CURRICULUM VITAE

Jason D. Gardner, Ph.D., F.A.H.A., F.C.V.S.

Current Title: Kai and Earl Rozas Professor of Physiology

Business Address: Louisiana State University Health Sciences Center, 1901

Perdido Street, MEB 7205, New Orleans, LA 70112

Business Telephone and Fax: (504) 568-7252 / (504) 568-6158

Business email Address: jgardn@lsuhsc.edu

Citizenship: U.S. Citizen

Education:

Undergraduate: B.S., Chemical Engineering, Louisiana State University, 1991

Graduate: Ph.D., Biomedical Engineering, Louisiana Tech University, 1997

Post-Doctoral Fellowship: Department of Physiology, University of South Alabama,

College of Medicine, Mobile, 1997 - 2000

Academic, Professional, and Research Appointments:

Research Assistant Professor July 2000 - 2005
Department of Anatomy, Physiology and Pharmacology
Auburn University College of Veterinary Medicine, Auburn, AL

Assistant Professor July 2005 - 2008

Department of Cell and Developmental Biology and Anatomy

Department of Biomedical Engineering Core Faculty

University of South Carolina, School of Medicine, Columbia, SC

Assistant Professor June 2008 - 2014

Department of Physiology

Louisiana State University Health Sciences Center, School of Medicine,

New Orleans, LA

Associate Professor with tenure August 2014 - June 2020

Department of Physiology

Louisiana State University Health Sciences Center, School of Medicine,

New Orleans, LA

Kai and Earl Rozas Associate Professor of Physiology 2017 - 2020

Department of Physiology

Louisiana State University Health Sciences Center, School of Medicine,

New Orleans, LA

Professor with tenure

July 2020 - present

Department of Physiology Louisiana State University Health Sciences Center, School of Medicine, New Orleans, LA

Membership in Professional Organizations:

- Gulf Coast Physiological Society; President 2013-2015; Councilor 2012-2013; Treasurer 2013
- Society of Experimental Biology and Medicine (SEBM); Councilor 2012-2016; Chair of Nominating Committee 2016-2019
- American Physiological Society (APS); Member & Fellow of Cardiovascular Section
- APS Cardiovascular Section Treasurer 2015-2017
- American Heart Association (AHA); Member & Fellow Council on Basic Cardiovascular Sciences (BCVS);
- Research Society on Alcoholism (RSA); Member
- Biomedical Engineering Society (BMES); Member
- International Society for Heart Research (ISHR); Member

Awards and Honors:

- 1990 Dow Outstanding Junior Award (Chemical Engineering)
- Allied-Signal Chemical Engineering Scholarship
- Tau Beta Pi Engineering Honor Society
- 1st place in graduate student competition at the 16th Southern Biomedical Engineering Conference.
- 2000 Aventis Pharmaceuticals New Investigator Travel Award
- 2012 IDEA NISBRE Conference Young Investigator Award
- 2014 Elected as Fellow of the American Physiological Society Cardiovascular Section
- 2014 Elected as Fellow of the American Heart Association
- 2016 LSU Medical Alumni Association Award of Excellence
- 2020 Alcoholism Clinical and Experimental Research Journal Reviewer Award
- 2021 & 2023 Aesculapian Society Excellence in Teaching Award
- 2023 Copping Excellence in Teaching Award (LSUHSC's most prestigious campus-wide teaching award; Medical Physiology: Cardiovascular Block)

TEACHING EXPERIENCE AND RESPONSIBILITIES:

Course Directorships:

Medical Physiology (PHYSIO 100 / 205; NURS 7405)

Spring 2015 - Present

LSUHSC Medical School

Role: Director (2019-present) / Co-Director (2018)

Duties: Cardiovascular Lectures and Labs. Course and grade management. Content

development.

Seminar in Physiology (PHYSIO 299)

Spring/Fall 2019; Spring/Fall 2013 – Spring 2014

LSUHSC Department of Physiology

Role: Director

Duties: Schedule weekly invited seminar speakers; instruct students on proper introduction

of speakers and moderation of questions; evaluate student seminar reports.

Cardiovascular Physiology (PHYSIO 212)

Fall 2015

LSUHSC Graduate School

Role: Co-Director

Duties: Develop and present Cardiovascular Lectures on the Hyperpermeability,

Development, Hypertrophy, ECM, Heart Failure, Sex Differences, Effects of Alcohol, and

Cardiac Contractility. Administer and assess essay examination.

Human Physiology (BSN HS2410/OCCT 6523)

Spring/Fall 2009-Spring 2015

LSUHSC School of Nursing and School of Allied Health

Role: Co-Director

Duties: Develop and present the Cardiovascular Physiology Lecture Block and associated

ECG Laboratory; proctor examinations with Director Dr. Raymond Shepherd.

Special Topics in Physiology; Renal and Vascular Physiology (PHYSIO 289)

Fall 2013

LSUHSC Department of Physiology

Role: Co-Director

Duties: Course development and organization with co-Director, Dr. Lisa Harrison-Bernard. Develop lecture and exam materials; administer exams; evaluate student presentations.

Anatomy and Physiology for Biomedical Engineers (BMEN 723)

Spring 2006/2007

University of South Carolina Biomedical Engineering Department

Role: Director

Duties: Course director and developer; lecture blocks of cell biology and cardiovascular physiology; administer examinations; manage course grades and lecture schedule.

