

## **Prabhakara (Prabha) Nagareddy, M. Pharm, M.Sc., PhD, FAHA**

Professor, Section of Cardiovascular Diseases, Dept. of Internal Medicine

The University of Oklahoma Health Sciences Center (OUHSC)

Oklahoma City

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### **EDUCATION:**

- B. Pharm. Pharmacy (*Distinction*), Bangalore University, Bangalore, India, **1993-1997**.
- M. Pharm. Pharmacology (*Distinction*), Rajiv Gandhi University of Health Sciences, Bangalore, India, **1999- 2001**.
- M.Sc. Pharmaceutical Sciences (Pharmacology), University of British Columbia (UBC), Vancouver, Canada, **2002- 2004**.
- Ph.D. Pharmaceutical Sciences (Pharmacology), University of British Columbia (UBC), Vancouver, Canada, **2005- 2009**.

### **TRAINING:**

- Post-Doctoral Preventive Medicine and Nutrition, Department of Internal Medicine, Columbia University, New York, **2009-2013** (Dr. Ira Goldberg, Mentor)
- Post-Doctoral Division of Cardiovascular Medicine, Department of Internal Medicine, University of Kentucky, Lexington, **2013- 2016** (Dr. Susan Smyth, Mentor)

### **ACADEMIC APPOINTMENTS:**

- 05/2016-06/2019 Assistant Professor  
Department of Pathology, School of Medicine  
University of Alabama at Birmingham (UAB)
- 07/2109- 07/2023 Associate Professor (Tenured)  
Division of Cardiac Surgery, Dept. of Surgery  
Ohio State University, Columbus
- 08/2023-Current Professor  
Section of Cardiovascular Diseases, Dept. of Internal Medicine  
The University of Oklahoma, Health Sciences Center, Oklahoma City
- 11/2023- Current Adjunct Professor  
Department of Pathology  
The University of Oklahoma, Health Sciences Center, Oklahoma City
- 01/2024- Current Adjunct Professor  
Department of Biochemistry and Physiology  
The University of Oklahoma, Health Sciences Center, Oklahoma City

- 05/2024- Current      Adjunct Professor  
 Department of Pharmaceutical Sciences  
 OU College of Pharmacy, Oklahoma City
- 08/2024- Current      Extraordinary Professor  
 Division of Medical Physiology, Department of Biomedical Sciences  
 Faculty of Medicine and Health Sciences,  
 Stellenbosch University, South Africa

### **MAJOR RESEARCH INTERESTS:**

The research in my lab is broadly focused on understanding the pathological basis for enhanced atherothrombotic risk in cardiometabolic disease. In this regard, we have been studying the role of NLRP3 inflammasome signaling in myeloid cells particularly, neutrophils and macrophages. We have identified certain neutrophil-derived alarmin molecules (i.e., S100A8/A9) that activate the NLRP3 inflammasome and, facilitate the release of pro-inflammatory cytokines. These cytokines travel to the bone marrow, interact with different hematopoietic stem and progenitor cells (HSPCs) in the bone marrow (BM) to stimulate aberrant myelopoiesis and thrombopoiesis, thus increasing the risk of atherothrombosis. Thus, our focus is mainly on identifying the inflammatory cues/signaling mediators that interact with HSPCs in the BM to promote systemic inflammation. Our short-term goal is to validate and repurpose certain FDA-approved agents to target acute and chronic inflammation to improve cardiometabolic outcomes. The long-term goal is to harness the wealth of knowledge from our studies and others to develop novel therapeutic strategies to reduce the overall burden of cardiovascular and cardiometabolic diseases.

### **AWARDS/ HONORS:**

- 2024            International Visiting Professorship Award, American Heart Association
- 2022            Chair, Recent Advances in Cardiovascular Disease Research and Therapeutics, 4<sup>th</sup> International Symposium, GTS-2022 (Virtual).
- 2022            Best Oral Communication Award, 15<sup>th</sup> World Congress on Inflammation, Rome, Italy
- 2022            Co-Chair, Lipids, Inflammation and Vasculature, 2<sup>nd</sup> Olympiad in Cardiovascular Medicine, Heraklion, Greece.
- 2021            Distinguished Reviewer for Diabetes Journal
- 2020            Elected, Fellow of the American Heart Association, BCVS (FAHA)
- 2018            Young Investigator Award (Finalist), International Society for Heart Research (ISHR), Halifax, Canada.
- 2017            Kenneth M. Brinkhous Young Investigator Prize in Thrombosis (Finalist), Arteriosclerosis Thrombosis and Vascular Biology (ATVB), American Heart Association (AHA), Minneapolis, MN
- 2015            Dean's Distinguished Lecture Award, College of Medicine, University of Kentucky
- 2015            Outstanding Post-Doctoral Presentation, Gill Heart Institute Cardiovascular Research Day, University of Kentucky, Lexington, KY
- 2015            Young Investigators Award, American College of Cardiology, Kentucky Chapter, Lexington, KY
- 2015            Outstanding Early Career Award (Finalist), AHA, Basic Cardiovascular Sciences Scientific Sessions, New Orleans, LA
- 2015            Irvine H. Page Young Investigator Research Award (Finalist), Arteriosclerosis Thrombosis and Vascular Biology (ATVB) Scientific Sessions, San Francisco, CA
- 2014            Stew Whitman Memorial Award, Cardiovascular Research Day, University of Kentucky, Lexington, KY
- 2014            Best Research Presentation, Barnstable Brown Obesity and Diabetes Research Day,

University of Kentucky, Lexington, KY  
 2014 The Canadian Institutes of Health Research (CIHR), Institute of Circulatory and Respiratory Health (ICRH) Travel Award, Canada  
 2014 Best Poster Presentation, College of Medicine, University of Kentucky, Lexington  
 2014 Stew Whitman Memorial Award, Cardiovascular Research Day, University of Kentucky, Lexington, KY  
 2013 Vasculata Scholarship, North American Vascular Biology Organization, San Diego  
 2013 Best Research Presentation, Barnstable Brown Obesity and Diabetes Research Day, University of Kentucky, Lexington, KY  
 2012 Have a Heart Award, Canadian Cardiovascular Society, Canada  
 2012 The Canadian Institutes of Health Research (CIHR), Institute of Circulatory and Respiratory Health (ICRH) Travel Award, Canada  
 2012 Future of Science Fund Scholarship, Keystone Symposia, Big Sky, MT  
 2011 Young Investigator Award, ATVB Council, Chicago, IL  
 2010 Post-Doctoral Research Fellowship from CIHR (3 years), Canada  
 2010 Early Career Investigator Award, The Kern Aspen Lipid Conference, Aspen, CO  
 2008 Peter Dresel Award, The IX<sup>th</sup> World Conference on Clinical Pharmacology & Therapeutics, Canada  
 2008 Graduate Student Travel Award, Canadian Society for Clinical Pharmacology, Canada  
 2008 Graduate Student Travel Award, The American Society for Pharmacology and Experimental Therapeutics, San Diego, CA  
 2007 Subhash C. Verma Prize in Pharmaceutical Sciences, University of British Columbia, Canada  
 2006 Heart and Stroke Foundation Travel Award, Canada  
 2006 Doctoral Research Award, Heart and Stroke Foundation of Canada, Canada  
 2006 Doctoral Research Award, Canadian Diabetes Association, Canada  
 2006 Doctoral Research Award, The Michael Smith Foundation for Health Research, Canada  
 2005 Graduate Student Travel Award, The American Society for Pharmacology and Experimental Therapeutics, San Diego, CA  
 2004 The John H McNeill Prize, University of British Columbia, Canada  
 2004 Graduate Research Scholarship in Pharmacy, Health Research Foundation of CIHR and Rx&D, Canada  
 2001 Sri Nagaraja Rao Memorial Prize, Rajiv Gandhi University of Health Sciences, Bangalore, India  
 2001 Silver Jubilee Fund Prize, Rajiv Gandhi University of Health Sciences, Bangalore, India  
 1999 Junior Research Fellowship, Government of India, India  
 1993 National Merit Scholarship (6 years), Government of India, India

## **FUNDING:**

### [Current Support](#)

**R01 HL137799-01A1**

(PI: Nagareddy, PR)

04/01/2018-03/31/2025

NIH/NHLBI

Title: Thrombopoiesis in Diabetes: Role of Damage Associated Molecular Patterns

Aim: The main objective of this study is to understand the mechanisms of thrombopoiesis in diabetes and examine its contribution to the inefficacy of the standard antiplatelet drugs such as aspirin and clopidogrel and, atherothrombotic complications in diabetes.

