

Prachi Singh, Ph.D.

1. Personal Information

- **E-mail:** prachi.singh@pbrc.edu
- **Phone:** 225-763-3151

2. Present Academic Rank and Position

Associate Professor, Clinical Sciences, Pennington Biomedical Research Center, Baton Rouge, LA 2019

Research Collaborator, Mayo Clinic, Rochester, MN 2019

3. Education

Daulat Ram College, University of Delhi, India 1996
Bachelor of Science (Botany Hons.)

University of Delhi, India 1998
Master of Science (Botany)

Central Drug Research Institute 2003
University of Lucknow, India
Ph.D.

4. Honors/Awards

Smt Leela Wati Nanda Memorial Silver Medal for outstanding academic achievements and co-curricular activities, Daulat Ram College, University of Delhi, India. 1995

Merit award for First Position in B.Sc. (Botany Hons.), Class of 1993-1996. 1996

First prize in the first National Talent Search Competition held by the Indian Society for Plant Physiology, Indian Agricultural Research Institute (IARI), New Delhi, India. 1997

Research Fellowship in Life Sciences and eligibility for lectureship, under the Council of Scientific and Industrial Research (CSIR) (India) and University Grant Commission (UGC) (India) fellowship schemes. (*Annually awarded to approximately 1200 from a total of 40,000 applicants*). 1998 - 2002

Dr C. R. Krishna Murti Memorial Young Scientist Medal, 2002, by the Society of Biological Chemists (India), for work on "LpdA: An anomalous lipoamide dehydrogenase of *Mycobacterium tuberculosis*." (*National level competition*). 2002

Postdoctoral fellowship from American Heart Association. (<i>Priority score 1.6 (on the scale of 1-5); percentile rank 13.83; 25 applicants awarded of 114 reviewed</i>).	2007 - 2009
American Heart Association Basic Cardiovascular Sciences Abstract Travel Award for Annual Scientific Sessions 2008 (<i>Peer reviewed; placed in top 20%</i>).	2008
Travel award to participate in the Building Science, Engineering and Technology Leadership Workshop funded by the Presidential Award for Excellence in Science, Engineering and Mathematics and the AAAS Centre for Advancing Science and Engineering Capacity.	2009
Landmark Contribution to the Literature Award 2010 (<i>co-author</i>), Mayo Foundation Department of Medicine.	2010
Scientist Development Grant from American Heart Association (<i>Average priority score 1.3 (on the scale of 1-5, a score of 1.0-1.4 being considered excellent); percentile rank 22.6; 62 applicant awarded of 294 reviewed</i>).	2011 - 2015
Young Investigator Award (2 nd place), American College of Cardiology (ACC) Annual Scientific Session 2013 (<i>co-author</i>).	2013
Best Poster Award, American College of Cardiology (ACC) Annual Scientific Session 2013 (<i>co-author</i>) (<i>Peer reviewed; awarded to top 3% scoring percentile of poster acceptances</i>).	2013
Harry Goldblatt New Investigator Award at the High Blood Pressure Research 2014 Scientific Sessions American Heart Association (<i>co-author</i>).	2014
CCaTS Early Stage Investigator Award, Mayo Clinic Center for Translational Science Activities.	2015
Finalist, APS Endocrinology and Metabolism Campbell Poster Competition, Experimental Biology 2016 (<i>Mentor to primary author</i>).	2016
Lifestyle and Cardiometabolic Health Young Investigator Award – American Heart Association (<i>co-author</i>).	2017
Fellow, Cardiovascular Section of American Physiological Society	2018

5. Previous Professional Positions and Appointments

Junior Research Fellow, Central Drug Research Institute, Lucknow, India	1998 - 2000
Senior Research Fellow, Central Drug Research Institute, Lucknow, India	2000 - 2002
Research Scientist, International Centre for Genetic Engineering and Biotechnology, New Delhi, India	2002 - 2003
Research Scientist, International Centre for Genetic Engineering and Biotechnology, New Delhi, India	2004 - 2005
Research Fellow, Department of Internal Medicine, Division of Cardiovascular Disease, Mayo Clinic, Rochester, Minnesota	2005 - 2010
Research Associate, Department of Internal Medicine, Division of Cardiovascular Diseases, Mayo Clinic, Rochester, Minnesota	2010 - 2013
Assistant Professor, Department of Internal Medicine, Mayo Clinic, Rochester, Minnesota	2009 - 2018
Associate Professor, Department of Internal Medicine, Mayo Clinic, Rochester, Minnesota	2018 - 2019
Associate Consultant I, Department of Cardiovascular Medicine, Mayo Clinic, Rochester, Minnesota	2013 - 2019
Associate Consultant I, Department of Biochemistry and Molecular Biology (Joint Appointment), Mayo Clinic, Rochester, Minnesota	2013 - 2019

6. Professional Memberships, Societies, and Services

Professional Memberships and Services

Member, American Heart Association / American Stroke Association	2007 - Present
Member, North American Vascular Biology Organization	2008 - Present
Member, The Obesity Society: Abstract reviewer (2013); Abstract reviewer (2016)	2008 - Present
Member, Canadian Obesity Network	2009 - Present
Member, American Association for Advancement of Science	2009 - Present