Formal Course Responsibilities

School of Medicine

Medical Physiology (PHYSIO 100/205)

Spring 2015 - 2021

Director (2019-present) / Co-Director (2018)

~190 Medical Students and Graduate Students; Cardiovascular Physiology Lecture Block / ECG and CV Labs/ Heart Sounds TBL/ Shock TBL; ~20 hrs lecture/ ~10 hrs labs/TBLs

Science and Practice of Medicine: Medical Ethics (CSI/SPM 200)

Fall 2013 - present

Carollton House, Houses Program

~15 Medical Students; ~ 20 contact hrs/semester

Science and Practice of Medicine: Clinical Forums (CSI/SPM 100)

Spring 2013 – Fall 2020

Carollton House, Houses Program

~15 Medical Students; ~12 contact hrs/semester

School of Nursing and School of Allied Health

Medical Physiology (NURS 7405)

Spring 2015 - 2021

Director (2019-present) / Co-Director

~50 CRNA Students, Concurrent with PHYSIO 100. Cardiovascular Physiology Lecture Block / ECG and CV Labs/ Heart Sounds and Shock TBLs

Human Physiology (BSN HS2410/OCCT 6523)

Spring/Fall 2009 - Spring 2015

Co-Director BSN HS2410

~185-200 Nursing and Occupational Therapy Students; Cardiovascular Physiology Lecture Block and ECG Labs; 8 hrs lecture/ 6 hrs lab

Pathophysiology (BSN HS3410)

Fall 2008 - 2010

~100 nursing students; Heart Failure lecture; 2 hrs lecture

School of Dentistry

Dental Physiology (DENT 1115)

Spring 2009 - 2017

~80 students; Cardiovascular Physiology Lecture Block; 8 hrs lecture

School of Graduate Studies

Physiological Sciences / Biological Systems Course (INTER 131/PHTH 7120/PHYSIO 6523)

Spring 2017 - 2020

~65 students; Cardiovascular Physiology Lectures; 12-16 hrs lecture

<u>Special Topics in Physiology; Renal and Vascular Physiology (PHYSIO 289)</u> Fall 2013

Co-Director; 7 Graduate Students; 2 hrs lecture

Cardiovascular Physiology (PHYSIO 212)

Fall 2008 / 2011 / 2015

~5-7 Graduate Students: 6-9 hrs lecture

Other

LSU Health Department of Surgery

2019 - present Cardiovascular Review; ~10 surgery residents/year; 2 hrs.

University of South Carolina, Columbia, SC

2006 - 2008 Course director and developer, Anatomy and Physiology for Biomedical Engineers (BMEN 723); 12 graduate students; 14 hrs (Biomedical Engineering Program)

Fall 2006 Medical Microanatomy Laboratory; 85 medical students; 3 hrs twice weekly (School of Medicine)

2005 - 2008 Research in Cardiovascular Disease (SCCC 302D); 12 undergraduate students; 2 hrs lecture (Graduate School)

Auburn University, Auburn, AL

2003 - 2004 Experimental Techniques in Molecular and Cell Biology (CMBL / VBMS 7530); Zymography & Protein Determination Lectures; 12-15 graduate students; 2 hrs lecture (Department of Pathobiology, College of Veterinary Medicine)

University of South Alabama, Mobile, AL

1998 - 2000 ECG and Blood Pressure Laboratories; 70 medical students, 3 hrs (Department of Physiology, College of Medicine)

1997 - 1999 Physical Chemistry Laboratory I & II Instructor; ~30 undergraduate students each semester; 3 hrs each; 2 sections (Chemistry Department)

Louisiana Tech University, Ruston, LA

Fall 1996 Biotransport Phenomena; graduate and senior level physiological modeling course; 20 students; 50% of lectures at 3 hrs/wk (Biomedical Engineering Department)

Departmental / Interdisciplinary Teaching Conferences:

2007 Title: "Contribution of Ovarian Hormones and Estrogen Receptors to Female Cardioprotection."

Seminar

Department of Physiology

Title: "Inhalation of Particulates and Cardiac Injury"
 Work in Progress Session to discuss Board of Regents grant application.
 Department of Physiology

2008 Title: "Lysyl Oxidase and Volume Overload Stress" Work in Progress Session to discuss American Heart Association Beginning Grant-in-Aid application.

Department of Physiology

2009 Title: "Estrogenic Cardioprotection in a Rat Model of Chronic Volume Overload." Seminar

Department of Physiology

2009 Title: "Lysyl Oxidase and Volume Overload Stress"

Work in Progress Session to discuss American Heart Association Grant-in-Aid application.

Department of Physiology

2010 Title: "Lysyl oxidase-dependent Mechanisms of Heart Failure"
Work in Progress Session to discuss American Heart Association Grant-in-Aid resubmission strategy.
Department of Physiology

2010 Title: "Lysyl oxidase-dependent Mechanisms of Heart Failure" Work in Progress Session to discuss American Heart Association Application Final Resubmission.

Department of Physiology

2013 Title: "Alcohol Exacerbation of Volume Overload Dysfunction and Fibrosis" Work in Progress Session to discuss NIH R21 Application. Department of Physiology

2013 Title: "Alcohol and Cardiac Fibrosis"

Seminar for Perspectives in Alcohol Research Group
Department of Physiology

2014 Title: "Lysyl oxidase, Collagen Cross-linking, and Heart Failure" Seminar Department of Physiology

2015 Title: "Cardioprotective Effects of Lysyl Oxidase Inhibition"

Cardiovascular Center Retreat

Invited Talk

- 2015 Title: "Cardioprotective Effects of Lysyl Oxidase Inhibition"SeminarDepartment of Physiology
- 2016 Title: "Lysyl Oxidase in the Volume Overloaded Heart: Friend or Foe?"
 Seminar
 Department of Pharmacology

Undergraduate, Medical, or Graduate Students Trained:

DOCTORAL STUDENTS

- Yan Du, Ph.D., Doctoral Committee Member, Department of Cell Biology and Anatomy, University of South Carolina School of Medicine: Graduated 2010, Asst Professor at Nicholls State.
- Vicky Rands, Ph.D., Doctoral Committee Member, Department of Physiology, Tulane Medical School. Graduated in 2011 from Tulane Doctoral Program.
- Sarah Mahne, Ph.D., Doctoral Committee Member, Department of Pharmacology, LSUHSC: Graduated 2012.
- Kristine Kurtz, Ph.D., Doctoral Committee Member, Department of Physiology, LSUHSC: Graduated 2013.
- Jessica Bradley, Ph.D., Mentor, Doctoral Graduate Student; Joined the laboratory in April 2009. Jessica received the following awards: 2011 and 2012 Society of Toxicology Meeting Travel Awards, 2013 SEBM Burton E. Sobel Young Investigator Award, 2010 Keystone Symposia "Extracellular Matrix and Cardiovascular Remodeling" in Tahoe City, CA, the Departmental Roheim Award for Excellence in Graduate Research; and the SEBM Burton E. Sobel Young Investigator Award; Jessica was nominated and elected as Chair of the Trainee Committee for the Cardiovascular Section of the American Physiological Society; Graduated 2013; Current position: Associate Professor, Physiology, School of Osteopathic Medicine, Univ of Incarnate Word, San Antonio, Texas.
- Tyrous Ward, Doctoral Committee Member, Department of Anatomy, LSUHSC: Graduated 2015.
- Stephen Ford, Doctoral Committee Member, Department of Physiology, LSUHSC: Graduated 2017.
- Alan Mouton, Mentor, Doctoral Graduate Student; Joined the laboratory in April 2013. Alan received the 2014 SEBM Young Investigator Award and 2015 APS Caroline Tum Suden Travel Award; funded by AHA Predoctoral Fellowship; Departmental Roheim Award for Excellence in Graduate Research; Graduated 2017; Current position: Assistant Professor at Univ of Mississippi Med Center, Jackson.

