

Mallikarjuna Reddy Pabbidi DVM PhD

Assistant Professor
 Department of Pharmacology and Toxicology,
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Academic Qualifications

2013 – Present Assistant Professor, Department of Pharmacology, UMMC, Jackson, MS 39216.
 2010 – 2012 Instructor of Pharmacology, Department of Pharmacology UMMC, Jackson, MS 39216.
 2007 – 2010 Research Associate in Department of Physiology, Loyola University Medical Center, Maywood, IL
 2004 – 2007 PhD in Pharmacology, Southern Illinois University, School of medicine, Springfield, IL.
 2001 – 2003 Trainee Veterinarian, Department of Preclinical safety, Discovery Research, India.
 1995 – 2000 DVM, College of Veterinary Science, Tirupati, Andrapradesh, India.

Clinical Experience

Jan 1998 to May 2000- Student - College of Veterinary Science, Tirupati, India

- Clinical rotations in surgery, medicine, gynecology, ambulatory, and laboratory diagnostic medicine of both small and large animals.

Jun 2000 to Nov 2000- Intern- Veterinary Polyclinic, Kadapa, India

- Provided critical care for large and small animals. Implemented prophylaxis, anesthesia, surgeries, and post-operative care. Communicated diagnoses, treatment, and follow-up with clients.

Awards and Honors

2004 Travel Grant Award from Southern Illinois University to attend SFN meeting
2005 Obtained participation certificate for oral and poster presentation on Role of TRPV1 (Transient Receptor Potential Vanilloid 1) function and expression in diabetes-induced altered thermal sensitivity in **combined research symposium held in Springfield, 2005, Illinois, USA.**
2005 Travel Grant Award from Southern Illinois University to attend SFN meeting
2006 Travel Grant Award from Southern Illinois University to attend SFN meeting
2006 Obtained participation certificate for oral and poster presentation on Role of Streptozotocin (STZ) in TRPV1 mediated hyperalgesia in **combined research symposium held in Springfield, 2006, Illinois, USA.**
2007 Obtained participation and survival certificate for 10 day course conducted in cold spring harbor laboratory (CSHL) in New York, USA. (Sponsored by CSHL).
2007 Travel Grant Award from Southern Illinois University to attend SFN conference
2010 Travel Grant Award from Loyola University Medical Center to attend Biophysical Society meeting
2012 Annual **High Blood Pressure Research Conference New Investigator Award.** ABSTRACT 117, Identification of a Region of Rat Chromosome 1 That Impairs the Myogenic Response and Cerebral Blood Flow Autoregulation in Fawn Hooded Hypertensive Rats.
2014 American Physiology Society (APS) **STRIDE fellow host.**
2015 American Physiology Society (APS) **IOSP fellow host.**
2015 Travel Grant Award from **Faculty Scholarship Exchange Grant from APW/WHRC conference**
2016 **The Carl G. Evers M. D., Society M2 All Star Professor Award 2015-2016 UMMC**
2016 **Excellence in Research Award, Bronze Level, University of Mississippi Medical Center**

Professional Memberships

2004 – Past Member of **Society for Neuroscience.**
 2007 – Past Member of **Biophysical Society.**
 2010 – Present Member of **EB (Experimental Biology).**
 2012 – Present Member of **AHA (American Heart Association).**

Committees and service

2015: **MSRP poster judge** at UMMC, Jackson, MS.
 2015: **Post-doctoral poster Judge** at UMMC, Jackson, MS.
 2016: **Honors thesis committee member: Student:** Gurjit Kaur (Millsap's college). **Thesis title:** Enhanced Serotonin (5-HT)-Mediated Carotid Vessel Constriction from the Fawn Hooded Hypertensive (FHH) Rat.
 2015-2016: UMMC Pharmacology **Graduate student Award Judge.**
 2016-2017: Mentoring committee member for Dr. Garla. Master of Science in Clinical Investigation program 2016-2018.

