alabama at Birmingham, Birmingham, AL. (2002).
4. Cardiothoracic Division Seminar Series, Medical University of South Carolina, Charleston, SC. (2002).
5. Program in Molecular and Cellular Biology and Pathobiology Seminar Series, Medical University of South Carolina, Charleston, SC. (2003).
6. Department of Cell and Molecular Pharmacology and Experimental Therapeutics Seminar Series, Medical University of South Carolina, Charleston, SC. (2003).
7. Applications to Specific Disease States: Hypertrophy. In the Basic Science Workshop "The Cardiovascular Proteomics Initiative: Defining a New Frontier in Cardiovascular Research, Heart Failure Society of America Conference, Las Vegas, NV. (Sept 2003).
8. Cardiology Research Conference at the University of Texas Health Science Center at San Antonio, San Antonio, TX. (Feb 2005).
9. Department of Pharmacology and Neuroscience Seminar Series, Texas Tech University Health Science Center, Lubbock, TX. (Feb 2005).
10. Department of Cellular and Structural Biology Seminar Series at the University of Texas Health Science Center at San Antonio, San Antonio, TX. (Sept 2005).
11. Cardiovascular Sciences Section Seminar, Department of Medicine, Baylor College of Medicine, Houston, TX. (Feb 2006).
12. "Integrated Modeling of Post-Myocardial Infarction Fibroblast Activation". 2006 Seminars in Basic and Clinical Investigation Seminar Series at The University of Texas Health Science Center at San Antonio, TX. (Sept 8, 2006).
13. "Integrated Modeling of Post-Myocardial Infarction Fibroblast Activation". The Department of Medicine Research Seminar Series, The University of Texas Health Science Center at San Antonio, TX. (Sept 19, 2006).
14. "Integrated Modeling of Post-Myocardial Infarction Fibroblast Activation". The University of Texas at San Antonio, Minority Biomedical Research Support (MBRS) and Minority Access to Research Careers (MARC) Fall 2006 Seminar Series. (Oct 20, 2006).
15. "Integrated Modeling of Post-Myocardial Infarction Fibroblast Activation". Biology Department Seminar, St. Mary's University, San Antonio, TX. (Oct 27, 2006).
16. "Extracellular Matrix Remodeling: Causes and Consequences". Department of Pediatrics Research Seminar Series, The University of Texas Health Science Center at San Antonio, TX. (March 1, 2007).
17. "Extracellular Matrix Remodeling: Causes and Consequences". IBT Information Exchange Seminar, Institute of Biosciences and Technology, Texas A&M University Health Science Center, Houston, TX. (March 2007).
18. "Modeling Fibroblast Activation to Improve Outcomes Post-MI". Cardiology Research Seminar, University of Texas Health Science Center at Houston, Houston, TX. (Sept 2007).

19. "Using a Portfolio to Document Excellence in Teaching". 2007 Cellular and Structural Biology Retreat, UTHSCSA, San Antonio, TX. (Sept 2007). Presented on why we need to document excellence in teaching and how we can do this using a teaching portfolio.
20. "Knowing What You Want". Women's Faculty Association General Meeting, UTHSCSA, San Antonio, TX. (Oct 2007). Presented on how to create a career development agenda.
21. "The Importance of Networking". Healthcare Businesswomen's Association, San Antonio Affiliate. (Jan 24, 2008). Presented on how my support network has been important in my career and how the HBA has contributed to my networking.
22. "Navigating the Extracellular Matrix Complexity of Left Ventricular Remodeling". UCSD Cardiology Research Seminar, San Diego, CA. (April 2008).
23. "Extracellular Matrix Mechanisms of Cardiac Aging". Sam and Ann Barshop Institute for Longevity and Aging Studies Research Seminar, UTHSCSA, San Antonio, TX. (Sept 2008)
24. "Navigating the Extracellular Matrix Complexity of Left Ventricular Remodeling". University of Pittsburgh Cardiology Grand Rounds, Pittsburgh, PA. (Oct 2008).
25. "Negotiation: Knowing Now What I Didn't Know Then". Co-Presented with Dr. Martha Medrano, Women's Faculty Association General Meeting, UTHSCSA, San Antonio, TX. (Feb 2009)
26. "Academic Medicine/ Research" Discussion Leader. 1st Annual Career Development Day for UTHSCSA MSIII Students. San Antonio, TX (April 14, 2009)
27. "Navigating the Extracellular Matrix Complexity of Left Ventricular Remodeling". Department of Physiology, James H. Quillen College of Medicine, East Tennessee State University, Johnson City, TN. (May 2009)
28. "LV Remodeling in Aging and Infarction." Cardiovascular Sciences, Department of Medicine, Baylor College of Medicine, Houston, TX. (Aug 2009)
29. "Using Systems Biology Approaches to Understand Extracellular Matrix Remodeling." Cardiology Division, Department of Medicine, The Johns Hopkins University School of Medicine, Baltimore, MD. (Sept 2009)
30. "Role of Periodontal Disease in Post-Myocardial Infarction Remodeling." The Max and Minnie Tomerlin Voelcker Fund Trustees. (Oct 2009)
31. "Measuring Cardiac Healthspan." Lifespan and Healthspan Extension in Aging Research: When Is It Real and How Can We Be Certain? Bandera Conference, Barshop Institute. (Oct 2009)
32. "Aging and the Heart". National Conference of State Legislatures, Legislators in the Lab. UTHSCSA (Nov 2-3, 2009)
33. "How I Became a Cardiovascular Scientist". Presented to 355 7th grade science students at Driscoll Middle School, San Antonio, TX, as part of the American Physiological Society, Physiology Understanding (PhUN) Week.
34. "Collagen and Cardiac Repair". Post-Infarct Remodeling: Contribution of Wound Healing (evening seminar). American Heart Association Scientific Sessions. (Nov 2009)
35. "How to be a good mentor to your students." Women's Faculty Association General Meeting, UTHSCSA, San Antonio, TX. (Jan 2010)
36. "Novel Strategies in Cardiovascular Extracellular Matrix Proteomics". Department of Cell Biology and Anatomy, University of South Carolina, Columbia, SC. (April 2010)
37. "Extracellular matrix causes and consequences of infarct remodeling". Feature Topic Session: Extracellular Matrix and Pathology of Cardiovascular Disease. Experimental Biology Meeting. (April 2010)
38. "Three Pieces of Advice for Your Career." Women's Faculty Association Student Leadership Award Ceremony, UTHSCSA, San Antonio, TX. (May 2010)
39. "Using Extracellular Matrix Proteomic Approaches to Understand Left Ventricular Remodeling". Biochemistry Department, University of South Alabama School of Medicine. (June 2010)
40. "MMP-9 Regulation of Cardiac Remodeling". The Child Health Research Center Seminar Series, The Research Institute at Nationwide Children's Hospital, Ohio State University. (July 2010)
41. "Novel Therapeutic Strategies for the Post-MI Patient". Internal Medicine Grand Rounds, University of South Alabama School of Medicine. (September 2010)
42. "MMP-9 Regulation of Cardiac Remodeling". Department of Physiology Seminar Series, University of Louisville School of Medicine. (September 2010)
43. "Using extracellular matrix proteomics to understand cardiac remodeling". Cardiovascular Research Center Seminar, Massachusetts General Hospital, Boston, MA. (October 2010)
44. "How to measure ECM globally". How to Profile the Extracellular Matrix: Tools and Strategies Session at the American Heart Association Scientific Sessions, Chicago, IL. (November 2010).
45. "Left Ventricular Adaptations to Chronic and Intermittent Hypoxia". Department of Integrative Physiology Seminar Series, University of North Texas Health Science Center, Ft. Worth, TX. (December 2010)
46. "Using ECM-Specific Microarrays and Proteomics to Gain Insight into Cardiac Remodeling Post-Myocardial Infarction". Extracellular Matrix and Cardiovascular Remodeling Keystone Symposium, Tahoe, CA. (January 2011)
47. "Post-MI Remodeling from the Extracellular Matrix View". Texas A&M Health Science Center, Division of Molecular Cardiology, Temple, TX. (February 2011)

