

CURRICULUM VITAE

Michael R. Garrett, Ph.D., MBA, FAHA
Professor of Pharmacology and Toxicology

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PLACE OF BIRTH: Bridgeport, Connecticut

CITIZENSHIP: U.S.A.

EDUCATION:

08/1989 - 06/1993 **B.S. (Biochemistry)**, University of California-Riverside, Riverside, CA
08/1993 - 06/1994 **M.S. (Biochemistry)**, University of California-Riverside, Riverside, CA
08/1996 - 06/1999 **M.B.A. (Finance)**, Bowling Green State University, Bowling Green, OH
12/2003 - 12/2006 **Ph.D. (Molecular Basis of Disease)**, University of Toledo-College of
Medicine, Toledo, OH

FACULTY APPOINTMENTS (INCLUDE SECONDARY AND ADJUNCT APPOINTMENTS):

08/1999- 03/2001 **Research Instructor**, Medical College of Ohio, Department of Physiology and
Molecular Medicine, Toledo, OH
03/2001- 11/2003 **Research Assistant Professor**, Medical College of Ohio, Department of
Physiology and Molecular Medicine, Toledo, OH
11/2003- 06/2007 **Assistant Professor**, University of Toledo-College of Medicine, Department of
Physiology and Pharmacology, Toledo, OH
07/2007- 07/2010 **Assistant Professor**, Medical College of Wisconsin, Department of Medicine,
Kidney Disease Center, Joint Appointment in Department of Physiology and
Human Molecular Genetics Center (HMGC), Milwaukee, WI
08/2010- 07/2016 **Associate Professor (Tenured)**, University of Mississippi Medical Center
(UMMC), Department of Pharmacology and Toxicology, Joint Appointments in
Department of Medicine (Nephrology) and Pediatrics (Genetics) Jackson, MS
09/2010- Present **Director**, Molecular and Genomics Core, University of Mississippi Medical
Center, Jackson, MS
08/2014- Present **Associate Director of Research**, Center for Genetic Medicine, University of
Mississippi Medical Center, Jackson, MS
07/2016- Present **Professor (Tenured)**, University of Mississippi Medical Center (UMMC),
Department of Pharmacology and Toxicology, Joint Appointments in Department
of Medicine (Nephrology) and Pediatrics (Genetics) Jackson, MS

AWARDS AND HONORS:

1993	Leland M. Shannon Memorial Biochemistry Scholarship
2007	APS Star Reviewer, Physiological Genomics
2010	Robert M. Hearin Foundation Research Scholar
2011	UMMC Silver Medal for Excellence in Research
2012	UMMC Leadership Development Program
2012	Fellow of American Heart Association (FAHA)-Council for High Blood Pressure Research (HBPR)
2013	UMMC Gold Medal for Excellence in Research
2015	Meritorious Service Award- Core Services
2016	APS Star Reviewer, Physiological Genomics

MEMBERSHIPS IN HONORARY AND PROFESSIONAL SOCIETIES:

1996-	American Association for the Advancement of Science (AAAS)
1998- 2007	International Mammalian Genome Society
2001-	American Physiological Society (APS)
2006-	American Society of Nephrology (ASN)
2008-	American Heart Association (AHA)
2012-	American Society for Pharmacology and Experimental Therapeutics (ASPET)
2012-	Association of Biomolecular Resource Facilities (ABRF)

EDITORSHIPS/EDITORIAL BOARDS/JOURNAL REVIEWS:

Associate Editor

2015- *Physiological Genomics*

Editorial Boards

2003-2006 *Journal of Hypertension*
 2010-2012 *Frontiers in Genomic Physiology*
 2008-2013 *Physiological Genomics*
 2015- *SM Journal of Nephrology and Therapeutics*

Journal Reviews

2003-Present *Journal of Hypertension*
 2003-Present *Journal of American Society of Nephrology*
 2004 *Journal of Endocrinology*
 2005-Present *Physiological Genomics*
 2005 *PLOS Biology*
 2007-Present *Kidney International*
 2007-Present *Hypertension*
 2007-Present *American Journal Physiology-Renal Physiology*
 2008-Present *Mammalian Genome*
 2010-Present *Frontiers in Genomic Physiology*
 2010-Present *Translational Research*

2011-Present *PLOS One*
 2011-Present *BMC Research Note*
 2014- Present *Science Reports*
 2016- Present *Clinical Sciences*

NATIONAL ELECTED/APPOINTED LEADERSHIP AND COMMITTEE POSITIONS:

Grant Reviewer

12/2005 Ad Hoc Reviewer, Special Emphasis Panel (NIH/NIAID), RFA “Genomics of Transplantation Cooperative Research Program”
 05/2008 Ad Hoc Reviewer, Israel Science Foundation, “Individual Research Grant”
 05/2009 Ad Hoc Reviewer, Israel Science Foundation, “Individual Research Grant”
 03/2010 Ad Hoc Reviewer, Diabetes UK, “Project Research Grant”
 06/2010 Ad Hoc Reviewer, Special Emphasis Panel (NIH/NHLBI) RFA "Cellular and Molecular Mechanisms of Arterial Stiffening and its Relationship to Development of Hypertension"
 08/2010 Ad Hoc Reviewer, Special Emphasis Panel (NIH/NHLBI) RFA, “Review of Conference Grant Applications (R13)”
 12/2010 Ad Hoc Reviewer, Special Emphasis Panel (NIH/NHLBI) RFA, “Review of Conference Grant Applications (R13)”
 06/2012 Ad Hoc Reviewer, Special Emphasis Panel (NIH/NCATS), “Comparative Medicine (R01)”
 10/2012 Ad Hoc Reviewer, Basic Cell, Genetics, and Epigenetics (AHA)
 04/2013 Member Reviewer, Basic Cell, Genetics, and Epigenetics (AHA)
 10/2013 Member Reviewer, Basic Cell, Genetics, and Epigenetics (AHA)
 06/2013 Ad Hoc Reviewer, Special Emphasis Panel (NIH/NIDDK), “EDIC/GoKind DP3”
 02/2014 Ad Hoc Reviewer, Special Emphasis Panel (NIH/NIDDK), RFA, “Biomarkers of Diabetes, Digestive, and Kidney (R01)”
 08/2014 Ad Hoc Reviewer, Special Emphasis Panel (NIH/NIDDK),”NIDDK Central Repositories Non-Renewable Sample Access (X01)”
 10/2014 Member Reviewer, Basic Cell, Genetics, and Epigenetics (AHA)
 01/2015 Reviewer, Jackson Heart Study Publications and Presentations Subcommittee
 11/2016 Ad Hoc Reviewer, French Foundation for Rare Diseases (Fondation maladies rares)

Committee Service

08/2012- 08/2015 Member, Membership & Communications Committee of the Functional Genomics & Translational Biology (FGTB) Council
 03/2014- 12/2016 Member, American Physiological Society (APS) Finance Committee
 04/2014- Member, Joint Program Committee Representative (JPR), APS Physiological Genomics (PG) Steering Committee (planning of Experimental Biology 2014-2017)
 06/2013- AHA-Council on Hypertension Abstract Reviewer

Graduate Program Reviewer

02/2014 External Review Panel- MS Program in Biology at Jackson State University

RESEARCH GRANTS/AWARDS/CONTRACTS/PROJECTS:**A. Active
Peer Review**

Title: Systems Biology of Macrophage Polarization Following Myocardial Infarction
 Source: NIH/NHLBI
 Role: **Co-investigator (5%)** (PI-Lindsey)
 Dates: August 16, 2015- August 15-2019
 Goal: The goal of this project is to understand post-MI roles of the macrophage by establishing and validating an in silico computational model of the temporal evolution of macrophage polarization.

Title: Systems Biology of Fibroblast Activation Following Myocardial Infarction- Fundable
 Source: NIH/NHLBI
 Role: **Co-investigator (10%)** (PI-Lindsey)
 Dates: 2016-2020
 Goal: The goal of this project is to understand post-MI roles of the fibroblast by establishing and validating an in silico computational model of the temporal evolution of fibroblast.