- Rishi Trivedi, Doctoral Committee Member, Department of Pharmacology, LSUHSC; Graduated 2017.
- Elia C. El Hajj, Mentor, Masters and Doctoral Graduate Student; Joined the laboratory in September 2013. *Eli received the 2017 SEBM Young Investigator Award Elia was funded by an AHA Predoctoral Fellowship and NIH F31 Predoctoral Fellowship from the NHLBI. He won the 2019 School of Graduate Studies Chancellor's Award.* Graduated with Masters in 2015 and Doctorate in 2018. Current position: Graduated medical school and entered residency.
- Van Ninh, Mentor, Doctoral Graduate Student; Joined the laboratory in April 2014. Van received the 2016 APS Cardiovascular Section Research Recognition Award, 2016 SEBM Young Investigator Award, and 2016 APS Caroline Tum Suden Travel Award; Departmental Roheim Award for Excellence in Graduate Research; Graduated May 2019. Current position: postdoctoral fellow UCSD.
- Zhen Li, Doctoral Committee Member, Department of Pharmacology, LSUHSC; Graduated 2019.
- Nicholas Fried, Mentor, MD/PhD Student; Joined the laboratory in May 2019. Awarded the 2022 APS Cardiovascular Section Research Recognition Award and Society for Experimental Biology and Medicine Travel Award. Won the 2022 School of Graduate Studies Chancellor's Award. Graduated May 2022. Current position: 4th year medical student at LSUHSC-NO.
- Jonquil Poret, Doctoral Committee Member, Department of Physiology, LSUHSC; Graduated 2023.
- Anna Whitehead, Doctoral Committee Member, Department of Physiology, LSUHSC; Graduated 2023.
- Brianna Bourgeois, Doctoral Committee Member, Department of Physiology, LSUHSC; Graduated 2023.
- Jake Doiron, Doctoral Committee Member, Department of Pharmacology, LSUHSC.
- Josh Edavettal, Mentor, MD/PhD Student; Joined the laboratory in July 2021; awarded NIH F30 Predoctoral Fellowship.
- Nicholas Harris, Mentor, MD/PhD Student: Joined the laboratory in July 2023; awarded American Heart Association Predoctoral Fellowship; awarded 2024 APS CV Section Research Recognition Award.

POST-BACCALAUREATE

- Joselyn Knowling, Mentor, Post Baccalaureate Research Education Program (PREP) student, Department of Physiology, June 2018-May 2019, LSUHSC.
- Diego Vargas, Mentor, PREP student, Department of Physiology, June 2019-May 2020, LSUHSC. Current position: graduate school Univ of Colorado Boulder.

Olivia Warren, Mentor, PREP student, Department of Physiology, June 2021-May 2022, LSUHSC.

Nicholos Horne, Mentor, PREP student, Department of Physiology, joined June 2023.

MEDICAL STUDENTS

David Tadin, Mentor, 2009 Summer Medical Student Research Program, LSUHSC; David's oral presentation was selected for presentation at a national symposium in Austin. TX

Greg Lee, Mentor, 2010 Summer Medical Student Research Program, LSUHSC

Kip Kryar, Mentor 2011 Summer Medical Student Research Program, LSUHSC

Jamie Lovitt, Mentor 2012 Summer Medical Student Research Program, LSUHSC

Morgan Walker, Mentor 2013 Summer Medical Student Research Program, LSUHSC

Milad El Hajj, Mentor and Supervisor; Milad received 4th Place for his poster entitled "Lysyl Oxidase Inhibition in the Volume Overloaded Heart Prevents Adverse Collagen Remodeling, Apoptosis, and Cardiac Dysfunction." at the 2013 Medical Student Research Day. He was also awarded the APS Excellence in Professional Student (MD or DO) Research Travel Award for Experimental Biology 2014.

John Johnson, Mentor 2019 Summer Medical Student Research Program, LSUHSC (Honors Thesis Mentor)

Joshua Edavettal, Mentor 2020 Summer Medical Student Research Program, LSUHSC

Idanis Garcia-Sanchez, Ponce Health Sciences University, Puerto Rico, Mentor 2021 Summer Medical Student Research Program, LSUHSC

Nicholas Harris, Mentor 2021 Summer Medical Student Research Program, LSUHSC

Marcie Sorrel, Mentor 2023 Summer Medical Student Research Program, LSUHSC

Ashley St.Martin, co-Mentor 2023 Summer Medical Student Research Program, LSUHSC

Kaitlyn Allen, 2023 Summer Medical Student Research Program, LSUHSC

Hassan Malik, co-Mentor 2023 Summer Medical Student Research Program, LSUHSC

VETERINARY STUDENTS (MERCK SUMMER RESEARCH FELLOWS; AUBURN UNIVERSITY)

Tanya Sommerville, 2002 (co-mentor)

Travis Wagner, 2002 (co-mentor)

Adam Bush, 2003 (co-mentor)

Allison Howe, 2004 (co-mentor)

Laurie L. Nelms, 2005 (mentor)