48. "Multi-dimensional approaches to study cardiac extracellular matrix remodeling". New York University, Cardiology Division Research Seminar, New York City, NY. (February 2011)
49. "Multi-dimensional approaches to study cardiac extracellular matrix remodeling". Cardiovascular Basic Science Seminar, Texas Heart[®] Institute at St. Luke's Episcopal Hospital, Houston, TX. (April 2011)
50. "Personalized Medicine in the Era of Omics – Genomics, Epigenomics, Proteomics, Metabolomics". (panel discussion) Department of Medicine Research Day. (May 2011)
51. "Post-MI Remodeling from the Extracellular Matrix View". Cardiovascular Research Center and the Department of Physiology, Temple University School of Medicine, Philadelphia, PA. (May 2011)
52. "Cardiac Remodeling from the Extracellular Matrix View". Department of Physiology and Biophysics, University of Mississippi Medical Center, Jackson, MS. (August 2011)
53. "Cardiac Remodeling from the Extracellular Matrix View". Barshop Institute for Aging and Longevity Studies, UTHSCSA, San Antonio, TX. (September 2011)
54. "Using Extracellular Matrix Proteomic Strategies to Understand Cardiac Remodeling Post-MI". Distinguished Lectureship of Proteomic Science at UCLA, Los Angeles, CA. (September 2011)
55. "Establishing Collaborations/ Leading a Successful Research Laboratory". KL2 Seminar, UTHSCSA, San Antonio, TX (September 2011). This lecture was given to the KL2 scholars that are part of our CTSA training program. Of 7 attendees, the evaluation score was 1.17 ± 0.31 (1=best; 5=worst).
56. "Novel Strategies Targeting the Cardiac Extracellular Matrix". Department of Pharmacology and Toxicology, Maastricht University, Maastricht, Netherlands. (October 17, 2011)
57. "Novel Strategies Targeting the Cardiac Extracellular Matrix". Klinik und Poliklinik für Herzchirurgie, Universitätsklinikum Bonn, Bonn, Germany. (October 19, 2011)
58. "Novel Strategies Targeting the Cardiac Extracellular Matrix". ICCAD 2011 - the 9th International Congress on Coronary Artery Disease, Venice, Italy. (October 25, 2011)
59. "Extracellular Matrix Proteomics and Cardiovascular Remodeling". Department of Molecular Pathology. Università degli Studi di Urbino, Urbino, Italy. (October 27, 2011)
60. "Using extracellular matrix proteomic strategies to understand cardiac remodeling post-MI." Wilf Family Cardiovascular Research Institute, Albert Einstein College of Medicine, New York, NY. (November 8, 2011)
61. "Cardiac Remodeling from the Extracellular Matrix View". Department of Molecular Medicine, UTHSCSA, San Antonio, TX. (December 13, 2011)
62. "Cardiac Wound Healing from the Extracellular Matrix View." San Antonio Wound Healing Group Seminar Series, Southwest Research Institute, San Antonio, TX. (January 19, 2012)
63. "Cardiac Remodeling from the Extracellular Matrix View". Department of Physiology, Loyola University Health Sciences Center, Chicago, IL. (March 23, 2012).
64. Cardiac Remodeling from the Extracellular Matrix Perspective". Department of Medicine Research Series, UTHSCSA, San Antonio, TX. (March 27, 2012).
65. "Tips for Thriving in a Scientific Career". Trainee Meetings Outside the Box (TMOB) Seminar Series, UTHSCSA, San Antonio, TX. (April 11, 2012).
66. "Using Proteomics to Identify Novel Extracellular Matrix Mechanisms of Cardiac Remodeling". Third Wenzhou International Diabetic Complication Forum. Chinese-American Research Institute for Diabetic Complications, Wenzhou Medical College, Wenzhou, Zhejiang, China. (May 1, 2012).
67. "Cardiac Remodeling from the Extracellular Matrix Perspective". The Center for Cardiovascular Research, University of Illinois at Chicago, Chicago, IL. (May 18, 2012)
68. "The Extracellular Matrix in Cardiac Remodeling During Aging and Disease". Gerontology Division, Department of Medicine, Fourth Military Medical Institution, Xi'an, China. (June 2012)
69. "The Heart of Aging". Barshop Institute for Aging and Longevity Studies, UTHSCSA, San Antonio, TX. (June 2012)
70. "Cardiac Remodeling from the Extracellular Matrix View". Cardiology Division, UCSD, San Diego, CA. (July 2012)
71. "Cardiac Remodeling from the Extracellular Matrix View". The Hopkins Bayview Proteomics Centre, Johns Hopkins University, Baltimore, MD. (August 2012)
72. "Cardiac Remodeling from the Extracellular Matrix View". Physiology Department, University of Alberta, Edmonton, Canada. (August 2012)
73. "Lead-Header-Ship: Leveraging your career to match your authentic self." (panel discussion) Healthcare Businesswomen's Association, San Antonio Chapter, San Antonio, TX. (September 2012)
74. "Session III: Cardiopulmonary". (individual speaker and panel discussion). Mouse Healthspan: Why Lifespan is No Longer Enough. 2012 San Antonio Nathan Shock Center Conference on Aging. (October 2012)
75. "Extracellular Matrix Roles in Cardiac Remodeling". Physiology Department, School of Medicine, LSU Health New Orleans, New Orleans, LA. (October 2012)