Teaching: (Title of the course, contact hours, Topic, students):

Mechanisms of Drug Action (Pharm 723): 2 hours; Cardiac electrophysiology and antiarrhythmics: Graduate students.
 Medical Pharmacology (PH620): 4 hours; Cardiac electrophysiology and antiarrhythmics: Medical Students.
 Medical Pharmacology (PH620): 2 hours; Local and general anesthetics: Medical Students.
 Medical Pharmacology (PH620): 2 hours; Neuroleptics and Antiepileptic's: Medical Students.
 Medical Pharmacology (PH620): 2 hours; Arrhythmia simulation: Medical Students.
 Dental Pharmacology (DENT626): 2 hours; Cardiac antiarrhythmics: Dental Students
 Dental Pharmacology (DENT626): 2 hours; Local and general anesthetics: Dental Students
 Dental Pharmacology (DENT626): 2 hours; Neuroleptics and Epilepsy: Dental Students
 Chair small Group sessions (2 groups): 4 hours; Autonomics M2 students
 Chair small Group sessions (2 groups): 4 hours; Antiarrhythmics: M2 students
 M2 Pharmacology Board Review sessions: 4 hours
 AAP student Pharmacology Board Review sessions: 2 hours
 Preclinical advisor: 3 M1 and 3 M2 students
 Review and assign grades to M4 Pharmacology Course Reports

Mentoring and Training

2003 – 2007 Instruct patch-clamp electrophysiology to new summer and graduate students.
 2011 – MSRP Program: Dr. Hurtis JeRon Tullos., MD – Resident Physician.
 2011 – Dr. Ramachandram Avusula – Volunteer – Present Psychiatry resident at UMMC.

2012 – Rohini Bandaru – Graduate student, UMMC.
 2013 – 2015 Gurjit Kaur – SURE student 2013 and APS STRIDE fellow in 2014, APS IOSP fellow in 2015.
 2013 – 2014 Olga Mazur – Researcher III – Presently Medical student at UMMC, Jackson, MS.
 2014 – Lydia Aluko – Researcher III
 2015 – Dr. Prameela Alla., DDS, Volunteer 2015.
 2015 – Robert Cragon SURE student 2015
 2015 – Jeanne Ishimwe SURE student 2015
 2015 – 2017 Tanya Pareek – Researcher III
 2016 – Current: Andrea Miller, Base Pair Student

Journal Reviewer

The Journal of Applied Physiology
 European Journal of Pain
 Cells
 Postdoc Journal
 PLOS one
 Toxicology and allied clinical pharmacology
 Neurochemical Research
 Pharmaceuticals
 Physiological Reports

