

Nitin Puri

110 Laurel Xing, Huntington, WV, 25705

purin@marshall.edu

EDUCATION AND TRAINING:

1. M.B.B.S (M.D.)—Mahatma Gandhi Memorial Medical College, Indore, Madhya Pradesh, India; 2000
2. Doctor of Philosophy (PhD)—Biomedical Sciences; Dept. of Pharmacology, New York Medical College, Valhalla, NY; 2005-2010
3. Certificate Course—
 - A Systems Approach to Assessment in Health Professions Education, Harvard Macy Institute
 - Health Care Education 2.0-Transforming your teaching for the digital age, Harvard Macy Institute

POSTGRADUATE MEDICAL EDUCATION (RESIDENCIES, FELLOWSHIPS):

Master of Surgery (Residency)
SS Medical College
Rewa, Madhya Pradesh, India
Department of General Surgery
General Surgery
2000-2003

PRE-AND POST-DOCTORAL FELLOWSHIPS:

2003-2004
Delhi Heart and Lung Institute
Panchkuian Road, New Delhi, 110055, India
Department of Cardiothoracic and Vascular Surgery
Post-residency Fellowship in Cardiothoracic and Vascular Surgery

2010-2011
The University of Toledo, College of Medicine and Life Sciences
Toledo OH 43614
Department of Physiology and Pharmacology
Postdoctoral Fellowship in Cardiovascular Physiology

EMPLOYMENT:

2004-2005

B.J.R.M. Hospital, Jahangirpur B Block, New Delhi, 110033, India
Department of Surgery
Senior Resident Surgeon

June, 2011-May, 2017

Assistant Professor, Academic Basic Scientist-Educator Track
The University of Toledo, Toledo OH, College of Medicine
Department of Physiology & Pharmacology

June, 2015-Oct, 2017

The University of Toledo, Toledo OH, College of Medicine,
Program Director, MSBS Medical Sciences Program

June, 2017-October, 2017

Associate Professor, Academic Basic Scientist-Educator
The University of Toledo, Toledo OH, College of Medicine
Department of Physiology & Pharmacology

November, 2017-Present

JCESOM, Marshall University, Huntington, WV
Associate Dean for Medical Education
Associate Professor for Biomedical Sciences

AWARDS AND COMMENDATIONS:

1. First prize for oral presentation at the Pharmacology Graduate Student Research Forum, New York Medical College, New York—2009
2. Second prize for oral presentation at the 21st Graduate Student Research Forum, New York Medical College, New York—2009
3. Martha Lucas Pate, Ph.D., Memorial Award, “In recognition of academic excellence and leadership in social and humane concerns in medicine, science or health.” The Trustees of New York Medical College, New York-2010
4. Outstanding poster award at the 13th International Winter Eicosanoids Conference, Baltimore MD—2011
5. Outstanding (second place) oral presentation in “Molecular and genetic basis of hypertension” at the 2012-Experimental Biology meeting, San Diego CA
6. Outstanding Junior Faculty Award of the Dept. of Physiology and Pharmacology-2016
7. Dean’s award for teaching excellence in basic-science category for 2016, The University of Toledo, College of Medicine and Life Sciences—2017

8. Outstanding Teacher Award, The University of Toledo—2017
9. Best Block Leader, Joan C. Edwards School of Medicine—2018
10. Excellence and Commitment to Learning, Joan C. Edwards School of Medicine—2018
11. Best Block Leader, Joan C. Edwards School of Medicine—2019
12. Excellence and Commitment to Learning, Joan C. Edwards School of Medicine—2019

SERVICE

COMMITTEES, JCESOM, Marshall University:

LCME Workgroup
Chair, LCME Standards 6-9

Curriculum Revision Taskforce
Chair and OME Liaison

The Curriculum Committee
Executive Secretary

MS1 and MS2 Sub-Committees
OME Liaison

Clinical Clerkship Committee
OME Liaison

Curriculum Evaluation Committee
OME Liaison

COMMITTEES, THE UNIVERSITY OF TOLEDO:

Preclinical Curriculum Committee, COMLS
2014-2017
Member

Curriculum Evaluation Committee, COMLS
2015-2017
Member

CVMD/MOME Admissions Committee, COMLS Graduate Studies
2014-2017
Member

Master's in science and Biomedical Sciences-Medical Science Admissions,
COMLS
2015-2017
Chair