Title: Mechanisms of Cardiorenal Disease following Preeclampsia
 Source: NIH/NHLBI
 Role: **Co-investigator (10%)** (PI-Sasser)
 Dates: 2016 – 2021
 Goal: This goal of this application is to develop in vitro adipose tissue models in which adipose cells are grown on 3-D spheroids made from biocompatible copolymers.

Title: 3-D Spheroid Model of Adipose Pathophysiology
 Source: NIH/NIBIB
 Role: **Co-investigator (5%)** (PI-Janorkar)
 Dates: 2016 – 2021
 Goal: This goal of this application is to develop in vitro adipose tissue models in which adipose cells are grown on 3-D spheroids made from biocompatible copolymers.

Title: Mississippi- IDeA Network of Biomedical Research Excellence (MS-INBRE)
 Source: INBRE/P20- subcontract
 Role: **Core Director (10%)** (PI-Elarsi)
 Dates: 2013 - 2018

Direct Funds: \$500,000 (direct costs and indirect for all years-Genomics Core)
 Goal: Provide genomic technology expertise and oversee genomics services for MS-INBRE members.

Title: Center for Psychiatric Neuroscience (CPN)
 Source: COBRE/P30-
 Role: **Core Director (10%)** (PI-Stockmeier)
 Dates: 2013 - 2018
 Direct Funds: \$ 342,415 (total direct costs for all years-Genomics Core)
 Goal: Provide genomic technology expertise and oversee genomics services for CPN member through UMMC Molecular and Genomics Core Facility

Title: Cardiorenal and Metabolic Diseases Research Center
 Source: COBRE/P20-
 Role: **Core Leader (10%)** (PI-Hall)
 Dates: 2013 - 2018
 Direct Funds: \$482,987 (total direct costs for all years-Genomics Core)
 Goal: Provide genomic technology expertise and oversee genomics services for COBRE member through UMMC Molecular and Genomics Core Facility

Title: The Role of Cgn1 (and Arhgef11) in Hypertensive Kidney Disease
 Source: Gene Editing Rat Resource Center-Round6
 Role: Animal model selected for development- Cgn1-/-
 Dates: 2017-2018
 Direct Funds: \$~20,000 value
 Goal: To investigate the role of the Cgn1 in hypertension associated kidney injury as well as the opportunity to investigate the interaction with Arhgef11 (SS-Arhgef11-/-Cgn1-/- double knockout).

B. Pending/Submission for Oct-Nov 2015
Extramural/Principal Investigator

Pending-

Title: Trans-organ crossroads between inflammation and fibrosis
 1R01HL133703-01A1-R01
 Source: NIH
 Role: **Principal Investigator (Multi-PI- Lindsey/Garrett)**
 Dates: 2017-2022
 Direct Funds: \$ 2,100,000 (total direct cost for all years)

In Preparation-

Title: Genetic Targets of Hypertension End Organ Damage
 Source: NIH/NIDDK-1R01HL137673-01

Role: **Principal Investigator (20%)**
 Dates: 2017-2022
 Direct Funds: \$ 2,300,000 (total direct cost for all years)

Title: Multi-Omics Analysis of Nephron Number and CKD
 Source: NIH/NIDDK-
 Role: **Principal Investigator (20%)**
 Dates: 2017-2022
 Direct Funds: \$ 2,300,000 (total direct cost for all years)

Title: Genetic Mechanisms and Biomarkers of Chronic Kidney Disease
A1-R01 submission Feb 2017
 Source: NIH
 Role: **Principal Investigator (25%)**
 Dates: 2017-2022
 Direct Funds: \$ 1,408,295 (total direct cost for all years)
 Goal: Identify genetic factors that play a role in hypertensive renal disease using *in vivo* approaches [Dahl salt-sensitive (S) rat], *in vitro* techniques (cell culture, genetic knockdown, overexpression, etc.), and development of genomic and proteomic biomarkers using rat and human population.

Extramural/Co-Investigator (Pending)

Title: Mississippi Center of Excellence in Perinatal Research (MS CEPR)
 Source: NIH
 Role: **Core Director (10%) (PI-Reckelhoff)**
 Dates: 2017 – 2022

Title: Genetics of Addiction-Associated Behavior in Rhesus Macaques
 Source: NIH
 Role: **Co-Investigator (5%) (PI-Vallender) + MGCF support (25%)**
 Dates: 2017 – 2022

Title: Maternal immune activation and abnormal neurodevelopment
 Source: NIH
 Role: **Co-Investigator (5%) (PI-Pang)**
 Dates: 2017 – 2022

Title: Preeclampsia: Pathophysiological mechanisms and therapeutic targets.
 Source: NIH/PPG
 Role: **Co-Investigator (5%) (PI-Granger)**
 Dates: 2017 – 2022

C. Prior Peer Review

Title: Role of CIR1 in Vascular Function and Disease
 Source: NIH/NIGMS- UDP subcontract
 Role: **Principal Investigator (5%)**
 Dates: August 15, 2015- August 14, 2016
 Direct Funds: \$ 60,000
 Goal: The objective of this proposal will be to explore the pathogenic role of CIR 292 T>A (Trp98Arg) in the context of vascular function using *in vitro* methodologies.

Title: Genetics of Renal End Organ Damage in Hypertension
 Source: NIH/NHLBI
 Role: **Principal Investigator (40%)**
 Dates: August 1, 2009 - July 30, 2015 (no cost extension)
 Direct Funds: \$1,250,000 (total direct cost for all years)
 Goal: Identify genetic factors that play a role in hypertensive renal disease using *in vivo* approaches [Dahl salt-sensitive (S) rat] and *in vitro* techniques (cell culture, genetic knockdown, overexpression, etc.)

Title: Medical Student Research Program (MSRP)
 Source: Robert M. Hearin Foundation
 Role: **Principal Investigator (effort in kind)**
 Dates: July 1, 2014 – June 30, 2018
 Direct Funds: \$ 481,000 (total direct cost for all years)
 Goal: The purpose of the MSRP is to foster the development of medical students into physician scientist. The program consists of 10-week “Summer of Research” portion M1-M2, followed by “Full Option” for M2-M4.

Title: The Role of Arhgef11 in Hypertensive Kidney Disease
 Source: Gene Editing Rat Resource Center-Round 1
 Role: Animal model selected for development- Arhgef11-/-
 Dates: 2017-2018
 Direct Funds: \$~20,000 value
 Goal: To investigate the role of the Arhgef11 (SS-Arhgef11-/- knockout) in hypertensive kidney disease.

Title: Renal Hemodynamics in New Genetic Model Born with a Single Kidney
 Source: UMMC-IRSP
 Role: **Principal Investigator**
 Dates: Nov 1, 2010 - Oct 31, 2011
 Direct Funds: \$30,000 (total direct cost for all years)
 Goal: Develop and characterize the long-term impact on renal hemodynamics, renal injury, and cardiovascular disease in genetic animal model born with single kidney.