Journal Editorial board Member

Enliven: Toxicology and allied clinical pharmacology

Peer reviewed publications

1. Nikolett Szarka M.D, **Mallikarjuna R. Pabbidi Ph.D**, Krisztina Pohoczky M.S, Zsuzsanna Helyes M.D., Ph.D., Zoltan Ungvari M.D., Ph.D., Akos Koller M.D., Ph.D., Andras Buki M.D, Ph.D., Peter Toth M.D., Ph.D. Traumatic brain injury impairs myogenic constriction of cerebral arteries: role of mitochondria-derived H₂O₂ and TRPV4-dependent activation of BKCa channels (NEU-2017-5056). Journal of Neurotrauma. **In first Revision.**
2. Sanapureddy. P, Garla. VV, **Pabbidi. MR.** "Primary Hyperparathyroidism – Diagnosis and Management". JFP-2016-11-0130.R2. Accepted in The Journal of Family Practice. **In print**
3. **Pabbidi M.R.**, X. Ji, G.A. Mignery, A.M. Samarel, S.L. Lipsius. Inhibition of cAMP-dependent PKA Activates β_2 -Adrenergic Receptor Stimulation of Cytosolic Phospholipase A₂ via Raf-1/MEK/ERK and IP₃-Dependent Ca²⁺ Signaling in Atrial Myocytes. PLoS One. 2016 Dec 15;11(12):e0168505. **Corresponding author.**
4. Fan Fan, **Mallikarjuna Pabbidi**, Ying Ge, Longyang Li, Shaoxun Wang, Paige Mims, and Richard Roman. Knockdown of Add3 Impairs the Myogenic Response of Renal Afferent Arterioles and Middle Cerebral Arteries" Am J Physiol Renal Physiol. 2016 Dec 7:ajprenal.00529.2016. doi: 10.1152/ajprenal.00529.2016. **Equally contributing author.**
5. **Pabbidi M. R.**, Richard. J. Roman. Elevated K channel activity opposes vasoconstrictor response to serotonin (5-HT) in cerebral arteries of the Fawn Hooded Hypertensive rat. Physiol Genomics. 2016 Oct 27: physiolgenomics.00072.2016. doi: 10.1152/physiolgenomics.00072.2016. **Corresponding author.**
6. SC Gupta, Ramesh Singh, Matt Asters, Jianghua Liu, Xu Zhang, **Pabbidi MR**, Yin-Yuan Mo and Watabe K. Regulation of breast tumorigenesis through acid sensors. Oncogene. 2015 Dec 21. doi: 10.1038/onc.2015.477.
7. Fan F, Geurts AM, S Murphy, **Pabbidi MR**, Jacob H, Roman RJ. Impaired myogenic response and autoregulation of cerebral blood flow is rescued in CYP4A1 transgenic Dahl salt-sensitive rat". AJP Regulatory, Integrative and Comparative Physiology. American Journal of Physiology - Regulatory, Integrative and Comparative Physiology. December 2014Vol. no. , DOI: 10.1152/ajpregu.00256.2014
8. Fan F, Geurts AM, **Pabbidi MR**, Smith SV, Harder DR, Jacob H, Roman RJ. Zinc-Finger Nuclease Knockout of Dual-Specificity Protein Phosphatase-5 Enhances the Myogenic Response and Autoregulation of Cerebral Blood Flow in FHH.1^{BN} Rats. DOI:10.1371/journal.pone.0112878.
9. **Pabbidi MR**, Mazur O, Fan F, Farley JM, Gebremedhin D, Harder DR, Roman RJ. Enhanced large conductance K⁺ channel (BK) activity contributes to the impaired myogenic response in the cerebral vasculature of Fawn Hooded Hypertensive rats. Am J Physiol Heart Circ Physiol. 2014 Apr 1;306(7):H989-H1000. doi:0.1152/ajpheart.00636.2013.Epub 2014 Jan 24.
10. Fan F, Sun CW, Maier KG, Williams JM, **Pabbidi MR**, Didion SP, Falck JR, Zhuo J, Roman RJ. 20-Hydroxyeicosatetraenoic Acid Contributes to the Inhibition of K⁺ Channel Activity and Vasoconstrictor Response to Angiotensin II in Rat Renal Microvessels. PLoS One. 2013 Dec 4; 8(12):e82482. Doi: 10.1371/journal.pone.0082482.
11. Burke M, **Pabbidi MR**, Farley J, Roman RJ. Molecular Mechanisms of Renal Blood Flow Autoregulation. Curr Vasc Pharmacol. 2013 Sep 25.
12. Premkumar LS, **Pabbidi RM**. Diabetic Peripheral Neuropathy: Role of Reactive Oxygen and Nitrogen Species. Cell Biochem Biophys. 2013 May 31. [Epub ahead of print].
13. Aleksey V. Zima, **Pabbidi MR**, Stephen L. Lipsius, Lothar A. Blatter. "Effects of mitochondrial uncoupling on Ca²⁺ signaling during excitation-contraction coupling in atrial myocytes," Am J Physiol Heart Circ Physiol. 2013 Feb 1.PMID: 23376829.
14. **Pabbidi MR**, Juncos JP, Juncos LA, Renic M, Tullos H, Lazar J, Jacob HJ, Harder DR, Roman RJ. Identification of a region of rat chromosome 1 that impairs the myogenic response and autoregulation of cerebral blood flow in Fawn Hooded Hypertensive rats. Am J Physiol Heart Circ Physiol. 2013 Jan; 304(2):H311-7. PMID: 23144316.
15. Marilyn Burke, **Pabbidi MR**, Fan, Ying Ge, Ruisheng Liu, Jan Michael Williams, Allison B. Sarkis, Jozef Lazar, Howard J Jacob, Richard J. Roman. Genetic Basis of the Impaired Renal Myogenic Response in FHH Rats. Am J Physiol Renal Physiol. 2012 Dec 5. PMID: 23220727.
16. Raisinghani M, Zhong L, Jeffry JA, Bishnoi M, **Pabbidi MR**, Pimentel F, Cao DS, Evans MS, Premkumar LS. Activation Characteristics of Transient Receptor Potential Ankyrin 1 and its Role in Nociception. Am J Physiol Cell Physiol. 2011 Sep; 301(3):C587-600. Epub 2011 Jun 8.PMID: 21653898.
17. **Pabbidi MR**, Ji X, Wang YG, Samarel AM, Lipsius SL. Cell Attachment to Laminin Enhances β_2 -Adrenergic Receptor Stimulation of L-type Ca²⁺ Current via Activation of Cytosolic Phospholipase A₂ Signalling in Cat Atrial Myocytes. J Physiol. 2009 Oct 15; 587 (Pt 20):4785-97. Epub 2009 Aug 24.
18. Wang YG, Ji X, **Pabbidi MR**, Samarel AM, Lipsius SL. Laminin Acts via FAK/PI-(3) K/Akt to Down-Regulate (beta) 1-Adrenergic Receptor Signalling in Cat Atrial Myocytes. J Physiol. 2009 Feb 1; 587(Pt 3):541-50. Epub 2008 Dec 8.