COMLS Medical School Curriculum Task Force: Cardiopulmonary
2015-2017
Chair

COMLS Medical School Curriculum Task Force: Renal
2015-2017
Chair

Academic Enrichment Center-Director Search Committee
2016-2017
Member

Cardiopulmonary-Renal Thread Committee for the Medical School Curriculum,
COMLS
2016-2017
Chair/Thread Director

COMLS Curriculum Steering committee
2015-2017
Member

**REGIONAL, NATIONAL AND INTERNATIONAL PROFESSIONAL SOCIETIES
AND ACTIVITIES:**

Member, New York Academy of Sciences (2005- 2010)
Member, American Heart Association- 2010-present
Member, American Physiological Society- 2013-present

COMMUNITY SERVICE AND ORGANIZATIONS:

Volunteer, Pulse Polio Campaign, Indore, India- 1995-2003
Volunteer, Primary Health Care Clinic, Indore, India- 1999-2000
Social Events Coordinator, MGM Medical College, Indore, India- 1996-1998
Volunteer Tutor, Pharmacology, New York Medical College, Valhalla, NY- 2006-
2010

CURRICULUM DEVELOPMENT/INNOVATION:

1. MD Curriculum, JCESOM—leading a team of 10 to deliver core institutional competencies in a redesigned 4-year MD curriculum with emphasis on active-learning pedagogies and System’s approach to assessment.
2. Toledo, MSBS-Medical Sciences Program Curriculum (Director): revamped the entire program with renewed focus on longitudinal research integration and an organ-system based curriculum.
3. Medical school new curriculum, UTCOM:
 - a. Co team-lead for the redesign of vertically integrated pre-clerkship curriculum at the UTCOM, Toledo, OH.
 - b. Cardio-Pulmonary-Renal Thread Director (Toledo):
 - i. Development and implementation of vertically integrated, 18-month pre-clerkship curriculum.
 - ii. Incorporated novel pedagogical techniques in the new curriculum including, active-learning sessions, TBLs, simulations, e-modules, and principals of clinical medicine that includes, patient contact from day 1.
 - iii. Team-Based Learning (TBL) across all threads.
 - iv. Weekly assessments and active learning in the classroom with application of complex concepts in TBLs.
 - v. Comprehensive, NBME-style, summative exam to assess student readiness at the unit-end.
 - vi. Non-classroom-centric pedagogy: creating e-modules for physiology and pharmacology. All e-modules will be followed by formative self-assessments.
4. **Innovative student engagement tools:** incorporated the use of social networking applications to promote collaborative and open interactions/discussions amongst students and the faculty.
5. **Flipped Classroom:** I am currently employing the “flipped” classroom setting for teaching physiology and pathophysiology to our Medical Students. Every 3-hours of directed-self learning is followed by 1-hours of in-class review. Modules are created with a mix of delivery styles, including short videos, interactive images, interactive tabs, flash cards, and knowledge checks.
6. **Case simulations:** piloted case-based simulations to impart practical skills and knowledge to our medical students. These scenarios emulate common clinical cases on the simulation dummies challenge students to use foundational concepts to solve clinical problems.

LEARNER ASSESSMENT:

1. Small-group active-learning sessions across medical, PA and MSBS-MS programs for formative feedback on learner progress.
2. MSBS-MS learner professionalism assessment and review.

3. Authored of over 200 clinical correlates and problem-solving questions for formative and summative assessments across the medical, PA, and MSBS curriculum.
4. Developing a longitudinal, system-based assessment plan for the pre-clerkship curriculum at the JCESOM, Marshall University; including, incorporation of weekly TBLs and low-stakes summative assessments with comprehensive, customized, NBME-assessments for each System.