**R01 HL156856-01A1** (PI: Nagareddy, PR) 07/01/2022-06/30/2027  
NIH/NHLBI

Title: A dialogue between neutrophils and monocytes for effective resolution of inflammation following acute myocardial injury.

Aim: The main objective of this grant is to study the role of neutrophil-derived S100A8/A9 proteins in resolving inflammation following acute myocardial injury.

**AHA TPA (970002)** (PI: Nagareddy, PR) 07/01/2022-06/30/2025

Title: Harnessing the potential of an endogenous anti-inflammatory mechanism to mitigate cardiac inflammation and heart failure

Aim: The main goal of this project is to understand how inflammation is suppressed in the BM post-MI by reverse migrating neutrophils via the engagement of IL-10-1L-10 R signaling.

**24IVPHA1291489** (PI: Nagareddy, PR) 04/01/2024-03/31/2025  
AHA

Title: Exploring the role of mitochondrial function in atherosclerotic plaque macrophages

Aim: This is AHA International Visiting Professorship Award. To main objective of this award is to support the visit of Prof. Andrew Murphy and his team from The Baker Heart and Diabetes Institute, Australia to Nagareddy lab.

#### [Pending Support](#)

**R35 HL177235-01** (PI: Nagareddy, PR) 09/01/2024-08/31/2031  
NIH/NHLBI

Title: Mechanism of aberrant hematopoiesis in cardiometabolic disease.

Aim: The main objective of this grant is to study the signaling pathways involved in aberrant hematopoiesis including thrombopoiesis and clonal hematopoiesis in Obesity/ diabetes

Status: Pending

**R01 DK141795-01** (PI: Nagareddy, PR) 09/01/2024-08/31/2029  
NIDDK

Title: Targeting Adipose Tissue Inflammation to Mitigate the Development of Type 2 Diabetes in Obesity

Aim: *The main objective of this grant is to study the role of inflammasome and Gasdermin D signaling in aggravating obesity-induced adipose tissue inflammation, insulin resistance, hepatic steatosis, and onset of type 2 diabetes.*

Status: Pending

**R01 HL137799 (Renewal)** (PI: Nagareddy, PR) 09/01/2024-08/31/2029  
NIH/NHLBI

Title: Thrombopoietin Independent Mechanisms of Thrombopoiesis in Type II Diabetes

Aim: The main objective of this grant is to elucidate the molecular mechanisms that promote thrombopoiesis in type 2 diabetes and characterize the functional properties of reticulated platelets

Status: Pending

**R01 HL177465-01** (PI: Nagareddy, PR) 09/01/2024-08/31/2029  
NIH/NHLBI

Title: Clonal hematopoiesis (CHIP) in diabetes: implications for Cardiometabolic Diseases

Aim: The main objective of this grant is to examine the role of impaired AMPK signaling and its interaction with CHIP in aggravating cardiometabolic features in type 2 diabetes

**Status:** Pending

**R21 AG091000-01** (PI: Nagareddy, PR) 09/01/2024-08/31/2026

Title: Impact of age and sex on myocardial infarction induced inflammatory response.

Aim: The main objective of this grant is to examine the role of age and sex on neutrophil dominated acute inflammatory response during myocardial infarction.

**Status:** Pending

**SRA201311658** (PI: Nagareddy, PR) 09/01/2024-08/31/2027

Title: Targeting Neutrophil-Derived S100A8/A9 to Prevent/ Delay the Onset of T1D

Aim: The main objective of this grant is to examine the role of neutrophil derived S100A8/A9 in triggering islet cell pathology and development of type 1 diabetes.

**Status:** Pending

### Completed Support

**R21AG063197-01A1** (MPI grant, Contact PI: De Luca, M) 08/15/2020-05/31/2024.

NIH/ NIA

Title: Syndecan-4 as a molecular link between adipose tissue and aging

Aim: The main objective of this grant is to elucidate the role of syndecan4 in adipose tissue dysfunction and cellular senescence.

**R00 HL122505** (PI: Nagareddy, PR) 07/01/2016-07/31/2020

NIH/NHLBI

K99 R00 Pathway to Independence Award

Title: Mechanisms of Monocytosis in Obesity: Implications for Cardiovascular Disease

Aim: The goal of this study is to elucidate the molecular mechanisms of enhanced monocytosis in obesity and study its overall impact on atherosclerosis lesion regression

Role: PI

**1K99HL122505** (PI: Nagareddy, PR) 05/01/2014-04/31/2016

NIH/NHLBI

Title: Mechanisms of monocytosis in obesity: Implications for cardiovascular disease

Aim: The goal of this study was to elucidate the mechanisms of enhanced monocytosis in obesity.

Role: Postdoctoral Fellow

**1000402363** (PI: Nagareddy, PR). 07/01/2013-06/30/2014

Canadian Diabetes Association (CDA)

Title: Role of S100A8/A9 in hyperglycemia-associated monocytosis in type II diabetes.

Aim: To examine if plasma levels of S100A8/A9 correlates with monocytosis and Hb1Ac/blood glucose in type II diabetic subjects and to study the mechanisms the regulate S100A8/A9 production/secretion in neutrophils

Role: Postdoctoral Fellow

**BMS01012011** (PI: Goldberg, IJ) 01/01/2011-12/31/2012

Bristol-Myers Squibb Company

Title: Effects of glucose reduction on white blood cells, lipoproteins, and atherosclerosis

Aim: The main objective of this study was to study the effect of Dapagliflozin, an SGLT2 inhibitor on hyperglycemia-induced monocytosis and atherosclerosis lesion regression in mouse models of type I diabetes.

Role: Co-Investigator

**200910MFE-213293-142925** (PI: Nagareddy, PR). 04/01/2010-03/31/2013  
Canadian Institutes of Health Research (CIHR), Canada

Title: Role of Aldose Reductase (AR) and Matrix Metalloproteinases (MMP) in the Development of Diabetic Atherosclerosis"

Aim: The main objective of this study was to investigate the role of aldose reductase and matrix metalloproteinases in promoting atherosclerosis in mouse models of type I diabetes.

Role: Postdoctoral Fellow

**HSFC DRA** (PI: Nagareddy, PR) 07/01/2006-06/30/2009  
Heart and Stroke Foundation of Canada, Canada

Title: Mechanisms of vascular dysfunction in diabetes, role of nitrosative stress.

Aim: The main objective of this study was to examine the role of nitrosative stress in diabetes-induced vascular dysfunction with a particular emphasis on inducible nitric oxide synthase

Role: Predoctoral Fellow

**MSFHR-SGS-BR** (PI: Nagareddy, PR) 07/01/2006-06/30/2009  
The Michael Smith Foundation for Health Research, Canada

Title: Mechanisms of vascular dysfunction in diabetes, role of iNos and PKC beta.