Title: Characterizing a Novel Model of Proteinuria using Nr4a1 Nuclear Receptor Knockout Rats
 Source: Children’s Research Institute (RCEPN)

- Role: **Principal Investigator**
 Dates: July 1, 2009 - June 30, 2011
 Direct Funds: \$97,000 (total direct costs for all years)
 Goal: Investigate the physiological and biochemical mechanism the role of *Nr4a1* in kidney disease.
- Title: A Positional Cloning and Functional Approach to Identify a Renal Disease Gene Potentially Linked to Fibrosis
 Source: AHA
 Role: **Principal Investigator**
 Dates: July 1, 2007 - June 30, 2009
 Direct Funds: \$110,000 (total direct costs for all years)
 Goal: Identify genetic factors (on Chromosome 2) that play a role in renal disease using *in vivo* approaches [Dahl salt-sensitive (S) rat].
- Title: Biochemistry and Genetics of Hypertension
 Source: NIH/NHLBI (R01-HL20176)
 Role: **Co-Investigator** (PI- John Rapp/Bina Joe)
 Dates: December 1 2003 - November 30, 2008
 Direct Funds: \$2,054,605 (total for all years)
 Goal: Perform genetic analysis (QTL analysis) to identify and fine-map genomic regions linked to hypertension in the Dahl salt-sensitive rat
- Title: The Use of Renal Expression Profiling in the Genetic Dissection of Renal Disease using the Dahl S Rat
 Source: University of Toledo- College of Medicine
 Role: **Principal Investigator**
 Dates: February 15 2005 - February 15, 2006
 Direct Funds: \$8,400 (total for all years)
 Goal: Explore transcriptome changes on the development renal disease using the Dahl salt-sensitive (S) rat.
- Title: Genetic Analysis of Renal Disease in SHR and Dahl S Rats
 Source: NIH/NHLBI (R01-HL66998)
 Role: **Principal Investigator**
 Dates: March 8, 2001 - Feb 2, 2005
 Direct Funds: \$550,000 (total for all years)
 Goal: Perform genetic analysis (QTL analysis) to identify genomic regions linked to renal injury in the Dahl salt-sensitive rat
- Title: Positional Cloning of Blood Pressure QTL
 Source: NIH/NHLBI (R01-HL65290)
 Role: **Co-Investigator** (PI- John Rapp)
 Dates: September 29 2000 - August 31, 2003
 Direct Funds: \$1,000,000 (total for all years)
 Goal: Perform genetic analysis (QTL analysis) to identify and fine-map genomic regions linked to hypertension in the Dahl salt-sensitive rat

Title: Biochemistry and Genetics of Hypertension
 Source: NIH/NHLBI (R37HL-20176)
 Role: **Research Associate** (PI- John Rapp)
 Dates: June 01, 1995 - May 31, 2003
 Goal: Perform genetic analysis (QTL analysis) to identify and fine-map genomic regions linked to hypertension in the Dahl salt-sensitive rat

INVITED LECTURES/WORKSHOPS/PRESENTATIONS (must be invited to participate):

Research/Genomic Core Presentations

National/Regional

1. “Searching for the Molecular Basis of Renal Disease in the Dahl Salt-Sensitive Rat,” **Garrett, M.R.**, Department of Physiology and Kidney Disease Center, Medical College of Wisconsin, February 22, 2007.
2. “Strategies for Unraveling the Genetic Basis of Renal Diseases,” **Garrett, M.R.**, Department of Medicine, Division of Nephrology Research Conference, Medical College of Wisconsin, April 4, 2007.
3. “Leveraging Rat Genetic Models to Understand Human Complex Disease,” **Garrett, M.R.** Millsaps College, Department of Biology, November 13, 2013
4. “Genomics Approaches to Medicine and Research” **Garrett, M.R.**, 78th Annual Meeting of Mississippi Academy of Sciences, Hattiesburg, MS, March 6, 2014
5. “The Genomics Revolution: Technological Advances for Understanding Disease” **Garrett, M.R.**, MS-INBRE Biomedical Training Session, May 13, 2014
6. “Leveraging Rat Genetics to Understand Human Diseases of the Kidney” **Garrett, M.R.**, SE Regional IDEa Meeting, Biloxi, MS November 11-13, 2015
7. “The UMMC Molecular and Genomics Core Facility: A Resource for Genomic Technology throughout Mississippi and Beyond” **Garrett, M.R.**, SE Regional IDEa Meeting, Biloxi, MS November 11-13, 2015
8. “Genetics of salt-sensitive hypertension: basic science perspectives,” **Garrett, M.R.**, American Heart Association Scientific Sessions 2012, Los Angeles, CA, November 4, 2012 (*invited talk*)
9. “Biomarker Discovery: Leveraging Rat Genetics Models to Understand Human Chronic Kidney Disease,” **Garrett, M.R.**, GlaxoSmithKline, May 30, 2013(*invited talk*)

10. “Genetic variants in Arhgef11 promote kidney injury and reduced renal function through Rho-Rock Pathway” **Garrett, M.R.**, Department of Medicine, Marshall University, July 11-12, 2013. (*invited talk*)
11. “Advances in Personalized Medicine: From Surveying Genetic Variation to Sequencing Whole Genomes” **Garrett, M.R.**, Department of Medicine, Marshall University, July 11-12, 2013. (*invited talk*)
12. “Genetic variants in Arhgef11 promote kidney injury and reduced renal function in Dahl S rats” Experimental Biology (EB), Boston, April 20-24, 2013 (*invited talk*)
13. “New Insight into Nephron Number, Hypertension, and CKD using the HSRA One-Kidney Rat Model” **Garrett, M.R.**, 3rd Annual Physiological Genomics Conference, Experimental Biology (EB), Boston, April 2-6, 2016 (*invited talk*)
14. “Genetic variation associated with kidney injury in the hypertensive rat.” **Garrett, M.R.**, American Society of Nephrology-Kidney Week, Chicago, November 16-22. 2016 (*invited talk*)
15. “Resources for High Throughput Genomic Technology in Mississippi: Application for Metagenomics/16S Microbial Sequencing” **Garrett, M.R.**, Mississippi Academy of Sciences, Hattiesburg, MS February 23-24, 2017

Local

1. “Genetic Dissection of Hypertension and Renal Disease in the Dahl Salt-Sensitive Rat” , **Garrett, M.R.**, Joe, B., Rapp, J.P., Integrated Biology/Translation Research Seminar Series, Medical College of Ohio, December 9, 2004
2. “The Genetic Basis of Renal Failure: Translating Animal Genetics to Human Disease”, **Garrett, M.R.**, Department of Medicine, Medicine Grand Rounds, Medical College of Wisconsin, December 14, 2007
3. “Sequencing and SNP Analysis of a Major Locus Influencing Proteinuria in the Rat,” **Garrett, M.R.**, Department of Medicine, Division of Nephrology Research Conference, Medical College of Wisconsin, April 15, 2008.
4. “Rat and Genetics and Renal Disease, Oh My!” **Garrett, M.R.**, Department of Physiology, HMGC Conference, Medical College of Wisconsin, September 4, 2008.
5. “Novel Genetic Models of Kidney Disease Using the Rat,” **Garrett, M.R.**, Department of Medicine, Division of Nephrology Research Conference, Medical College of Wisconsin, January 20, 2009.
6. “Rat, Genetics, and Renal Disease,” **Garrett, M.R.**, Children’s Hospital of Wisconsin, Children’s Research Institute (CRI), Noon Conference March 6, 2009.

7. “Heterogeneous Stock (HS) rats: Renal Phenotypes & New Model of Unilateral Renal Agenesis,” **Garrett, M.R.**, Cardiovascular Research Center (CVC), Medical College of Wisconsin, February 17, 2010.
8. “Tales from the Rat Race...Progress on Models of Kidney Disease,” **Garrett, M.R.**, Department of Medicine, Division of Nephrology Research Conference, Medical College of Wisconsin, March 16, 2010.
9. “A Tale of Two Rats: Toward Understanding Kidney Disease Rat”, **Garrett, M.R.**, Department of Pharmacology, UMMC, September 27, 2011.
10. “UMMC Molecular and Genomics Core: who we are what we can do!”, **Garrett, M.R.**, UMMC, Cancer Institute, October 25,2011 and Center of Excellence in Cardio-renal Research (CECR), October 27,2011
11. “Two brother, A Different Vision: Mapping a Gene for Cataracts”, **Garrett, M.R.**, Department of Pharmacology, UMMC, February 27, 2012.
12. “Born with One-Kidney or Two: Does it Matter?” **Garrett, M.R.**, Department of Physiology, UMMC, March 7, 2012.
13. Genetic variants in *Arhgef11* promote kidney injury and reduced renal function through Rho-Rock Pathway” **Garrett, M.R.**, Department of Physiology, UMMC, March 20, 2013.
14. “Advances in Personalized Medicine,” **Garrett, M.R.**, Medical Student Research Program Seminar Series, UMMC, July 26, 2013
15. “Genomic Technologies at UMMC: The stuff that dreams are made of...” **Garrett, M.R.**, Department of Biochemistry, UMMC, February 25,2014
16. “UMMC Molecular and Genomics Core: A Resource for Mississippi’s Genomics Needs” **Garrett, M.R.** Neuroscience Brown Bag Lunch, UMMC and University of Mississippi, April 10, 2014
17. “Pharmacogenomics: An Overview and Examples” **Garrett, M.R.**, Pediatrics Genetics Conference, May 8, 2014
18. “Identification of Novel Therapeutic Targets for Kidney Disease by Genetic Analysis of the Dahl S Rat,” P **Garrett M.R.** Pharmacology Seminar, December 14,2015
19. “Leveraging Rat Genetic Models and High-throughput Genomic Technologies to Understand Human Diseases of the Kidney” Johnson A.C., Wang X., Jia Z., Pasco D.S., and **Garrett M.R.**, UM-UMMC Research Day, Jackson, MS, February, 2016