SCHOLARSHIP

EDITORIAL BOARDS:

Journal of Hypertension and Cardiology
2012-Present
Editor

JOURNAL PEER REVIEW:

American Journal of Physiology: Heart and Circulation
Prostaglandins and Other Lipid Mediators
American Journal of Hypertension
Public Library of Sciences One
Journal of Cardiology
Journal of Biological Chemistry
International Journal of Hypertension
Hypertension (American Heart Association)

CONSULTATIVE ACTIVITIES:

Trans Tech Pharma
2011-2012
Consultation and collaboration for drug-development for targeting of the heme oxygenase system

MAJOR RESEARCH INTERESTS:

My research interest lies in the investigations of the (dys)functional regulation of the cardio-vascular, renal and metabolic systems.

During my graduate training, I was very interested in cellular redox mechanisms and their role in the regulation of cardiovascular function. I examined the interplay of the heme-heme oxygenase system, a crucial cellular antioxidant pathway, with reactive species and gases including, carbon monoxide, nitric oxide, and hydrogen peroxide. I uncovered a novel regulatory pathway that governs the dual vascular effects hydrogen peroxide on the renal vasculature. We showed that broad-spectrum antioxidants can condition the

renal vascular response to hydrogen peroxide, which can cause vasodilation via increased heme oxygenase activity and carbon monoxide production. In the absence of such conditioning, hydrogen peroxide interferes with heme oxygenase activity and causes thromboxane-induced vasoconstriction.

I further pursued my interests in redox biology and heme-heme oxygenase system, in the regulation of cardio-metabolic systems, during my postdoctoral fellowship and early years as a junior faculty. My interests expanded to the study of the human mesenchymal cells, and their regulation by oxidative stress. I published a number of manuscripts, with my co-authors, on the effects of reactive oxygen species on the adipogenic potential of human MSCs. We demonstrated the protective role of the heme-heme oxygenase system in this setting and established alternate therapeutic options for obesity.

During the past 3-years, I have been deeply involved in a number of diverse projects with my collaborators. In conjunction with Dr. Kumar, I have expanded my research endeavors to include transcriptional regulation of genes of the renin-angiotensin-system (RAS) with implications for vascular function and blood pressure regulation. I am focused on the physiological effects of haplotype-dependent regulation of the RAS axis and my work includes the use of novel techniques like, the wire myograph, telemetric implantations, and generation and study of humanized transgenic mice. We have uncovered gene-regulatory pathways that can alter the transcription of gene like angiotensinogen and aldosterone synthase under various pathophysiological conditions including, aging and obesity. We have shown that these effects are haplotype-dependent and are modulated by previously unknown mechanisms including, the intronic regulation of gene-expression. These studies bring us one-step closer to the goal of personalized medicine by identifying “at risk” individuals for the devolvment of hypertension and metabolic syndrome. **I am the co-investigator on this grant, and we are funded by the NIH through 2019.**

Additionally, in collaboration with Dr. Sodhi, I am involved in the study of redox mediators in obesity and non-alcoholic fatty liver disease (NAFLD). We study the interplay of the heme-heme oxygenase system and the ubiquitous NAD-dependent deacetylase, Sirtuin1, in the pathophysiology of NAFLD. Importantly, we are also exploring the role of the Na/K-ATPase-Src amplification loop in hepatocyte signaling and the development of the NAFLD.

PAST RESEARCH SUPPORT, TRAINING GRANTS:

1. Heme Oxygenase Regulation of Eicosanoid Biosynthesis
NIDDK
06/01/2010-05/31/2011
\$250,000.00
Abraham, NG
Department of Phys Pharm Met/Cardio Science
UTCOMLS
Research Associate
2. Hormonal Regulation of Blood Pressure

- NHLBI
04/15/2011-03/31/2012
\$263,451.00
Abraham, NG
Department of Phys Pharm Met/Cardio Science
UTCOMLS
Research Associate
3. Heme Oxygenase Regulation of Eicosanoid Biosynthesis
NIDDK
06/01/2012-12/31/2012
\$205,425.00
Abraham, NG
Department of Phys Pharm Met/Cardio Science
UTCOMLS
Prof/Medical Support
4. Hormonal Regulation of Blood Pressure
NHLBI
04/01/2012-01/31/2013
\$265,452.00
Abraham, NG
Department of Phys Pharm Met/Cardio Science
UTCOMLS
Research Associate
5. Genetics of Hypertension
NHLBI
12/01/2013-11/30/2015
\$245,000.00
Kumar, Ashok
Department of Phys Pharm Met/Cardio Science
UTCOMLS
Consultant
6. Non-coding Variants of Angiotensinogen Gene and Hypertension
NHLBI
01/01/2016-08/30/2016
\$130,776.00
Kumar, Ashok
Department of Phys Pharm Met/Cardio Science
UTCOMLS
Co-Investigator