Aim: The main goal of this study was to investigate the molecular mechanisms of vascular dysfunction in diabetes and specifically study the role of PKC beta isoform and iNOS enzyme systems in promoting endothelial dysfunction, attenuated pressor responses to vasoactive agents and other hemodynamic abnormalities.

Role: Predoctoral Fellow

**CAAA-142925** (PI: Nagareddy, PR) 07/01/2004-06/30/2006  
The Health Research Foundation of CIHR and Rx&D, Canada

Title: Hemodynamic effects of inducible nitric oxide synthase in STZ diabetic rats

Aim: main objective of this study was to characterize the hemodynamic abnormalities in STZ diabetic rats and investigate the abnormal signaling pathways that led to these abnormalities with a specific focus on iNOS-derived nitric oxide.

Role: Predoctoral Fellow

## **PUBLICATIONS:**

Number of peer-reviewed publications: 70

Number of Book Chapters: 3

Total Citations: > 4480

h-index: 37

## **Published**

1. Kanuri B, Sreejit G, Biswas P, Murphy AJ and Nagareddy PR. Macrophage heterogeneity in myocardial infarction: Evolution and implications for diverse therapeutic approaches. **iScience**, 2024. 27, 110274, July 19.

2. Shantaram D, Hoyd R, Blaszczyk AM, Antwi L, Jalilvand A, Wright VP, Liu J, Smith AJ, Bradley D, Lafuse W, Liu Y, Williams NF, Snyder O, Wheeler C, Needleman B, Brethauer S, Noria S, Renton D, Perry KA, Nagareddy PR, Wozniak D, Mahajan S, Rana PSJB, Pietrzak M, Schlesinger LS, Spakowicz DJ, Hsueh WA. Obesity-associated microbiomes instigate visceral adipose tissue inflammation by recruitment of distinct neutrophils. **Nature Communications**. 2024. 27;15(1):5434. PMID: 38937454
3. Traugher C, Timinski K, Prince A, Neupane K, Khan M, Opoku E, Opoku E, Brubaker G, Shin J, Hong J, Kanuri B, Ertugral E, Nagareddy PR, Kothapalli C, Cherepanova O, Smith J and Gulshan K. Disulfiram reduces atherosclerosis and enhances efferocytosis, autophagy, and atheroprotective gut microbiota in hyperlipidemic mice. **Journal of American Heart Association**. 2024, Apr 2:e033881. doi: 10.1161/JAHA.123.033881.
4. Kanuri B, Biswas P, Dahdah A, Murphy AJ and Nagareddy PR. Impact of age and sex on myelopoiesis and inflammation during myocardial infarction. **Journal of Molecular and Cellular Cardiology**. 2023, Dec 8:S0022-2828(23)00193-1.
5. Kumar N, MJ, Wu Q, Ahumada OS, Dellos-Nolan S, Saljoughian N, Shukla RK, Mitchem CF, Nagareddy PR, Ganesan LP, William LP, Wozniak DJ, Rajaram MVS. Pseudomonas aeruginosa pulmonary infection results in S100A8/A9-dependent cardiac dysfunction. **PLoS Pathogens**. 2023 Aug 25;19(8): e1011573. doi: 10.1371/journal.ppat.1011573.
6. Crocco P, Vecchie D, Sreejit G, Dato S, Passarino G, Young ME, Nagareddy PR, Rose G and De Luca M. Syndecan-4 as a genetic determinant of the metabolic syndrome. **Diabetology & Metabolic Syndrome**. 2023 Jul 17;15(1):156. doi: 10.1186/s13098-023-01132-8.
7. Moellering DR, SmithJohnston K, Kelley C, Sammy MJ, Benedict J, Brock G, Johnson J, Baskin KK, Jarjour WN, Belury MA, Reiser PJ, Nagareddy PR and Hanaoka BY. Association between skeletal muscle mitochondrial dysfunction and insulin resistance in patients with rheumatoid arthritis: a case-control study. **Arthritis Research and Therapy**. 2023 May 20;25(1):85. doi: 10.1186/s13075-023-03065-z.
8. Kawaguchi N, Bruno A, Nagareddy PR, Nakanishi T, Rajaram MVS and Spinetti G. Editorial: The role of inflammation, stem cells and progenitor cells in cardiovascular repair. **Frontiers in Cardiovascular Medicine**. 2023 Apr 18; 10:1195863. doi: 10.3389/fcvm.2023.1195863. eCollection 2023.
9. Dragoljevic D, Lee MSK, Pernes G, Morgan PK, Louis C, Shihata W, Huynh K, Kochetkova AA, Bell PW, Mellett N A, Meikle PJ, Lancaster GI, Kraakman MJ, Nagareddy PR, Hanaoka BY, Wicks IP and Murphy AJ. Administration of an LXR agonist promotes atherosclerotic lesion remodeling in murine inflammatory arthritis. **Clinical and Translational Immunology**. 2023 Apr 18;12(4): e1446. doi: 10.1002/cti2.1446. eCollection 2023.
10. Murphy AJ and Nagareddy PR. TP53 clonal hematopoiesis promotes atherosclerosis. **Nature Cardiovascular Research**, News and Views, 2023.
11. Dahdah A, Jagers RM, Sreejit G, Johnson J, Kanuri B, Murphy AJ and Nagareddy PR. Immunological Insights into Cigarette Smoking-Induced Cardiovascular Disease Risk. **Cells**. 2022, 11 (20), 3190.

