

Sarika Chaudhari, M.D., Ph.D.

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EDUCATION

- 2011-2016 **Ph.D.** (Integrative Physiology)
Institute for Cardiovascular and Metabolic Diseases (ICMD),
UNT Health Science Center, Fort Worth, Texas, USA
- 2004-2007 **M.D.** (Physiology- Clinical and Experimental)
Government Medical College, Nagpur; Nagpur University, India
- 1995-2001 **M.B.B.S.** (Bachelor of Medicine and Bachelor of Surgery)
Government Medical College, Nagpur; Nagpur University, India

PROFESSIONAL EXPERIENCE

Full Time Appointments

- Sept 2016- **Postdoctoral Research Associate**, Department of Physiology and Anatomy, UNT Health Science Center at Fort Worth, Texas
- 2011-2016 **Graduate Teaching Assistant (Doctoral Candidate)**, Institute for Cardiovascular and Metabolic Diseases, UNT Health Science Center at Fort Worth, Texas
- 2007-2011 **Lecturer**, Physiology, Government Medical College, Nagpur, India
- 2004-2007 **Resident (Physiology- Clinical and Experimental)**, Government Medical College, Nagpur, India

Teaching Experience

October 2018 – Facilitator for the inter-professional education (IPE) workshop bringing together researchers and clinicians at Brown-Lupton University Union, Texas Christian University.
June 2017 - Course lectures for Pulmonary Physiology for JAMP (Joint Admission Medical Program) conducted by TCOM & GSBS, UNTHSC.

Reviewer Experience

Diabetes Care, American Diabetes Association
Experimental Biology and Medicine
Kidney and Blood Pressure Research
Molecular and Cellular Biochemistry
Molecular Biology Reports
International Journal of Environmental Research and Public Health, MDPI

GRANTS

- 2019 2020 AHA Postdoctoral Fellowship: Store-operated Calcium Entry Suppresses Renal inflammation in Diabetic Nephropathy.
- 2015 Project RI6165: Store-operated Ca²⁺ Entry and Renal Protection in Diabetic Nephropathy. (**Bridge Grant**) Intramural Research (UNTHSC)

2015 Project G201503151137055: Inhibition of TGF- β 1/Smad3 pathway mediates anti-fibrotic effect of Store Operated Calcium Entry in Mesangial cells. (**The Sigma Xi Grant-in-Aid of Research program**)

AWARDS

2019 **2019 Young Investigator Award** for Postdoc from Society for Experimental Biology and Medicine

2019 **GSBS Postdoctoral Travel Award** to attend the Experimental Biology Conference, Orlando, Florida

2018 **Outstanding Reviewer award** for the journal of Experimental Biology and Medicine (EBM).

2018 **GSBS Postdoctoral Travel Award** to attend the Experimental Biology Conference, San Diego

2016 **2016 Young Investigator Award** for Graduate Student from Society for Experimental Biology and Medicine

2016 **GSBS Graduate Student Travel Award** to attend the Experimental Biology Conference, San Diego.

2015 Induction to **Sigma Xi, the international Scientific Research Society.**

2015 **GSBS Graduate Student Travel Award** to attend the Experimental Biology Conference, Boston.

2014 **Student of the Year Award** for Department of Integrative Physiology, UNTHSC.

2014 **Student Leadership/Professional Development Fund (SLPDF) travel award** to attend Experimental Biology conference at San Diego.

PEER REVIEWED PUBLICATIONS

1. Pham GS, Shimoura CG, **Chaudhari S**, Kulp DV, Mathis KW. Chronic unilateral cervical vagotomy reduces renal inflammation, blood pressure, and renal injury in a mouse model of lupus. *Am J Physiol Renal Physiol.* 2020 Aug 1;319(2): F155-F161. PMID: 32538149.
2. **Chaudhari S**, Yazdizadeh Shotorbani P, Tao Y, Davis M, Mallet R, Ma R. Inhibition of interleukin-6 on matrix protein production by glomerular mesangial cells and its pathway involved. *Am J Physiol Renal Physiol.* 2020 Jun 1;318(6): F1478-F1488. PMID: 32390515.
3. Yazdizadeh Shotorbani P, **Chaudhari S**, Tao Y, Tsiokas L, Ma R. Inhibitor of MyoD family a (I-mfa), a new positive regulator of fibronectin production by glomerular mesangial cells. *Am J Physiol Renal Physiol.* 2020 Mar 1;318(3): F673-F682. PMID:31984795, PMCID: PMC7099507
4. Huang L, Ma R, Lin T, **Chaudhari S**, Shotorbani PY, Yang L, Wu P. Glucagon-like peptide-1 receptor pathway inhibits extracellular matrix production by mesangial cells through store-operated Ca²⁺ channel. *Exp Biol Med (Maywood).* 2019 Oct;244(14):1193-1201. PMID: 31510798
5. Ma Y, Li W, Yazdizadeh Shotorbani P, Dubansky BH, Huang L, **Chaudhari S**, Wu P, Wang LA, Ryou MG, Zhou Z, Ma R. Comparison of diabetic nephropathy between male and female eNOS^{-/-} db/db mice. *Am J Physiol Renal Physiol.* 2019 May 1;316(5): F889-F897. PMID: 30810354, PMCID: PMC6580249.
6. **Chaudhari S**, Cushen S, Osikoya O, Jaini P, Posey R, Mathis K and Goulopoulou S. Mechanisms of sex disparities in cardiovascular function and remodeling. *Compr Physiol.* 2018 Dec 13;9(1):375-411. PMID: 30549017.
7. Jiang H, Zou S, **Chaudhari S**, Ma R. Short Term High Glucose Treatment Decreased Abundance of Orai1 Protein through Posttranslational Mechanisms in Rat Mesangial Cells.