19. Yong Gao Wang, Aleksey V Zima, Xiang Ji, **Pabbidi MR**, Lothar A Blatter, and Stephen L. Lipsius. Ginsenoside Re Suppresses Electro-Mechanical Alternans in Cat and Human Cardiomyocytes. *Am J Physiol Heart Circ Physiol*. 2008 Aug; 295(2):H851-9. Epub 2008 Jun 20.
20. **Reddy M Pabbidi**, De-Shou Cao, Arti Parihar, Mary E Pauza, and S. Louis Premkumar. Direct Role of Streptozotocin in Inducing Thermal Hyperalgesia by Enhanced Expression of TRPV1 in Sensory Neurons. *Mol. Pharmacol*. 2008 73: 995-1004.
21. **Pabbidi MR**, Shuang-Quan Yu, Siying Peng, Romesh Khadori, Mary E. Pauza, and Louis S. Premkumar. Influence of TRPV1 on diabetes-induced alterations in thermal pain sensitivity. *Mol Pain*. 2008 4:9 doi: 10.1186/1744-8069-4-9: **Highly accessed article**.
22. Manish Raisinghani, **Reddy M Pabbidi** and Louis S Premkumar. 2005. Activation of transient receptor potential vanilloid 1 (TRPV1) by resiniferatoxin. *J Physiol* 567.3 pp 771-786.

Research support

Ongoing Research Support

1R01HL133061-01 *Chen (PI) 01/01/17-12/31/17*

NIH/NIDDK (National Institute of Diabetes and Digestive and Kidney diseases) RO1

Title: Roles of Sirtuin3 in diabetes-induced CFR reduction

Aim: To explore the role of Sirt3 in diabetic coronary circulation and cardiomyopathy.

Role: Co-Investigator (5% effort)

1R01DK104184-01 *Roman (PI) 10/01/14-09/30/19*

NIH/NIDDK (National Institute of Diabetes and Digestive and Kidney diseases) RO1

Title: Renal microcirculation and hypertension induced renal injury

Aim: To identify and study the genes responsible for impaired myogenic response in FHH rats.