Fellow of Cardiovascular Section, Member, The American Physiological Society: Research Host (2015, 2016); Invited speaker, Hypoxia Interest group (2017); Invited speaker, Cardiovascular Section (2017); Chair, Featured Symposium, Translational Physiology Interest Group (2017)	2012 - Present
Member, Sleep Research Society: Abstract Reviewer (2018, 2019)	2014 - Present
Member, American Society for Nutrition: Abstract reviewer (2018, 2019)	2016 - Present

Study Sections

Department of Defense, Congressionally Directed Medical Research Programs, Grant Reviewer	2016
Department of Defense, Congressionally Directed Medical Research Programs, Grant Reviewer	2017
Department of Defense, Accelerating Innovation in Military Medicine Research Award (AIMMRA), Defense Medical Research Development Program (DMRDP), Ad-hoc grant reviewer	2018
Department of Defense, United States Army Medical Research and Material Command Broad Agency Announcement – Extramural Medical Research (USAMRMC BAA-EMR), Congressionally Directed Medical Research Programs (CDMRP), Grant Reviewer	2019
Department of Defense, Peer reviewed Medical Research Program, Pre-application, Panel- Diabetes, Grant reviewer	2019
Department of Defense, Peer Reviewed Medical Research Program, Pre-application and application, Panel- Sleep Disorders, Grant reviewer	2019

Journal Responsibilities (invited manuscript review)

<i>Atherosclerosis</i> (Journal Impact factor: 4.1)	2010 - Present
<i>American Journal of Clinical Nutrition</i> (Journal Impact factor: 6.6)	2011 - Present
<i>Arteriosclerosis, thrombosis, and vascular biology</i> (Journal Impact factor: 7.2)	2011 - Present
<i>Obesity</i> (Journal Impact factor: 3.5)	2011 - Present

<i>Medicine & Science in Sports & Exercise</i> (Journal Impact factor: 4.1)	2011 - Present
<i>American Journal of Cardiology</i> (Journal Impact factor: 3.5)	2012 - Present
<i>Sleep</i> (Journal Impact factor: 5)	2011 - Present
<i>PLoS one</i> (Journal Impact factor: 4.1)	2013 - Present
<i>Diabetes</i> (Journal Impact factor: 7.9)	2014 - Present
<i>BMC Cardiovascular Disorders</i> (Journal Impact factor: 1.9)	2016 - Present
<i>Clinical Science</i> (Journal Impact factor: 5.6)	2017 - Present
<i>Science Translational Medicine</i> (Journal Impact factor: 16.7)	2018 - Present

7. Educational Activities

A. Curriculum/Course Development and Coordination

- Co-Chair, AC/SAC Council Department of Biochemistry and Molecular biology
- Developing short term research assignment for undergraduate and high school students.
- Developing projects and mentoring Post-Doctoral Research Fellows

B. Teaching activities

Weekly journal review in Cardiovascular Physiology and Molecular biology Laboratory, Rochester, MN	2008 - 2019
Identification of caveolin-1 as an inhibitor of leptin signaling: Implications for leptin resistance in a human weight gain model. Cardiovascular Research Seminar Series, Rochester, MN	2008
Identification of caveolin-1 as an inhibitor of leptin signaling: implications for leptin resistance in a human weight gain model. Endocrine Research Seminar, Rochester, MN	2009
Autocrine role of leptin Endocrine Research Seminar, Rochester, MN	2012
Adipose tissue dynamics in weight gain: the leptin story Kogod Center on Aging, Research Seminar, Rochester, MN	2013
Obesity and weight gain: Insights into adiponectin Biochemistry and Molecular Biology Seminar, Rochester, MN	2014

Sleep and Cardiovascular Disease: Perspectives
Biochemistry and Molecular Biology Faculty Colloquium, Rochester, MN

Other activities

- Judge, Poster Session, Young Investigator Research Symposium, March 2014
- Judge, Poster Session, Mayo Graduate school 25th Anniversary, Sept. 2014
- Judge, Poster Session, MRFA & MFA Research Day, Nov. 2014
- Judge, Poster Session, Young Investigator Research Symposium, March 2016
- Judge, Poster Session, MGS Symposium, Aug. 2016
- Judge, Poster Sessions, Young Investigator Research Symposium, March 2018

C. Mentorship

- Sudershan Anand***, Masters Student 2000
Description: Mentored research in protein expression and purification using *E. coli*.
Outcome: Successfully completed Masters Program.
Current Status: Assistant Professor, Department of Cell and Developmental Biology, Knight Cancer Institute, Oregon Health and Science University
- Andrus Jensen***, Summer student 2006
Description: Mentored research activity in basic molecular biology laboratory techniques.
Outcome: Co-authored 1 manuscript.
- Kara Barber***, SURF student 2007
Description: Mentored research including hypothesis generation and immunohistology studies in adipose tissue biopsy samples.
Outcome: 1) Oral presentation; 2) Co-authored 1 manuscript
Current Status: Neuroscience Graduate Program, University of Texas Medical Branch at Galveston
- Jason Glenn***, MOMSA student 2008
Description: Mentored research involving identification of role of caveolin-1 in modulating insulin signaling in human vascular cells.
Outcome: 1) Poster presentation; 2) Co-authored 1 manuscript
Current Status: Resident, General Surgery, Medical College of Wisconsin, Milwaukee WI
- Usiwoma Abugo***, MOMSA student 2009
Description: Mentored research involving the role of leptin in plasminogen activator inhibitor-1 regulation.
Outcome: 1 Poster presentation