- Am J Physiol Renal Physiol. 2018 May 1;314(5):F855-F863. PMID: 29363325, PMCID: PMC6031918.
8. **Chaudhari S**, Wang Y, Li W, Ma R. Store Operated Ca²⁺ Entry Suppressed TGFβ1- Smad3 Signaling Pathway in Glomerular Mesangial Cells. Am J Physiol Renal Physiol. 2017 Sep 1;313(3):F729-F739. PMID: 28637791, PMCID: PMC5625109.
 9. Li W, Ding Y, Smedley C, Wang Y, **Chaudhari S**, Birnbaumer L, Ma R. Increased Glomerular Filtration Rate and Impaired Contractile Function Of Mesangial Cells In Trpc6 Knockout Mice. Sci Rep. 2017 Jun 23;7(1):4145. PMID: 28646178, PMCID: PMC5482875
 10. Wu P, Ren Y, Ma Y, Wang Y, Jiang H, **Chaudhari S**, Davis M, Zuckerman J and Ma R. Negative regulation of Smad1 pathway and collagen IV expression by store-operated Ca²⁺ entry in glomerular mesangial cells. Am J Physiol Renal Physiol. 2017 Jun 1;312(6):F1090-F1100. PMID: 28298362, PMCID: PMC5495888.
 11. Ma R, **Chaudhari S** and Li W. Canonical Transient Receptor Potential 6 Channel: A New Target of Reactive Oxygen Species in Renal Physiology and Pathology. Antioxid Redox Signal. 2016 Nov 1; 25(13):732-748. PMID: 26937558 PMCID: PMC5079416.
 12. **Chaudhari S**, Ma R. Store-operated calcium entry and diabetic complications. Minireview, Exp Biol Med (Maywood) 2016 Feb; 241(4):343-52. PMID: 26468167, PMCID: PMC4935416.
 13. Wang Y, **Chaudhari S**, Ren Y, Ma R. Impairment of HNF4α Binding to stim1 Promoter Contributes to High Glucose-induced Upregulation of STIM1 Expression in Glomerular Mesangial Cells. Am J Physiol Renal Physiol. 2015 May 15; 308(10): F1135-45. PMID: 25786776, PMCID: PMC4437002.
 14. Wu P, Wang Y, Davis ME, Zuckerman JE, **Chaudhari S**, Begg M, Ma R. Store-operated Ca²⁺ channel in glomerular mesangial cells negatively regulates extracellular matrix protein expression. J Am Soc Nephrol. 2015 Nov; 26(11):2691-702. PMID: 25788524, PMCID: PMC4625675.
 15. **Chaudhari S**, Wu P, Wang Y, Ding Y, Yuan J, Begg M, Ma R. High glucose and diabetes enhanced store operated Ca⁺⁺entry and increased expression of its signaling proteins in mesangial cells. Am J Physiol Renal Physiol. 2014; 306(9):F1069-80. PMID: 24623143, PMCID: PMC4010683.
 16. Wang Y, Ding M, **Chaudhari S**, Yanfeng Ding, Joseph Yuan, Dorota Stankowska, Shaoqing He, Raghu Krishnamoorthy, Joseph T. Cunningham, Rong Ma. Nuclear factor κB mediates suppression of canonical transient receptor potential 6 expression by reactive oxygen species and protein kinase C in kidney cells. *J Biol Chem*. 2013; 288(18):12852-12865. PMID: 23525112, PMCID: PMC3642329.
 17. Banker MD, **Chaudhari SK**, Chaudhari KD. Impact of long term yoga practice on sleep quality and quality of life in the elderly. *J Ayurveda Integr Medicine*. 2013; 4(1): 28-32. PMID: 23741159, PMCID: PMC3667430.
 18. K Chaudhari, S Khanzode, S Khanzode, G Dakhale, A Saoji and **S Sarode**. Clinical correlation of alteration in the endogenous antioxidant-Uric acid level in Major Depressive Disorder. Indian Journal Clinical Biochemistry. 2010; 25 (1):77-81. PMID: 23105889, PMCID: PMC3453017.