Role: Co-Investigator (10% effort)

Pabbidi (PI) 01/01/17

UMMC, Pharmacology Incentive award

Title: Influence of sex and age on cerebrovascular function: Role of BK channel subunits.

Aim: To study the sex differences and identify the BK channel subunit role in cerebrovascular tone.

Role: Principle Investigator (50% effort)

Completed Research Support

Pabbidi (PI) 01/01/11-03/30/12

UMMC Intramural research support program

Title: Genetic basis of cerebral blood flow (CBF) autoregulation in FHH rats.

Aim: To identify and study the genes responsible for impaired myogenic response in FHH rats.

Role: Principle Investigator (30% effort)

APS Research Host Grant (PI) 26/05/14-07/31/14

Undergraduate Summer Research Fellowship: The goal of this study is to study the 5-HT mediated vascular response in conduit vessels of FHH and FHH.1BN rats.

Title: Enhanced serotonin mediated carotid vessel constriction from the fawn hooded hypertensive rat.

Role: Research Host

APS Education Office 2015 IOSP (PI) 26/05/15-07/31/15

Undergraduate Summer Research Fellowship: The goal of this study is to study the vasodilator response in conduit vessels of FHH and FHH.1BN rats.

Title: Enhanced serotonin mediated carotid vessel constriction from the fawn hooded hypertensive rat.

Role: Research Host

13SDG14000006 *Pabbidi (PI) 01/01/12 - 12/31/16*

AHA, National Scientist Development Award

Title: Genetic basis of cerebral blood flow (CBF) autoregulation in FHH rats.

Aim: To identify and study the genes responsible for impaired myogenic response in FHH rats.

Role: Principle Investigator (33% effort)

Presentations and abstracts

1. **Reddy M Pabbidi**, Manish Raisinghani, and Louis S Premkumar. 2005. Activation of transient receptor potential vanilloid 1 (TRPV1) by resiniferatoxin. Poster presentation in Neuroscience 2004 held in Sandiago, CA, USA.
2. **Reddy M Pabbidi**, Manish Raisinghani, and Louis S Premkumar. 2005. Activation of transient receptor potential vanilloid 1 (TRPV1) by resiniferatoxin. PowerPoint presentation in Sangamon Chapter Neuroscience Retreat, 2004 held in Peremarquett, Illinois, USA.
3. **Reddy M Pabbidi** and Louis S Premkumar. Role of TRPV1 (Transient Receptor Potential Vanilloid 1) function and expression in diabetes-induced altered thermal sensitivity. Presented in Combined Research Symposium held in Springfield, 2005, Illinois, USA.
4. **Reddy M Pabbidi**, Aarti Parihar and Louis S Premkumar. Role of Streptozotocin (STZ) in TRPV1-mediated hyperalgesia. Presented in Combined Research Symposium held in Springfield, 2006, Illinois, USA.
5. **Reddy M Pabbidi**, Aarti Parihar and Louis S Premkumar. Role of Streptozotocin (STZ) in TRPV1-mediated hyperalgesia. Presented in Neuroscience 2006 meeting held in Atlanta, Georgia, USA.
6. **Pabbidi RM** and Premkumar LS. TRPV1 and TRPM8 mediated heat and cold sensitivity in diabetic peripheral neuropathy. Poster presentation in Neuroscience 2007 held in Sandiago, CA, USA.
7. Selected and survived 10 day course conducted in Cold Spring Harbor Laboratory (CSHL) in New York, USA. (Sponsored by CSHL).
8. **Pabbidi MR**, Ji X, Wang YG, Samarel AM, Lipsius SL. Cell Attachment to Laminin Enhances β_2 -Adrenergic Receptor Stimulation of L-type Ca^{2+} Current via Activation of Cytosolic Phospholipase A_2 Signalling in Cat Atrial Myocytes. *J Physiol*. 2009 Oct 15;587(Pt 20):4785-97. Epub 2009 Aug 24. Biophysical society, San Francisco 2010, CA, USA.
9. **Pabbidi MR**, Ji X, Wang YG, Samarel AM, Lipsius SL, Magnery GA. Beta 2 adrenergic receptor stimulation of cytosolic phospholipase 2 (cPLA2) is dependent on PKC and IP3-mediated calcium signaling in atrial myocytes. (In Preparation) Biophysical society, San Francisco 2010, CA, USA.