Current Status: Fellow, Central Valley Eye Medical, Manteca CA

Anna Kilianova, Summer student 2011

Description: Mentored basic technical skills and research methods

Richa Singh, Research Trainee 2011

Description: Mentored basic technical skills and research methods

Outcome: Associate Scientist- High Throughput Screening, Horizon Discovery Company, Boston, Massachusetts, USA

Current Status: Research Associate, Berg Health, Framingham MA

Katarzyna Polonis, Research trainee 2012

Description: Mentored basic technical skills and research methods

2015 - 2018

Outcome: 1) Poster presentation at EB2016, AHA2016, AHA2017 meetings

2) Received AHA postdoctoral fellowship award, 2016, application percentile score: 0.01)

3) Co-authored 2 manuscript, 2 manuscripts in preparation

Current Status: Resident, Laboratory Genetics and Genomics, Mayo Clinic, Rochester

Karine Sahakyan, Research Fellow 2012 - 2014

Description: Mentored postdoctoral research project

Outcome: Co-authored 2 manuscripts

Current Status: Radiology Resident, Drexel University College of Medicine, Philadelphia PA

Sinny Delacroix, Research Fellow 2012 - 2013

Description: Mentored postdoctoral research project

Outcome: Co-authored 1 abstract

Current Status: Cardiovascular Research Centre, Royal Adelaide Hospital and Department of Medicine, University of Adelaide, Adelaide, SA, Australia

Kiran Somers, Summer Undergraduate Research Trainee 2012

Description: Mentored research project examining the role of intermittent

2015

hypoxia in regulation of adipokines.

2016

Outcome: 1) Presented poster at EB 2016, 2017

2) Received APS stride fellowship 2016

3) Co-Authored 1 manuscript

Current Status: Graduate Research Employee, Mayo Clinic, Rochester

Pragya Sharma, Research Fellow 2012 - 2016

Description: Mentored post-doctoral research

Outcome: 1) Co-authored 3 manuscript

2) Received AHA postdoctoral fellowship

Current Status: Clinical Lab Technologist, Mayo Clinic, Rochester

Michaela Pfeifer, High School Mentorship Program, APS Stride Fellow 2013

Description: Mentored research examining the effect of different insulin- 2015

sensitizing drugs on caveolin-1 expression in differentiated human white 2016

Outcome: 1) Presented poster at Experimental Biology meeting 2016, 2017

2) Received APS stride fellowship (2 years)

3) Co-Authored 1 Manuscript

Current Status: Research Assistant, Mayo Clinic, Rochester

Balamurugan Rangasamy, Research Fellow 2014

Description: Mentored basic technical skills and research methods

Current Status: Research Scientist, Sri Manakula Vinayagar Medical College, Puducherry, India

Yuebo Zhang, Research Fellow 2014 - 2015

Description: Mentored research related to role of statins in regulation of 2017 - 2019

adipokines and role of leptin in regulation of apoptosis.

Outcome: Co-authored 2 manuscript, 1 Manuscript in review

Current Status: Senior Research fellow, Mayo Clinic, Rochester

Christiane Becari Ribeiro, Research Fellow 2015 - 2017

Description: Mentored post-doctoral research

Outcome: 1) Awarded AHA postdoctoral fellowship

2) Presented abstract EB2016 and AHA 2016 meeting

3) Co-authored 2 manuscript, 2 manuscript in preparation

Current Status: Research Fellow, Brazil

Bhavesh Chuggani, High School student, Mentorship program 2015

Description: Mentored research related to circadian cycles

Current Status: IT Analyst/Programmer, Mayo Clinic

Luis Prieto, Graduate student 2016

Description: Mentored lab rotation

Current Status: Graduate student at Mayo

Humphrey G. Peterson-Jones, Graduate Research Employee Program 2017

Description: Role of endothelin-1 in lipolysis

Current Status: MD-PhD student at University of Colorado

Yu Dong, Visiting Research Fellow 2017 - 2018

Description: Mentored research related to effects of intermittent hypoxia on vascular endothelial cells and human preadipocytes.

Outcome: 1) Co-authored 1 abstract and 1 manuscript, 1 manuscript in preparation

An Huang, Research Trainee 2017 - 2018

Description: Mentored research related to effects of weight gain on adipocytes and effects of endothelin-1 on lipolysis.

Jeffer Pinzon, MOMSA student 2018

Description: Mentored research related to effects of regional fat distribution and circulating free fatty acids.

Outcome: Poster presentation

Current Status: Medical student

D. Education Scholarship

Junior Research Fellowship, Council of Scientific and Industrial Research, India 1998 - 2000

Senior Research Fellowship, Council of Scientific and Industrial Research, India 2000 - 2002

Postdoctoral Fellowship, American Heart Association 2007 - 2009

Scientist Development Grant, American Heart Association 2011 - 2015

8. Presentations at National and International Meetings

Invited

Metabolism Laboratory Seminar Series, Rockefeller University 2016

Weight gain and obesity: the dynamic role of leptin. Rockefeller University, New York, NY

Hypoxia interest group, Experimental Biology Meeting 2017

Vascular and adipose tissue effects of intermittent hypoxia: modulation of insulin signaling, Chicago, IL