Sessions Moderated and Symposia Organized

1. Organized and moderated the "Ask the Experts: Extracellular Matrix Effects on Cardiac Remodeling" Session at the American Heart Association Scientific Sessions, New Orleans, LA (November 10, 2008).
2. Co-chaired the featured topic "Matrix Metalloproteinases in Mitochondrial, Cytoskeletal, and Nuclear Remodeling" for the Experimental Biology Meeting, Anaheim, CA. (April 2010).
3. Organized and co-moderated the Daytime Seminar Session, "Challenging Issues in Cardiac Fibrosis: Are Fibroblasts Pharmacologic Targets in LV Remodeling?" at the American Heart Association Scientific Sessions, Chicago, IL (November 15, 2010).
4. Co-Organized the Keystone Symposium, "Extracellular Matrix and Cardiovascular Remodeling (B2)", Granlibakken Resort, Tahoe City, CA. (January 23-28, 2011). This included co-moderating one session, serving as a panel member of the career development workshop, and providing introductory and concluding remarks.
5. Co-chaired the featured topic "ECM-Cardiomyocyte Signaling in Heart Disease" for the Experimental Biology Meeting, Washington, D.C. (April 2011).
6. Organized and Chaired the "Physiology InFocus: Physiology in Medicine. Using Physiology to Translate Cardiac Remodeling and Heart Failure" Symposium for the Experimental Biology Meeting, San Diego, CA (April 2012).
7. Organized and Chaired the "Targeted Proteomic Analyses of Heart Failure" Feature Topic for the Experimental Biology Meeting, American Physiological Society, Cardiovascular Section, San Diego, CA (April 2012).

Social Media Groups Organized:

1. Established the CV-ECM Linked in group (http://www.linkedin.com/groups?gid=3775394&trk=hb_side_g), which currently has >110 members from the international research community. The purpose of the Cardiovascular Extracellular Matrix Group is to provide a forum for researchers to share ideas, protocols, and resources that will propel our field forward.
2. Filmed a commercial for our proteomics center that was placed on You Tube: <http://www.youtube.com/watch?v=WLjg-1VEw4Q> – this commercial has been seen by >900 viewers.

B. Areas of Research Interest:**MISSION STATEMENT**

My laboratory is dedicated to performing cardiovascular research that involves:

1. **Developing multidimensional approaches to examine the mechanisms whereby the left ventricle responds to injury;**
2. **Applying the knowledge gained to develop therapeutic strategies to prevent, slow, or reverse the progression to heart failure; and**
3. **Disseminating our results to general, scientific, and medical communities.**

Research Description. Cardiac extracellular matrix biology is my major research focus, particularly changes to the matrix that are the cause or effect of pathophysiological processes. These changes include cell-matrix interactions, which both affect and react to processes involved in tissue repair. My laboratory primarily uses the murine model of myocardial infarction (MI). In addition to physiological parameters, we also measure biochemical, cell biological, and proteomic outputs. The main focuses of my laboratory are: a) the role of macrophage-derived MMPs in LV remodeling post-MI; b) the role of the cardiac fibroblast in the remodeling process, and c) the influence of aging on LV remodeling.

C. Current Projects:

1. Identifying novel MMP-7 and MMP-9 substrates in post-MI tissues.
2. Using peptidomics to identify novel signaling pathways altered post-MI.
3. Examining the roles of macrophages and fibroblasts in post-MI remodeling of the left ventricle.
4. Determining the role of aging or periodontal disease on the remodeling process.
5. Discovering novel biomarkers of adverse left ventricular remodeling.

D. Research Support:**1. NATIONAL**Current:

Source: NIH/ NHLBI
Title: NHLBI UTHSCSA Cardiovascular Proteomics Center
Period: August 15, 2010 to August 14, 2015
Direct Costs/ Current: \$1,452,692
Year/ Total*: 5/ \$11,643,580
Role: Principal Investigator

Source: NIH/ NHLBI 2 R01 HL075360
Title: The Role of Macrophage-Derived MMP-9 in LV Remodeling
Period: July 1, 2010 to April 30, 2015
Direct Costs/ Current: \$272,270
Year/ Total*: 5/ \$1,863,375
Role: Principal Investigator

Supplements: NIH NHLBI 3R01HL075360-07A2S1 and S2
Period: Aug 1, 2010 to April 30, 2015 and Sept 1, 2011 to Aug 30, 2013
Direct Costs/ Current: \$24,699 and \$53,957
Year/ Total*: 5/ \$193,644 and 2/ \$168,123

Details: Minority Supplements: Nicolle Patterson and Rogelio Zamilpa, PhD. The S2 supplement was terminated early (March 2012), as Dr. Zamilpa transitioned to industry.

Source: Veteran's Administration
Title: MMP-9 Roles in the Aging Myocardial Response to Ischemia
Period: April 1, 2010- March 31, 2014
Direct Costs/ Current \$ 217,326
Year/ Total*: 4/ \$869,304 (Direct)
Role: Principal Investigator
 This application received a priority score of 119 (0.6 percentile) on first submission.

