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EDUCATION

September 1984 - November 1991

Necker - Enfants Malades Faculty of Medicine, Paris, France
M.D., November 1991

September 1978 - June 1983

Pahlavi University Faculty of Medicine, Shiraz, Iran

POST-GRADUATE TRAINING

July 1997 - June 2000

Postdoctoral Fellow/Associate Research Scientist in Cardiovascular
Immunology Laboratory, Boyer Center for Molecular Medicine, Yale University
School of Medicine, New Haven, CT

July 1995-June 1997

Fellow in Cardiovascular Medicine, Section of Cardiovascular Medicine, Yale
University School of Medicine, New Haven, CT

July 1992-June 1995

Resident in Internal Medicine, Yale-New Haven Hospital, New Haven, CT

CERTIFICATIONS and LICENSES

November 2010

Certification Board of Cardiovascular Computed Tomography (valid to 2020)

August 2007

Level II Certification in Coronary CTA, Lennox Hill Hospital, NY, NY

October 2000

Certification in Nuclear Cardiology (valid to 2020)

November 1998

Board Certified in Cardiovascular Medicine (valid to 2028)

October 1995

Board Certified in Internal Medicine (valid to 2015)

July 1995

Medical License by the Department of Public Health, State of Connecticut

June 1993

Federation Licensing Examination (FLEX), Commonwealth of Pennsylvania

July 1991

ECFMG Certificate by the Educational Commission for Foreign Medical Graduates

PROFESSIONAL EXPERIENCE

July 2015 - present

Professor of Medicine (Cardiology), Yale School of Medicine, New Haven, CT

July 2010 - 2015

Director of Advanced Cardiac Imaging, Section of Cardiology, VA Connecticut Healthcare System, West Haven, CT

July 2007 - June 2015

Associate Professor of Medicine (Cardiology), Yale School of Medicine, New Haven, CT

July 2001 - June 2007

Assistant Professor of Medicine (Cardiology), Yale School of Medicine, New Haven, CT

July 2001 - present

Director of Cardiovascular Molecular Imaging Laboratory, Yale University and VA Connecticut Healthcare System, West Haven, CT

July 2000 - present

Staff Physician, VA Connecticut Healthcare System, West Haven, CT

July 2000 - June 2001

Instructor, Department of Internal Medicine, Yale University, New Haven, CT

May 1991 - June 1992

Research Assistant in Cardiovascular Immunology Laboratory, Section of Cardiovascular Medicine, Department of Internal Medicine, Yale School of Medicine, New Haven, CT

December 1985 - October 1987

Clinical Research Assistant in “Association A. Garrod Pour l’Etude des Maladies Hereditaires du Metabolisme et des Malformations Congenitales”, Necker-Enfants Malades Hospital, Paris, France

HONORS and AWARDS

June 2018

Henry N. Wagner, Jr., MD, Cardiovascular Highlights Lecture, SNMMI Annual Meeting

February 2017

Master of Arts Privatim, Yale University

June 2012

Hermann Blumgart Award, Cardiovascular Council, Society of Nuclear Medicine

March 2000

American College of Cardiology/Harry B. Graf Career Development Award for Heart Disease Prevention

March 1999

American Society of Nuclear Cardiology/Nycomed Amersham Clinical Research Award

April 1997

Physician-Scientist Fellowship Award from the Lucille P. Markey Charitable Trust

September 1993

NIH Clinical Trainee Research Award for Distinguished Accomplishments in the Biomedical Sciences

September 1984

First Place, Medical School Entrance Exam
Necker - Enfants Malades Faculty of Medicine, Paris, France

June 1978

First Place, Iranian College Entrance Exam (300,000 participants)

MEMBERSHIP in ORGANIZATIONS

American College of Cardiology
Society of Nuclear Medicine and Molecular Imaging
American Society of Nuclear Cardiology
North American Vascular Biology Organization

LANGUAGES

English, French, Persian

CLINICAL ACTIVITIES

Attending on inpatient cardiology and internal medicine teams at WHVAMC
Supervision of fellow, resident, and NP outpatient cardiology clinics at WHVAMC
Reading nuclear cardiology and cardiac CT studies at WHVAMC and YNHH