Translational Physiology Interest Group, Experimental Biology Meeting 2017

Adipose tissue dynamics in weight gain: the leptin story, Chicago, IL

CV section, Experimental Biology Meeting 2017

Cardiovascular contributions of adipose tissue, Chicago, IL

Center of Emphasis in Diabetes and Metabolism, Texas Tech University Health Sciences Center 2018

Matter of fat: Sleep Disorders and Obesity, El Paso, Tx

Oct, 2019
2018

Pennington Biomedical Research Center

Disease mechanisms in obstructive sleep apnea: Glimpses into adipose tissue, Baton Rouge, LA

Oral

Annual Meeting, Society of Biological Chemists, Lucknow Chapter

2002

LpdA: An anomalous lipoamide dehydrogenase of *Mycobacterium tuberculosis*, Lucknow, India

15th International Research Symposium on Sleep and Breathing

2017

Intermittent hypoxia partially impairs insulin-signaling via increases in caveolin-1 expression: vascular implications, Madison, Wisconsin

Poster

Searching drug targets for tuberculosis.

2001

International symposium on Current Trends in Drug Discovery Research, Lucknow, India

Lipoamide dehydrogenase: A potential drug target for tuberculosis.

2002

International symposium on Current Trends In Drug Development in Tuberculosis, Bangalore, India.

LpdA: An anomalous lipoamide dehydrogenase of *Mycobacterium tuberculosis*.

2002

Society of Biological Chemists, Lucknow, India

Leptin induces C-reactive protein expression in vascular endothelial cells.

2007

Annual Conference, Arteriosclerosis, Thrombosis, and Vascular Biology. Chicago, USA

Identification of caveolin-1 as an inhibitor of leptin signaling: implications for leptin resistance in a human weight gain model.

2008

Scientific Sessions, American Heart Association, New Orleans, USA

Leptin decreases lipid accumulation in differentiating human preadipocytes: implications for fat gain.

2011

Annual Conference, Arteriosclerosis, Thrombosis, and Vascular Biology. Chicago, USA

Impairment of leptin signaling facilitates adipose tissue lipid accumulation.

2011

Annual Scientific Meeting of The Obesity Society, Orlando, USA

Regional differences in fat loss following weight gain in normal adults. Annual Conference, Arteriosclerosis, Thrombosis, and Vascular Biology. Chicago, USA	2012
Leptin induces adiponectin expression: Implications in obesity. Experimental Biology Meeting, Boston, USA	2013
Autocrine role of leptin in regulating adiponectin expression in humans. Annual Scientific Meeting of The Obesity Society, Atlanta, USA	2013
Modest weight gain and weight loss alter expression of sex hormone binding globin in healthy men: Implications for endothelial function. Experimental Biology Meeting, San Diego, USA	2014
Differential effects of leptin on adiponectin expression with weight gain versus obesity. Combined Annual Meeting of CSCTR and MWAFMR, Chicago, USA	2015
Effects of modest weight gain on estrogens in healthy men. Experimental Biology Meeting, San Diego, USA	2016
Modest fat gain reduces inflammatory cytokine transcription in adipose tissue of healthy volunteers. Annual Scientific Meeting of The Obesity Society, New Orleans, USA	2016
Intermittent Hypoxia Partially Impairs Insulin-Signaling via increases in caveolin-1 expression: Vascular Implications. Sleep 2017, Annual Meeting of the Associated Professional Sleep Societies, Boston, Massachusetts, USA	2017
Differential MicroRNA expression in subcutaneous abdominal and lower body fat depots. ATVB/PVD, San Francisco, USA	2018
9. Visiting Professorships	
Rockefeller University, New York, New York, USA	2016
Texas Tech University, El Paso, Texas, USA	2018
Pennington Biomedical Research Center, Baton Rouge, USA	2018

10. Research Interests

1. Mechanisms underlying the development of cardiovascular diseases in obstructive sleep apnea.
2. Molecular mechanisms underlying the development of cardiovascular disease and diabetes in obesity: differential role of body composition, fat distribution and fat quality.
3. Role of leptin in development of cardiometabolic disorders and obesity: Altered cellular signaling in obesity.
4. Impact of sleep restriction on body composition and development of cardiometabolic dysfunction: role of adipose tissue and adipokines.

11. Research Grants Awarded

Active

Principal Investigator	Disease Mechanisms in sleep apnea, National Institutes of Health, (R01 HL65176), Co-PI - Relinquished	7/2017 - 6/2022
Co-Investigator	Sleep enhancement to decrease blood pressure: A randomized Controlled Trial, National Institutes of Health, (R01 HL134808), PI: Somers	7/2017 - 6/2022

Pending

Principal Investigator	Senescent cell burden in sleep apnea: functional consequences and amelioration by metformin	7/2020 - 6/2025
------------------------	---	-----------------

Completed

Principal Investigator	Identification and characterization of antigenic genes of <i>Mycobacterium tuberculosis</i> , Council of Scientific and Industrial Research, India, (#33482)	8/1998 - 11/2002
Principal Investigator	Leptin and the endothelium- inflammatory and thrombotic risk mechanisms, American Heart Association Post Doctoral Grant (#0725787Z)	7/2007 - 6/2009
Co-Investigator	Molecular mechanisms mediating resistance to leptin signaling during fat gain, National Institutes of Health, (R21DK081014), PI: Somers	9/2008 - 2/2012 (NCE)
Co-Investigator	European Union – ICRC Brno – Mayo Clinic Grant Lopez FJ Responsible Investigator Sub-Award:	1/2011 - 12/2015