Source: NIH/NHLBI R01 HL095852
Title: Biomechanical mechanisms of artery tortuosity
Period: 3/1/2010-12/31/2014
Direct Costs/ Current: \$250,000 (direct)
Year/ Total*: 5/ \$1,821,770
Role: Co-Investigator (PI: Hai-Chao Han)

Source: NIH/NCCAM K99 AT006704
Title: DHA Mechanisms in Obesity-Mediated Cardiac Remodeling Post-Myocardial Infarction
Period: 8/1/11-6/30/2013
Year/ Total*: 2/ \$194,400
Role: Mentor (PI: Ganesh Halade, PhD)

Completed:

Source: NIH NRSA Fellowship F32 HL10337
Title: Targeted Deletion of MMP-9 and Left Ventricular Remodeling
Period: May 1, 2000 to May 31, 2003
Year/ Total*: 3/ \$109,960 (Direct)
Role: Principal Investigator

Source: NIH NHLBI R01 HL075360
Title: The Role of Macrophage-Derived MMPs in LV Remodeling
Period: July 1, 2004 to June 30, 2010
Direct Costs/ Current: \$250,000
Year/ Total*: 5/ \$1,250,000 (Direct)
Role: Principal Investigator
Supplements: NIH NHLBI R01 HL075360S1
Period: June 1, 2007 to August 31, 2008
Direct Costs/ Current: \$2,716
Year/ Total*: 3/ \$10,716 (Direct)
Details: Minority Supplement for high school student Elizabeth Lopez.

Source: Health Resources and Services Administration
Title: Center for Cardiovascular Systems Biology
Period: September 1, 2010 to August 31, 2011
Direct Costs/ Current: \$224,495
Year/ Total*: 1/ \$297,000
Role: Principal Investigator

Source: NIH/EB 1R03 EB 009496
Title: Mathematical Modeling of Matrix Metalloproteinase-9 Driven Left Ventricular Remodeling Post Myocardial Infarction
Period: 9/1/2010-8/31/2011
Year/ Total*: 1/ \$82,799
Role: Co-Investigator (PI: Yufang Jin, PhD)

Source: Veteran's Administration
Title: Role of CCR5 in EPC Biology and Atherosclerosis
Period: September 2008- August 2012
Direct Costs/ Current: \$150,000
Year/ Total*: 4/ \$600,000 (Direct)
Role: Co-Investigator (PI: Seema Ahuja)

Source: NIH/NHLBI T32 HL07446
Title: Pathobiology of Occlusive Vascular Disease
Period: 07/1990- 08/2015
Year/ Total*: 5/ \$1,018,107.00 (Direct)
Role: 2007-2013: Co-Investigator (PI: Linda McManus)
 2009-2013: Associate Program Director

Source: NIH/NIA T32 AG021890-07
Title: Training Grant on the Biology of Aging
Period: 05/01/2003-04/30/2013
Year/ Total*: 5/ \$ \$628,580 (Annual Total)
Role: 2008-2013: Co-Investigator/Mentor (PI: Steve Austad)

Source: NIH/NHLBI SC2 HL101430
Title: Effects of Aging on LV Geometry and MMP-9 Expression Level
Period: 9/1/2009-8/31/2012
Direct Costs/ Current: \$100,000
Year/ Total*: 3/ \$ 397,375 (Total)
Role: Consultant (PI: Yufang Jin)

Source: NIH/NIA RC2 AG036613
Title: Can Rapamycin Retard Age-Related Diseases?
Period: 9/30/2009-8/31/2012
Year/ Total*: 2/ \$2,576,662
Role: Co-Investigator (PI: Arlan Richardson, PhD)

Source: NIH/NIA P30 AG13319
Title: Nathan Shock Aging Center- Healthspan and Functional Core
Period: 9/30/09-6/30/2012
Year/ Total*: \$259,732
Role: Co-Investigator (PI: Arlan Richardson, PhD)

2. UNIVERSITY

Completed:

Source: The University of Texas Health Science Center at San Antonio
 Translational Science Training (TST) Program
Title: Matrix Metalloproteinase-9 (MMP-9) Roles in Cardiac Aging
Period: 8/1/2009 – 7/31/2010
Direct Costs/ Current \$33,000/ \$33,000
Year/ Total* 1/ \$33,000 (Direct)
Role: Mentor (Scholar: Ying Ann Chiao, Dept Biochemistry, Metabolism and Metabolic Disorders Track)

Source: The University of Texas Health Science Center at San Antonio Executive Research Committee
 Pilot Project Grant
Title: Extracellular Matrix Changes in Chronic and Intermittent Hypoxia
Period: 9/1/2008 – 8/31/2009
Direct Costs/ Current \$15,000 / \$15,000
Year/ Total* 1/ \$15,000 (Direct)
Role: Principal Investigator

Source: The University of Texas at San Antonio
 Collaborative Research Seed Grant Program (CRSGP)
Title: Why do arteries become tortuous?
Period: 11/8/2008 – 8/31/2009
Direct Costs/ Current \$30,000 / \$30,000
Year/ Total* 1/ \$30,000 (Direct)
Role: Co-PI (PI: Hai-Chao Han)

Source: The University of Texas Health Science Center at San Antonio
 Executive Research Committee Pilot Project Grant
Title: Age-Related Differences in Myocardial Matricryptin Profiles
Period: 7/1/2006 – 6/30/2007
Direct Costs/ Current \$15,000 / \$15,000
Year/ Total* 1/ \$15,000 (Direct)
Role: Principal Investigator

Source: The University of Texas Health Science Center at San Antonio Executive Research Committee
 Pilot Project Grant
Title: Multi-Analyte Profiling to Determine Age-Related Protein Changes in Murine Plasma Samples
Period: 3/1/2007 – 2/29/2008
Direct Costs/ Current \$15,000 / \$15,000
Year/ Total* 1/ \$15,000 (Direct)
Role: Principal Investigator

3. OTHER

Current:

Source: American Heart Association
 Postdoctoral Fellowship
Title: P. gingivalis primes the post-myocardial infarction remodeling response
Period: January 1, 2013 to December 31, 2014
Direct Costs/ Current \$ \$43,976.00
Year/ Total* 2/ \$ \$90,772.00 (Total)
Role: Mentor (PI: K. DeLeon)