PRESENTATIONS

1. **Chaudhari S**, Yazdizadeh Shotorbani P, Wang Y, Ma R. Store-Operated Calcium Entry in Mesangial Cells And Glomerular Inflammatory Responses: Role of Interleukin 6. Research appreciation Day, UNTHSC, April 2019 (Oral)
2. **Chaudhari S**, Yazdizadeh Shotorbani P, Wang Y, Ma R. Store-Operated Calcium Entry in Mesangial Cells And Glomerular Inflammatory Responses. Expt. Biol. Meeting, March 2019 (Poster)

3. **Chaudhari S**, Jiang H, Zou S, Huang L, Ma R. Promoting ubiquitination-mediated degradation of Orai1 protein by high glucose in glomerular mesangial cells. Expt. Biol. Meeting, April 2018 (Poster)
4. **Chaudhari S**, Jiang H, Zou S, Huang L, Yazdizadeh P, Ma R. Short term exposure to high glucose negatively regulates store-operated calcium channel proteins in mesangial cells. Research appreciation Day, UNTHSC, April 2018 (Poster)
5. **Chaudhari S**, Phillips NR, Sprouse M, Jarvis SS, Okada Y, Morton J, Davidge ST, Fu Q, Goulopoulou S. Circulating Cell-free Mitochondrial DNA In Normal Human Pregnancy And In Experimental Preeclampsia. Research appreciation Day, UNTHSC, April 2017 (Poster)
6. **Chaudhari S.**, Li W., and Ma R. Store Operated Ca^{2+} Entry Suppressed TGF β 1- Smad3 Signaling Pathway in Glomerular Mesangial Cells. Expt. Biol. Meeting, April 2016. (Oral and poster)
7. **Chaudhari S.**, Li W., Wang Y., and Ma R. Increased I-mfa in Mesangial Cells Contributes to Increased Abundance of Fibronectin Protein in Diabetic Kidney. Expt. Biol. Meeting, April 2016. (Poster)
8. **Chaudhari S.**, Wang Y., and Ma R. Prolonged High Glucose Treatment Increased Orai1 Protein Expression through Inhibition of Lysosomal Pathway in Human Mesangial Cells. Expt. Biol. Meeting, March-April 2015 and Research Appreciation Day, UNTHSC, April 2015. (Poster)
9. **Chaudhari S.**, Wang Y., Wu P., Yuan J., and Ma R. Positive regulation of STIM1/Orai1-mediated store operated calcium entry by reactive oxygen species in human mesangial cells. Expt. Biol. Meeting, April 2014. (Poster)
10. **Chaudhari S**, Wang Y, Ding M, Ding Y, Yuan J, and Ma R. Prolonged high glucose treatment increased STIM1/Orai1 protein expression and enhanced store-operated Ca^{2+} entry in human glomerular mesangial cells. Expt. Biol. Meeting, April 2013 and Research Appreciation Day, UNTHSC, April 2013. (Poster)
11. **Sarode S** and Mishra NV. Alteration in reaction time after short term and long term yoga in healthy volunteers - Medical Staff Research Society of Government Medical College, Nagpur, 18th Feb 2009. (Oral)
12. **Sarode S**, Mishra NV, Mishra VP, Tajane VD. Study of comparative changes yoga induces in different groups of hypertensive subjects in National symposium at UCMS and GTB Hospital, New Delhi, 29th Feb- 1st Mar 2008. (Poster)

PUBLISHED ABSTRACTS

1. **Chaudhari S**, Yazdizadeh Shotorbani P, Wang Y, Ma R. Store-Operated Calcium Entry in Mesangial Cells And Glomerular Inflammatory Responses. FASEB J April 2019, 33(1-supplement)
2. **Chaudhari S**, Jiang H, Zou S, Huang L, Ma R. Promoting ubiquitination-mediated degradation of Orai1 protein by high glucose in glomerular mesangial cells. FASEB J April 2018, 32(1-supplement). Abstract No:620.4
3. **Chaudhari S.**, Li W., and Ma R. Store Operated Ca^{2+} Entry Suppressed TGF β 1- Smad3 Signaling Pathway in Glomerular Mesangial Cells. FASEB J April 2016, 30(1-supplement). Abstract No:1224.28
4. **Chaudhari S., Li W., Wang Y., and Ma R.** Increased I-mfa in Mesangial Cells Contributes to Increased Abundance of Fibronectin Protein in Diabetic Kidney. FASEB J April 2016, 30:740.19
5. **Chaudhari S., Wang Y., and Ma R.** Prolonged High Glucose Treatment Increased Orai1 Protein Expression through Inhibition of Lysosomal Pathway in Human Mesangial Cells. FASEB J April 2015 29:959.6