20. “The UMMC Molecular and Genomics Facility: A Resource for Genomic Technology throughout Mississippi and Beyond.” Johnson A.C., Jia Z., and **Garrett M.R.** UMMC Research Day, Jackson, MS, February, 2016

UMMC Graduate School Discovery U Program (Administrative)

1. “Discovery U and Summer Undergraduate Research Experience (SURE), **Garrett, M.R.**, UMMC Graduate School, July 19, 2013
2. “Discovery U and Graduate Programs at UMMC,” **Garrett, M.R.**, Millsaps College, Department of Biology, Senior Seminar, November 3, 2013
3. “Discovery U Programs at UMMC,” **Garrett, M.R.**, College of Science, Engineering & Technology (CSET), Jackson State University, November 20, 2013
4. “From Rodent Genetic Models to Human Complex Disease,” **Garrett, M.R.**, Madison Central High School, December 17, 2013

PEER REVIEWED WORKSHOPS/PRESENTATIONS (must have abstract or submission peer-reviewed before asked to present):

National

1. “Genome Scan and Congenic Strains for Blood Pressure Quantitative Trait Loci Using Dahl Salt-Sensitive Rats.” **Garrett, M. R.**, Dene, H., Walder, R. Y., Zhang, Q., Cicila, G. T., Assadnia, S., Deng, A. Y., Rapp, J. P., 51st Council for High Blood Pressure Research of the American Heart Association. Washington D.C., September 16-19, 1997 (*Talk*)
2. "Localization of a Blood Pressure QTL on Rat Chromosome 7 to a 0.55cM region using Congenic Substrains" **Garrett, M. R.**, Cicila, G. T., Lee, S.J., Dene, H., Rapp, J. P., Genetics of Experimental and Human Hypertension Symposium, Toledo, OH, August 17-18, 2000 (*Talk*)
3. “Dissecting Blood Pressure QTL using Congenic Strains- Two Contrasting Examples”, **Garrett, M. R.**, Dene, H., Rapp, J. P., Rat Genomics and Models, Cold Spring Harbor, December 6-9, 2001(*Talk*)
4. “Identification of *Resp18* as a Candidate Gene for the Blood Pressure QTL on Rat Chromosome 9 Using Congenic Strains and Renal Expression Analysis”, Meng, H., **Garrett, M. R.**, Joe, B., Warriar, S., Dene, H., Rapp, J. P, Rat Genomics and Models , Cold Spring Harbor, December 11-14, 2003
5. “Genome Scan and Congenic Strains for Albuminuria QTL using Dahl Salt Sensitive Rats”, **Garrett, M.R.**, Joe, B., Rapp, J.P., International Symposium of Cardiovascular Genomics, Medical College of Ohio, May 17, 2004 (*Talk*)

6. "Refinement of a Proteinuria QTL to <1.5 cM on Rat Chromosome 2 using Recombinant Progeny Testing," **Garrett, M.R.**, Joe, B., Gunning WT., Radecki, T., Yerga-Woolwine, S., Rat Genomics and Models , Cold Spring Harbor, December 8-11, 2005
7. "An Accelerated Model of Chronic Kidney Disease by Genetic Modification of the Dahl Salt-Sensitive Rat", Regner, K., Stelloh, C., Eisenhauer, J., and **Garrett, M.R.**, American Society of Nephrology Renal Week, San Diego, CA, October 27- November 1, 2009 (*Talk*)
8. "Heterogenous Stock Rats (HS)- A Novel Genetic Resource to Study Renal Phenotypes," Solberg-Woods, L., Stelloh, C., Regner, K., Schwabe, T., Eisenhauer, J., and **Garrett, M.R.**, Cold Spring Harbor, December 2-5, 2009 (*Talk*).
9. "Identifying causative genetic variants and establishing biomarkers of kidney disease in a novel rat model," Harmon, A., Johnson, A., Atanur, S., Maratou, K., Driesbach, A., Aitman, T., and **Garrett, M.R.**, Cold Spring Harbor, December 7-9, 2011 (*Talk*).
10. "Physiological and Genetic Characterization of Congenital Solitary Kidney Rats," Wang, X., Johnson, A., Solberg-Woods, L., and **Garrett, M.R.**, Cold Spring Harbor, December 7-9, 2011 (*Talk*).
11. "Identification of Genetic Variants in *Arhgef11* linked to Hypertension related Kidney Disease," Williams, J.M, Stelloh, C., Ryan, R.P., Kevin R. Regner Roman, R.J., and **Garrett, M.R.**, Cold Spring Harbor, December 7-9, 2011 (*Talk*).
12. "Loss of Nuclear Receptor 4a1 on a Hypertensive Genetic Background Promotes Immune-Mediated Renal Injury." High Blood Pressure Research (HBPR) Council, Washington D.C., September 19-22, 2012 (*Talk*)

OTHER PEER REVIEWED ABSTRACTS/POSTER PRESENTATIONS

1. "Localization of Blood Pressure Quantitative Trait Loci (QTL) Using Linkage Analysis and Congenic Strains." Rapp, J. P., Deng, A.Y., Dene, H., Cicila, G. T., Dukhanina, O., **Garrett, M. R.**, 11th International Mouse Genome Conference, St. Petersburg, FL. October 12-16, 1997
2. "Characterization of a Rat Chromosome 7 Blood Pressure/Cardiac Mass Quantitative Trait Locus using Congenic Substrains." Cicila, G. T., **Garrett, M.R.**, Dukhanina, O., Dene, H., Liu, J., Lee, S.J., Rapp, J. P., 13th International Mouse Genome Conference, Philadelphia, PA. October 31- November 3, 1999
4. "Localization of Rat Chromosome 1 Blood Pressure Quantitative Trait Loci Using Congenic Strains." Saad, Y., **Garrett, M. R.**, Lee, S.J., Dene, H., Rapp, J. P., 13th International Mouse Genome Conference, Philadelphia, PA. October 31- November 3, 1999