Completed:

- Source:** American Heart Association, Texas Affiliate
Beginning-Grant-in-Aid 0665032Y
Title: Extracellular Matrix Remodeling in the Aging Myocardium
Period: July 1, 2006 to June 30, 2008
Direct Costs/ Current \$59,091
Year/ Total* 2/ \$130,000 (Total)
Role: Co-Investigator (PI: G. Patricia Escobar)
- Source:** Morrison Trust
Title: Anti-inflammatory effects of dietary sulforaphane, a component in broccoli
Period: October 1, 2008 to September 30, 2009
Direct Costs/ Current \$60,000
Year/ Total* 1/ \$72,000 (Total)
Role: Principal Investigator
- Source:** American Heart Association, South Central Affiliate
Grant-in-Aid 0855119F
Title: Macrophage-Dependent Mechanisms of Post-Myocardial Infarction Remodeling
Period: July 1, 2008 to June 30, 2010
Direct Costs/ Current \$63,636
Year/ Total* 2/ \$140,000 (Total)
Role: Principal Investigator
- Source:** American Heart Association, South Central Affiliate
Postdoctoral Fellowship
Title: MMP-9 Regulation of Cardiac Fibroblast Activation Post-Myocardial Infarction
Period: July 1, 2009 to June 30, 2011
Direct Costs/ Current \$ 42,000
Year/ Total* 2/ \$82,000 (Direct)
Role: Sponsor (Zamilpa, PI)
- Source:** Novartis
Title: Role of Aliskiren/ Valsartan in Modulating MMP-9 Post-MI Remodeling
Period: January 26, 2010- June 30, 2011
Direct Costs/ Current: \$176,000
Year/ Total* 1/ 221,760 (Total)
Role: Principal Investigator
- Source:** The Max and Minnie Tomerlin Voelcker Fund Young Investigator Award
Title: Role of Periodontal Disease in Post-Myocardial Infarction Remodeling
Period: July 1, 2009- June 30, 2014 (terminated January 13, 2013 due to re-location to Jackson, MS)
Direct Costs/ Current: \$136,364
Year/ Total* 5/ \$750,000 (Total)
Role: Principal Investigator
- Source:** American Heart Association, South Central Affiliate
Grant-in-Aid 10GRNT4020024
Title: Caveolin-1 Prevents the Development and Progression of Cardiac Remodeling
Period: July 1, 2010 to June 30, 2012
Direct Costs/ Current \$63,636
Year/ Total* 2/ \$140,000 (Total)
Role: Co-Investigator (LeSaux, PI)
- Source:** Amylin Pharmaceuticals, Inc.
Title: Cardiac Remodeling in a Dahl Salt Sensitive Rat Model
Period: December 2011 to June 2013
Year/ Total* 1/ \$211,450 (Total)
Role: Co-Principal Investigator (with Ganesh Halade, PhD)

Source: Canopus BioPharma
Title: Cardiac Sarcopenia Study
Period: June 2012 to May 2013
Year/ Total* 1/ \$246,456 (Total)
Role: Co-Principal Investigator

IV. SERVICE

E. Professional Affiliations:

1. **Current Professional and Scientific Organizations and Societies (*requires election or examination for membership)**

Year(s)	Organization
1995-present	American Heart Association, Council on Basic Cardiovascular Sciences and Interdisciplinary Council on Functional Genomics and Translational Biology 2008-2012- Fundraiser for the San Antonio Heart Walk 2010 and 2012- \$1,000 Club member; raised >\$1,000 for the heart walk, primarily by soliciting \$25 individual donations
	2011- Fellow, Council on Basic Cardiovascular Sciences 2012-4- Member, Membership/ Communications Committee, BCVS Council
	2012- Fellow, Council on Functional Genomics and Translational Biology
2001-present	American Association for the Advancement of Science
2002-2008	National Association for Female Executives
2003-present	Federation of the American Society of Experimental Biologists* 2003-present The American Physiological Society* 2006 Minority Travel Fellow Mentor for Nildris Cruz-Dias 2008 Minority Travel Fellow Mentor for Mesia M. Steed 2009-2012 Nominating Committee, Cardiovascular Section 2009-2013 APS Cardiovascular Section Programming Committee Co-Chair- Each year, my co-chair and I select 8 symposium and 9 featured topics and program approximately 600 posters for the Experimental Biology meeting. 2009-2013 APS Cardiovascular Section Steering Committee Member 2009-2013 APS Joint Programming Committee, Cardiovascular Section Representative 2010-2013 APS Translational Physiology Interest Group Steering Committee Chair 2011-2012 APS Actively work to attract, meet the needs of, engage, and retain membership Task Force; Women Subgroup of the Task Force 2012-present Fellow, CV section 2007-2012 American Society for Investigative Pathology
2003-present	Heart Failure Society of America*
2004-present	Association for Women in Science
2007-present	Healthcare Businesswomen's Association Member 2007 Member, Marketing and Publicity Committee 2007-2008 Co-Chair, Women in Science Affinity Group for San Antonio 2011 Member, Nominating Committee, San Antonio Chapter
2010-present	International Society of Heart Research, American Section
2010-present	American Society for Matrix Biology
2011-present	Saving Tiny Hearts Society 2011 Chair Pro Tempore, Medical Advisory Board
2012-present	American Aging Association

2. **Journal Reviewing and Editing:**

Year(s)	Journal	Activity
2010-present	ACS Chemical Biology	Reviewer
2011-present	Acta Biomaterialia	Reviewer
2007-present	Aging Cell	Reviewer
2012-present	American Journal of Cardiology	Reviewer
2008-present	American Journal of Hypertension	Reviewer
2005-present	American Journal of Physiology- Heart and Circulatory Physiology	Reviewer
	Jan 2011- present	Editorial Board
	Jan 2013- present	Consulting Editor
2005-present	American Journal of Physiology- Regulatory, Integrative and Comparative Physiology	Reviewer
2011-present	The Anatomical Record	Reviewer