UNDERGRADUATE STUDENTS

- Judith Clary, Mentor, 2006 2007 Office of Undergraduate Research Magellan Scholarship
- Michael Le, Mentor, 2006 2007, McNair Scholar, currently enrolled in Medical School at USC
- Margaret Crosby, Mentor, 2007 2008, Office of Undergraduate Research Magellan Scholarship, Margaret was awarded Best Student Poster Award at the 2007 Palmetto Health/MUSC/USC Aging Research Day and Best Basic Sciences Poster at the 2007 Carolina Women's Health Forum
- Rebecca Lowe, Mentor, 2007 USC-Palmetto Health Undergraduate Summer Research Internship
- Jonathan Nyugen, Supervisor of research during Spring/Summer 2008, currently enrolled in Medical School (USC)
- Savannah Rutherford, Mentor, 2008 USC-Palmetto Health Undergraduate Summer Research Internship
- Tyler Zachary, Mentor, McNeese State Chemical Engineering Department, 2010 Louisiana Biomedical Research Network Scholarship
- Kimberly Larkin, Mentor, Tulane, Biomedical Engineering, Undergraduate Honors Thesis, and 2011 Louisiana Biomedical Research Network Scholarship
- Sonu Shrestha, Mentor, University of New Orleans, Biology, 2011 Louisiana Biomedical Research Network Scholarship
- Perry Mitchell, Mentor, Premedical Student Summer Research Program (director Dr. Paula Gregory), June 2011 July 2011
- Keshab Sapkota, Mentor, Louisiana Tech, Biomedical Engineering, 2012 Louisiana Biomedical Research Network Scholarship
- Aimee Lacour, Mentor, Louisiana Tech, Biomedical Engineering, 2013

- Louisiana Biomedical Research Network Scholarship
- Ranjita Shrestha, Mentor, Louisiana Tech, Biomedical Engineering, 2013 Louisiana Biomedical Research Network Scholarship
- Meagan Doherty, Mentor, Premedical Student Summer Research Program (director Dr. Paula Gregory), June 2013 July 2013
- Rachel Oppenheim, Mentor, Louisiana State University Baton Rouge, Premedical Student Summer Research Program (director Dr. Fern Tsien), June 2014 July 2014
- Kay McKenzie, Mentor, Northwestern, Summer 2014 and 2015, Louisiana Biomedical Research Network Scholarship
- Courtney Evans, Mentor, Premedical Student Summer Research Program (director Drs. Fern Tsien and Paula Gregory), June 2015 July 2015
- Hope Shevchuk, Mentor, Worcester Polytechnic Institute, Premedical Student Summer Research Program (director Drs. Fern Tsien and Paula Gregory), June 2016 - July 2016
- Megan Drewett, co-Mentor, Premedical Student Summer Research Program (director Drs. Fern Tsien and Paula Gregory), June 2016 July 2016
- Jamal Jordan, Mentor, Premedical Student Summer Research Program (director Drs. Fern Tsien and Paula Gregory), June 2018 July 2018
- Tierra Foley, Mentor, Premedical Student Summer Research Program (director Drs. Fern Tsien and Paula Gregory), June 2019 July 2019

HIGH SCHOOL TEACHERS

Kyle Duhon, Mentor, APS Frontiers in Science Outreach Program, 2012

Aaron McCalister, Mentor, APS Frontiers in Science Outreach Program, 2014

Erika Otero, Mentor, APS Frontiers in Science Outreach Program, 2019

Thesis and Dissertation Committees:

DOCTORAL STUDENTS

- Yan Du, Committee Member, Entered Biomedical Sciences Curriculum, Auburn University, 2004; Transferred to Biomedical Sciences Curriculum, School of Medicine, University of South Carolina, 2006
- Sarah Mahne, Doctoral Committee Member, Department of Pharmacology, LSUHSC

Kristine Kurtz, Doctoral Committee Member, Department of Physiology, LSUHSC

Jessica Bradley, Mentor, Department of Physiology, LSUHSC

Vicky Rands, Doctoral Committee Member, Department of Physiology, Tulane Medical School

Alan Mouton, Mentor, Department of Physiology, LSUHSC

Stephen Ford, Doctoral Committee Member, Department of Physiology, LSUHSC

Tyrous Ward, Doctoral Committee Member, Department of Anatomy, LSUHSC

Van Ninh, Mentor, Department of Physiology, LSUHSC

Elia C. El Hajj, Mentor, Department of Physiology, LSUHSC

Rishi Trivedi, Doctoral Committee Member, Department of Pharmacology, LSUHSC

Zhen "Andrew" Li, Doctoral Committee Member, Department of Pharmacology, LSUHSC

Jonquil Poret, Doctoral Committee Member, Department of Physiology, LSUHSC

Brianna Bourgeois, Doctoral Committee Member, Department of Physiology, LSUHSC

Kyle LaPenna, Doctoral Committee Member, Department of Pharmacology, LSUHSC

Anna Whitehead, Doctoral Committee Member, Department of Physiology, LSUHSC

Nicholas Fried, Mentor, Department of Physiology LSUHSC

Jake Doiron, Doctoral Committee Member, Department of Pharmacology, LSUHSC.

Joshua Edavettal, Mentor, Department of Physiology LSUHSC

Nicholas Harris, Mentor, Department of Physiology LSUHSC

MASTERS STUDENTS

Allison Howe, Committee Member, Entered Biomedical Sciences Curriculum 2002; Current position: Practicing veterinarian graduated Auburn University, class of 2007 Laurie L. Nelms, Committee Member, Entered Biomedical Sciences Curriculum 2003; Current position: Practicing veterinarian graduated Auburn University, class of 2008

Derrick Bell, Laboratory Rotation 2008; Current Position: Biomedical Sciences graduate program, University of South Carolina

Elia C. El Hajj, Mentor, Department of Physiology, LSUHSC; Graduated May 2015; Current Position: Medical School, LSUHSC

Matthew Herrera, Committee Member, Department of Physiology, LSUHSC

UNDERGRADUATE HONORS STUDENTS

Kimberly Larkin, Mentor, Tulane, Biomedical Engineering, Undergraduate Honors Thesis

Post-Doctoral or Post-Residency Fellows Trained:

Tetyana Voloshenyuk, Ph.D.; Joined the laboratory in June 2008 (LSU). *Tetyana* received a travel award for oral presentation at the 2009 Sex Steroids and Gender in Cardiovascular-Renal Physiology and Pathophysiology, Broomfield, CO.

Mario A. Claudino, Ph.D., Jan – July 2010; Visiting post-doctoral fellow from the Department of Pharmacology, University of Campinas, Campinas, São Paulo, Brazil. Currently Assistant Professor in the Department of Pharmacology at the University of Campinas (UNICAMP).