TEACHING ACTIVITIES

2000-present: Inpatient and Outpatient Internal Medicine and Cardiology Rounds for Residents and Fellows

2000-present: Regular Lectures on Nuclear Imaging, Molecular Imaging, Radiation Safety and Valvular Heart Disease to Yale and Affiliated Hospitals' Residents and Fellows

2001-present: Medical Student's ECG Workshop, Yale University School of Medicine

2004-2006: Medical Student Clinical Tutor, Yale University School of Medicine

COMMITTEE and PROFESSIONAL SOCIETY ASSIGNMENTS

2018: Member, American Society of Nuclear Cardiology Annual Meeting Program Committee

2018: Member, American Society of Nuclear Cardiology Annual Meeting Abstract Review Panel

2018: Member, Society of Nuclear Medicine and Molecular Imaging Cardiovascular Council Nominating Committee

2017-18: Member, The Institute for the Advancement of Nuclear Cardiology (IANC) Research Awards Committee

2017: Member, International Conference on Nuclear Cardiology and Cardiac CT Program Committee

2017: Member, Hermann Blumgart Award Committee, Society of Nuclear Medicine and Molecular Imaging

2016- present: Member, Board of Directors, Cardiovascular Council, Society of Nuclear Medicine and Molecular Imaging

2015: Co-Chair, Multi-societal invitational “Cardiovascular Molecular Imaging Think Tank: Devising Strategies to Bridge the Translational Divide” to be held in DC in April 2015

2014: Member, Membership Committee, Society of Nuclear Medicine and Molecular Imaging

2014: Member, American Society of Nuclear Cardiology Annual Meeting Abstract Review Panel

2014: Member, European Society for Molecular Imaging Annual Meeting Abstract Review Panel

2013-2015: Vice Chair, Annual Meeting Scientific Program Committee, Society of Nuclear Medicine and Molecular Imaging

2013-14: Chair, Hermann Blumgart Award Committee, Society of Nuclear Medicine and Molecular Imaging

2012-14: Member, World Molecular Imaging Congress Annual Meeting Abstract Review Panel

2012: Chair, Society of Nuclear Medicine and Molecular Imaging Cardiovascular Council Election Committee

2011-2013: Board of Directors, Society of Nuclear Medicine and Molecular Imaging Center for Molecular Imaging Innovation and Translation

2011- 2016: Member, Animal User’s Committee, Yale University School of Medicine

2010-2011: President, Cardiovascular Council, Society of Nuclear Medicine

2008-2010: Vice-President Elect then Vice-President, Cardiovascular Council, Society of Nuclear Medicine

2008-2016: Member, Board of Directors, Cardiovascular Council, Society of Nuclear Medicine and Molecular Imaging

2007-2008: Member, Department of Internal Medicine’s Intern Selection Committee, Yale University School of Medicine

2005-2008, 2014: Member, Cardiology Fellow Selection Committee, Yale University School of Medicine

2006-2010: Subchair for Young Investigator Award Competition, Society of Nuclear Medicine Annual Meeting Program Committee,

2005-2007: Member, Board of Directors, Cardiovascular Council, Society of Nuclear Medicine

2004-2015: Member, Surgical and Other Invasive Procedures Committee, VA Connecticut Healthcare System

2004-present: Member, Radiation Safety Committee, VA Connecticut Healthcare System

2003-2005: Member, Radioactive Drug Research Committee, VA Connecticut Healthcare System

2002- 2004: Member, American Society of Nuclear Cardiology Panel of Experts in Vascular Imaging

2001-2004: Chair, Surgical and Other Invasive Procedures Committee, VA Connecticut Healthcare System

GRANT REVIEW

2019: VA Merit Review Panel
 2019: NIH IPCA ad-hoc member
 2018-19: IANC Research Award
 2016: NIH ZRG1 CVRS-E ad-hoc member
 2016: NIH CICS ad-hoc member
 2016: NIH CICS ad-hoc member
 2015: NIH ZRG1 CVRS-E SEP ad-hoc member
 2015: Austrian Science Fund
 2014: Qatar National Research Fund
 2013: ASNC Travel Award
 2013: Qatar National Research Fund
 2012: NIH NHLBI Program Project Review Committee (HLBP)
 2012: NIH NHLBI LRP
 2010: Netherland's Technology Foundation
 2009: NIH Challenge Grants
 2003-09: ACCF Awards Committee