10. **Pabbidi MR**, Ji X, Wang YG, Samarel AM, Lipsius SL. Role of Mitochondrial Dysfunction in β 2- Adrenergic Receptor (β 2-AR) Stimulation of Cytosolic Phospholipase A2 (cPLA2) in Atrial Myocytes. American Heart Association, Chicago, 2010, IL, USA.
11. **Pabbidi M. Reddy**, Julio Juncos, Marilyn F. Burke, Jerry M. Farley, David R. Harder, Richard J. Roman. Enhanced BK (Ik(ca))channel activity contributes to lack of myogenic response in the cerebral circulation of Fawn Hooded Hypertensive (FHH) rats. Experimental biology 2011, Washington DC, USA.
12. Burke M, **Pabbidi MR**, Williams JM, Liu R, Lazar J, Jacob HJ, Roman RJ. Genetic basis of altered myogenic response and renal injury in FHH rats. Experimental biology 2011, Washington DC, USA.
13. Richard J. Roman, **Pabbidi M. Reddy**, Jan M. Williams, Maralyn Burke, Julio Juncos, Maria Renic, David Harder. Genetic basis of impaired myogenic response and cerebral blood flow autoregulation FHH rats. Experimental biology 2011, Washington DC, USA.
14. **Pabbidi M. Reddy**, Jan M. Williams, Marilyn Burke, Julio Juncos, Maria Renic, David Harder, Richard J. Roman. Identification of a Region of Rat Chromosome 1 That Impairs the Myogenic Response and Cerebral Blood Flow Autoregulation in Fawn Hooded Hypertensive Rats. Annual High Blood Pressure Research Conference, 2012, Washington DC, USA
15. Tullos H, **Pabbidi M. Reddy**, Jerry M. Farley, Richard. J. Roman. "Cerebral Autoregulation: The Genetic Basis of The Myogenic Response" Poster presentation at the American Academy of Neurology 65th Annual Meeting, March 16 to March 23, 2013 at the San Diego Convention Center, San Diego, CA.
16. Hurtis Tullos, M1, Richard Roman, **Mallikarjuna R. Pabbidi**, Jerry M. Farley, Jan M. Williams. Genetic Basis of Cerebral Blood Flow in FHH (Fawn Hooded Hypertensive) Rats. Internal medicine symposium, Jackson, MS.
17. **Pabbidi M. Reddy**, Jerrey Farley, Debebe Gebremedhin, David Harder, Richard J. Roman. Enhanced Large Conductance Ca^{2+} -sensitive K^{+} Channels (BK) Activity Impairs The Myogenic Response In The Cerebral Vasculature Of Fawn Hooded Hypertensive (FHH) Rat. Annual High Blood Pressure Research Conference, 2013, New Orleans, USA
18. **Pabbidi M. Reddy**, Rohini Bandaru. Impaired serotonin (5-HT)-mediated vasoconstriction in the middle cerebral arteries from the Fawn Hooded Hypertensive (FHH) rat. 11th International Symposium on Resistance Arteries (ISRA), September, 2014 Banff Centre, Banff, Alberta, Canada.
19. Gurjit Kaur, **Mallikarjuna R. Pabbidi**. Enhanced serotonin mediated carotid vessel constriction from the fawn hooded hypertensive rat. Millsaps College, 2015, Department of Pharmacology and Toxicology, University of Mississippi Medical Center.
20. **Pabbidi M. Reddy**, Richard. J. Roman. Impaired serotonin (5-HT)-mediated vasoconstriction in the middle cerebral arteries from the Fawn Hooded Hypertensive (FHH) rat. Department of Pharmacology and Toxicology, University of Mississippi Medical Center. 2015 AHA ATVB, SFO, CA.