Joshua Oakes, Ph.D., July 2017 – July 2019. Current position: Plato Biopharma Inc.

Neelamegam Kandasamy, Ph.D., Jan 2021 – April 2022. Current position: Postdoctoral fellow, Univ of Texas.

RESEARCH AND SCHOLARSHIP

Grants and Contracts:

Funded:

ACTIVE:

■ 2023-2025	NIH /NIAAA R21 (#R21AA029747-A1), Role of novel RNA binding
	protein LARP6 in alcoholic cardiomyopathy (Role: PI). Priority
	score: 22.

 2022-2023 LSU SOM Research Enhancement Program, Role of novel RNA binding protein LARP6 in alcoholic cardiomyopathy (Role: PI).

PENDING

2023-2025 NIH/NIAAA R21 (#R21AA030395-A1), Proinflammatory adapter protein Traf3IP2 as a novel therapeutic target for alcoholic cardiomyopathy (Role: PI). Priority score: 28.

COMPLETED:

- **2017-2021** NIH /NHLBI R01 (#R01HL135635), Chronic nicotine inhalation increases susceptibility to cardiovascular and pulmonary diseases through inhibition of local compensatory mechanisms (Role: PI); \$1,500,000; Priority score: 18. **2020-2021** NIH /NHLBI R01 (#R01HL135635-S1), Cardiopulmonary effects of vaping (Role: PI). American Heart Association Grant-in-Aid (Role: PI); \$140,000; **2016-2019** Excess cardiac lysyl oxidase activity promotes systolic dysfunction (#16GRNT30440008). NCE through 2019. Saving Tiny Hearts Society (Role: PI); \$65,000; Role of NOX-4 **2017** dependent Notch1 dysregulation on cardiac development in fetal alcohol syndrome **2014 - 2016** NIH/NIAAA R21, Ethanol-induced Cardiac Fibrosis and Dysfunction are Mediated by NADPH Oxidases (Role: PI); \$250,000; Priority score: 10 (NCE through 2017).
- **2016** Saving Tiny Hearts Society (Role: PI); \$65,000; Mechanisms of Abnormal Cardiac Development in Fetal Alcohol Syndrome
- **2011 2014** American Heart Association Grant-in-Aid (#11GRNT7700002), Role of Lysyl Oxidase in Heart Failure (Role: PI); \$150,000
- **2013 2014** LSU-SOM Dean's Office: Research Enhancement Fund: Bridge Grant, Mechanisms of Cardiac Fibrosis (Role: PI); \$65,000
- **2013 2014** LSU-SOM Alcohol and Drug Abuse Center Pilot Fund: EtOH abuse and Cardiac Fibrosis (Role: PI); \$15,000
- **2000 2003** NIH/NHBLI R01-HL59981-01A1, Role of Myocardial Integrins in Ventricular Remodeling (Role: Co-Investigator), \$1,017,000.
- **2000 2004** NIH/NHBLI R01-HL62228-01, Cardiac Mast Cell: Role in Pathogenesis of Heart Failure (Role: Co-Investigator), \$1,532,000.
- **2001 2003** American Heart Association Beginning Grant-in-Aid, Gender Differences in the Development of Heart Failure (Role: PI); \$100,000.
- **2002 2003** United Soybean Board (Role: PI); \$10,000.

2003 - 2004 Auburn University Competitive Research Grant, Gender and Heart Disease (Role: PI); \$10,000. **2004 - 2007** NIH/NHBLI R01-HL62228 Cardiac Mast Cells: Role in Pathogenesis of Heart Failure, (Role: Co-Investigator), \$1,354,000. **2004 - 2007** Environmental Protection Agency, Mast Cell Mediated Cardiac Effects of Particulate Matter, (Role: Co-Investigator), \$400,000. NIH/NHBLI R01-HL73990 Sexual Hormones, Cardiac Mast Cells **2004 - 2008** and Cardioprotection, (Role: Co-Investigator), \$1,000,000. **2004 - 2008** American Heart Association National Scientist Development Grant, Cardiac Mast Cells and Gender-specific Cardioprotection (Role: PI); \$236,000. **2008 - 2009** Philip-Morris, Mast Cell Mediated Cardiovascular Effects of Cigarette Smoke (Role: PI); \$130,000. **2009 - 2012** Louisiana Board of Regents (LEQSF (2009-12)-RD-A-10), Mechanisms of Cardiac Damage from Inhaled Particulate Matter (Role: PI); \$150,000. **2011 - 2013** NIH/NCRR COBRE (2P20RR018766-09-Kapusta), Junior

overload (Role: Junior Developing Investigator).

Journal Publications (* denotes corresponding author):

Refereed:

1. **Gardner, J.D.**, and R.W. Schubert, Evaluation of myoglobin function in the presence of axial diffusion, *Adv. Exp. Med. Biol.*, 411: 157-69, 1997.

Investigator Developmental Project, Lysyl oxidase and pressure

- 2. **Gardner, J.D.**, and R.W. Schubert, Myoglobin function evaluated in working heart tissue, *Adv Exp Med Biol*, 454: 509-17, 1998.
- 3. Taylor, M.S., A.M. McMahon, **J.D. Gardner** and J.N. Benoit. Cyclic nucleotides and vasoconstrictor function: physiological and pathophysiological considerations. *Pathophysiology*. 5: 233-245, 1999.
- 4. Taylor, M.S., H. Gao, **J.D. Gardner** and J.N. Benoit. Effects of IBMX on norepinephrine-induced vasoconstriction in small mesenteric arteries. *Am. J. Physiol.* 276: G909-914, 1999.