12. Nagareddy PR and Sreejit G. Response to Letter Regarding Article “Retention of the NLRP3 Inflammasome-Primed Neutrophils in the Bone marrow is Essential for Myocardial Infarction-Induced Granulopoiesis”. **Circulation**. 2022. May 10;145(19):e1035-e1036
13. Araujo N, Sledziona J, Nooti SK, Burikhanov R, Hebbar N, Ganguly G, Shrestha-Bhattarai T, Zhu B, Katz WS, Zhang Y, Taylor BS, Liu J, Chen L, Weiss HL, He D, Wang C, Morris AJ, Cassis LA, Nikolova-Karakashian M, Nagareddy PR, Melander O, Evers BM, Kern PA and Rangnekar VM. Tumor Suppressor Par-4 Regulates Complement Factor C3 and Obesity. **Frontiers In Oncology**. 2022. March 29;12:880446. doi: 10.3389/fonc.2022.860446
14. Nagareddy PR and Sreejit G. Letter by Nagareddy et al Regarding Article “Interleukin-1 $\alpha$  (IL-1 $\alpha$ ) is a Central Regulator of Leukocyte-Endothelial Adhesion in Myocardial Infarction and in Chronic Kidney Disease”. **Circulation**. 2022, Mar 8;145(10): e762-e763
15. Dahdah A, Johnson J, Sreejit G, Jagers JM, Webb D, Murphy AJ, Hanssen NMJ, Hanaoka BY and Nagareddy PR. Neutrophil Migratory Patterns: Implications for Cardiovascular Disease. **Frontiers in Cell and Development Biology**. Mar 2; 10:795784. doi: 10.3389/fcell.2022.795784. eCollection 2022.
16. Sreejit G, Noothi SK, Jagers RM, Athmanathan A, Park KH, Al-Sharea A, Johnson J, Dahdah A, Lee MKS, Ma J, Murphy AJ, Nagareddy PR. Retention of the NLRP3 inflammasome-primed neutrophils in the bone marrow is essential from myocardial-infarction induced granulopoiesis. **Circulation**. 2022, 145(1): 31- 44. PMID: 34788059.
17. Sreejit G, Johnson J, Jagers JM, Dahdah A, Murphy AJ, Hanssen NMJ, Nagareddy PR. Neutrophils in cardiovascular disease: Warmongers or peacemakers or both? **Cardiovascular Research**. 2021. doi: 10.1093/cvr/cvab302. PMID: 34534269.
18. Johnson J, Jagers RM, Sreejit G, Dahdah A, Murphy Aj, Hanssen NMJ, Nagareddy PR. Oxidative stress in neutrophils: Implications for diabetic cardiovascular complications. **Antioxidants and Redox Signaling**. June 2021. doi: 10.1089/ars.2021.0116. PMID: 34148367.
19. Cooney OD, Nagareddy PR, Murphy AJ, Lee MKS. Healthy gut, healthy bones: Targeting the gut microbiome to promote bone health. **Frontiers in Endocrinology**. 2021. PMID: 33679604.
20. Hanssen NMJ, Spaetgens B, Nagareddy PR, Murphy AJ. DAMPening mortality in COVID19- Therapeutic insights from basic cardiometabolic studies on S100A8/A9. **Circulation**. 2021 Jan 12. doi: 10.1161/CIRCULATIONAHA.120.053025. PMID: 33434052.
21. Lee MSK, Kraakman MJ, Dragoljevic D, Hanssen NMJ, Flynn MC, Al-Sharea A, Sreejit G, Bettuzo-Veiga C, Cooney OD, Baig F, Morriss E, Copper ME, Josefsson EC, Kile BT, Nagareddy PR\*, Murphy AJ\*. Apoptotic ablation of platelets reduces atherosclerosis in mice with diabetes. **Arteriosclerosis Thrombosis, and Vascular Biology**. 2021 Jan 14doi: 10.1161/ATVBAHA.120.315369. PMID: 33441028. \* co-senior authors.
22. Sreejit G, Fleetwood AJ, Murphy AJ, Nagareddy PR. Origins and diversity of macrophages in health and disease. **Clinical and Translational Immunology**. 2020 2020 Dec 20;9(12): e1222. doi: 10.1002/cti2.1222. eCollection 2020. PMID: 33363732.



23. Dragoljevic D, Lee MKS, Louis C, Shihata W, Kraakman MJ, Hansen J, Master SL, Hanaoka BY, Nagareddy PR, Lancaster GI, Wicks IP, Murphy AJ. Inhibition of interleukin1 beta signaling promotes atherosclerotic lesion remodeling in mice with inflammatory arthritis. **Clinical and Translational Immunology**. 2020, doi: 10.1002/cti2.1206. PMID: 33204425.
24. Hanssen NMJ, Kraakman MJ, Flynn MC, Nagareddy PR, Schalkwijk CG, Murphy AJ. Postprandial glucose spikes, an important contributor to cardiovascular disease in diabetes? **Frontiers in Cardiovascular Medicine**. 2020, Sep 18; 7:570553. doi: 10.3389/fcvm.2020.570553. PMID: 3319545.
25. Sreejit G, Abdel Latif A, Murphy AJ, Nagareddy PR. Emerging roles of neutrophil borne S100A8/A9 in cardiovascular inflammation. **Pharmacological Research**. 2020, Sep 28;161:105212. doi: 10.1016/j.phrs.2020.105212. PMID: 32991974.
26. Nagareddy PR\*, Sreejit G, Abo-Aly M, Jaggars R, Chelvarajan L, Johnson J, Pernes G, Athmanathan A, Abdel-Latif A and Murphy AJ. NETosis is essential for S100A8/A9-induced granulopoiesis after myocardial infarction. **Arteriosclerosis Thrombosis, and Vascular Biology**. 2020, 40(11): 2805-2807 PMID: 32878477. \* **Corresponding author**.
27. Lee MKS, Sreejit G, Nagareddy PR, Murphy AJ. Attack of the NETs! NETosis primes IL1b-mediated inflammation in diabetic foot ulcers. **Clinical Science (London)**, 2020, 134 (12): 1399-1401. PMID: 32556177.
28. Flynn MC, Kraakman MJ, Tikellis C, Lee MKS, Hanssen NM, Kammoun HL, Pickering R, Dragoljevic D, Al-Sharea A, Barrett TJ, Hortle F, Olzomer E, McCarthy DA, Schalkwijk CG, Forbes JM, Hoehn K, Makowski L, Lancaster GI, El-Osta A, Fisher EA, Goldberg IJ, Nagareddy PR\*, Thomas MC\*, Murphy AJ\*. Transient intermittent hyperglycemia accelerates atherosclerosis by promoting myelopoiesis. **Circulation Research**. 2020 Jun 22. doi: 10.1161/CIRCRESAHA.120.316653. PMID: 32564710. \* **co-senior authors**.  
*\*Editorial: Transient Intermittent Hyperglycemia-Enhanced Myelopoiesis and Atherosclerosis; Short and Sweet, Choudhary RP, **Circulation Research**. 2020, 127:893-895. PMID: 32910740.*
29. 16. Asare-Bediako B, Noothi SK, Li Calzi S, Athmanathan B, Vieira CP, Adu-Agyeiwaah Y, Dupont M, Jones BA, Wang XX, Chakraborty D, Levi M, Nagareddy PR, Grant MB. Characterizing the Retinal Phenotype in the High-Fat Diet and Western Diet Mouse Models of Prediabetes. **Cells**. 2020 Feb 18;9(2). pii: E464. doi: 10.3390/cells9020464. PMID: 32085589.
30. Nagareddy PR and Sreejit G. Response by Sreejit and Nagareddy to Letter Regarding Article, "Neutrophil-Derived S100A8/A9 Amplify Granulopoiesis After Myocardial Infarction" doi: 10.1161/CIRCULATIONAHA.120.049408. **Circulation**. PMID: 32866066.
31. Sreejit G, Abdel-Latif A, Athmanathan A, Annabathula A, Dhyani A, Noothi SK, Quaife- Ryan GA, Al-Sharea A, Pernes G, Dragoljevic D, Lal H, Coll R, Hanaoka BY, Raman C, Grant MB, Schroder K, Hudson JE, Smyth SS, Porrello ER, Murphy AJ and Nagareddy PR. Neutrophil-derived S100A8/A9 amplify granulopoiesis following myocardial infarction. **Circulation**. 2020. PMID: 31941367.
32. Fadini GP, Mehta A, Dhindsa DS, Bonora BM, Sreejit G, Nagareddy PR and QuyyumAA. Circulating stem cells and cardiovascular outcomes: From basic science to the clinic.