Development of novel methods and interventions to decrease risk factors and incidence of cardiovascular diseases in the general population, PI: Lopez-Jimenez

Somers VK Responsible Investigator Sub-Award
Identification of novel risk factors and methods for treatment of cardiovascular and metabolic disorders, PI: Somers (Mayo overall P.I. V.K. Somers) Project FNUSA-ICRC (No. CZ.1.05/1.1.00/02.0123)

Principal Investigator	Molecular mechanisms underlying low adiponectin expression in obesity, American Heart Association Scientist Development Grant, (11SDG7260046)	7/2011 - 6/2015
Co-Investigator	Disease Mechanisms in Sleep Apnea, National Institutes of Health, (R01 HL65176), PI: Somers	4/2012 - 7/2016
Co-PI	Adipose Tissue Epigenome in End Stage Kidney Disease as a Predictor of New Onset Diabetes after Transplantation (CIM grant, Mayo Clinic Arizona)	1/2013 - 12/2013
Co-Investigator	Cardiovascular effects of sleep restriction, AHA, (13POST16420009), PI: Covassin	7/2013 - 6/2015
Collaborator (<u>mentor</u>)	Molecular mechanisms of endothelial dysfunction in obstructive sleep apnea, AHA, (15POST25090037), PI: Sharma	7/2015 - 4/2016
Consultant (<u>mentor</u>)	APS-STRIDE Fellowship, PI: Michaela Pfeifer	4/2015 - 5/2017
Consultant (<u>mentor/sponsor</u>)	Role of adipose tissue renin-angiotensin system in obstructive sleep apnea, AHA, (16POST27210011), PI: Becari	1/2016 - 1/2017
Consultant (<u>mentor</u>)	APS-STRIDE Fellowship, PI: Kiran Somers	4/2016 - 5/2017
Principal Investigator	Molecular basis of adipose tissue inflammation in obesity (CCaTS ESIA, Mayo Clinic Rochester)	7/2015 - 6/2017
Co-Investigator	Interactions between obesity risk and insufficient sleep, National Institutes of Health, (R01HL114024), PI: Somers	7/2012 - 4/2018 (NCE)

Co-Investigator	Sleep restriction and augmented vascular risk in pre hypertension, National Institutes of Health, (R01, HL114676), PI: Somers	7/2012 - 4/2018 (NCE)
Co-Investigator	Endothelin-1 as a novel target for the prevention of metabolic dysfunction with intermittent Hypoxia (Center for Biomedical Discovery – Mayo Clinic, Rochester), PI: Jensen	1/2017 - 12/2018
Principal Investigator	Role of leptin in adipose tissue cell death: implication for obesity, American Heart Association, (17GRNT33660138)	7/2017 - 6/2019

12. Publications

Original Peer reviewed Publication (Total citations: >1250, h index: 18)

1. Deb DK, **Dahiya P**, Srivastava KK, Srivastava R, Srivastava BS. Selective identification of new therapeutic targets of Mycobacterium tuberculosis by IVIAT approach. *Tuberculosis (Edinburgh, Scotland)*. 2002;82(4-5):175-182.
2. Hoffmann MS, **Singh P**, Wolk R, Romero-Corral A, Raghavakaimal S, Somers VK. Microarray studies of genomic oxidative stress and cell cycle responses in obstructive sleep apnea. *Antioxidants & redox signaling*. 2007;9(6):661-669.
3. **Singh P**, Hoffmann M, Wolk R, Shamsuzzaman AS, Somers VK. Leptin induces C-reactive protein expression in vascular endothelial cells. *Arteriosclerosis, thrombosis, and vascular biology*. 2007;27(9):e302-307.
4. Romero-Corral A, Sierra-Johnson J, Lopez-Jimenez F, Thomas RJ, **Singh P**, Hoffmann M, Okcay A, Korinek J, Wolk R, Somers VK. Relationships between leptin and C-reactive protein with cardiovascular disease in the adult general population. *Nature clinical practice*. 2008;5(7):418-425.
5. **Singh P**, Peterson TE, Barber KR, Kuniyoshi FS, Jensen A, Hoffmann M, Shamsuzzaman AS, Somers, VK. Leptin upregulates the expression of plasminogen activator inhibitor-1 in human vascular endothelial cells. *Biochemical and Biophysical Research Communications*. 2010; 392(1):47-52.
6. Sert Kuniyoshi F, Pusalavidyasagar S, **Singh P**, Somers VK. Cardiovascular Consequences of Obstructive Sleep Apnea. *Indian Journal of Medical Research*. 2010; 131:196-205.
7. Romero-Corral A, Sert Kuniyoshi FH, Sierra-Johnson J, Orban M, Gami AS, Davison DE, **Singh P**, Pusalavidyasagar S, Huyber CM, Votruba SB, Jensen MD, Somers VK. Modest visceral fat gain causes endothelial dysfunction in healthy humans. *Journal of American College of Cardiology*. 2010; 56(8):662-666.