5. "Blood Pressure QTL in the Rat: Simple, Compound, and Interactive Examples." Rapp, J. P., **Garrett, M. R.**, Dene, H., Cicila, G. T., Physiological Genomics and Rat Models, Cold Spring Harbor, NY, December 9-12, 1999
6. "Improved Pressure-Natriuresis in Chromosome 5 Congenic Dahl S Rats" Hoagland, K.M., **Garrett, M.R.**, Rapp, J. P., Roman R.J., FASEB 2001 Meeting, March 31- April 4, 2001
7. "Transferring the CYP4A Region of Chromosome 5 Reduces Glomerular Capillary Pressure and Glomerular Injury in Congenic Dahl S Rats" Moreno, C., Fenoy, F. J., Hoagland K.M. , Maier K.G., **Garrett, M.R.**, Rapp, J. P., Roman R.J. FASEB 2001 Meeting, March 31- April 4, 2001
8. "Localization of a Blood Pressure QTL to a 2.5 cM Interval on Rat Chromosome 9" Meng, H., **Garrett, M. R.**, Dene, H., Rapp, J. P., Physiological Genomics and Rat Models, Cold Spring Harbor, December 6-9, 2001
9. "Substitution Mapping in Congenic Substrains Derived from Dahl Rats Identifies Two Distinct Blood Pressure QTLs in the q-Terminus of Rat Chromosome 3" Cicila, G. T., Liu, J., **Garrett, M. R.**, Lee, S.J., Rapp, J. Physiological Genomics and Rat Models, Cold Spring Harbor, December 6-9, 2001
10. "Genome Scan and Congenic Strains for Albuminuria QTL using Dahl Salt Sensitive Rats", **Garrett, M.R.**, Dene, H, Rapp, J.P. , Rat Genomics and Models , Cold Spring Harbor, December 11-14, 2003
11. "Effect of the transfer of CYP4A region of chromosome 5 from Lewis rats into the Dahl-S genetic background on pressure natriuresis and salt-induced hypertension." Roman R.J., Hoagland, K., Lopez, B., Kwitek, A., **Garrett, M.R.**, Rapp, J.P., Lazar, J, Jacob, H.J., Sarkis, A 59th Council for High Blood Pressure Research of the American Heart Association. Washington D.C., September 21-24, 2005
12. "Transfer of the CYP4A region from Lewis rats into Dahl S background reduces renal injury.", Roman R.J., Hoagland, K., Lopez, B., Kwitek, A., **Garrett, M.R.**, Rapp, J.P., Lazar, J, Jacob, H.J., Sarkis,, 59th Council for High Blood Pressure Research of the American Heart Association. Washington D.C., September 21-24, 2005
13. "A Rat Blood Pressure Quantitative Trait Locus Localized to a 1.17 MB Region on Rat Chromosome 10", Saad, Y, **Garrett, M.R.**, Yerga-Woolwine, S., Manickavasagam, E., Radecki, T., Joe, B., Rat Genomics and Models, Cold Spring Harbor, December 8-11, 2005
14. "Rat Strain Differences in Survival Time to Controlled Hemorrhage", Klemcke, H.G., Baer, D., Cox, A., Cortez, D., Joe, B., **Garrett, M.R.**, Ryan, K.L., FASEB 2006 Meeting, April 1-5, 2006
15. "Fine-Mapping, High Density SNP and Comprehensive Transcript Analysis Reveal Sequence Variants Within a 450kb Interval Linked to Proteinuria and Renal Interstitial Fibrosis in the

- Rat,” **Garrett, M.R.** and Purciello, D., American Society of Nephrology Renal Week, Nov 5-9, 2008
16. “Dissecting the Genetic Basis of Calcium Oxalate Stone Disease Using Chromosome Substitution Strains in the Rat,” Wiessner, J, **Garrett, M.R.**, Roman, R.J., Mandel, N. American Society of Nephrology Renal Week, November 5-9, 2008
 17. “Resurrecting a Candidate Gene: TGF-B1 and Chronic Kidney Disease,” Rao, M., Demello, C., **Garrett, M.R.**, Li, L., Gopal, S., Alam, A., and Balakrishnan, V., American Society of Nephrology Renal Week, October 27- November 1, 2009.
 18. “Knockout of Nuclear Receptor 4a1 on a Hypertensive Genetic Background Results in Severe Renal Injury”, Regner, K.R., Eisenhauer, J., Stelloh, C., Mattson, D. L., and **Garrett, M.R.**, American Society of Nephrology Renal Week, November 16-21, 2010.
 19. “Increased Renal CYP4A Expression and 20-HETE Production Promotes Resistance to Renal Ischemia Reperfusion Injury in Rats.”, Marthaler B., White, S., Van Why, S.K., **Garrett, M.R.**, Roman, R.J., Regner, K.R., American Society of Nephrology Renal Week, November 16-21, 2010.
 20. “Genetic Variants in *Arhgef11* linked to Proteinuria, Renal Hemodynamic Parameters and GFR in the Dahl Salt-Sensitive Rat,” Williams, J.M, Stelloh, C., Ryan, R.P., Kevin R. Regner Roman, R.J., and **Garrett, M.R.**, American Society of Nephrology Renal Week, November 16-21, 2010.
 21. “A Novel Rat Model with >75% of Offspring Exhibiting Spontaneous Unilateral Renal Agenesis,” Kampa, N., Solberg-Woods, L., Regner, K.R., Stelloh, C., and **Garrett, M.R.**, American Society of Nephrology Renal Week, 2010.
 22. “A Translational Study using a Novel Rat Model to Identify Biomarkers of Kidney Disease and Validation in Human CKD Patients,” Harmon, A.C., Driesbach, A., Winters, K., Lang-Jenkins, K., Smith, S., Henegar, J., Johnson A., and **Garrett, M.R.**, Gulf Coast Physiological Society, May 20-21, 2011
 23. “Congenital Solitary Kidney Rats: A Novel Model to Study Cardiovascular and Renal Disease,” Wang, X., Johnson A., and **Garrett, M.R.**, Gulf Coast Physiological Society, May 20-21, 2011
 24. “Establishing Biomarkers of Hypertension Related Kidney Disease in a Novel Rat Model,” Harmon, A.C., Johnson A., Driesbach, A., and **Garrett, M.R.**, FASEB J, San Diego March 29, 2012
 25. “Congenital Solitary Kidney Rats are Predisposed to Significant Renal Injury,” Wang, X., Johnson A., Solberg-Woods, L., and **Garrett, M.R.**, FASEB J, San Diego, March 29, 2012

26. “The Role of Genetic Variants in ARHGEF11 via the Rho-Rock Pathway on Kidney Injury in the Dahl S Rat,” Jia Z., Guo, Z., Johnson, A.C., and **Garrett, M.R.**, Council for High Blood Pressure Research (AHA-HBPR). Washington DC, September 19-22, 2012
27. “Identification of Genetic Variants Associated with Kidney Injury that leads to Increased Blood Pressure,” Harmon, A., Johnson, A., Atanur, S., Maratou, K., Driesbach, A., Aitman, T., and **Garrett, M.R.**, Council for High Blood Pressure Research (AHA-HBPR). Washington DC September 19-22, 2012
28. “Born with a Single Kidney versus Nephrectomy: Similar End Point, Different Mechanism of Injury?” Wang, X., Johnson A., Lee, J., Solberg-Woods, L., and **Garrett, M.R.**, Council for High Blood Pressure Research (AHA-HBPR). Washington DC September 19-22, 2012
29. “Urinary CYP Eicosanoid Excretion Correlates with Glomerular Filtration in African-Americans with Chronic Kidney Disease,” Driesbach, A., Smith S., Kyle, P.B., Ramaiah, M., Amenuke, M., Garrett, M.R., Griswold, M.E., Roman, R.J., Council for High Blood Pressure Research (AHA-HBPR). Washington DC September 19-22, 2012
30. “Genetic variants in Arhgef11 promote kidney injury and reduced renal function in Dahl S rats” Jia, Z., Guo, Z., Johnson A.C., **Garrett, M.R.**, Experimental Biology (EB), Boston, April 20-24, 2013
31. “Biomarkers of kidney disease identified using a novel rat model and evaluated in human CKD patients” Harmon, A., Johnson, A., Driesbach, A., **Garrett, M.R.**, Experimental Biology (EB), Boston, April 20-24, 2013
32. “Genetic defects in congenital solitary kidney rats cause low nephron numbers and predispose to severe renal damage” Wang, X., Johnson A., Lee, J., Solberg-Woods, L., and **Garrett, M.R.**, Experimental Biology (EB), Boston, April 20-24, 2013
33. “Identifying causative genetic variants linked to reduced kidney function through congenic strain analysis and whole genome sequencing” Harmon, A., Johnson, A., Atanur, S., Maratou, K., Driesbach, A., Aitman, T., and **Garrett, M.R.**, Experimental Biology (EB), Boston, April 20-24, 2013
34. “Differential gene expression profiles produced by high fat diet in white and brown adipose” Faulkner, J.L., Gomolak, J.R., **Garrett, M.R.**, and Didion, S.P., Experimental Biology (EB), Boston, April 20-24, 2013
35. “Epistasis involving variations within noncoding elements accounts for ‘Missing Heritability’ of two closely-linked blood pressure loci.” Waghulde, H., Pillai, R., Nie, Y., Gopalakrishnan, K., Kumarasamy, S., Farms, P., **Garrett, M.R.**, Atanur, S., Aitman, T., Joe, B. Experimental Biology (EB), Boston, April 20-24, 2013
36. “Investigating the Dahl Salt-Sensitive Rat as a Spontaneous Model of Preeclampsia” Gillis, E.E., Mooney, J.N., Williams, J.M., **Garrett, M.R.**, Sasser, J.M., 7th Gulf Coast Physiological Meeting. Mobile, Al, May 31-June 1, 2013