21. Fan, Aron M. Geurts, **Mallikarjuna R. Pabbidi**, Ying Ge, David R. Harder and Richard J. Roman. Department of Pharmacology, University of Mississippi Medical Center, Jackson, MS. Medical College of Wisconsin, WI. A K572Q mutation in gamma-Adducin is responsible for the impaired myogenic response and autoregulation of renal and cerebral blood flow in FHH rats. AHA HBPR 2015.
22. Gurjit Kaur, **Mallikarjuna R. Pabbidi**. Enhanced serotonin mediated carotid vessel constriction from the fawn hooded hypertensive rat. Department of Pharmacology and Toxicology, University of Mississippi Medical Center. Washington DC, EB meeting 2015.
23. Fan, **Mallikarjuna R. Pabbidi**, Ying Ge and Richard J. Roman. Department of Pharmacology, University of Mississippi Medical Center, Jackson, MS. Knockdown of gamma-Adducin expression impairs the myogenic response of the cerebral and renal arterioles. AHA HBPR 2015.
24. **M Pabbidi**, G Kaur (2015). Enhanced Serotonin (5-HT)-Mediated Carotid Vessel Constriction From The Fawn Hooded Hypertensive (FHH) Rat. The FASEB Journal 29 (1 Supplement), 646.1
25. **M Pabbidi**, R Bandaru. Impaired serotonin (5-HT)-mediated vasoconstriction in the middle cerebral arteries from the Fawn Hooded Hypertensive (FHH) rat. Journal of vascular research. 51, 84-84
26. **M Pabbidi**. Sex differences in the cerebral vascular function and K channel role. APS3_2015_SEXGENDER-2015 APS Conference: Cardiovascular, Renal and Metabolic Diseases-Physiology and Gender.
27. **Mallikarjuna R. Pabbidi**, Ying Ge, David R. Harder, Richard J. Roman and Fan Fan. Role of Gamma-adducin Gene In Cerebral Vascular Myogenic Response. The FASEB Journal vol. 30 no. 1 Supplement 945.7
28. Fan Fan, **Mallikarjuna R. Pabbidi**, Rick Lin, Ying Ge, Elise P. Gomez-Sanchez, Grazyna Rajkowska, Mohaddetheh Moulana, Ezekiel Gonzalez-fernandez, Jerrell Sims, Matthew R. Elliott, Ian A. Paul, Alexander P. Auchus, Thomas H. Mosley, David R. Harder and Richard J. Roman. Impaired myogenic response of MCA elevates transmission of pressure to penetrating arterioles and contributes to cerebral vascular disease in aging hypertensive FHH rats. April 2016 The FASEB Journal vol. 30 no. 1 Supplement 953.7
29. Rachael Morris, **Mallikarjuna Pabbidi**, Shauna-Kay Spencer, Sarah Tremble, Marilyn Cipolla, Kedra Wallace. Blockade of endothelin-1 attenuates cerebral impairment in an animal model of HELLP syndrome. Supplement to JANUARY 2015 American Journal of Obstetrics & Gynecology.
30. Nikolett Szarka M.D., **Mallikarjuna R. Pabbidi Ph.D.**, Krisztina Pohoczky M.S, Zsuzsanna Helyes M.D., Ph.D., Zoltan Ungvari M.D., Ph.D., Akos Koller M.D., Ph.D., Andras Buki M.D, Ph.D., Peter Toth M.D., Ph.D. Traumatic brain injury impairs myogenic constriction of cerebral arteries: role of mitochondria-derived H₂O₂ and TRPV4-dependent activation of BKCa channels (NEU-2017-5056). April 2017 The FASEB Journal Vol 31, no.1 supplement, 836.5