8. **Singh P**, Peterson TE, Sert-Kuniyoshi FH, Jensen MD, Somers, VK. Leptin upregulates caveolin-1 expression: Implications for development of atherosclerosis. *Atherosclerosis* 2011; 217 (2): 499-502. PMID: 3482003
9. Adachi T, Sert-Kuniyoshi FH, Calvin AD, **Singh P**, Romero-Corral A, van der Walt C, Davison DE, Bukartyk J, Konecny T, Sierra-Johnson J, Somers VK. Effect of weight gain on cardiac autonomic control during awake and asleep. *Hypertension* 2011; 217 (2):499-502. PMID: 3469265
10. Sert-Kuniyoshi FH, **Singh P**, Gami AS, Garcia-Touchard A, van der Walt C, Pusalavidyasagar S, Wright RS, Vasquez EC, Lopez-Jimenez F, Somers VK. Obstructive sleep apnea in patients after myocardial infarction is associated with severely impaired endothelial function. *Chest* 2011; 140 (1):62-67. PMID: 3130528
11. **Singh P**, Somers VK, Romero-Corral A, Sert Kuniyoshi FH, Pusalavidyasagar S, Davison DE, Jensen MD, Effects of weight gain and weight loss on regional fat depots. *American Journal of Clinical Nutrition*, 2012; 96 (2):229-233. PMID: 3396439
12. **Singh P**, Peterson TE, Sert Kuniyoshi FH, Glenn JA, Davison DE, Romero-Corral A, Pusalavidyasagar S, Jensen MD, Somers VK. Leptin Signaling in Adipose Tissue: Role in Lipid Accumulation and Weight Gain. *Circulation Research* 2012, 111 (5): 599-603. PMID: 3482005
13. Diaz-Meleán CM, Somers VK, Rodriguez-Escudero JP, **Singh P**, Sochor O, Llano EM, Lopez-Jimenez F, Mechanisms of Adverse Cardiometabolic Consequences of Obesity, *Curr Atheroscler Rep* 2013, 15 (11): 1-10
14. Hoffmann MS, **Singh P**, Wolk R, Narkiewicz K, Somers VK. Obstructive Sleep Apnea and Intermittent Hypoxia Increase Expression of Dual Specificity Phosphatase 1, *Atherosclerosis*, 2013, 231(2): 378-383. PMID: 3865929
15. Cundrle I, Somers VK, **Singh P**, Johnson BD, Scott CG, Olson, LY. The relationship between Leptin and Ventilatory Control in Heart Failure. *Journal of Cardiac Failure*, 2013, 19(11): 756-761. PMID: 4220787
16. Cundrle I, Somers VK, **Singh P**, Johnson BD, Scott CG, van der Walt C, Olson, LY. Leptin Deficiency Promotes Central Sleep Apnea in Heart Failure Patients. *Chest*, 2014, 145 (1), 72-78
17. Calvin AD, Covassin N, Kremers WK, Adachi T, Macedo P, Albuquerque FN, Bukartyk J, Davison DE, Levine JA, **Singh P**, Wang S, Somers VK. Experimental Sleep Restriction Causes Endothelial Dysfunction in Healthy Humans. *Journal of the American Heart Association*, 2014, 3(6):e001143. PMID: 4338700
18. Batsis JA, Sahakyan KR, **Singh P**, Bartels SJ, Somers VK, Lopez-Jimenez F. Leptin, Adiposity and Mortality: Results from the National Health and Nutrition Examination Survey III, 1988-1994, *Mayo Clinic Proceedings*, 2015 Apr;90(4):481-91.
19. Soucek F, Covassin N, **Singh P**, Ruzek L, Kara T, Suleiman M, Lerman A, Koestler C, Friedman PA, Lopez-Jimenez F, Somers VK, Effects of Atorvastatin (80mg) Therapy on Quantity of Epicardial Adipose Tissue in Patients Undergoing Pulmonary Vein Isolation for

Atrial Fibrillation, *American Journal of Cardiology*, 2015 Nov 1; 116(9):1443-6. PMID: 4609296