6. **Chaudhari S**, Wang Y, Wu P, Yuan J, Ma R. Positive regulation of STIM1/Orai1-mediated store operated calcium entry by reactive oxygen species in human mesangial cells. FASEB J April 2014 28:LB731
7. Wu P, Wang Y, **Chaudhari S**, Zuckerman J, Davis M, and Ma R. SMAD1 signaling mediates inhibition of store-operated Ca^{2+} entry on collagen IV expression in glomerular mesangial cells. FASEB J April 2014 28:689.14
8. Wang Y, Wu P, **Chaudhari S**, and Ma R. Hepatocyte nuclear factor 4 α negatively regulates STIM1 protein expression in human glomerular mesangial cells. FASEB J April 2014 28:689.15
9. Ma R, **Chaudhari S**, Wu P, Wang Y, Ding Y. Enhanced Store-Operated Ca^{2+} Entry in Glomerular Mesangial Cells in Diabetes Suppresses Extracellular Matrix Protein Expression. American Society of Nephrology Kidney Week. Nov 2013.
10. **Chaudhari S**, Wang Y, Ding M, Ding Y, Yuan J, Ma R. Prolonged high glucose treatment increased STIM1/Orai1 protein expression and enhanced store-operated Ca^{2+} entry in human glomerular mesangial cells. FASEB J April 9, 2013 27:702.11

PROFESSIONAL SOCIETY MEMBERSHIPS

2015-present: Society for Experimental Biology and Medicine
2015-2016: Sigma Xi, the Scientific Research Society
2014-present: American Heart Association (AHA)
2012-present: American Physiological Society (APS)
2008- present: Association of Physiologists and Pharmacologists of India (APPI)

COMMUNITY SERVICE

Physiology Understanding (Phun) week, December 2019: Program through the American Physiological Society to give K-12 students a basic introduction of Physiology as a subject, and as a career field to encourage STEM participation.
Physiology Understanding (Phun) week, November, 2017.
Judge for science fair at All-Saints Catholic School, Fort Worth, May 3rd 2017.
Physiology Understanding (Phun) week, October 2016
Science lab at Tanglewood elementary, Fort Worth 2016-2017
Science lab at Tanglewood elementary, Fort Worth 2015-2016
Science lab at Tanglewood elementary, Fort Worth October 2014
Judge for summer student's poster presentation at UNTHSC July 24, 2014
Solutions Fair, UNTHSC, June 18, 2014
Global café India, UNTHSC, March 2014
Assisted in classroom at Ellis Head start, December 2013
Participated in Walk to end Alzheimer's October 2013

RESEARCH SKILLS

Clinical trials: Hypothesis generation, study designing, clinical trial protocol generation, consent form preparation, data sheet preparation, subject recruitment, sample and data collection, data analysis and presentation.
Functional testing: Human: reaction time, psychomotor function.
Rodents:
Generation of type 1 and type 2 diabetic rats and mice.

Transient transfection of siRNAs via tail vein injections.

Model based testing: Crook's pole climbing, maximum electroshock seizure model, histamin chamber, analgesiometer, hot plate method.

Cell culture: Ca⁺⁺ Imaging by fura2 fluorescence ratiometry.

- Biochemistry:** Western Blot, RT-PCR, Real time PCR, BCA protein assay, ELISA, calorimetric evaluation of proteins and lipids and blood sugar levels, transient transfection using siRNA, shRNA and expression plasmids, Immunoprecipitation, Immunofluorescence staining including Immunocytochemistry and Immunohistochemistry (paraffin and frozen sections), Flow Cytometry.
- Sample collection:** Rodent body dissection: heart, kidney, liver, muscle, aorta, spleen, thymus, lungs, ovaries, bone marrow cells,
Blood collection: tail vein, retro orbital, intra cardiac.
Laser capture microdissection to isolate glomeruli from the kidney sections, Magnetic Beads isolation of glomeruli from whole kidneys.
- Biostatistics:** Sample size, power calculation, t- test, ANOVA, correlation and regression analysis
- Computer Skills:** Use of Refworks, EndNote, Sigma plot, SPSS 17, Graph Pad prism, Image J, FlowJo V10.
MS Office: Word, Power point, Excel, Outlook.