37. “Investigating the Dahl salt sensitive (S) rat as a spontaneous model of preeclampsia-comparison to the Spontaneously Hypertensive Rat (SHR),” Gillis, E.E., Mooney, J.N., Williams, J.M., **Garrett, M.R.**, Sasser, J.M. Renal Hemodynamics: Integrating with the nephron and beyond, Vermont, June 30-July 5, 2013
38. “Identifying Genetic Variants Causative of Increased Kidney Disease in the S.SHR(11) Congenic Model,” Harmon A.C., Johnson, A.C., Garrett. M.R. 7th Gulf Coast Physiological Meeting, Mobile, Al, May 31-June 1, 2013
39. “Allelic Variants in Arhgef11 via the Rho-Rock Pathway Promote Epithelial–Mesenchymal Transition in Proximal Tubule Cells and Contributes to Kidney Injury,” Jia, Z., Johnson, A.C. Guo. Z., **Garrett, M.R.**, Council for High Blood Pressure Research (AHA-HBPR). New Orleans, LA, September 12-14, 2013
40. “The Use of Congenic Strains, Comparative Genome Hybridization, and Whole Genome Sequencing to Dissect the Genetic Basis of Chronic Kidney Disease in the Dahl S Rat.” Johnson, A.C. Guo. Z., Kyle, P.B., **Garrett, M.R.**, Council for High Blood Pressure Research (AHA-HBPR). New Orleans, LA, September 12-14, 2013
41. “Increased blood pressure and proteinuria and absence of increased nitric oxide (NO) production during pregnancy in the Dahl Salt Sensitive (S) Rat.” Gillis, E.E., Mooney, J.N., Williams, J.M., **Garrett, M.R.**, Sasser, J.M. Council for High Blood Pressure Research (AHA-HBPR). New Orleans, LA, September 12-14, 2013
42. “Protective Role of Endogenous 20-HETE in Renal Ischemia-Reperfusion Injury,” Muroua, Y., Fan, F., Regner, K.R., Marthaler, B., Falck, J.R., **Garrett, M.R.**, Junco, L. Roman, R.J., Council for High Blood Pressure Research (AHA-HBPR). New Orleans, LA, September 12-14, 2013
43. “Temporal and Whole Transcriptome Analysis of Differential Gene Pattern Expression in Response to a High Fat Diet,” Faulkner, J.L., Gomolak, J.R., **Garrett, M.R.**, and Didion, S.P., Council for High Blood Pressure Research (AHA-HBPR). New Orleans, LA, September 12-14, 2013
44. “The UMMC Molecular and Genomics Facility: Center for Psychiatric Neuroscience COBRE Core Component,” Guo, Z. **Garrett, M.R.**, 2013 SE Regional IDeA Meeting, Little Rock, November 15-17, 2013
45. “Elucidating the Mechanism of Nephron Deficiency and Predisposition to Kidney Injury in a Novel One-Kidney Rat Model’ Wang, X., Johnson, A.C., Guo, Z., Chen, F., Solberg-Woods, L., Garrett, M.R., Rat Genomics and Model, Cold Spring Harbor, NY December 11-14, 2013
46. “The UMMC Molecular and Genomics Facility: A Resource for Mississippi’s Genomics Needs,” Guo, Z. **Garrett, M.R.**, Mississippi-INBRE Annual Research Symposium, February 15, 2014

47. "The Dahl S rat on normal salt diet is a spontaneous model of preeclampsia." Gillis, E.E., Mooney, J.N., Williams, J.M., **Garrett, M.R.**, Sasser, J.M. Experimental Biology (EB), San Diego, April 26-30, 2014
48. "Upregulation of GPR50 in White Adipose of Diet-Induced Obese Mice Requires Intact Leptin Signaling." Faulkner, J.L., Gomolak, J.R., **Garrett, M.R.**, and Didion, S.P., Experimental Biology (EB), San Diego, April 26-30, 2014
49. "Initial Characterization of Leptin Receptor Knockout Dahl Salt-Sensitive Rats," McPherson, K., White, T.N., Johnson, A.C., Geurts, A.M., Jacob, H.J., **Garrett, M.R.** and Williams, J.M. Experimental Biology (EB), San Diego, April 26-30, 2014
50. "Molecular and Genomics Core of the COBRE- Center for Psychiatric Neuroscience," Guo, Z. Stockmeier, C.A., **Garrett, M.R.**, Fifth Biennial National IDeA Symposium, Washington, DC June 16-18, 2014
51. "Effect of a High-Salt Diet on Endothelial Dysfunction and Blood Pressure in a Genetic Model of Hypertension," Mezzetti, E.M., **Garrett, M.R.**, Didion, S.P. International Society of Hypertension, Athens , Greece, June 13-16, 2014
52. "Nephron Deficient Rats are Highly Susceptible to Hypertension Induced Kidney Injury," Wang, X., Johnson, A.C., Guo. Z., Chen, F., Lee, Solberg-Woods, L., and **Garrett, M.R.**, Council for High Blood Pressure Research (AHA-HBPR). San Francisco, CA September 9-15, 2014
53. "Molecular Mechanism of Arhgef11 via the Rho-Rock Pathway in Promoting Kidney Injury in the Dahl S Rat," Jia, Z., Johnson, A.C., Guo, Z., **Garrett, M.R.**, Council for High Blood Pressure Research (AHA-HBPR). San Francisco, CA, September 9-15, 2014
54. "The Dahl Salt Sensitive Rat is a Novel Model of Chronic Hypertension with Superimposed Preeclampsia," Gillis, E.E., Mooney, J.N., **Garrett, M.R.**, Sasser, J.M, International Society for the Study of Hypertension in Pregnancy, New Orleans, LA, October 26-29, 2014
55. "Identification of a genomic drug target for kidney injury and therapeutic screening of natural products derived small molecules," Jia, Z., Pasco, D.S, Johnson, A.C., **Garrett, M.R.**, Experimental Biology (EB), Boston , March 28- April 1, 2015
56. "Searching for the genetic basis and mechanism of nephrogenesis defects in the HSRA congenital solitary kidney rat", Wang, X., Johnson, A.C., Guo. Z., Jia, Z., and **Garrett, M.R.**, Experimental Biology (EB), Boston , March 28- April 1, 2015
57. "Sildenafil treatment improves the maternal syndrome in the preeclamptic Dahl Salt Sensitive (S) rat," Gillis, E.E., Mooney, J.N., **Garrett, M.R.**, Sasser , J.M, Experimental Biology (EB), Boston , March 28- April 1, 2015
58. "Preeclampsia in the Dahl Salt Sensitive Rat is Associated with Increased Uterine Artery Resistance and Reduced Placental Microvascular Density." Gillis, E.E., Chade, A.R., **Garrett, M.R.**, and Sasser , J.M, AHA COH, Washington D.C., September 16-19, 2015