20. Sahakyan K, Somers VK, Rodriguez-Escudero JP, Hodge DO, Carter RE, Sochor O, Coutinho T, Jensen MD, Roger VL, **Singh P**, Lopez-Jimenez F, Normal-weight central obesity: implication for total and cardiovascular mortality, *Annals of Internal Medicine*, 2015, 163(11):827-35. PMID: 26551006
21. Wolk R, Bertolet M, Brooks MM, Pratley RE, Sobel BE, Frye RL, **Singh P**, Calvin A, Rutter M, Mooradian A, Somers VK, BARI 2D study group. Differential Effects of Insulin Sensitization and Insulin Provision Treatment Strategies on Concentrations of Circulating Adipokines in Patients with Diabetes and Coronary Artery Disease in the BARI 2D Trial. *European Journal of Preventive Cardiology*, 2016, 23(1):50-8. PMID: 4385003.
22. **Singh P***, Sharma P, Sahakyan K, Davison DE, Sert-Kuniyoshi FH, Romero-Corral A, Swain JM, Jensen MD, Lopez-Jimenez F, Kara T, Somers VK. Differential effects of leptin on adiponectin expression with weight gain versus obesity. *International Journal of Obesity*, 2016 Feb; 40 (2):266-74. PMID: 4747836. (*: corresponding author)
23. Covassin N, **Singh P**. Sleep duration and cardiovascular disease risk: epidemiologic and experimental evidence. *Sleep Medicine Clinics*. 2016 11(1):81-90. PMID:4791534.
24. Wolk R, Bertolet M, **Singh P**, Brooks MM, Pratley RE, Frye RL, Mooradian AD, Rutter, MK, Calvin AD, Chaitman BR, Somers VK, Prognostic value of adipokines in predicting cardiovascular outcome – Explaining the obesity paradox. *Mayo Clinic Proceedings*, 2016, 91(7): 858-66. PMID: 4935584.
25. Pusalavidyasagar SS, Sert-Kuniyoshi FH, Shamsuzzaman A.S.M., **Singh P**, Maharaj S, Leinverber P, Nykodym J, Somers VK, Comparison of Endothelial Function in Asian Indians versus Caucasians, *Metabolic Syndrome and Related Disorders*, 2016, Sep; 14(7):363-367. PMID 27172431
26. **Singh P**, Somers VK, Obstructive sleep apnea, diabetes and obesity: Partners in Crime? *Sleep Medicine*, 2016, 25:162-163. PMID:27567164
27. Xie J, Sert-Kuniyoshi FH, Covassin N, **Singh P**, Gami A, Wang S, Chahal, AA, Yongxiang W, Somers VK. Nocturnal Hypoxemia due to obstructive sleep apnea is an independent predictor of poor prognosis after myocardial infarction. *Journal of the American Heart Association*, 2016, 27; 5(8).
28. Covassin N, **Singh P**, Somers VK, Keeping up with the clock: Circadian disruption and obesity risk, *Hypertension*, 2016, 68(5):1081-1090.
29. Hoffmann M, Wolf J, Szyndler A, **Singh P**, Somers VK, Narkiewicz K. Serum of obstructive sleep apnea patients impairs human coronary endothelial cell migration. *Archives of Medical Science*. 2017 Feb; 13(1):223-227.
30. Cundrle I, Somers VK, **Singh P**, Johnson BD, Scott CG, Olson LJ. Sex differences in leptin modulate ventilation in heart failure. *Heart & Lung*, 2017, 46 (3):187-191

31. Tobaldini E, Covassin N, Calvin A, **Singh P**, Bukartyk J, Wang S, Montano N, Somers VK. Cardiac autonomic control and complexity during sleep are preserved after chronic sleep restriction in healthy subjects. *Physiological Reports*, 2017, Apr, 5: (7).
32. Xie J, Chahal AA, Covassin N, Schulte Philip, **Singh P**, Srivali Narat, Somers VK, Caples S, Periodic limb movements of sleep are associated with an increased prevalence of atrial fibrillation in patients with mild sleep disordered breathing. *International Journal of Cardiology*, 2017, Aug 15: 241: 200-204.
33. Cundrle I, Somers VK, **Singh P**, Johnson BD, Scott CG, Olson LJ. Low leptin concentration may identify heart failure patients with central sleep apnea. *Journal of sleep research*, 2018, 27 (2), 240-243.
34. Baheti S, **Singh P**, Zhang Y, Evans J, Jensen MD, Somers VK, Kocher JPA, Sun Zhifu, Chakkerla H. Adipose tissue DNA methylation changes in development of new onset diabetes after kidney transplantation. *Epigenomics*, 2017, 9 (11), 1423-1435.
35. Polonis K*, Somers VK, Becari C, Schulte P, Covassin N, Druliner, Boardman L, **Singh P**. Moderate-to-severe sleep apnea is associated with telomere lengthening. *AJP-Heart and Circulatory Physiology*, 2017, 313 (5): H1022-H1030.
36. Xie J, Sert-Kuniyoshi FH, Covassin N, **Singh P**, Gami A, Chahal AA, Somers VK. Excessive daytime sleepiness independently predicts increased cardiovascular risk after myocardial infarction. 2018, *Journal of the American Heart Association*, 7 (2), e007221.
37. **Singh P**, Zhang Y, Sharma P, Covassin N, Soucek F, Friedman PA, Somers VK, Statins decrease leptin expression in human white adipocytes. *Physiological Reports*, 2018, 6 (2).
38. Covassin N, Sert-Kuniyoshi FH, **Singh P**, Romero-Corral A, Davison DE, Lopez-Jimenez F, Jensen MD, Somers VK, Experimental weight gain increases ambulatory blood pressure in healthy subjects: Implications of visceral fat accumulation. *Mayo Clinic Proceedings*, 2018, 93 (5), 618-626.
39. Covassin N, Greene EL, **Singh P**, Somers VK, Disparities in hypertension among African-Americans: implications of insufficient sleep. *Current Hypertension Reports*, 2018, 20 (7):57. PMID: 29884924 DOI: 10.1007/s11906-018-0855-1.
40. Sharma P*, Somers VK, Peterson TE, Zhang Y, **Singh P**. Intermittent hypoxia attenuates eNOS activity via increases in caveolin-1 expression. *Scientific Reports*, 2018, 20, 8(1):14110. PMID: 30237409 PMCID: PMC6148090 DOI: 10.1038/s41598-018-32490-3
41. Zhang Y*, Somers KR, Becari C, Polonis K, Pfeifer MA, Allen A, Kellog TA, Covassin N, **Singh P**. Comparative expression of renin angiotensin pathway proteins in visceral versus subcutaneous fat. *Frontiers in Physiology*, 2018, 9:1370. PMID: 30364113 PMCID: PMC6191467 DOI: 10.3389/fphys.2018.01370
42. Xie J, Covassin N, Chahal AA, Schulte PJ, **Singh P**, Somers VK, Caples SM. Effect of adaptive servo-ventilation on periodic limb movements in sleep in patients with heart failure. *American Journal of Cardiology*, 2019, 123 (4):632-637. PMID: 30554649 PMCID: PMC6349535 [Available on 2020-02-15] DOI: 10.1016/j.amjcard.2018.11.014.