- European Heart Journal**. 2019, Dec 31. pii: ehz923. doi: 10.1093/eurheartj/ehz923. PMID: 31891403.
33. De Luca M, Vecchie' D, Athmanathan B, Gopalkrishna S, Valcin JA, Swain TM, Sertie R, Wekesa K, Rowe GC, Bailey SM, Nagareddy PR. Genetic deletion of syndecan-4 alters body composition, metabolic phenotypes, and the function of metabolic tissues in female mice fed a high fat diet. **Nutrients**. 2019, 18; 11 (11). PMID: 31752080.
  34. Duan Y, Prasad R, Feng D, Beli E, Li Calzi S, Longhini ALF, Lamendella R, Floyd JL, Dupont M, Noothi S, Sreejit G, Athmanathan B, Wright J, Jensen AR, Oudit GY, Markel TA, Nagareddy PR, Obukhov AG, Grant MB. Bone Marrow-Derived Cells Restore Functional Integrity of the Gut Epithelial and Vascular Barriers in a Model of Diabetes and ACE2 Deficiency. **Circulation Research**. 2019, 125; 969-988. PMID: 31610731.
  35. Flynn MC, Pernes G, Lee MKS, Nagareddy PR, Murphy AJ. Monocytes, Macrophages, and metabolic Disease in Atherosclerosis. **Frontiers in Pharmacology**. 2019, 13:10:666. PMID: 31249530.
  36. Al-Sharea A, Lee MKS, Whillas A, Michell D, Shihata W, Nicholls AJ, Cooney OD, Kraakman MJ, Bertuzzo Veiga C, Jefferis AM, Jackson K, Nagareddy PR, Lambert G, Wong CHY, Andrews KL, Head GA, Chin-Dusting J, Murphy AJ. Chronic sympathetic driven hypertension promotes atherosclerosis by enhancing hematopoiesis. **Haematologica**. 2019, 104 (3): 456-467. PMID: 30361420.
  37. Dragoljevic D, Westerterp M, Veiga CB, Nagareddy PR, Murphy AJ. Disordered haematopoiesis and cardiovascular disease: a focus on myelopoiesis. **Clinical Science (London)**. 2018, 5; 132(17):1889-1899. PMID: 30185612.
  38. Nagareddy PR, Noothi SK, Flynn MC and Murphy AM. Its reticulated: The liver at the heart of atherosclerosis. **Journal of Endocrinology**. 2018, 238(1): R1-R11. PMID: 29720539.
  39. Klyachkin YM, Idris A, Rodell CB, Tripathi H, Ye S, Nagareddy PR, Asfour A, Gao E, Annabathula R, Ratajczak M, Burdick JA, Abdel-Latif A. Cathelicidin Related Antimicrobial Peptide (CRAMP) Enhances Bone Marrow Cell Retention and Attenuates Cardiac Dysfunction in a Mouse Model of Myocardial Infarction. **Stem Cell Reviews and Reports**. 2018 14(5): 702-714. PMID: 29948752.
  40. Dragoljevic D, Kraakman MJ, Nagareddy PR, Ngo D, Shihata W, Kammoun H, Whillas A, Lee MKS, Al-Sharea A, Lancaster GI, Febbraio MA, Chin-Dusting J, Hanaoka BY, Wicks and Murphy AJ. Impaired atherosclerotic regression in rheumatoid arthritis is associated with monocytosis and thrombocytosis. **European Heart Journal**. 2018, 39(23): 2158- 2167. PMID: 29905812.
- \*Editorial: Is defective cholesterol efflux an integral inflammatory component in myelopoiesis driven cardiovascular diseases? Yvan-Charvet and Swirski F. **European Heart Journal**. 2018, 39: 2168-2171. PMID: 29771312.*
41. Al-Sharea A, Murphy AJ, Huggins LA, Hu Y, Goldberg IJ and Nagareddy PR. SGLT2 inhibition reduces atherosclerosis in diabetic LDL receptor knockout mice. **Atherosclerosis**. 2018, 271: 166-176. PMID: 29518749.

42. Manning JR, Levitan BM, Chelvarajan L, Withers CN, Nagareddy PR, Haggerty CM, Fornwalt BK, Gao E, Abdel-Latif A, Andres DA and Satin J. Rad GTPase deletion attenuates post-ischemic cardiac dysfunction and remodeling. **JACC: Basic to Translational Science**. 2018, 3(1):83-96. PMID: 29732439.
43. Kraakman M, Lee M, Al-Sharea A, Dragoljevic D, Barrett TJ, Montenont E, Basu D, Heywood S, Kammoun HL, Flynn M, Whillas A, Hanssen N, Febbraio MS, Westein E, Fisher EA, Chin-Dusting J, Cooper ME, Berger JS, Goldberg IJ, Nagareddy PR\* and Murphy AJ\*. Neutrophil-derived S100A8 and S100A9 promotes reticulated thrombocytosis and atherogenesis in diabetes. **Journal of Clinical Investigation**. 2017, 127 (6):2133-2147. PMID:2850465. \* **co-senior authors**.  
*\*Editorial: Sugar makes neutrophils RAGE: linking diabetes-associated hyperglycemia to thrombocytosis and platelet reactivity; Lee RH, Bergmeier W, Journal of Clinical Investigation*. 2017, 127(6): 2040-2043. PMID: 28504654.
44. Klyachkin YM, Nagareddy PR, Ye S, Wysoczynski M, Asfour A, Gao E, Sunkara M, Brandon JA, Annabathula R, Ponnareddy R, Solanki M, Smyth SS, Ratajczak MZ, Morris AJ and Abdel-Latif A. Pharmacological elevation of circulating bioactive phospho-sphingolipids enhances myocardial recovery after acute infarction. **Stem Cells Translational Medicine**. 2015, 4(11):1333-43.
45. Willecke F, Scerbo D, Nagareddy PR, Obunike JC, Barrett TJ, Abdillahi ML, Trent CM, Huggins LA, Fisher EA, Drosatos K, Goldberg IJ. Lipolysis, and not hepatic lipogenesis, is the primary modulator of triglyceride levels in streptozotocin-induced diabetic mice. **Arteriosclerosis, Thrombosis and Vascular Biology**. 2015, 35(1): 102-110. PMID: 25395613.
46. Nagareddy PR, Kraakman M, Masters SL, Stirzaker RA, Gorman DJ, Grant RW, Dragoljevic D, Hong ES, Abdel-Latif A, Smyth SS, Choi SH, Korner J, Bornfeldt KE, Fisher EA, Dixit VD, Tall AR, Goldberg IJ and Murphy AJ. Adipose tissue macrophages promote myelopoiesis and monocytosis in obesity. **Cell Metabolism**. 2014, 19(5): 821-835. PMID: 24807222.  
*\*Editorial: Obesity Corrupts Myelopoiesis: P.J. Murray. Cell Metabolism*. 2014: 19:735-736.  
*\*Highlight: R Levinson. Recruiting inflammatory cell to fat. Nature Medicine*. 2014: 20:594.  
*\*Highlight: Listed as "Top 10 Breakthroughs of the Decade" by Cell Metabolism*. 2015.
47. Nagareddy PR, Asfour A, Klyachkin YM, Abdel-Latif A. A novel role for bioactive lipids in stem cell mobilization during cardiac ischemia: New paradigms in thrombosis: novel mediators and biomarkers. **Journal of Thrombosis and Thrombolysis**. 2014, 37(1): 24-31. PMID: 24318213.
48. Nagareddy PR, Murphy AJ, Stirzaker RA, Hu Y, Yu S, Miller RG, Ramkhalawon B, Distel E, Westerterp M, Huang LS, Schmidt AM, Orchard TJ, Fisher EA, Tall AR and Goldberg IJ. Hyperglycemia promotes myelopoiesis and impairs the resolution of atherosclerosis. **Cell Metabolism**. 2013, 17(5): 695-708. PMID: 23663738.  
*\*Editorial: Hyperglycemia-Stimulated Myelopoiesis Causes Impaired Regression of Atherosclerosis in Type 1 Diabetes: M Brownlee. Cell Metabolism*. 2013, 17(5): 631-633.  
*\*Highlight: This paper was highlighted on cover page of May 2013 issue*
49. Westerterp M, Murphy AJ, Wang M, Pagler TA, Vengrenyuk Y, Kappus MS, Gorman DJ, Nagareddy PR, Zhu X, Abramowicz S, Parks JS, Welch CL, Fisher EA, Wang N, Yvan-Charvet L, Tall AR. Deficiency of ABCA1 and ABCG1 in Macrophages Increases