2010-present	Angewandte Chemie	Reviewer
2004-present	Annals of Medicine	Reviewer
2008-present	Archives of Medical Research	Reviewer
2007-present	Archives of Pharmacology	Reviewer
2008-present	Atherosclerosis	Reviewer
2007-present	Arteriosclerosis, Thrombosis, and Vascular Biology	Reviewer
2008-present	Biochimica et Biophysica Acta	
	-Molecular Basis of Disease	Reviewer
	-Molecular Cell Research	Reviewer
	-General Subjects	Reviewer
	-Proteins and Proteomics	Reviewer
2006-present	Biochemical Pharmacology	Reviewer
2007-present	Biomarkers in Medicine	Reviewer
2007-present	Cardiology	Reviewer
2005-present	Cardiovascular Drugs and Therapy	Reviewer
2011-present	Cardiovascular Pathology	Reviewer
2005-present	Cardiovascular Research	
	2005-present	Reviewer
	2008-present	Consulting Editor
2010-present	ChemMedChem	Reviewer
2002-present	Circulation	Reviewer
2008-present	Circulation: Heart Failure	Reviewer
2004-present	Circulation Research	Reviewer
	2007-present	Diamond Reviewer (reviewed >10 manuscripts)
	2008-present	Triage and Tie-Breaker Reviewer
	2009-present	Editorial Board
	2009- named one of the best reviewers of the year	
2011-present	Clinical Science	Reviewer
2009-present	Current Medicinal Chemistry	Reviewer
2005-present	Current Pharmaceutical Design	Reviewer
2010-present	Cytokine	Reviewer
2007-present	Drug Discovery Today	Reviewer
2008-present	European Journal of Pediatrics	Reviewer
2008-present	European Journal of Pharmacology	Reviewer
2004-present	European Heart Journal	Reviewer
2007-present	Expert Opinion on Drug Discovery	Reviewer
2010-present	Expert Opinion on Investigational Drugs	Reviewer
2010-present	Expert Opinion on Therapeutic Targets	Reviewer
2008-present	Experimental Gerontology	Reviewer
2008-present	FASEB Journal	Reviewer
2012-present	Fibrogenesis and Tissue Repair	Reviewer
2011-present	Frontiers in Bioscience	Reviewer
2011-present	Frontiers in Genetics of Aging	Review Editorial Board
2011-present	Heart Failure Reviews	Reviewer
2006-present	Hypertension	Reviewer
	2009-present	Editorial Board
2007-present	Hypertension Research	Reviewer
2010-present	Immunobiology	Reviewer
2011-present	Indian Journal of Biochemistry and Biophysics	Reviewer
2004-present	International Journal of Cardiology	Reviewer
2008-present	International Journal of Developmental Biology	Reviewer
2011-present	IUBMB Life	Reviewer
2008-present	Journal of the American College of Cardiology	Reviewer
2011-present	Journal of Applied Physiology	Reviewer
2006-present	Journal of Biological Chemistry	Reviewer
2002-present	Journal of Cardiac Failure	Reviewer
	2009-present	Editorial Board
2011-present	Journal of Cardiovascular Medicine	Reviewer
2008-present	Journal of Cardiovascular Pharmacology	Reviewer
	2011-present	Tie-breaker reviewer

2006-present	Journal of Dental Research	Reviewer
2008-present	Journal of Experimental Gerontology	Reviewer
2007-present	Journal of Gene Medicine	Reviewer
2008-present	Journal of Gerontology: Biological Sciences	Reviewer
2008-present	Journal of Histochemistry and Cytochemistry	Reviewer
2002-present	Journal of Molecular and Cellular Cardiology	Reviewer
2009-present	2009: Special Issue on Extracellular Matrix and Cardiovascular Remodeling; with Dr. Tom Borg	Editorial Board; Triage Reviewer Guest Editor
2008-present	Journal of Pharmacy and Pharmacology	Reviewer
2009-present	Journal of Proteome Research	Reviewer
2011-present	Journal of Proteomics	Reviewer
2011-present	Journal of Visualized Experiments	Reviewer
2011-present	Life Sciences	Reviewer
2010-present	Matrix Biology	Reviewer
2011-present	Microscopy and Microanalysis Special Issue on "Cardiovascular Extracellular Matrix"; with Dr. Tom Borg	Reviewer Guest Editor
2011-present	Molecular Biology Reports	Reviewer
2008-present	Molecular and Cellular Biochemistry	Reviewer
2011-present	Molecular and Cellular Proteomics	Reviewer
2011-present	OMICS Publishing Group/Clinical	Reviewer
2007-present	The Open Proteomics Journal	Editorial Board
2011-present	PDA Journal of Pharmaceutical Science and Technology	Reviewer
2007-present	Pharmacology and Therapeutics	Reviewer
2011-present	Physiological Genomics	Reviewer
2009-present	PLoS One	Reviewer
2013-present	Proceedings of the National Academy of Sciences	Reviewer
2006-present	Proteomics	Reviewer
2005-2010	Recent Patents on Anti-Cancer Drug Discovery	Editorial advisory board; Reviewer
2011-present	Rejuvenation Research	Reviewer
2009-present	The Tohoku Journal of Experimental Medicine	Reviewer
2005-present	Thrombosis Research	Reviewer
2010-present	Translational Research	Reviewer

- 2007- reviewed 105 manuscripts (average 8.8±2.3 manuscript reviews/ month)
- 2008- reviewed 120 manuscripts (average 10.0±1.7 manuscript reviews/ month)
- 2009- reviewed 126 manuscripts (average 10.5±3.0 manuscript reviews/ month)
- 2010- reviewed 56 manuscripts (average 4.7±2.2 manuscript reviews/ month)
- 2011- reviewed 120 manuscripts (average 10.0±4.8 manuscript reviews/ month)
- 2012- reviewed 76 manuscripts (average 6.3±2.8 manuscript reviews/ month)

Book Reviewing

2012 Book abstract review, Bentham e-books

Grant Reviewing:

	National Institutes of Health	
2007	Cellular Mechanisms in Aging and Development Study Section (Oct 2007)	Temporary Member
2008-present	Myocardial Ischemia and Metabolism Study Section Feb 2009, Oct 2009, Feb 2010, June 2010 July 1, 2010- June 30, 2016	Temporary Member Regular Member
2009	ZRG1 CVRS-B 58 Stage One Panel (Challenge Grants Panel 19; May-June 2009)	Mail Reviewer
2009	R13 Conference Grants Study Section (July-Aug 2009)	Member
2010	NHLBI ZRG1 CVRS-L(85)S ARRA: Ischemic Challenge	Member
2012	NIA Special Emphasis Panel ZAG1 ZIJ-8 (02) Stress and Aging (program project grant)	Member