EDITORIAL and REVIEW SERVICES

2015-present: Member of Editorial Board, Journal of Nuclear Medicine

2014-present: Associate Editor, Journal of Nuclear Cardiology

2003-present: Reviewer for American Journal of Respiratory Cell and Molecular Biology, Atherosclerosis, ATVB, Cardiology, Circulation, Circulation Cardiovascular Imaging, European Heart Journal Cardiovascular Imaging, European Heart Journal Cardiovascular Imaging, European Journal of Nuclear Medicine and Molecular Imaging, FASEB Journal, Future Cardiology, Journal of the American College of Cardiology, JACC Imaging, Journal of Nuclear Cardiology, Journal of Nuclear Medicine, Magnetic Resonance Imaging, Nanomedicine, PNAS, Theranostics, Thrombosis and Haemostasis

MENTORING ACTIVITIES

1) Student mentoring:

Name of trainee: Ali Kooshkabadi

Position and period of mentorship: Yale Undergraduate Student; STARS Summer Research Scholar, Summer 2002

Name of trainee: Niema Razavian

Position and period of mentorship: University of California, Berkeley Undergraduate Student; Summer 2008 and 2009

Name of trainee: Michelle de Roo

Position and period of mentorship: University of Groningen (Netherlands) PharmD Student; 12/2013- 5/2014

Name of trainee: Koen Hilgerink

Position and period of mentorship: University of Groningen (Netherlands) PharmD Student; 12/2013- 5/2014

Name of trainee: Aria Mohseni

Position and period of mentorship: Emory University Undergraduate Student, Summer 2017

Name of trainee: Heng Liu

Position and period of mentorship: Vassar College Undergraduate Student, Summer 2018

2) Postdoctoral mentoring: Postdoctoral fellows, postgraduate associates, clinical fellows and/or residents

Name of trainee: Svetlana Krassilnikova, MD

Position and period of mentorship: Postdoctoral Fellowship; 2000-2004

Research project: Molecular imaging of vascular remodeling

Current position: Allergy-Immunology Physician, VA

Name of trainee: Amir A. Gharaei, MD

Position and period of mentorship: Postdoctoral Fellowship; 2001-2003

Research project: Molecular imaging of vascular remodeling
 Current position: Pulmonary-Critical Care Physician, WA

Name of trainee: Jiasheng Zhang, MD
 Position and period of mentorship: Postdoctoral Fellowship; 2002-2003, Associate Research Scientist; 2003-2012
 Research project: Molecular imaging of vascular remodeling
 Awards & honors: Recipient of the Fellowship Award of American Society of Nuclear Cardiology in 2006
 Current position: Research Scientist, Internal Medicine/Cardiology, Yale University

Name of trainee: Gaoxing Luo, MD, PhD
 Position and period of mentorship: Postdoctoral Fellowship; 2002-2003
 Research project: ESDN and regulation of vascular remodeling
 Current position: Professor at the Institute of Burn research, Third Military Medical University, China

Name of trainee: Hooman R. Fassaei, MD
 Position and period of mentorship: Postdoctoral Fellowship; 2003-2004
 Research project: ESDN and regulation of vascular remodeling
 Current position: Anesthesiologist, CA

Name of trainee: Abolfazl Asadi, PhD
 Position and period of mentorship: Postdoctoral Fellowship; 2004-2005
 Research project: ESDN and regulation of vascular remodeling
 Current position: Research Engineer, Stockholm University, Sweden

Name of trainee: Lei Nie, PhD
 Position and period of mentorship: Postdoctoral Fellowship; 2005-2011, Associate Research Scientist; 2011-2014
 Research project: ESDN and regulation of vascular remodeling and molecular imaging of vascular remodeling
 Awards & honors: Recipient of the Young Investigator award of the Cardiovascular Molecular Imaging Symposium in Washington SC, in April 2009
 Current position: Professor at Hebei University, China

Name of trainee: Masood Ahmed, MD
 Position and period of mentorship: Postdoctoral Fellowship; 2005-2007
 Research project: MMP-targeted imaging of vascular remodeling
 Current position: Cardiologist, GA