- Inflammation and Accelerates Atherosclerosis in Mice. **Circulation Research**. 2013, 112(11): 1456-65. PMID: 23572498.
50. Tolani S, Pagler TA, Murphy AJ, Bochem AE, Abramowicz S, Welch C, Nagareddy PR, Holleran S, Hovingh GK, Kuivenhoven JA, Tall AR. Hypercholesterolemia and reduced HDL-C promote hematopoietic stem cell proliferation and monocytosis: Studies in mice and FH children. **Atherosclerosis**. 2013, 229(1): 79-85. PMID: 23684512.
51. Nagareddy PR and Smyth SS. Inflammation and thrombosis in cardiovascular disease. **Current Opinion in Hematology**. 2013, 20(5): 457-63. PMID: 23892572.
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55. Nagareddy PR, Chow FL, Li H, Wang X, Nishimura T, MacLeod KM, McNeill JH and Fernandez-Patron C. Maintenance of adrenergic vascular tone by MMP-transactivation of the EGFR requires PI3K and mitochondrial ATP synthesis. **Cardiovascular Research**. 2009, 84(3): 368-77. PMID: 19578070.  
*\*Editorial: Vasoconstriction: tightening the noose through MMPs: Isenberg JS & Shiva S. Cardiovascular Research*. 2009; 84(3): 339-4.
56. Nagareddy PR, Soliman H, Lin G, McNeill JH and MacLeod KM. Selective inhibition of protein kinase C  $\beta$ 2 attenuates inducible nitric oxide synthase mediated cardiovascular abnormalities in streptozotocin-diabetic rats. **Diabetes**. 2009, 58(10): 2355-64. PMID: 19587355.
57. Nagareddy PR, McNeill JH, Macleod KM. Chronic inhibition of inducible nitric oxide synthase ameliorates cardiovascular abnormalities in streptozotocin diabetic rats. **European Journal of Pharmacology**. 2009, 611:53–59. PMID: 19344709.
58. Soliman H, Craig GP, Nagareddy PR, Yuen V, Lin G, McNeill JH, Kumar U and MacLeod KM. Role of iNOS in induction of Rho A expression in hearts from diabetic rats. **Cardiovascular Research**. 2008, 9(2): 322-30. PMID: 18411229.
59. Xia Z, Kuo KH, Nagareddy PR, Wang F, Guo Z, Guo T, Jiang J, McNeill JH. N-acetylcysteine attenuates PKC $\beta$ 2 overexpression and myocardial hypertrophy in streptozotocin-induced diabetic rats. **Cardiovascular Research**. 2007, 73(4): 770-82. PMID: 17250813.
60. Nagareddy PR, Xia Z, MacLeod KM, McNeill JH. N-acetylcysteine prevents nitrosative stress-associated depression of blood pressure and heart rate in streptozotocin diabetic rats. **Journal of Cardiovascular Pharmacology**. 2006, 47(4): 513-20. PMID: 16680064.

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62. Xia Z, Guo Z, Nagareddy PR, Yuen V, Yeung E, McNeill JH. Antioxidant N-acetylcysteine restores myocardial Mn-SOD activity and attenuates myocardial dysfunction in diabetic rats. **European Journal of Pharmacology**. 2006 Aug 21;544(1-3):118-25. doi: 10.1016/j.ejphar.2006.06.033.
63. Xia Z, Nagareddy PR, Guo Z, Zhang W, McNeill JH. Antioxidant N-acetylcysteine restores systemic nitric oxide availability and corrects depressions in arterial blood pressure and heart rate in diabetic rats. **Free Radical Research**. 2006 Feb;40(2):175-84. doi: 10.1080/10715760500484336.
64. Nagareddy PR, Xia Z, McNeill JH, MacLeod KM. Increased expression of iNOS is associated with endothelial dysfunction and impaired pressor responsiveness in streptozotocin-induced diabetes. **American Journal of Physiology: Heart and Circulatory Physiology**. 2005, 289(5): H2144-52. PMID: 16006542.  
*\*Highlight: Selected as "Top 10 Hidden Jewels in Cardiovascular Biology" by F1000 Biology.*
65. Nagareddy PR, Vasudevan H, McNeill JH. Oral administration of sodium tungstate improves cardiac performance in streptozotocin-induced diabetic rats. **Canadian Journal of Physiology and Pharmacology**. 2005, 83(5): 405-11. PMID: 15897922.
66. Nagareddy PR, Lakshmana M. Withania somnifera improves bone calcification in calcium-deficient ovariectomized rats. **Journal of Pharmacy and Pharmacology**. 2006 Apr; 58(4): 513-9. PMID: 16597369.
67. Nagareddy PR, Lakshmana M. Assessment of experimental osteoporosis using CT-scanning, quantitative X-ray analysis and impact test in calcium deficient ovariectomized rats. **Journal of Pharmacological and Toxicological Methods**. 2005, 52(3): 350-5. PMID: 15996488.
68. Nagareddy PR, Lakshmana M, Udupa UV. Antiosteoporotic activity of OST-6 (Osteocare), a herbomineral preparation in calcium deficient ovariectomized rats. **Phytotherapy Research**. 2004, 18(1): 25-9. PMID: 14750196.
69. Nagareddy PR, Lakshmana M, Udupa UV. Effect of Praval bhasma (Coral calx), a natural source of rich calcium on bone mineralization in rats. **Pharmacological Research**. 2003, 48(6): 593-9. PMID: 14527824.
70. Nagareddy PR, Lakshmana M. Prevention of bone loss in calcium deficient ovariectomized rats by OST-6, a herbal preparation. **Journal of Ethnopharmacology**. 2003, 84(2-3): 259-64. PMID: 12648824.

#### Under Review and In Preparation

1. Dahdah A, Park KH, Jaggars RM, Sreejit G, Johnson J, Biswas P, Xu X, Tilley DG, Murphy AJ, and Nagareddy PR. Blockade of  $\beta_2$  adrenergic receptors suppress neutrophil demargination and recruitment to ischemic heart post- myocardial infarction. 2024 (*In Review*).

2. Al-sharea A, Lee MKS, Xu Y, Morgan PK, Hickey P, Zalcenstein D, Bertuzzo-Veiga C, Stolz CJ, Chan J, Rime J, Purton JE, Coultas L, El-Osta A, Naik S, Hawkins E, Nagareddy PR\* and Murphy AJ\*. The Chrna7 regulates the hematopoietic bone marrow microenvironment to retain haematopoietic stem and progenitor cells. 2024 (*In Review*). \* Joint senior authors.
3. Jagers RM, Athmanathan B, Shukla R, Nitin N, Dahdah A, Sreejit G, Johnson J, Murphy AJ, and Nagareddy PR. Cigarette smoking aggravates atherosclerosis by deploying neutrophil derived alarmins. 2024 (*In Preparation*).
4. Jagers RM, Noothi SK, Sreejit G, Johnson J, Dahdah A, Biswas P, Jobe J, Park KH, Murphy AJ, Willa AH, Hanaoka BY and Nagareddy, PR. Infiltration of injury-exposed neutrophils to white adipose tissue after myocardial infarction aggravate insulin resistance in obese but not lean mice. 2024 (*In Preparation*).

### Book Chapters (Invited)

1. Willecke F, Nagareddy PR, Murphy AJ. (2017). Mechanisms of Platelet Activation in Diabetes Mellitus. In: Zirlik A., Bode C., Gawaz M. (eds) Platelets, Haemostasis and Inflammation. **Cardiac and Vascular Biology**. Springer, Cham, pp 137-152.
2. Sreejit G, Nooti SK, Athmanathan B and Nagareddy PR (2019). S100A8/A9 in Myocardial Infarction, In: Heizmann CW. (eds) Calcium Binding Proteins: Methods and Protocols. Methods in Molecular Biology, Springer, 1929: 739-754.
3. Sreejit G, Flynn M, Patil M, Krishnamurthy P, Murphy AJ and Nagareddy PR (2020). S100 family proteins in inflammation and beyond. In: Makowski G. (eds). Advances in Clinical Chemistry. Elsevier, 98:173-231.