3. Community Activities:

- 2006-2007 Alamo Regional Science & Engineering Fair, Special Awards Judge- judged 10-15 posters each year for the Special Awards Females Junior Division, which was organized in conjunction with the UTHSCSA Women's Faculty Association.
- 2006 Science Expo volunteer- Provided a table display for the Women's Faculty Association to provide inspiration to students to pursue a career in the health professions. The expo was attended by nearly 1000 middle-school and high school students from the San Antonio area and outlying regions (Laredo, Corpus Christi, Kerrville, Marion, Snook, Cotulla, Lytle, Eagle Pass, Del Rio, Austin, San Marcos, Helotes, Bandera, Zapata, and New Braunfels).
- December 13, 2006- Was a Career Exploration Mentor to Irma Cordova, a high school senior from John F. Kennedy High School (Edgewood School District); provided her with a 2 hr tour of my laboratory and discussion of science career opportunities.
- February 3, 2007- Was a reading session volunteer for the Jr Academy of Science- reviewed student research committee forms for completeness and accuracy.
- March 14, 2007- Was an invited speaker for the Med-Ed Field Experience, which brought in 85 high school students from Laredo and other border towns to discuss career options; presented a 1 hr talk on being a cardiovascular research scientist.
- June 25, 2008- Gave a 30 min presentation on cardiovascular research for the National Conference of State Legislatures Legislators in the Lab Visit.
- July 2008- participated in a video for the local San Antonio American Heart Association Heart Walk Fundraiser.
- September 23, 2008- presented a 10 min presentation on "Cardiovascular Research at UTHSCSA" to the local San Antonio AHA board.
- March 30, 2009- presented 1 hr presentation on what it's like to be a cardiovascular research scientist to 60 10th graders at Johnson High School, as part of UT Health Science Center National Doctors' Day Community Outreach.
- October 2009- was a talent judge for the UTHSCSA Chili Cook Off Talent Competition.
- January 2010- Expanding Your Horizons Conference in Science and Mathematics; presented to 15 middle school girls on what it is like to be a cardiovascular research scientist.
- July 2012- Scientist for a Day; hosted 6 girl scouts for a tour of the lab to show them what being a research scientist is like.

F. Committees:

Department	Committee	Member/ Officer
Year(s) 2006	Research Day Poster Judging Committee- judged 118 posters 9 th Annual Medicine Research Day, Department of Medicine, UTHSCSA	Judge
2011	Research Day Poster Judging Committee-judged ~85 posters 14 th Annual Medicine Research Day, Department of Medicine, UTHSCSA	Judge
2007-2008	Biomedical Summer Undergraduate Research Experience (B-Sure) Program Strategic Planning Committee Biochemistry Department, UTHSCSA	Program Co-Director Committee Member
2007-2008	Faculty Search Committee Dermatology Division, Department of Medicine, UTHSCSA	Member
2007	Cardiology Fiesta Cardiology Division, Department of Medicine, UTHSCSA	Abstract Grader
2008-2010	Committee on Graduate Studies Department of Cellular and Structural Biology	Committee Member
2008- present	Research Equipment and Research Space (REARS) Allocation Committee, Department of Medicine -an ad hoc research space and equipment needs assessment committee	Member
2009-2011	Career Development Committee Department of Cellular and Structural Biology	Committee Member

*Qualifying Exam Committees:*2005 Oral Qualifying Exam Committee Member

Student: Andre Ana Pena
 Department: Cellular and Structural Biology, UTHSCSA
 Degree: Ph.D.
 Proposal Title: The Contribution of Vascular Cell Senescence to Atherosclerosis in Progeria

2006 Oral Qualifying Exam Committee Member

Student: Yong-Ung Lee
 Department: Joint Program in Biomedical Engineering (UTSA/UTHSCSA)
 Degree: Ph.D.
 Proposal Title: Effects of Axial Stretch and Wall Injury on Intimal Hyperplasia in Arteries

2006 Oral Qualifying Exam Committee Member

Student: Beili Zhu
 Department: Joint Program in Biomedical Engineering (UTSA/UTHSCSA)
 Degree: Ph.D.
 Proposal Title: Establishing Atherosclerosis Occlusion in Porcine Coronary Artery

2007 Oral Qualifying Exam Committee Member

Student: Maggie M. Beranek
 Department: Joint Program in Biomedical Engineering (UTSA/UTHSCSA)
 Degree: Ph.D.
 Proposal Title: Overcoming Restenosis: A Combinational Surface to Improve Vascular Device Biocompatibility

2007 Oral Qualifying Exam Committee Member

Student: Danika Hayman
 Department: Joint Program in Biomedical Engineering (UTSA/UTHSCSA)
 Degree: Ph.D.
 Proposal Title: Pulsatile Pressure: its effect on arterial structure and function

2008 Level II Qualifying Exam Committee, Supervising Professor

Student: Michou Kelley
 Department: Joint Program in Biomedical Engineering (UTSA/UTHSCSA)
 Degree: Ph.D.

2008 Level II Qualifying Exam Committee Member

Student: Pamela A. Colby
 Department: Joint Program in Biomedical Engineering (UTSA/UTHSCSA)
 Degree: Ph.D.

2008 Level II Qualifying Exam Committee Member

Student: Avione Y. Northcutt
 Department: Joint Program in Biomedical Engineering (UTSA/UTHSCSA)
 Degree: Ph.D.

2008 Oral Qualifying Exam Committee Member

Student: Chi Fung Lee
 Department: Metabolism and Metabolic Disorders Track, Biochemistry, UTHSCSA
 Degree: Ph.D.
 Proposal Title: The Role of PLU-1 in Gene Regulation, RB/E2F Pathway and Cancers

2009 Oral Qualifying Exam Committee Member

Student: Maria Villarreal
 Department: Metabolism and Metabolic Disorders Track, Biochemistry, UTHSCSA
 Degree: Ph.D.