Name of trainee: Mahmoud Razavian, PhD
 Position and period of mentorship: Postdoctoral Fellowship; 2007-2008, Associate Research Scientist; 2008-2014
 Research project: Molecular imaging of vascular remodeling
 Awards & honors: Recipient of the best poster award, SNMMI annual meeting 2013
 Current position: Scientist at the Industry, CA

Name of trainee: Sina Tavakoli, MD
 Position and period of mentorship: Postdoctoral Fellowship; 2008-2010
 Research project: $\alpha\text{v}\beta\text{3}$ -targeted imaging of injury-induced vascular remodeling and response to rosiglitazone in type 2 diabetic mice
 Awards & honors: Recipient of an AHA postdoctoral fellowship award, Recipient of Radiological Society of North America (RSNA) Young Investigator Award in Molecular Imaging in 2009
 Current position: Assistant Professor of Radiology, University of Pittsburgh, PA

Name of trainee: Ravi Marfatia, MD
 Position and period of mentorship: Postdoctoral Fellowship; 2008-2010
 Research project: Molecular imaging of vascular remodeling
 Current position: Oconee Heart and Vascular Center, Athens, GA

Name of trainee: Heloise Mongue-Din, PhD
 Position and period of mentorship: Postdoctoral Fellowship; 2010
 Research project: Molecular imaging of vascular remodeling
 Current position: Clinical research manager, London Ambulance Service, UK

Name of trainee: Xuan Li, PhD
 Position and period of mentorship: Postdoctoral Fellowship; 2010-11
 Research project: ESDN and regulation of vascular remodeling
 Current position: Research assistant, Pharmaceutical School of Nanjing University of Chinese Medicine, China

Name of trainee: Azariyas A. Challa, MD, PhD
 Position and period of mentorship: Postdoctoral Fellowship; 2012-2013
 Research project: Molecular imaging of calcific aortic valve disease
 Current position: Internal Medicine, UPMC, PA

Name of trainee: Jae-Joon Jung, PhD
 Position and period of mentorship: Postdoctoral Fellowship; 2013-14
 Research project: ESDN and regulation of vascular remodeling
 Current position: Associate Research Scientist, Internal Medicine/Cardiology, Yale University

Name of trainee: Reza Golestani, MD, PhD
 Position and period of mentorship: Postdoctoral Fellowship; 2013-2016
 Research project: Molecular imaging of aortic aneurysm
 Awards & honors: Recipient of American Society of Nuclear Cardiology Travel Award in 2013, Recipient of Society of Nuclear Medicine and Molecular Imaging (SNMMI) Cardiovascular Council Young Investigator Award in 2014
 Current position: Pathology Residency, University of Southern California, CA

Name of trainee: Jakub Toczek, PhD
 Position and period of mentorship: Postdoctoral Fellowship; 2014-present

Research project: Molecular imaging of aortic aneurysm

Awards & honors: Recipient of Society of Nuclear Medicine and Molecular Imaging (SNMMI) Cardiovascular Council Best Poster Award in 2016, Recipient of American Society of Nuclear Cardiology Young Investigator Award in 2017, AHA Postdoctoral Fellowship 2018-2020, Department of Defense Discovery Award 2019.

Current position:

Name of trainee: Kiran Gona, PhD

Position and period of mentorship: Postdoctoral Fellowship; 2016-present

Research project: Novel MMP tracers

Awards & honors: American Society of Nuclear Cardiology Young Investigator Award Finalist in 2018

Current position:

Name of trainee: Arvene Golbazi, BS

Position and period of mentorship: Postgraduate Associate; 2018-present

Research project: Signal peptide in wound healing

Awards & honors:

Current position:

Name of trainee: Parnaz Boodagh, PhD

Position and period of mentorship: Postdoctoral Fellowship; 2018-present

Research project: Molecular imaging and therapy in vascular remodeling

Current position:

Name of trainee: Mani Salarian, PhD

Position and period of mentorship: Postdoctoral Fellowship; 2019-present

Research project: MMP-12 in aortic aneurysms

Current position:

3) Faculty mentoring

Name of trainee: Alan Morrison, MD, PhD

Position and period of mentorship: Assistant Professor; 2013-2017

Role as mentor: Co-mentor on VA Career Development Award (started in July 2014)

Current position: Assistant Professor, Internal Medicine/Cardiovascular Medicine, Brown Alpert Medical School

Name of trainee: Jiasheng Zhang, MD

Position and period of mentorship: Research Scientist; 2013-present

Role as mentor: Supporting molecular imaging research, Mentor on American Heart Association Scientist Development Grant Proposals

Current position: Research Scientist, Internal Medicine/Cardiology, Yale University

Name of trainee: Jae-Joon Jung, PhD

Position and period of mentorship: Research Scientist, 2014-present

Role as mentor: Mentor on American Heart Association Scientist Development Grant,
 Department of Defense and NIH Proposals
 Research project: ESDN and regulation of valvular remodeling
 Current position: Research Scientist, Internal Medicine/Cardiology, Yale University

PUBLICATIONS in PEER-REVIEWED JOURNALS

1. Bender JR, **Sadeghi MM**, Watson C, Pfau S, Pardi R. "Heterogeneous activation thresholds to cytokines in genetically distinct endothelial cells; Evidence for diverse transcriptional responses" *Proceedings of the National Academy of Sciences, USA*, 1994; 91:3994-3998
2. **Sadeghi MM**, Collinge M, Pardi R, Bender JR. "Simvastatin modulates cytokine-mediated endothelial cell adhesion molecule induction; involvement of an Inhibitory G protein", *Journal of Immunology*, 2000; 165: 2712-2718
3. **Sadeghi MM**, Tiglio A, Sadigh K, O'Donnell L, Collinge M, Pardi R, Bender JR. "Inhibition of interferon- γ -mediated microvascular endothelial cell major histocompatibility complex class II gene activation by HMG-CoA reductase inhibitors", *Transplantation*, 2001; 71(9): 1262-1268
4. Danesh FR, **Sadeghi MM**, Amro N, Philips C, Zeng L, Lin S, Sahai A, Kanwar YS. "3-Hydroxy-3-methylglutaryl CoA reductase inhibitors prevent high glucose-induced proliferation of mesangial cells via modulation of Rho GTPase/ p21 signaling pathway: Implications for diabetic nephropathy" *Proceedings of the National Academy of Sciences, USA*, 2002; 99:8301-8305
5. Tatum JL, Narula J, Bender JR, Heller G, **Sadeghi MM**, Strauss HW. "Lake Tahoe Invitational Meeting 2002, Panel 3: Vascular Imaging", *Journal of Nuclear Cardiology*, 2003; 10(2): 234-237
6. Zhu Q, Piao D, **Sadeghi MM**, Sinusas AJ. "Simultaneous optical coherence tomography imaging and beta particle detection", *Optics Letters*, 2003; 28(18):1704-1706.
7. **Sadeghi MM**, Schechner JS, Krassilnikova S, Gharaei AA, Zhang J, Kirkiles-Smith N, Sinusas AJ, Zaret BL, Bender JR. "Vascular cell adhesion molecule-1-targeted detection endothelial activation in human microvasculature" *Transplantation Proceedings*, 2004; 36:1585-1591.
8. **Sadeghi MM**, Krassilnikova S, Zhang J, Gharaei AA, Rastegar Fassaei H, Esmailzadeh L, Kooshkabi A, Edwards DS, Yalamanchili P, Harris TD, Sinusas AJ, Zaret BL, Bender JR. "Detection of injury-induced vascular remodeling by targeting activated α v β 3 integrin in vivo", *Circulation*, 2004; 110:84-90.