CURRENT RESEARCH SUPPORT, TRAINING GRANTS;

Non-coding Variants of Angiotensinogen Gene and Hypertension Subcontract
from New York Medical College (Dr. Kumar)
NHLBI

01/01/2017-12/31/2017

Funding Cycle End Date: 12/31/2019

\$16,125.00 Direct Cost

PI: Ashok Kumar, Dept. of Pathology, New York Medical College

Co-investigator: Nitin Puri

BIBLIOGRAPHY

Peer-reviewed publications (newest first):

1. Jain S, **Puri N**, Rana A, Sirianni N, Mopidevi B, Kumar A. Metabolic Syndrome Induces Over Expression of the Human AT1R: A Haplotype-Dependent Effect With Implications on Cardio-Renal Function. *Am J Hypertens*. 2018 Mar 10;31(4):495-503. doi: 10.1093/ajh/hpx176. PubMed PMID: 29036458; PubMed Central PMCID: PMC5861552.
2. Johnson B, Flemer M, Khuder S, **Puri N**. Premedical special master's programs increase USMLE STEP1 scores and improve residency placements. *PLoS One*. 2017 Nov 30;12(11):e0188036. doi: 10.1371/journal.pone.0188036. eCollection 2017. PubMed PMID: 29190691; PubMed Central PMCID: PMC5708752.
3. **Puri N**, Arefiev Y, Chao R, Sacerdoti D, Chaudry H, Nichols A, Srikanthan K, Nawab A, Sharma D, Lakhani VH, Klug R, Sodhi K, Peterson SJ. Heme Oxygenase Induction Suppresses Hepatic Hcpidin and Rescues Ferroportin and Ferritin Expression in Obese Mice. *J Nutr Metab*. 2017;2017:4964571. doi: 10.1155/2017/4964571. Epub 2017 Sep 14. PubMed PMID: 29062571; PubMed Central PMCID: PMC5618758.
4. Rana A, Jain S, **Puri N**, Kaw M, Sirianni N, Eren D, Mopidevi BR, Kumar A. The transcriptional regulation of the human angiotensinogen gene after high-fat diet is haplotype-dependent: Novel insights into the gene-regulatory networks and implications for human hypertension. *PLoS One*. 2017 May 3;12(5):e0176373. doi: 10.1371/journal.pone.0176373. eCollection 2017. PubMed PMID: 28467442; PubMed Central PMCID: PMC5415177
5. Krithika Srikanthan, Rebecca Klug, Maria Tirona, Ellen Thompson, Haresh Visweshwar, **Nitin Puri**, Joseph Shapiro and Komal Sodhi. Creating a Biomarker Panel for Early Detection of Chemotherapy Related Cardiac Dysfunction in Breast Cancer Patients. Accepted for publication. *Clinical and Experimental Cardiology*.
6. Perrine Goguet-Rubio, Amrita Mallick, Vishal H Lakhani, **Puri N**, Kathleen M. O'Hanlon, Joseph I. Shapiro¹ and Komal Sodhi. Early Detection of Metabolic Syndrome in a Population of West Virginia: Existence of a Strong Correlation of Biomarkers and miRNA in Females with Metabolic Syndrome and Obesity. Accepted for publication. *International Journal of Medical Sciences*
7. *Sodhi K, **Puri N**, Favero G, Stevens S, Meadows C, Abraham NG, Rezzani R, Ansinelli H, Lebovics E, Shapiro JI. Fructose Mediated Non-Alcoholic Fatty Liver Is Attenuated by HO-1-SIRT1 Module in Murine Hepatocytes and Mice Fed a High Fructose Diet. *PLoS One*. 2015 Jun 22;10(6):e0128648. doi:

10.1371/journal.pone.0128648. PubMed PMID: 26098879; PubMed Central PMCID: PMC4476565