Proposal Title: Nampt Roles in Type 2 Diabetes

2009 Oral Qualifying Exam Committee Member

Student: Avione Y. Northcutt Lee
 Department: Joint Program in Biomedical Engineering (UTSA/UTHSCSA)
 Degree: Ph.D.

Proposal Title: Determining the Critical Buckling Pressure of Blood Vessels through Modeling and In Vitro Experiments

2010 Oral Qualifying Exam Committee Member

Student: Yanan Chen
 Department: Aging Track, Cellular and Structural Biology, UTHSCSA
 Degree: Ph.D.

Proposal Title: Extranuclear thyroid hormone receptor regulates thyroid hormone-stimulated iNOS expression in vascular myocytes through activation of the PI3K/Akt/mTOR/HIF1 α pathway

2011 Oral Qualifying Exam Committee Member

Student: Celia Macias
 Department: Joint Program in Biomedical Engineering (UTSA/UTHSCSA)
 Degree: Ph.D.
 Proposal Title: Non-Polymeric Coatings for Drug Eluting Stents

School

Year(s)	Committee	Member/ Officer
2005-2009	Medical School Admissions Committee School of Medicine, UTHSCSA 2006-2008: MD Applicant Interviewer 2009: MD/PhD Applicant Interviewer JAMP Shiller Scholarship Application Reviewer- was one of a 5 member committee that ranked 11 applicants for this scholarship	Member
2006-2010	Annual Medical Student Research Day Poster Judging Committee School of Medicine, UTHSCSA 2006: judged approximately 10 posters 2007-2009: coordinated judging of approximately 65 student posters to select top 6 posters	Judge Chair
2006-2012	Recruiting and Faculty Resources Committee, Biology of Aging Track Graduate School, UTHSCSA	Member
2006-2011	Curriculum Committee Metabolism and Metabolic Disorders Track, Graduate School, UTHSCSA	Member
2006-2012	Recruitment Acquisition Committee MCIP Integrative Biology Track, Graduate School, UTHSCSA	Member
2007-2009	Science Symposium Judging Committee, Dental School, UTHSCSA 2007: judged 10 oral presentations for 1 st and 2 nd place prizes 2008: judged oral presentations 2009: judged 10 posters	Head Judge Judge Judge
2007-2010	Medical Student Summer Stipend Review Committee School of Medicine, UTHSCSA -committee reviewed applications for summer research: 58 applications in 2007, 52 applications in 2008, 50 applications in 2009, 62 applications in 2010.	Chair
2007-2010	MD with Distinction in Research Advisory Committee, School of Medicine, UTHSCSA 2007-2009 2009-2010 -6 members review applications and monitor student progress (15-20 applications/ year)	Committee Member Chair
2007-2008	Admissions Committee Graduate School, UTHSCSA -Metabolism and Metabolic Disorders Track Representative -Recruiting Weekend Poster Session Subcommittee	Member Co-Chair
2007-2008	Diversity Task Force School of Medicine, UTHSCSA -Faculty Recruitment and Retention Subcommittee	Member Chair
2008-2009	Graduate School Student Advisor Graduate School, UTHSCSA -1 st year advisor to 3 students (Xiang Bai, Aimee Signarovitz and Anel Lizcano)	Member

2008-2009	XYZ Compensation Plan Committee School of Medicine, UTHSCSA -a 6 member committee to formulate the compensation plan for SOM faculty	Member
2009	National Doctors' Day School of Medicine, UTHSCSA Community Outreach; gave a 1 hour presentation to high school students about research career options	Speaker
2009	First Annual Medical Student Career Day School of Medicine, UTHSCSA -discussed academic medicine career options with 3 rd year medical students	Speaker
2009-2010	MD PhD Advisory Committee Medical Scientist Training Program	Member
2010-2011	Associate Dean for Faculty Affairs Search Committee School of Medicine, UTHSCSA	Member
2011-2012	Recruitment Committee Molecular Biophysics and Biochemistry Track, Graduate School, UTHSCSA	Member
University		
Year(s)	Committee	Member/ Officer
1995-1997	Graduate Student Council Graduate School of Biomedical Sciences Baylor College of Medicine	Student Representative (1995-6) Vice-President (1996-7) President (1997)
2003-2005	Institutional Research Funds Subcommittee University Research Committee, Medical University of South Carolina	Member/ Reviewer
2004	Student Research Day Medical University of South Carolina	Judge
2005	Summer Health Professional Research Program Medical University of South Carolina	Application Reviewer
2006-2012	Women's Faculty Association, UTHSCSA	Member (2006-present) President (2006-7) Recruiting Chair (2007-8)
2006-2010	Conflict of Interest Committee, UTHSCSA	Medical School Representative
2006-2012	Advisory Committee for Biomedical Research Barshop Institute, UTHSCSA	Medical School Representative
2007	UTHSCSA Leadership, Education, and Development (LEAD) Institute - 1 of 24 UTHSCSA leaders selected for the 2 nd annual 9 month class on developing leadership skills	Fellow
2007-2012	Cardiovascular Function Core Barshop Institute for Longevity and Aging Studies, Nathan Shock Aging Center of Excellence	Director
2007-2008	University Research Core Facility Committee, UTHSCSA	Member
2009-2012	Mass Spectrometry Core Advisory Committee, UTHSCSA	Member
2009-2010	Council for Education Innovation and Research Research Education, Training, and Career Development Key Function Institute for Integration of Medicine and Science The purpose of this council is to share and develop processes for the creation and evaluation of research education programs throughout UTHSCSA.	Board Member

2009-2010	Academic Environment Subcommittee LCME Self-Study, SOM, UTHSCSA	Chair
2011-2012	Glenn Foundation Student Fellowship Selection Committee Barshop Institute, Graduate School, UTHSCSA	Member
Inter-institutional		
Year(s)	Committee	Member/ Officer
2004-2005	Institutional Animal Care and Use Committee Ralph H. Johnson VA Medical Center, Charleston, SC	Member
2007-2012	Joint Program in Biomedical Engineering Committee on Graduate Studies, UTSA/ UTHSCSA	Member
2007-2008	Faculty Search Committee Department of Biomedical Engineering, UTSA	Member