59. “Decreased survival rate in female obese leptin receptor mutant Dahl salt-sensitive rats that develop chronic kidney disease.” McPherson, K., Guillory D., Taylor L., Spires, D., Johnson, A.C., **Garrett, M.R.** and Williams, J.M. AHA COH, Washington D.C., September 16-19, 2015
60. “The efficacy of soluble guanylyl cyclase (sGC) stimulators and activators in a rat model of preeclampsia” Robinson, T., Gillis, E.E., Granger, J., George, E., **Garrett, M.R.**, and Sasser, J.M, SE Regional IDeA Meeting, Biloxi, MS November 11-13, 2015
61. “Whole genome and RNA sequencing identifies Genetic Factors involved in Nephron Deficiency in the HSRA Congenital Solitary Kidney Rat” Wang, X., Johnson, A.C., **Garrett, M.R.** Experimental Biology (EB), Boston, April 2-6, 2016
62. “Searching for the genetic basis of impaired placentation in the Dahl Salt salt- Sensitive rat model of superimposed preeclampsia,” Sasser, J.M, Johnson, A.C., and **Garrett, M.R.**, Experimental Biology (EB), Boston, April 2-6, 2016
63. “Chronic inflammation inhibits myofibroblast activation through macrophage Ccl12 secretion.” DeLeon-Pennell K.Y., Padmanabhan Iyer R., Cates C.A., Flynn E., Ma Y., Cannon P., Shannon D, **Garrett M.R.**, Buchanan W., and Lindsey M.L. International Society for Heart Research World Congress (ISHR), April 2016.
64. “Prior preeclampsia results in persistent immune activation following pregnancy in the Dahl salt sensitive rat.” Taylor, E.B., **Garrett M.R.**, Ryan M.J, and Sasser, J.M. APS- Inflammation, Immunity and Cardiovascular Disease, Colorado, August 24-27, 2016
65. “Altered barrier permeability and placental expression of MMP9, ILR1N and occludin in rat placenta following VSG.” Lawson W.J., Spann R.A., Bidwell, G., Garrett M.R., Grayson, B.E., Obesity Society- Obesity Week, New Orleans, October 31- November 4, 2016
66. “Spheroid Culture System Confers Differentiated Genotype and Functional Advantage to Maturing 3T3-L1 Adipocytes.” Turner P.A., **Garrett M.R.**, Didion, S.P., and Janorkar A.V. TERMIS-AM Conference, San Diego, December 11-14, 2016.
67. “IL-10 improves cardiac remodeling post-myocardial infarction by increasing M2 macrophage polarization to improve scar formation: Jung M., Ma, Y., Yabluchiansky A., Iyer RP, **Garrett MR**, DeLeon-Pennell K.Y., and Lindsey M.L. Experimental Biology (EB), Chicago, April 21-25, 2017
68. “Loss of Arhgef11 on the Genetic Background of the Dahl Salt-Sensitive (SS) Rat Significantly Attenuates Blood Pressure and Renal Injury.” Johnson, A.C., and **Garrett, M.R.** Experimental Biology (EB), Chicago, April 21-25, 2017
69. “Gene Expression changes in Utero-Placental development associated with superimposed preeclampsia in the Dahl salt- sensitive rat model.” Johnson, A.C., **Garrett, M.R.**, Sasser, J.M. Experimental Biology (EB), Chicago, April 21-25, 2017

70. “Cerebral Edema and Blood Brain Barrier Dysfunction in Pregnant Dahl S Rats”, Maeda K.J., Warrington J.P., Duncan J, Granger J.P., **Garrett M.R.**, Sasser, J.M. Experimental Biology (EB), Chicago, April 21-25, 2017 (accepted).
71. “Chronic inflammation triggers macrophage secretion of Ccl12 to inhibit fibroblast-mediated cardiac wound healing following myocardial infarction,” Lindsey M.L., Iyer R.P., Ero O, Cates M.S., Flynn E.R., Cannon-Stewart M.S., Jung M, Shannon D, **Garrett, M.R.**, Buchanan, W., Hall, M.E., Ma Y., DeLeon-Pennell K.Y. European Journal of Cardiology., August 2017 (accepted)

COMMITTEE SERVICE:

Medical School and Graduate Committees

Previous Institutions

10/2005- 06/2007	Faculty Senator-Physiology Department (UTHSC)
03/2008- 07/2010	Nephrology Fellowship Interview Committee (MCW)
08/2009- 07/2010	HMGC Core Activities Sub Committee (MCW)
11/2009- 07/2010	Nephrology Faculty Recruitment Committee (MCW)

UMMC-Institutional

08/2010- 07/2011	Member, Information Technology Strategic Plan Committee
08/2010- 05/2013	Co-Chair, Medical Student Research Scholar Committee
05/2013- 05/2015	Chair, Medical Student Research Scholar Committee
03/2011- 02/2013	Member, Honors Day Award Committee
03/2011-	Member, Intramural Research Support Program Reviewer
07/2011-	Member, Space Committee
01/2013- 02/2013	Faculty participant, Liaison Committee on Medical Education
10/2013	Member, Recharge Review Committee
04/2014-	Chair, External Request Review Committee
06/2014-	Member, Core Committee
07/2014- 08/2016	Member, SOM-Curriculum Committee
08/2014-	Member, Children's Heart Center Research Committee Structure
07/2015- 08/2016	Member, SOM-Curriculum Committee- Evaluation Sub Committee

UMMC-Department/Center

08/2012-01/2014	Chair, Pharmacology Graduate/Curriculum Committee
01/2014-	Member, Pharmacology Graduate Program Committee
07/2016-	Chair/Member, Pharmacology Strategic Planning Committee

UMMC-Leadership/Administrative

08/2011 – 06/2012	Leadership Development Program (UMMC)
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09/2012 – 05/2015 Faculty Senator- (UMMC)
 10/2012 – 10/2014 Program Director, Discovery U (UMMC-Graduate School)
 12/2012 – Onsite Bio-Rad Supply Center Manger (UMMC)

MEDICAL SCHOOL TEACHING ACTIVITIES:

Medical School/Dental School Education

Previous Institutions

09/2006 – 12/2006 Instructor, Problem-Based Integrative Pathophysiology I (UTHSC)
 01/2007 – 05/2007 Instructor, Problem-Based Integrative Pathophysiology II (UTHSC)

UMMC-Institutional

09/2012 – Instructor, PH620 (Medical Pharmacology), UMMC (9 hrs)
 Pharmacogenomics (2)
 AAP-Pharmacogenomics (1)
 Diuretics (2)
 Viruses and Antivirals (2)
 Gene Therapy (2)

03/2013 – Instructor, PH626 (Dental Pharmacology), UMMC (4 hrs)
 Pharmacogenomics (2)
 Diuretics (2)

03/2014 –1/2017 Course Director, CONJ633 and CONJ660, UMMC
 (Medical Student Research Electives)

Graduate Student Education

Previous Institutions

01/2009 – 07/2010 Co-Director and Instructor, Molecular Biology for the Physiologist (MCW)

UMMC-Institutional

03/2011 – 2014 Instructor, ID727 (Current Issues in Biomedical Research), UMMC (1.5 hrs)
 03/2011 – 2014 Instructor, ID710 (Research Tools in Molecular Biology), UMMC (6 hrs)
 04/2011 – 2014 Instructor, ID714 (Professional Skills), UMMC (1.5 hrs)
 10/2011 – Instructor, PH723 (Mechanisms of Drug Action), UMMC (1.5 hrs)
 10/2013 – Instructor, Responsible Conduct of Research, UMMC (1.5 hrs)
 03/2014 – Instructor, ID713 (Bioinformatics and Genomics), UMMC (3 hrs)
 01/2017 – Instructor, ID724 (Bioinformatics and Genomics), UMMC (2 hrs)
 01/2017– Instructor, PH724 (Experimental Methods to Study Cell Signaling), UMMC (2 hrs)