### MEMBERSHIPS:

2004- Pres.	American Heart Association
2010- Pres.	European Atherosclerosis Society
2018- Pres.	Society for Leukocyte Biology
2017-Pres.	International Society for Heart Research
2022- Pres.	American Physiological Society

### GRANT REVIEW COMMITTEE/ STUDY SECTION:

2024	VICI-Programme, The Netherlands Organization for Scientific Research
2024	Special Emphasis Panel, K08 Training Grants, NIH
2023	Austrian Science Fund (FWF), Special Research Programme Review Committee (CDA, TPA), AHA
2022	Review Committee (CDA, TPA), AHA Israel National Foundation

2021	Review Committee (PPG), Special Emphasis Panel, NIH Review Committee (HTBT Study Section), NIH
2020	Review Committee (CDA, TPA Awards), AHA
2019	Review Committee (TPA Awards), AHA
2018	Review Committee (R15), Vascular and Hematology SEP, NIH
2018	Review Committee Member, US-Israel Binational Science Foundation
2017	Review Committee Member, Diabetes UK (United Kingdom)
2013-2015	CCTS TL1: Review Committee Member, Predoctoral Training Program, University of Kentucky
2013-2015	CCTS KL2: Review Committee Member, Junior Faculty Training Program, University of Kentucky.

### **JOURNAL REVIEW (Ad hoc):**

JAMA, JACC, Circulation, Circulation Research, Journal of Clinical Investigation (JCI), Sciences Advances Ageing Cell, Journal of Biological Chemistry (JBC), Diabetes, Diabetologia, ATVB, Endocrinology, Cardiovascular Research, Atherosclerosis, Scientific Reports, Journal of Molecular and Cellular Cardiology (JMCC), Biochemical Pharmacology, Obesity, British Journal of Pharmacology, European Journal of Pharmacology, Journal of Ethnopharmacology, Molecular and Cellular Biochemistry, PLOS One, eBioMedicine, AJP Endocrinology and Metabolism, AJP Regulatory, Integrative and Comparative Physiology, Cellular and Molecular Life Sciences, Journal of Thrombosis and Hemostasis. AJP: Heart and Circulatory Physiology, Frontiers Journals, MDPI Journals etc.

### **EDITORIAL ACTIVITIES:**

#### Board Member:

Diabetes (Official Journal of the American Diabetes Association)  
Atherosclerosis (Official Journal of the European Atherosclerosis Society)  
Scientific Reports (Nature Publications)  
American Journal of Physiology: Heart and Circulatory Physiology (AJP)  
Journal of Endocrinological Research (Official Journal of the Italian Society of Endocrinology)  
Frontiers in Cardiovascular Medicine

#### Managing/ Associate Editor:

Pharmacological Research (An International Union of Basic and Clinical Pharmacology, IUPHAR affiliated journal)  
Frontiers in Cardiovascular Medicine: Section on Cardiovascular Therapeutics

Frontiers in Cardiovascular Medicine: Clinical and Translational Cardiovascular Medicine  
Nutrients, Topical Advisory Panel Member  
Cells, Guest Editor, Special Issue, Cardiac and Skeletal Muscle Physiology and Diseases: Cellular Mechanism  
Nutrients, Nutritional Epidemiology, Topic Advisory Panel

### TEACHING:

1998-1999	Lecturer, Bangalore University, India
2001-2002	Lecturer, Bangalore University, India
2002-2004	Tutor, Problem Based Learning (PBL), UBC, Canada
2018-2019	BMS 612, Systems Pharmacology 1, Modules 9-11, UAB
2019-2023	PATHOL 7847, Cellular Mechanisms and Pathogenesis of Inflammation
2021-2023	PHAR3100, Human Physiology and Disease
2022- 2023	PHYSIO812, Advanced Cardiometabolic Disease

### INDUSTRY:

2001-2002	Scientist, Diabetic Vascular Complications-Drug Discovery Group, Torrent Research Center, India
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### MENTORING:

*As a graduate student at University of British Columbia*

2005-2009	Mentor (2 students), Summer Student Research Program
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*As a post-doctoral fellow at Columbia University*

2010-2011	Mentor (1 student), Master's Program, Institute of Human Nutrition
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*As Principal Investigator*

*Postdoctoral trainees/ Research Scientists*

2024- Current	Mathankumar Marimuthu (Vellore Institute of Technology, Vellore, India)
2024- Current	Dipanjan Chattopadhyay (Visva Bharati University, India)
2024- Current	Krishna Maremanda (National Institute of Pharmaceutical Education and Research (NIPER), Punjab, India)
2023- Current	Rajnikant Shukla, PhD (King George's Medical University, India)
2022- Current	Babu Nageswararao Kanuri, PhD (CDRI Lucknow, India)
2020- Current	Albert Dahdah, PhD (INSERM, Paris, France)
2023- 2023	Sabita Pokhrel, PhD (University of Akron, Ohio, USA)
2022- 2023	Qiang Wang, PhD (University of Chinese Academy of Sciences, China)
2017- 2022	Gopalakrishna Sreejit, PhD (CDFD, Hyderabad, India)
2016- 2020	Baskaran Athmanathan, PhD (Bharathidasan University, India)
2018- 2019	Sunil Noothi, PhD, (Tata Institute of Fundamental Research, India)
2016- 2017	Ashish Dhyani, PhD (University of Milan, Italy)

*Graduate Students*

2016- 2021	Co-Mentor, Justin Gibson, Graduate Biomedical Science Program; Cellular, Molecular, and Developmental Biology (CMDDB) Theme, UAB
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Undergraduate Students:

2020- Current	Jacob Jobe, OSU
2020- 2022	Darren Webb, OSU
2020- 2021	Isaac Stokes, OSU
2020- 2021	Samuel Asamoah, Ohio Dominican University, Columbus
2014- 2016	Rahul Annabathula, University of Kentucky, MD

*Dissertation Committee*

2023-	Kaitlyn Hill, Department of Physiology, OUHSC
2024-	Anna Faakye, Biochemistry and Physiology, OUHSC/ OMRF
2024-	Weronika Zarzycka, Biochemistry and Molecular Biology, OUHSC

**INVITED TALKS/ ORAL PRESENTATIONS:**

2024	Neutrophils: The Protagonists of Inflammation in Cardiometabolic Disease” Lund University, Malmo Sweden.
2024	Navigating Academic Careers: India to the USA. Manipal University, Manipal, India.
2024	Beta Blockers in Acute Myocardial Infarction: Old Dog and New tricks? Department of Internal Medicine Grand Rounds, OUHSC, OK.
2023	Neutrophils in Cardiometabolic Disease, Department of Pathology, OUHSC.
2023	Neutrophil Kinetics During Myocardial Infarction, Department of Microbiology, and Immunology, OUHSC
2023	Neutrophils during Myocardial Infarction: The Good, The Bad and the Ugly: Harold Hamm Diabetes Center Seminar Series, OUHSC.
2023	Neutrophils During Myocardial Infarction: The Good, The Bad and The Ugly. Society for South Asian Heart Research (SAHR), Early Career Seminar Series.
2023	Beta Blockers in Heart Failure: Old Dog and New tricks? Department of Medicine, University of Padova, Padua, Italy.
2023	Neutrophils During Myocardial Infarction: The Good, The Bad and The Ugly, Department of Biomedical Sciences, Humanitas University, Milan, Italy.
2023	Neutrophils During Myocardial Infarction: Friends or Foes? MizzouForward Keystone Address, University of Missouri, Columbia, MO
2022	Targeting Neutrophils During Myocardial Infarction: The Good, The Bad and The Ugly, Division of Cardiology, Dept of Medicine, Oklahoma University Health Sciences Center, Oklahoma City, OK
2022	Neutrophils During Myocardial Infarction: The Good, The Bad and The Ugly. The Precision in the Science of Medicine (PRISM) Seminar Series, University of Texas Health Sciences Center, SA.