43. **Singh P**, A sleep apneics' gene: perspectives for development of diabetes. *Polish Archives of Internal Medicine*, 2019, 129 (1):800-801. PMID: 30702652 PMCID: PMC6530905 DOI: 10.20452/pamw.4431
44. Polonis K*, Sompalli S, Becari C, Xie J, Covassin N, Schulte PJ, Druliner B, Johnson R, Narkiewicz K, Boardman L, **Singh P**, Somers VK. Telomere length and risk of major adverse cardiac events and cancer in obstructive sleep apnea patients. *Cells*, 2019, 8 (5) 381. PMID: 31027347 PMCID: PMC6562838 DOI: 10.3390/cells8050381
45. Polonis K*, Becari C, Chahal AA, Allen A, Kellogg TA, Somers VK, **Singh P**. Intermittent hypoxia triggers senescence: implication for obstructive sleep apnea. *Scientific Reports, Revised manuscript submitted*.
46. **Singh P**, Covassin N, Singh RJ, Cundrle I, Sert-Kuniyoshi FH, Romero-Corral A, Davison DE, Lopez-Jimenez F, Jensen MD, Somers VK. Modest weight gain and weight loss alter expression of sex hormone binding globin in healthy men: relationships with endothelial function and body composition. *Manuscript in preparation*.
47. Covassin N, **Singh P**, McCrady-Spitzer SK, St. Louis EK, Calvin AD, Levine JA, Somers VK. Sleep restriction, energy intake and energy expenditure: implications for visceral obesity. *Manuscript in preparation*.

* Indicates that the primary author is a mentee.

Letters

1. Cundrle I, **Singh P**, Johnson BD, Scott CG, Olson, LY. Leptin and ventilation in heart failure. Response. *Chest*, 2015, 147 (5), E198

Abstracts (selected)

1. **Singh P**, Peterson TE, Romero-Corral A, Davison DE, Jensen MD, Somers VK. Identification of caveolin-1 as an inhibitor of leptin signaling: Implications for leptin resistance in a human weight gain model. *Circulation*, 2008; 118(18_Meeting Abstracts): S_278-c-
2. Sahakyan K, Somers VK, **Singh P**, Coutinho T, Jensen MD, Roger VL, Sochor O, Lopez-Jimenez F, Normal-weight central obesity and cardiovascular mortality risk in the US population, *European Heart Journal*, 2012, 33, 494-494.
3. Sahakyan K, Somers VK, Rodriguez-Escudero JP, Squires R, Allison T, Thomas R, Sochor O, **Singh P**, Lopez-Jimenez F. Physical Activity, Nutritional Status and the risk for Normal weight Obesity in the US Population, *Circulation*, 2012; 126: A9262
4. Sahakyan K, Somers VK, Rodriguez-Escudero J, Thomas R, Sochor O, **Singh P**, Lopez-Jimenez F. Normal-weight Central Obesity and Cardiovascular Mortality Risk in Hypertensive Patients, *Journal of the American College of Cardiology*, 2013; 61 (10_S).

5. Cundrle I, Somers VK, **Singh P**, Johnson BD, Scott CG, van der Walt C, Olson, LY. Leptin Concentration Predicts Central Sleep Apnea in Heart Failure Patients, *Journal of the American College of Cardiology*, 2013; 61 (10_S).
6. **Singh P**, Sahakyan K, Sert Kuniyoshi F, Romero-Corral A, Davison DE, Jensen MD, Somers VK. Leptin induces adiponectin expression: Implications in obesity. *The FASEB Journal* 2013; 27:1192.7.
7. Covassin N, **Singh P**, Sert-Kuniyoshi FH, Romero-Corral A, Davison DE, Lopez-Jimenez F, Jensen MD, Somers VK, Experimental Modest Weight Gain Increases 24-h Blood Pressure in Lean Healthy Subjects: Implications of Increased Visceral Fat. *Hypertension*, 2014, 64:A029.
8. Pfeifer MA*, Zhang Y, **Singh P**. Metformin Decreases Caveolin-1 expression in differentiated human preadipocytes. *The FASEB Journal*,2016;30 (1):1292.7.
9. Becari C*, Polonis K, Somers VK, Chahal AA, Sharma P, Covassin N, **Singh P**. Adipose tissue renin angiotensin system in obstructive sleep apnea: role of intermittent hypoxia. *Circulation*, 2016.
10. Covassin N, **Singh P**, McCrady-Spitzer SK, St Louis EK, Calvin AD, Levine JA, Somers VK, Experimental sleep restriction, energy balance and weight gain: Implications for visceral adiposity. *Circulation*, 2017: 136 (1) A20740.
11. Zhang Y*, Somers VK, Dong Yu, **Singh P**. Anti-apoptotic role of leptin in adipose tissue. *Arteriosclerosis, thrombosis and vascular biology*, 2018.
12. Smith KL, Boeve AR, Somers VK, Bukartyk J, **Singh P**, Covassin N. Frequency of breakfast consumption, obesity and weight gain. *The FASEB Journal*, 2018, 32 (1).