- 5. **Gardner, J.D.**, and J.N. Benoit. Effects of capacitative calcium entry on agonist-induced calcium transients in A7r5 vascular smooth muscle cells, *J. Biomed. Sci.*, 7(4): 304-10, 2000.
- 6. **Gardner, J.D.,** G.L. Brower and J.S. Janicki. Gender differences in cardiac remodeling secondary to chronic volume overload, *J.Card. Failure*, 8(2): 101-107, 2002.
- 7. Brower, G.L., **J.D. Gardner** and J.S. Janicki. Gender mediated cardiac protection from adverse ventricular remodeling is abolished by ovariectomy. *Molecular and Cellular Biochemistry, 251 (1-2): 89-95,* 2003.
- 8. Murray, D.B., **J.D. Gardner,** G.L. Brower and J.S. Janicki, Endothelin-1 Mediates Cardiac Mast Cell Degranulation, MMP Activation and Myocardial Remodeling in Rats. *AJP: Heart and Circ.*, 287(5): H2295-H2299, 2004.
- 9. Janicki J.S., G.L. Brower, **J.D. Gardner**, A.L. Chancey, J.A. Stewart Jr. The dynamic interaction between matrix metalloproteinase activity and adverse myocardial remodeling. *Heart Fail Rev.* 9(1): 33-42, 2004.
- Chancey A.L., J.D. Gardner, G.L. Brower and J.S. Janicki. Modulation of cardiac mast cell mediated extracellular matrix degradation by estrogen. AJP: Heart and Circ., 289(1):H316-21, 2005.
- 11. **Gardner**, **J.D.***, G.L. Brower and J.S. Janicki. Effects of dietary phytoestrogens on cardiac remodeling secondary to chronic volume overload in female rats. *J. Appl. Physiol.*, 99(4):1378-83, 2005.
- Janicki, J.S., G.L. Brower, J.D. Gardner, M.F. Forman, J.A. Stewart Jr, D.B. Murray and A.L. Chancey. Cardiac mast cell regulation of matrix metalloproteinases-related ventricular remodeling in chronic pressure or volume overload. *Cardiovascular Res.* 69(3): 657-665, 2006
- 13. Brower, G.L., **J.D. Gardner**, M.F. Forman, D.B. Murray T. Voloshenyuk, S.P. Levick, J.S. Janicki. The relationship between myocardial extracellular matrix remodeling and ventricular function. Eur J *Cardiothorac Surg.*, 30(4):604-10, 2006.
- 14. Csiszar, A., N. Labinskyy, K. Smith, A. Rivera, E. Bakker, H. Jo, **J. Gardner**, Z. Orosz, Z. Ungvari. Down-regulation of BMP-4 expression in coronary arterial endothelial cells: role of shear stress and the cAMP/PKA pathway, *ATVB*, 27(4):776-82, 2007.
- 15. Murray, D.B., **J.D. Gardner**, S.P. Levick, G.L. Brower, L.G. Morgan, and J.S. Janicki. Response of Cardiac Mast Cells to Atrial Natriuretic Peptide, *AJP: Heart and Circ.*, 293(2):H1216-22, 2007.
- 16. Levick, S.P., **J.D. Gardner**, M. Holland, M. Hauer-Jensen, J.S. Janicki, G.L. Brower. Protection from adverse myocardial remodeling secondary

- to chronic volume overload in mast cell deficient rats. JMCC, 45(1):56-61, 2008.
- Gardner, J.D.*, G.L. Brower, T.G. Voloshenyuk, and J.S. Janicki. Cardioprotection in Female Rats Subjected to Chronic Volume Overload: Synergistic Interaction of Estrogen and Phytoestrogens, *AJP: Heart and Circ.*, 294(1):H198-204, 2008.
- Murray, D.B., J.D. Gardner, G.L. Brower, and J.S. Janicki. Effects of Non-Selective Endothelin-1 Receptor Antagonism on Cardiac Mast Cell-Mediated Ventricular Remodeling in Rats, AJP: Heart and Circ., 294(3):H1251-7, 2008.
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- 61. Yue, X., J.M. Oakes, J. Xu, E. Lazartigues, **J.D. Gardner**. Chronic Nicotine Inhalation Promotes the Development of Pulmonary Hypertension. *FASEB J.* 33(1), 2019.
- 62. Fried, N.D., T.M. Morris, D.C. Woods, J.M. Oakes, J. Xu, V.K. Ninh, E. Lazartigues, X. Yue, **J.D. Gardner**. Chronic Nicotine Inhalation Promotes Differential Remodeling of the Right and Left Ventricles in Mice. *FASEB J.* 34(S1), 2020.
- 63. Whitehead, A. N.D. Fried, T.M. Morris, C. Pearson, Z. Li, D.J. Lefer, J.D. Gardner, E. Lazartigues, X. Yue. Chronic Nicotine Inhalation-Induced

- Vascular Dysfunction is Mediated by the Alpha 7 Nicotinic Acetylcholine Receptor. EB 2021.
- 64. Fried, N.D., T.M. Morris, A. Whitehead, E. Lazartigues, X. Yue, J.D. Gardner. Chronic Inhaled Nicotine-Induced Pulmonary Hypertension and Right Ventricular Remodeling are Mediated by Angiotensin-II Type 1 Receptor. EB 2021.
- 65. Fried, N.D., J.D. Gardner. Cardiopulmonary protection against nicotine-induced pulmonary hypertension and right ventricular remodeling in mice is not mediated by ovarian hormones. EB 2022.
- 66. Edavettal, J., N.D. Fried, J.D. Gardner. Chronic nicotine inhalation accelerates cardiac decompensation due to pressure overload. APS Summit 2023.

Research Review Committees:

- 2006 Reviewer for Health Research Board, Ireland
- 2007 2008 Mid-Atlantic Affiliate American Heart Association Study Section
- 2008 Reviewer for the Kentucky Science and Engineering Foundation
- 2009 Greater Southeast Affiliate American Heart Association Study Section
- 2010 American Heart Association Card Bio 3 Study Section
- 2011 2013 Reviewer for Pennsylvania's Commonwealth Universal Research Enhancement Program
- 2012 / 2016 American Heart Association Card Bio 4 Study Section
- 2012 2016 SEBM Young Investigator Award Review Committee
- 2013 2018, 2022 Reviewer for Qatar National Research Foundation
- 2013 Reviewer for Ochsner Translation Medical Research Initiative
- 2013 Reviewer for the Research Committee of the Faculty of Medicine at the American University of Beirut
- 2014 2016 California Tobacco-Related Disease Research Program (TRDRP)
- 2016 American Heart Association IRG Study Section
- 2017-2018 Pennsylvania Department of Health
- 2017-2020 Florida Department of Health
- 2017-2018 NIH/FDA TCORS Study Section
- 2018-2019 American Heart Association Study Section
- 2020 NIH Lung Cellular, Molecular, and Immunobiology Study Section ad hoc
- 2020 Heart & Vascular Great Plains IDEA-CTR Pilot Projects Reviewer for the University of Nebraska Medical Center