8. Pandey VG, Jain S, Rana A, **Puri N**, Arudra SK, Mopidevi B, Kaw M, Nasjletti A, Kumar A. Dexamethasone promotes hypertension by allele-specific regulation of the human angiotensinogen gene. *J Biol Chem*. 2015 Feb 27;290(9):5749-58. doi: 10.1074/jbc.M114.601922. PubMed PMID: 25568318; PubMed Central PMCID: PMC4342485.
9. *Mopidevi B, Kaw MK, **Puri N**, Ponnala M, Jain S, Rana A, Keetha NR, Khuder SA, Fiering SN, Kumar A. Variable transcriptional regulation of the human aldosterone synthase gene causes salt-dependent high blood pressure in transgenic mice. *Circ Cardiovasc Genet*. 2015 Feb;8(1):30-9. doi: 10.1161/CIRCGENETICS.114.000694. PubMed PMID: 25504670; PubMed Central PMCID: PMC4334713.
10. Maharjan S, Mopidevi B, Kaw MK, **Puri N**, Kumar A. Human aldosterone synthase gene polymorphism promotes miRNA binding and regulates gene expression. *Physiol Genomics*. 2014 Dec 15;46(24):860-5. doi: 10.1152/physiolgenomics.00084.2014. PubMed PMID: 25351194; PubMed Central PMCID: PMC4269658.
11. Jain S, Prater A, Pandey V, Rana A, **Puri N**, Kumar A. A haplotype of angiotensin receptor type 1 associated with human hypertension increases blood pressure in transgenic mice. *J Biol Chem*. 2013 Dec 27;288(52):37048-56. doi: 10.1074/jbc.M113.520023. PubMed PMID: 24202179; PubMed Central PMCID: PMC3873561.
12. Hinds TD Jr, Sodhi K, Meadows C, Fedorova L, **Puri N**, Kim DH, Peterson SJ, Shapiro J, Abraham NG, Kappas A. Increased HO-1 levels ameliorate fatty liver development through a reduction of heme and recruitment of FGF21. *Obesity (Silver Spring)*. 2014 Mar;22(3):705-12. doi: 10.1002/oby.20559. PubMed PMID: 23839791; PubMed Central PMCID: PMC3830593.
13. Sodhi K, **Puri N**, Kim DH, Hinds TD, Stechschulte LA, Favero G, Rodella L, Shapiro JI, Jude D, Abraham NG. PPAR δ binding to heme oxygenase 1 promoter prevents angiotensin II-induced adipocyte dysfunction in Goldblatt hypertensive rats. *Int J Obes (Lond)*. 2014 Mar;38(3):456-65. doi: 10.1038/ijo.2013.116. PubMed PMID: 23779049; PubMed Central PMCID: PMC3950586.
14. Monu SR, Pesce P, Sodhi K, Boldrin M, **Puri N**, Fedorova L, Sacerdoti D, Peterson SJ, Abraham NG, Kappas A. HO-1 induction improves the type-1 cardiorenal syndrome in mice with impaired angiotensin II-induced lymphocyte activation. *Hypertension*. 2013 Aug;62(2):310-6. Do

10.1161/HYPERTENSIONAHA.111.00495. PubMed PMID: 23753410;
PubMed Central PMCID: PMC3771397.