Resident & Fellow Education

01/2009 Instructor, “Genetics and Kidney Disease” (MCW)
 04/2009 Instructor, “From DNA to Understanding Complex Disease” (MCW)

STUDENTS, FACULTY. RESIDENTS AND CLINICAL/RESEARCH FELLOWS MENTORED:**High School Students**

06/2004 – 08/2004 Wesley Vollmer (UTHSC)
 06/2006 – 08/2006 John Wilson (UTHSC)
 01/2012 – 05/2013 Zaliya Morris (UMMC)

Undergraduate Students

09/2000 – 12/2000 Nancy Koile (UTHSC)
 06/2002 – 08/2002 Hilary Berlin (UTHSC)
 06/2002 – 08/2002 Alley Schmidt (UTHSC)
 05/2009 – 08/2009 Tiffany Schwabe (MCW)
 05/2011 – 08/2011 Haley Harvey (UMMC)
 05/2012 – 08/2012 Dana Smith (UMMC) (2 summer periods)
 05/2013 – 08/2013 Dana Smith (UMMC) (2 summer periods)
 05/2013 – 08/2013 Matthew Mosley (UMMC)
 05/2013 – 08/2013 Zaliya Morris (UMMC)
 05/2014 – 08/2014 Amanda Marbury (UMMC)

Medical Students

06/2006 – 05/2007 Matthew Packard (UTHSC)
 03/2011 – 05/2014 Lindsey Westbrook (UMMC-MSRP)
 06/2013 – 08/2013 Basmah AlTinawi (UMMC-Saudi Arabia)
 06/2015 – 08/2015 Dana Smith (UMMC-MSRP)
 06/2016 – 08/2015 Meredith Cobb (UMMC-MD/PhD)

Graduate Students**M.S. Students- Mentor**

09/1999 – 05/2001 Xiaotong Zhang (UTHSC)

PhD Students - Mentor

08/2010 – 05/2015 Xuexiang Wang (UMMC)

08/2010 – 09/2013 Ashlyn Harmon (UMMC)

PhD Students -Committee

08/2011 – 03/2013 Marilyn Burke (UMMC-Roman)
 08/2012 – 05/2014 Tiffani White (UMMC-Williams)
 08/2013 – 12/2015 Ellen Gillis (UMMC-Sasser)
 08/2013 – 03/2014 Jessica Faulker (UMMC-Didion)
 08/2014 – Kasi McPherson (UMMC-Williams)
 06/2015 – Gouri J. Mahajan (UMMC-Benghuzzi)
 11/2016 – Ashley Newsome (UMMC-Alexander)

Clinical/Research Fellows

06/2009 – 08/2010 Kumar Sujeet, MD (MCW)
 08/2015 – Derick Davis, MD (UMMC-Pediatrics)

Faculty/ K Series Mentor

01/2012 – 2016 Jennifer Sasser, PhD (K01-awarded)
 06/2013 – Eric George, PhD (K01-awarded)
 03/2014 – Kayla Stover, PharmD [Focused Investigator Training (FIT) program]
 03/2014 – Yonggang Ma, PhD (K99- submitted)
 06/2016 – Aimee Parnell, MD (K23- awarded)

BIBLIOGRAPHY

REFEREED JOURNAL PUBLICATIONS/ORIGINAL PAPERS

1. Kita N., Boyd C., **Garrett M.R.**, Jurnak F. A., Keen N. T. Differential effect of site-directed mutations in pelC on pectate lyase activity, plant tissue maceration, and elicitor activity. Journal of Biological Chemistry 271(43): 26529-26535, 1996.
2. Zhang Q. Y., Dene H., Deng A. Y., **Garrett M. R.**, Jacob H., Rapp J. P. Interval mapping and congenic strains for a blood pressure QTL on rat chromosome 13. Mammalian Genome 8: 636-641, 1997.
3. Cicila, G. T., Dukhanina, O. I., Kurtz, T., Walder, R., **Garrett, M. R.**, Dene, H., Rapp, J. Blood pressure and survival of a chromosome 7 congenic strain bred from Dahl rats. Mammalian Genome 8: 896-902, 1997.
4. Deng A.Y., Smith-Mensah, W. H., Hoebee, B., **Garrett M.R.**, Rapp J. P. Linkage mapping of rat chromosome markers generated from chromosome-sorted DNA. Mammalian Genome 9: 38-43, 1998.

5. Rapp, J. P., **Garrett, M. R.**, Deng, A.Y. Construction of a double congenic strain to prove an epistatic interaction on blood pressure between rat chromosome 2 and 10. Journal of Clinical Investigation V.101, N.8: 1591-1595, 1998.
6. Dene, H., Choi C. R., Cicila, G. T., **Garrett, M. R.**, Dukhanina, O. I., Bihoreau, M., Hoebee, B., Rapp, J. P. An improved linkage map of rat chromosome 3 using three mapping panels. Mammalian Genome 9: 517-520, 1998.
7. **Garrett, M. R.**, Dene, H., Walder, R. Y., Zhang, Q., Cicila, G. T., Assadnia, S., Deng, A. Y., Rapp, J. P. Genomic scan and congenic strains for blood pressure QTL using Dahl salt- sensitive rats. Genome Research 8: 711-723, 1998.
8. Rapp, J. P., **Garrett, M. R.**, Dene, H., Meng, H., Hoebee, B., Lathrop, G.M. Linkage Analysis and Construction of a Congenic Strain for a Blood Pressure QTL on Rat Chromosome 9. Genomics 51,191-196, 1998
9. Walder, R. Y., **Garrett, M. R.**, McClain, A. M., Beck, G. E., Brennan, T., Kramer, N. A., Kanis, A. B., Mark, A. L., Rapp, J. P., Sheffield, V. C. High quality polymorphic markers for the rat genome developed from marker-selected libraries. Mammalian Genome 9:1013-1021, 1998.
10. Saad, Y., **Garrett, M.R.**, Lee, S. J., Dene, H., Rapp, J. P. Localization of a blood pressure QTL on rat chromosome 1 using Dahl-rat congenic strains. Physiological Genomics 1: 119-125, 1999.
11. **Garrett, M.R.**, Saad, Y., Dene, H., Rapp, J. P. Blood pressure QTL that differentiate Dahl salt sensitive and spontaneously hypertensive rats. Physiological Genomics 3: 33-38, 2000.
12. Saad, Y., **Garrett, M.R.**, Rapp, J. P Mapping Blood Pressure QTL on Rat Chromosome 1 Defined by Dahl Rat Congenic Strains. Physiological Genomics 4: 201-214, 2000
13. Cicila, G. T.*, **Garrett, M.R.***, Lee, S. J.,Lui, J, Dene, H., Rapp, J. P. High resolution mapping of the blood pressure QTL on Chromosome 7 using Dahl Rat Congenic Strains Genomics 72, 51-60, 2001 *Authors contributed equally
14. **Garrett, M.R.**, Zhang X., Deng A.Y., Dukhanina, O. I., Rapp, J. P., Two Linked Blood Pressure QTL on Chromosome 10 Defined by Dahl Rat Congenic Strains. Hypertension 38,779-785, 2001 PMID:11641286
15. **Garrett, M.R.**, Rapp, J. P., Dissection of Multiple QTL on Rat Chromosome 2 by Dahl Rat Congenic Strains. Mammalian Genome 13:41-44, 2002
16. **Garrett, M.R.**, Rapp, J. P., Two Closely Linked Interactive Blood Pressure QTL on Rat Chromosome 5 Defined by Dahl Rat Congenic. Physiological Genomics 8:81-86, 2002
17. Ways, J.A., Cicila, G. T., **Garrett, M.R.**, Koch L.G., A Genome Scan for Loci Associated with Aerobic Running Capacity in Rats. Genomics 80:13-20, 2002 (Cover)

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