- 2021 Florida Department of Health Biomedical Research Program Review Panel
- 2021 NIH Cardiovascular and Respiratory Science Small Business Study Section (ZRG1 CVRS-J11) ad hoc – June and November cycles
- 2021 2022 Saving Tiny Hearts Society
- 2022 LaCaTS Pilot Grant Program
- 2022 NIH NIAAA Study Section (ZAA-1) ad hoc June cycle
- 2023 NIH NHLBI Study Section (MPPB) ad hoc Feb cycle
- 2023 NIH NIAAA Study Section (ZAA-1) ad hoc Feb cycle
- 2023 NIH NHLBI Study Section (MPPA) ad hoc Nov cycle

Scientific Presentations:

Invited Presentations at Scientific Meetings:

INTERNATIONAL:

Gardner, J.D., J.M. Bradley, and M.C. El Hajj. Lysyl oxidase, collagen cross-linking, and cardiac dysfunction. *IUPS 2013*, Birmingham, UK.

Gardner, J.D. Lysyl oxidase activity promotes cardiac dysfunction and adverse remodeling. *PanAmerican Conference* 2019, Havana, Cuba.

NATIONAL:

Gardner, J.D., and R.W. Schubert, "Myoglobin facilitated oxygen diffusion in the heart: a mathematical assessment," <u>Microcirculation: Proceedings of the 42nd Annual Conference</u>, 1995.

Gardner, **J.D.**, G.L. Brower and J.S. Janicki. Gender Mediated Cardiac Protection from Adverse Ventricular Remodeling Is Abolished by Ovariectomy, XV Congress of the Cardiovascular System Dynamics Society 2002.

Gardner, J.D. and G.L. Brower. Inhalation of Particulate Matter Induces Cardiac Mast Cell Activation of Metalloproteinases, *Circulation* 110(17): III-56, 2004.

Voloshenyuk, T.G. and **J.D. Gardner**. Improved TIMP-1/MMP-9 and TIMP-2/MMP-2 Balance in Volume Overloaded Hearts of Ovariectomized Rats after Estrogen Replacement. *APS Summer Conference*, 2009.

Gardner, **J.D.**, J.M. Bradley, and T.G. Voloshenyuk. Compensatory response of cardiac lysyl oxidase to chronic volume overload. *Experimental Biology*, 2010.

- **Gardner, J.D.**, T.G. Voloshenyuk, M.A. Claudino and J.M. Bradley. Estrogen modulates myocardial collagen cross-linking and attenuates volume overload induced ventricular dilatation. *Experimental Biology*, 2011.
- **Gardner**, **J.D.**, "Ethanol Exacerbates Cardiac Injury" for symposium Alcohol and Trauma: Immunologic Consequences. *Research Society on Alcoholism*, 2014.
- **Gardner**, **J.D.** "Alcohol and cardiac remodeling: potential mechanisms"; Gordon Conference on Alcohol-Induced End Organ Diseases, 2017.
- **Gardner, J.D.** "Impact of Estrogen on Left Ventricular Remodeling and Function"; *Experimental Biology*, 2019.
- Gardner, J.D. "Cardiac effects of Inhaled Nicotine"; AHA BCVS, 2020.

REGIONAL:

Gardner, **J.D.**, "Lysyl Oxidase, Dilatation and Dysfunction in the Volume Overloaded Heart" Gulf Coast Physiological Society Meeting, Jackson, MS, 2011.

Invited Presentations and Seminars:

OUTSIDE OF LSUHSC:

- 2003 American Heart Association Local Chapter, "Gender Differences in Congestive Heart Failure", Auburn, AL.
- 2008 Commencement Address, "Get Out of Your Comfort Zone", Pearl River Community College, Poplarville, MS.
- 2010 "Lysyl Oxidase: A Key Player in Cardiac Decompensation?", Department of Physiology, Tulane School of Medicine, New Orleans, LA
- 2010 "Lysyl Oxidase and Cardiac Remodeling", Division of Cardiology, University of Texas Health Science Center, San Antonio, TX
- 2011 Gulf Coast Physiological Society Meeting, "Lysyl Oxidase, Dilatation and Dysfunction in the Volume Overloaded Heart", Jackson, MS
- 2012 "Cardiac Fibrosis and Heart Failure", Summer Undergraduate Research Program for the Louisiana Biomedical Research Network, Louisiana State University, Baton Rouge, LA.
- 2013 "Lysyl Oxidase and Heart Failure", Department of Pharmacology, Tulane School of Medicine, New Orleans, LA.
- 2013 IUPS Meeting, "Lysyl oxidase, Collagen Cross-linking, and Cardiac Dysfunction", Birmingham, UK.

- 2014 "Lysyl oxidase, Collagen Cross-linking, and Heart Failure", Department of Biology, Mississippi State University, Starkville.
- 2016 "Lysyl Oxidase in the Volume Overloaded Heart: Friend or Foe?",
 Department of Physiology, Tulane School of Medicine, New Orleans,
 LA
- 2022 "Cardiac Effects of Chronically Inhaled Nicotine", InsideScientific and the American Journal of Physiology Webinar (Spring)
- 2022 "Pre-clinical Evidence on the Damaging Cardiac Effects of Chronically Inhaled Nicotine", Biomedical Engineering Department, Louisiana Tech University, Ruston, LA (05/22)
- 2022 "Adverse Cardiac and Vascular Effects of Chronic Nicotine and Vape Inhalation" NIH/NHLBI, Remote Seminar, 10/2022.