15. Fedorova LV, Sodhi K, Gatto-Weis C, **Puri N**, Hinds TD Jr, Shapiro JI, Malhotra D. Peroxisome proliferator-activated receptor δ agonist, HPP593, prevents renal necrosis under chronic ischemia. *PLoS One*. 2013 May 15;8(5):e64436. doi: 10.1371/journal.pone.0064436. PubMed PMID: 23691217; PubMed Central PMCID: PMC3654981.
16. Vanella L, Sodhi K, Kim DH, **Puri N**, Maheshwari M, Hinds TD, Bellner L, Goldstein D, Peterson SJ, Shapiro JI, Abraham NG. Increased heme-oxygenase 1 expression in mesenchymal stem cell-derived adipocytes decreases differentiation and lipid accumulation via upregulation of the canonical Wnt signaling cascade. *Stem Cell Res Ther*. 2013 Mar 12;4(2):28. doi: 10.1186/scrt176. PubMed PMID: 23497794; PubMed Central PMCID: PMC3706794.
17. Kim DH, **Puri N**, Sodhi K, Falck JR, Abraham NG, Shapiro J, Schwartzman ML. Cyclooxygenase-2 dependent metabolism of 20-HETE increases adiposity and adipocyte enlargement in mesenchymal stem cell-derived adipocytes. *J Lipid Res*. 2013 Mar;54(3):786-93. doi: 10.1194/jlr.M033894. PubMed PMID: 23293373; PubMed Central PMCID: PMC3617952.
18. ***Puri N**, Zhang F, Monu SR, Sodhi K, Bellner L, Lamon BD, Zhang Y, Abraham NG, Nasjletti A. Antioxidants condition pleiotropic vascular responses to exogenous H₂O₂: role of modulation of vascular TP receptors and the heme oxygenase system. *Antioxid Redox Signal*. 2013 Feb 10;18(5):471-80. doi: 10.1089/ars.2012.4587. PubMed PMID: 22867102; PubMed Central PMCID: PMC3545357. (**first and corresponding author**)
19. Cao J, Vecoli C, Neglia D, Tavazzi B, Lazzarino G, Novelli M, Masiello P, Wang YT, **Puri N**, Paolocci N, L'abbate A, Abraham NG. Cobalt-Protoporphyrin Improves Heart Function by Blunting Oxidative Stress and Restoring NO Synthase Equilibrium in an Animal Model of Experimental Diabetes. *Front Physiol*. 2012 Jun 4;3:160. doi: 10.3389/fphys.2012.00160. PubMed PMID: 22675305; PubMed Central PMCID: PMC3366474.
20. Cao J, **Puri N**, Sodhi K, Bellner L, Abraham NG, Kappas A. Apo A1 Mimetic Rescues the Diabetic Phenotype of HO-2 Knockout Mice via an Increase in HO-1 Adiponectin and LKBI Signaling Pathway. *Int J Hypertens*. 2012;2012:628147. doi: 10.1155/2012/628147. PubMed PMID: 22577519; PubMed Central PMCID: PMC3335301.
21. Issan Y, Hochhauser E, Kornowski R, Leshem-Lev D, Lev E, Sharoni R, Vanella L, **Puri N**, Laniado-Schwartzman M, Abraham NG, Porat E. Endothelial progenitor cell function inversely correlates with long-term glucose

control in diabetic patients: association with the attenuation of the heme oxygenase-adiponectin axis. *Can J Cardiol*. 2012 Nov-Dec;28(6):728-36. doi: 10.1016/j.cjca.2012.01.013.

22. Kawakami T, **Puri** N, Sodhi K, Bellner L, Takahashi T, Morita K, Rezzani R, Oury TD, Abraham NG. Reciprocal Effects of Oxidative Stress on Heme Oxygenase Expression and Activity Contributes to Reno-Vascular Abnormalities in EC-SOD Knockout Mice. *Int J Hypertens*. 2012;2012:740203. doi: 10.1155/2012/740203. PubMed PMID: 22292113; PubMed Central PMCID: PMC3265091. (**Co-first author**)
23. ***Puri** N, Sodhi K, Haarstad M, Kim DH, Bohinc S, Foglio E, Favero G, Abraham NG. Heme induced oxidative stress attenuates sirtuin1 and enhances adipogenesis in mesenchymal stem cells and mouse pre-adipocytes. *J Cell Biochem*. 2012 Jun;113(6):1926-35. doi: 10.1002/jcb.24061. PubMed PMID: 22234917; PubMed Central PMCID: PMC3360793.
24. Sodhi K, **Puri** N, Inoue K, Falck JR, Schwartzman ML, Abraham NG. EET agonist prevents adiposity and vascular dysfunction in rats fed a high fat diet via a decrease in Bach 1 and an increase in HO-1 levels. *Prostaglandins Other Lipid Mediat*. 2012 Aug;98(3-4):133-42. doi: 10.1016/j.prostaglandins.2011.12.004. PubMed PMID: 22209722; PubMed Central PMCID: PMC3449325. (**Co-first author**)
25. Cao J, Sodhi K, **Puri** N, Monu SR, Rezzani R, Abraham NG. High fat diet enhances cardiac abnormalities in SHR rats: Protective role of heme oxygenase-adiponectin axis. *Diabetol Metab Syndr*. 2011 Dec 23;3(1):37. doi: 10.1186/1758-5996-3-37. PubMed PMID: 22196253; PubMed Central PMCID: PMC3261094.
26. Cao J, Inoue K, Sodhi K, **Puri** N, Peterson SJ, Rezzani R, Abraham NG. High-fat diet exacerbates renal dysfunction in SHR: reversal by induction of HO-1-adiponectin axis. *Obesity (Silver Spring)*. 2012 May;20(5):945-53. doi: 10.1038/oby.2011.365. PubMed PMID: 22193921.
27. Bellner L, Martinelli L, Halilovic A, Patil K, **Puri** N, Dunn MW, Regan RF, Schwartzman ML. Heme oxygenase-2 deletion causes endothelial cell activation marked by oxidative stress, inflammation, and angiogenesis. *J Pharmacol Exp Ther*. 2009 Dec;331(3):925-32. doi: 10.1124/jpet.109.158352. PubMed PMID: 19773531; PubMed Central PMCID: PMC2784722.
28. Lamon BD, Zhang FF, **Puri** N, Brodsky SV, Goligorsky MS, Nasjletti A. Dual pathways of carbon monoxide-mediated vasoregulation: modulation by redox mechanisms. *Circ Res*. 2009 Oct 9;105(8):775-83. doi:

10.1161/CIRCRESAHA.109.197434. PubMed PMID: 19745167; PubMed Central PMCID: PMC2771695.

29. Inoue K, Sodhi K, **Puri N**, Gotlinger KH, Cao J, Rezzani R, Falck JR, Abraham NG, Laniado-Schwartzman M. Endothelial-specific CYP4A2 overexpression leads to renal injury and hypertension via increased production of 20-HETE. *Am J Physiol Renal Physiol*. 2009 Oct;297(4):F875-84. doi: 10.1152/ajprenal.00364.2009. PubMed PMID: 19675180; PubMed Central PMCID: PMC2775578.
30. Peterson SJ, Kim DH, Li M, Positano V, Vanella L, Rodella LF, Piccolomini F, **Puri N**, Gastaldelli A, Kusmic C, L'Abbate A, Abraham NG. The L-4F mimetic peptide prevents insulin resistance through increased levels of HO-1, pAMPK, and pAKT in obese mice. *J Lipid Res*. 2009 Jul;50(7):1293-304. doi: 10.1194/jlr.M800610-JLR200. PubMed PMID: 19224872; PubMed Central PMCID: PMC2694329.
31. Kim DH, Burgess AP, Li M, Tsenovoy PL, Addabbo F, McClung JA, **Puri N**, Abraham NG. Heme oxygenase-mediated increases in adiponectin decrease fat content and inflammatory cytokines tumor necrosis factor-alpha and interleukin-6 in Zucker rats and reduce adipogenesis in human mesenchymal stem cells. *J Pharmacol Exp Ther*. 2008 Jun;325(3):833-40. doi: 10.1124/jpet.107.135285. PubMed PMID: 18334666.

Published Abstracts and Presentations at National Meetings:

1. K. Sodhi, K. Inoue, **Nitin Puri**, J. Husni, J. Cao, N. G. Abraham and M. L. Schwartzman. Lentiviral-mediated long term targeting of CYP4A2 into vascular endothelial cells leads to renal injury and hypertension via increased production of 20-HETE. Presented at the Jackson Cardiovascular-Renal Meeting, Jackson MS, 2008.
2. L. Bellner, L. Martinelli, **Nitin Puri**, K. A. Patil, M. W. Dunn, N. G. Abraham, and M. Laniado Schwartzman. HO-2 Deletion Causes Endothelial Activation via Alteration in the VEGF Pathway. Presented at ARVO meeting 2009, Fort Lauderdale, FL.
3. Frank F Zhang, **Nitin Puri**, Alberto Nasjletti. Heme Oxygenase-Dependent Action(s) of Hemin in Isolated Renal Arteries: Role of Redox Mechanisms. Presented at the 62nd High Blood Pressure Research Conference, Atlanta, GA, 2008.
4. **Nitin Puri**, Frank Fan Zhang, A Nasjletti. The arterial response to H₂O₂ is redox sensitive: Contributions of prostanoids and HO-derived products. Presented at the 62nd High Blood Pressure Research Conference, Atlanta, GA, 2008.
5. **Nitin Puri**, Frank Fan Zhang, A Nasjletti. NO and 20-Hete of Vascular Origin are Reciprocal Modulators of the Co-Mediated Dilator Action of Exogenous H₂O₂ in Renal Arteries Subjected to Antioxidant Protection. Selected for