- 2022 Neutrophil Response to Myocardial Infarction. Scientific Session 2022, AHA, Chicago, MI.
- 2022 Neutrophils in Cardiometabolic Disease: Friend or Foe? Dept of Biochemistry and Molecular Biology, Wright State University/ Bookshoft School of Medicine, Dayton, OH.
- 2022 Inflammasome Primed Neutrophils Regulate Myocardial Infarction Induced Myelopoiesis, Basic Cardiovascular Sciences Scientific Sessions Section, AHA, Chicago, MI.
- 2022 Inflammasome-primed neutrophils and granulopoiesis during myocardial Infarction. World Congress on Inflammation, Rome, Italy.
- 2022 Neutrophils and Cardiometabolic Diseases: Istituto di Ricovero e Cura a Carattere Scientifico Multi Medica, Milan, Italy.
- 2022 Aberrant Hematopoiesis in Cardiometabolic Diseases. Mayo Clinic Science of Medicine Grand Rounds, Mayo Clinic Arizona.
- 2022 Neutrophils: The regulators of Inflammation in Cardiometabolic Disease. Dept. of Nutritional Sciences, University of Illinois, Urbana-Champaign
- 2020 Disarming the Neutrophil-derived Alarmins to Improve Cardiac Inflammation Post-Myocardial Infarction. Innovations in Cardiovascular Sciences and Therapeutics During a Pandemic. Global Talents in Science e-Symposium.
- 2020 Myelopoiesis in Cardiometabolic Diseases. University of Padova, Padua, Italy
- 2020 Causes and Consequences of Myocardial Infarction-Induced Granulopoiesis. Saha Cardiovascular Research Center, University of Kentucky, Lexington.
- 2019 DAMPening Leukocytosis in Cardiometabolic Disease, Ira J Goldberg's 40 Years in Lipid Research Symposium, New York University, NY
- 2019 Tracking and Taming of Neutrophils in Myocardial Infarction, The Everett D. Reese Immunology and Rheumatology Research Seminar Series. Ohio state University
- 2019 World Congress on Inflammation, Sydney, Australia
- 2019 Baker Heart and Diabetes Institute, Melbourne, Australia
- 2019 Science at a Glance, European Atherosclerosis Society, Maastricht, Netherlands
- 2019 DAMPening Leukocytosis: An Approach to Treat Cardiometabolic Diseases? Pathology Grand Rounds, Feb 2019, UAB, Birmingham, AL
- 2018 Neutrophils in the Infarcted heart, Department of Pharmacology and Toxicology, University of Mississippi Medical Center, Jackson, MS.

- 2018 DAMPening Leukocytosis: A Strategy to Target Cardiometabolic Diseases? Department of Surgery, Ohio State University, Columbus, OH
- 2018 Inflammasome-primed neutrophils make a round trip to the bone marrow to amplify granulopoiesis. North American Section of the International Society for Heart Research, Halifax, Canada
- 2018 Fate of neutrophils in the infarcted heart, Department of Cardiovascular Science, University of Kentucky, Lexington
- 2017 *Mechanisms of Granulopoiesis in Acute MI*, The Hemostasis, Transfusion and Hematology Research Group (The Red Club), UAB
- 2017 *DAMPening Granulopoiesis: A Strategy to Reduce Heart Failure?* BME Innovation & Therapeutics Seminar Series (BITS), Dept. of Biomedical Engineering, UAB
- 2017 *Neutrophil-derived S100a8 and S100a9 promotes reticulated thrombocytosis and atherogenesis in diabetes.* AHA's Arteriosclerosis, Thrombosis and Vascular Biology (ATVB) Scientific Sessions, Minneapolis, MN.
- 2017 *DAMPening Leukocytosis: A Strategy to Reduce CVD?* Faculty of Pharmaceutical Sciences, University of British Columbia, Canada
- 2016 *Hematopoiesis: Implications for Cardiometabolic Diseases.* Vascular Biology and Hypertension Seminar Series, UAB
- 2016 *Leukocytosis in Cardiometabolic Disease: Role of DAMPs.* Program in Immunology Seminar Series, UAB
- 2016 *DAMPening Leukocytosis: A Strategy to Reduce Cardiovascular Disease?* Comprehensive Cardiovascular Center (CCVC) Seminar Series, UAB
- 2016 *Myelopoiesis in Diabetes and Cardiovascular Disease.* Dean's Distinguished Lecture Series, College of Medicine, University of Kentucky, Lexington
- 2016 *Thrombopoiesis in Diabetes: Implications for Cardiovascular Disease.* The NORC and Dept. of Nutrition Sciences Seminar Series, UAB
- 2015 Role of the *Nlrp3* Inflammasome in Acute Myocardial Ischemia-Induced Leukocytosis. American College of Cardiology Annual Meeting, Lexington, Kentucky Chapter
- 2015 *Myelopoiesis Following Myocardial Ischemia Involves Activation of the Nlrp3 Inflammasome by Neutrophil-Derived S100A8/A9.* American Heart Association's Basic Cardiovascular Sciences Scientific Sessions, New Orleans, Louisiana
- 2015 *Neutrophil-Derived S100A8/A9 Promotes Myelopoiesis in Acute Myocardial Ischemia.* American Heart Association's Arteriosclerosis, Thrombosis and Vascular Biology Scientific Sessions, San Francisco. California

- 2014 *Mechanisms of Monocytosis in Obesity: Role of Adipose Tissue Macrophages.* State of the Heart, Adelaide, Australia
- 2014 *Mechanisms of Monocytosis in Diabetes and Obesity: Implications for Cardiovascular Disease.* Endocrinology Research Conference, College of Medicine, University of Kentucky, Lexington
- 2013 *Mechanisms of Monocytosis in Obesity.* Barnstable Brown Obesity and Diabetes Research Day, University of Kentucky, Lexington
- 2012 *Hyperglycemia Promotes Myeloid Cell Proliferation and Impairs Atherosclerosis Lesion Regression in Diabetes.* American Diabetes Association, 72<sup>nd</sup> Scientific Sessions, Philadelphia.
- 2012 *Hyperglycemia Enhances Myelopoiesis and Impairs Atherosclerosis Regression in Diabetes.* Molecular Basis of Vascular Inflammation & Atherosclerosis, Keystone Conference, Big Sky, Montana
- 2011 *Hyperglycemia Promotes Ly6-C<sup>hi</sup> Monocytosis and Granulocytosis via Increased Proliferation of Granulocyte-Macrophage Progenitor Cells in Diabetic Mice.* American Heart Association's Arteriosclerosis, Thrombosis and Vascular Biology Scientific Sessions, Chicago
- 2007 *Matrix Metalloproteinase-Dependent Epidermal Growth Factor Receptor Transactivation in Vascular Smooth Muscle: Therapeutic Potential in Hypertensive Disorders?* Merck Frosst Biology Research Day, Montreal, Canada.