Invited talk

- 2013 – “**Similarities and differences between human and animal house hold medicine**”. Medical students (Secular Student Alliance Group) at UMMC, Jackson.
- 2013 – “**What can you learn from your senior’s career in USA?**” Veterinary Students, College of Veterinary Science, Proddatur, India. 12/20/13
- 2014 – “**Role of CYP/20HETE pathway in airway hyper responsiveness (AHR)**” CRRC, UMMC, Jackson.
- 2014 – “**Sexual dimorphism in cerebrovascular function of Fawn hooded hypertensive (FHH) rats**”. CRRC, UMMC.
- 2015 – “**Sex differences in vascular function and K channel function**”. CRRC, UMMC. Jackson.
- 2016 – “**Sex differences in vascular function and K channel function**”. Research Day, UMMC. Jackson.
- 2016 – “**Sex differences in cerebral vascular function: BK channel α and β 1-subunit role**”. CRRC, UMMC. Jackson.
- 2016 – “**Cerebrovascular function: Influence of sex and age. From basic science to retrospective studies**”. Geriatrics, Mind center, UMMC. Jackson. 11/012/16
- 2017 – “**Influence of sex, hormones and age on cerebrovascular function: Role of BK channel subunits**. UMMC. Pharmacology, Jackson. 03/06/2017.
- 2017 – “**Mechanisms underlying cerebrovascular function: Role of gender and aging**”. CRRC, UMMC. Jackson. 05/04/2017.

Collaborations

July 2013 to Present - Assistant Professor - Department of Pharmacology, UMMC. Ongoing collaboration with Drs. Richard J. Roman, Chen, Ma, Fan, and Jan M, Williams working in the areas of renal, cerebral vasculature in genetically modified and diabetic rats.

OCT 2007 to June 2010 - Postdoctoral Research Associate – Loyola University Medical Center- Collaborated with the laboratories of Drs. Allen Samarel (William B. Knapp Professor of Medicine and Physiology, The cardiovascular Institute) and Alex Zima (Assistant professor of Physiology, LUMC) to generate key research results in the field of cardiac signaling mechanisms.

July 2003 to July 2007 - Graduate Research Assistant – Southern Illinois University. Collaborated with the laboratories of Drs. Mary Pauza (SIU SOM, IL USA), Romesh Kardori (Professor of Medicine, Chief, Division of Endocrinology Director, Endocrinology Fellowship Training Program), to produce key research results in the field of diabetic research.

Skills

1. Primary culture of vascular smooth muscle cells, dorsal root ganglion, trigeminal ganglion neurons
2. Perform isometric and isobaric measurements in conduit and resistance vessels
3. Fura-2 ratio metric and fluo-4 calcium imaging
4. Experience in setting up a patch-clamp set up and performing experiments using related software's (Clampex, Clampfit and Channel 2).
5. Single channel current recording using cell attached and inside out patch clamp technique from cultured murine DRG neurons, oocytes, smooth muscle cells and human embryonic kidney 293 (HEK 293) cells.
6. Recording voltage gated (VGCC or Kv or BK) and non-voltage gated currents (TRPV1, TRPM8, TRPA1)
7. Handling of chemical-induced (STZ), transgenic diabetic and non-diabetic mouse models, rodents etc.
8. Binding and immunohistochemistry experiments on tissues collected from control and diabetic tissues.
9. Measurement of free radicals by using di chloro fluorescense di acetate (DCF-DA) dye.
10. Handling, anesthetizing and surgical collection of oocytes from *Xenopus laevis* frogs, defolliculating Xenopus frog oocytes, preparation of microelectrodes and injection of cDNA into the Xenopus oocytes.
11. Oral, intraperitoneal, intravenous administration of various anti-diabetic, (DRF-2593) dyslipidemic (DRF-10945) and anti-cancer compounds (DRF-1042) in rodents and canines.
12. Observing animals under study for new chemical entities (NCE)-induced adverse effects and recording the findings.
13. Performed genotoxic assays (Comet assay) of new chemical entities (NCE) especially on DRF-10945, DRF-1042 and DRF-2593 (dyslipidemic, anti-cancer and anti-diabetic) compounds, which are in Phase II clinical trials.