- presentation at the 64th High Blood Pressure Research Conference, Washington, DC, 2010.
6. **Nitin Puri**, Frank Fan Zhang, A Nasjletti. NO and 20-HETE are Reciprocal Modulators of the CO-Mediated Vasodilation to Exogenous H₂O₂. Selected for presentation at the 13th International Winter Eicosanoid Conference, Baltimore MD, 2011.
 7. **Nitin Puri**, Luca Vanella, Komal Sodhi, Jian Cao, Dong Hyun Kim, Kazuyoshi Inoue, John Quilley and Nader G Abraham. Long Term Induction of Heme Oxygenase Ameliorates Angiotensin II Dependent Hypertension in Sprague Dawley Rats Transduced with HO1-Lentiviral Construct. Oral presentation at the experimental biology meeting, Washington DC, 2011.
 8. **Nitin Puri**, Tomoko Kawakami, Luca Vanella, Lars Bellner, Rita Rezzani, Toru Takahashi, Kiyoshi Morita, and Nader G Abraham. Heme Oxygenase Induction Prevents Endothelial Dysfunction and Renal Damage In EC-SOD KO Mice. American society of hypertension annual scientific meeting, New York NY 2011.
 9. **Puri Nitin**, Sodhi Komal, Inoue K, Falck JR, Schwartzman ML and Abraham NG. Department of Physiology and Pharmacology, College of Medicine, University of Toledo, Toledo, OH, 43614. EET agonist attenuates nuclear Bach1 via p-GSK- β /p-AKT-dependent pathways: Thus increasing HO1 levels and alleviating adiposity and vascular dysfunction in rats fed a high fat diet. Winter Eicosanoid Conference, 2012.
 10. Nader G. Abraham, Komal Sodhi, Luca Vanella, **Nitin Puri**, Attallah Kappas, Stephen J. Peterson and Matthew J. Kostura. Department of Physiology and Pharmacology, College of Medicine, University of Toledo, Toledo, OH, 43614. Protective effects of HPP593, a novel PPAR delta agonist, in the Goldblatt model of renal hypertension. Presented at the HBPR 2013 Scientific Sessions, NO, LA, 2013.
 11. Varunkumar Pandey, Meenakshi Kaw, Sudhir Jain, **Nitin Puri**, Anita Rana, Brahma Raju Mopidevi & Ashok Kumar. Department of Physiology and Pharmacology, College of Medicine, University of Toledo, Toledo, OH, 43614. Dexamethasone Promotes Hypertension In Transgenic Mice By Haplotype-Dependent Regulation Of The Human Angiotensinogen Gene. Presented at the HBPR 2014 Scientific Sessions, WA, DC, 2014.
 12. Mopidevi. B, Kaw. M, **Puri. N**, Ponnala. M, Jain. S, Rana. A, Keetha. NR, Firing. S[†], Kumar. A. Department of Physiology and Pharmacology, College of Medicine, University of Toledo, Toledo, OH, 43614. A Genetic Variant of Human Aldosterone Synthase Gene Causes Salt-Dependent High Blood Pressure in Transgenic Mice. Presented at the HBPR 2014 Scientific Sessions, WA, DC, 2014.
 13. Meenakshi Kaw, M.D., Ph.D., Brahma Raju Mopidevi Ph.D., **Nitin Puri** M.D., Ph.D., Ashok Kumar Ph.D. Department of Physiology and Pharmacology, College of Medicine, The University of Toledo, Toledo OH. Interplay of Intronic and Promoter Region Polymorphisms Up-regulate Human Angiotensinogen and Cause Hypertension in Transgenic Mice. Presented at the HBPR 2015 Scientific Sessions, SF, CA, 2015.