ADDITIONAL PRESENTATIONS WITHIN LSUHSC:

- 2009 Department of Pharmacology, "Ovarian Hormone Dependent Protection against Adverse Left Ventricular Remodeling"
- 2009 New Faculty Orientation Session on IACUC Protocols
- 2010 Department of Pharmacology, COBRA Developmental Session, "Lysyl Oxidase and Heart Failure"
- 2010 Department of Cell Biology and Anatomy, "Role of Lysyl Oxidase in Ventricular Dilatation and Heart Failure"
- 2011 Department of Pharmacology, COBRA Developmental Session, "Volume Overload, Lysyl Oxidase and Heart Failure: R01 Resubmission"
- 2011 Department of Pharmacology, COBRA Developmental Session, "Lysyl Oxidase and Pressure Overload: New R01 Application"
- 2012 Department of Pharmacology, COBRA Developmental Session, "Role of Lysyl Oxidase in Volume Overload Induced Cardiac Dysfunction"
- 2012 Department of Pharmacology, COBRA Developmental Session, "NOXdependent Mechanisms of Fibrosis in Pressure Overload: Discussion of Preliminary Data"
- 2013 LSUHSC Alcohol and Drug Abuse Center of Excellence retreat, "Alcohol and Cardiac Fibrosis"
- 2014 Department of Physiology, "Lysyl oxidase, Collagen Cross-linking, and Heart Failure"
- 2015 Department of Physiology, "Cardioprotective Effects of Lysyl Oxidase Inhibition"

- 2015 Cardiovascular Center Retreat, "Cardioprotective Effects of Lysyl Oxidase Inhibition"
- 2016 Department of Pharmacology, "Lysyl Oxidase in the Volume Overloaded Heart: Friend or Foe?"

Editorial Posts and Activities:

Journal editorships and associate editorships:

- 2011-2016 Associate Editor for *Life Sciences* and *Endocrine*
- 2011 Guest Editor for a special issue of *Life Sciences* on Diabetes and Cardiac Dysfunction
- 2015-present Associate Editor for American Journal of Physiology: Heart and Circulatory Physiology
- 2018-present Executive Editor for Biomedicine and Pharmacotherapy

Reviewer status:

■ Invited Reviewer for American Journal of Physiology (AJP): Regulatory, Integrative and Comparative Physiology, AJP: Heart and Circulatory Physiology, AJP: Lung, Cellular and Molecular Physiology, Clinical Science, Cardiovascular Research, Circulation: Cardiovascular Genetics, Peptides, Journal of Women, Cytokine, Microscopy and Microanalysis, Experimental Biology and Medicine, Life Sciences, PlosOne, Endocrine, Computers and Mathematics with Applications, Journal of Gerontology: Biological Sciences, Cardiovascular Toxicology, Journal of Endocrinology, Journal of Molecular and Cellular Cardiology, Alcohol, Alcoholism: Clinical and Experimental Research, Shock, Journal of Applied Physiology, Hypertension, and others.

SERVICE ACTIVITIES

University/Institutional Service:

Departmental committees and service (Physiology):

- 2012 present Shared Instrumentation and Core Laboratories Coordinator
- 2012 2014, 2018 Departmental Seminar Series Coordinator
- 2012 2015 Summer Trainee Coordinator
- 2014 present Departmental Faculty Search Committee (Chair -2015/2016/2023)

- 2018 present Departmental Teach Task Force Chair
- 2021 present Departmental Diversity, Equity, and Inclusion Committee

School of Medicine committees:

- 2008 present Scholarships and Student Awards Committee
- 2008 present LSUHSC-NO School Disaster Preparation Go-Team
- 2011 present Communications Committee
- 2013 present Strategic Planning Committee: Communications
- 2014 present Institutional Animal Care and Use Committee
- 2016 present Faculty Assembly
- 2021 present Faculty Assembly Diversity, Equity, and Inclusion Subcommittee
- 2022 present Administrative Council Faculty Assembly Basic Sci Rep
- 2022 present Executive Committee Faculty Assembly Rep
- 2023 President-elect Faculty Assembly

Other LSUHSC service:

- 2011-2013, 2023 Graduate Student Research Day Judge
- 2012 2015 LSUHSC Recruitment Table at the Experimental Biology Undergraduate Research Poster Session
- 2021 LSU SOM Basic Science Grant Review
- 2022 LSU SOM Clinical Science Grant Review
- 2023 LSU SOM Basic Science Grant Review

Committee and Scientific Service Outside of LSUHSC:

National committees:

- 2010 2016 APS Perkins Award Committee
- 2011 2016 American Physiological Society (APS) Cardiovascular Section Nominating Committee
- 2011 2016 APS Chapter Advisory Committee
- 2011 2016 Councilor for the Society of Experimental Biology and Medicine (SEBM)
- 2013 2016 SEBM Membership Committee

- 2014 2017 Treasurer of the APS Cardiovascular Section
- 2016 2018 SEBM Nominating Committee (Chair)
- 2019 present Saving Tiny Hearts Society Medical Advisory Board
- 2020 2023 APS Cardiovascular Section Fellowship Committee

Regional committees:

- 2011 2013 Councilor, Treasurer, and Nominating Committee of GCPS
- 2011 2016 APS Representative for the GCPS
- 2013 2015 President of Gulf Coast Physiological Society (GCPS)

Scientific Meeting Development and Contribution:

- 2010 Chair of Featured Topic Session for Experimental Biology sponsored by the Cardiovascular Section entitled, "Extracellular Matrix and Pathology of Cardiovascular Disease."
- 2012 Chair of Featured Topic Session for Experimental Biology sponsored by the Cardiovascular Section entiled, "Extracellular and Intracellular Signaling Mechanisms of Cardiac Remodeling."
- 2014 Chair of Featured Topic Session for Experimental Biology sponsored by the Cardiovascular Section entitled, "Novel Mechanisms of Diabetic Cardiac Dysfunction."
- 2019 Chair of Session for the Research Society on Alcoholism Meeting entitled, "Alcohol and the Cardiovascular System: Evolving Concepts in Pathology and Therapy

Community Service Activities and Scientific Outreach:

- 2009 2011 Volunteer Assistant for 7/8 year old and 9/10 year old Youth Football Programs at Pelican Park, Mandeville, LA
- 2009 2014 Local and Regional Science Fair Judge
- 2009 2015 APS K-12 Outreach Volunteer (Science Fair Award)
- 2012 Mentor for APS Frontiers in Science Awardee, Mr. Kyle Duhon. This APS outreach program provides a laboratory research and training experience for K-12 teachers.
- 2014 Mentor for APS Frontiers in Science Awardee, Mr. Aaron McCalister.
- 2009 2018 APS K-12 Outreach Volunteer (Physiology Understanding Week; hands on physiological activities for elementary, middle and junior high school students)
- 2019 Mentor for APS Frontiers in Science Awardee, Ms. Erika Otero.