9. Meoli DF, **Sadeghi MM**, Krassilnikova S, Bourke B, Giordano FJ, Dione DP, Su H, Edwards DS, Liu S, Harris TD, Madri J, Zaret BL, Sinusas AJ. "Non-invasive imaging of myocardial angiogenesis following experimental myocardial infarction", *Journal of Clinical Investigation*, 2004; 113 (12):1684-1691.
10. Zeng L, Xu H, Chew TL, Chisholm R, **Sadeghi MM**, Kanwar YS, Danesh FR. "Simvastatin modulates angiotensin II signaling pathways by preventing Rac1-mediated upregulation of p27", *Journal of the American society of Nephrology*, 2004; 15:1711-1720.
11. Hua J, Dobrucki LW, , **Sadeghi MM**, Zhang, J, Bourke BN Cavaliere P, Song J, Chow C, Jahanshad N, Van Royen N, Buschmann I, Madri JA, Mendizabel M, Sinusas AJ. "Non-invasive imaging of angiogenesis with a ^{99m}Tc-labeled peptide targeted at $\alpha\beta 3$ integrin following murine hindlimb angiogenesis", *Circulation*, 2005, 111:3255-3260.
12. Piao D, **Sadeghi MM**, Zhang J, Chen Y, Sinusas AJ, Zhu Q. "A hybrid positron detection and optical coherence tomography system: design, calibration and experimental validation with rabbit atherosclerotic models," *Journal of Biomedical Optics*, 2005, 10(4):044010.
13. Zhang J, Krassilnikova S, Gharaei AA, Rastegar Fassaei H, Esmailzadeh L, Asadi A, Danesh FR, Edwards DS, Harris TD, Azure M, Rodriguez ER, Tellides G, Sinusas AJ, Zaret BL, Bender JR, **Sadeghi MM**. " $\alpha\beta 3$ -targeted imaging of arteriopathy in transplanted human coronary arteries", *FASEB Journal*, 2005, 19(13):1857-9.
14. Zeng L, Xu H, Eng E, Chew T, **Sadeghi MM**, Adler S, Kanwar YS, Danesh FR. "VEGF-induced endothelial cell hyperpermeability is mediated by myosin regulatory light chain phosphorylation: modulatory effects of statins," *FASEB Journal*, 2005, 19(13):1845-7.
15. **Sadeghi MM**. "The pathobiology of the vessel wall; implications for imaging", *Journal of Nuclear Cardiology*, 2006, 13(3):402-414.
16. Xu H, Zeng L, Peng H, Chen S, Jones J, Chew T, **Sadeghi MM**, Kanwar YS, Danesh FR. "HMG-CoA reductase inhibitor, simvastatin mitigates VEGF-induced "inside-out" signaling to extracellular matrix by preventing RhoA activation", *American Journal of Physiology Renal Physiology*, 2006, 291(5): F995-F1004.
17. **Sadeghi MM**, Bender, JR. "Activated $\alpha\beta 3$ integrin targeting in injury-induced vascular remodeling", *Trends in Cardiovascular Medicine*, 2007, 17(1):5-10.
18. **Sadeghi MM**, Esmailzadeh L, Zhang J, Guo X, Asadi A, Krassilnikova S, Rastegar Fassaei H, Luo G, Al-Lamki RSM, Takahashi T, Tellides G, Bender JR, Rodriguez ER. "Endothelial and smooth muscle cell-derived neuropilin-like protein is a marker and regulator of cell proliferation in vascular remodeling", *American Journal of Transplantation*, 2007, 7(9):2098-2105.

19. Kalinowski L, Dobrucki LW, Meoli DF, Dione DP, **Sadeghi MM**, Madri JA, Sinusas AJ. "Targeted imaging of hypoxia-induced integrin activation in myocardium early after infarction", *Journal of Applied Physiology*, 2008, 104:1504-1512.
20. Zhang J, Nie L, Razavian M, Ahmed M, Dobrucki LW, Asadi A, Edwards DS, Azure M, Sinusas AJ, **Sadeghi MM**. "Molecular imaging of activated matrix metalloproteinases in vascular remodeling", *Circulation*, 2008, 118:1953-1960.
21. Nahrendorf M, Sosnovik DE, French BA, Swirski FK, Bengel F, **Sadeghi MM**, Lindner JR, Wu JC, Kraitchman DL, Fayad ZA, Sinusas AJ. "Multimodality cardiovascular molecular imaging, Part II", *Circulation: Cardiovascular Imaging*, 2009, 2:56-70.
22. Tavakoli S, **Sadeghi MM**, "Imaging of vascular biology in the heart", *Current Cardiovascular Imaging Reports*, 2009, 2:40-49.
23. Guo X, Nie L, Esmailzadeh L, Zhang J, Bender JR, **Sadeghi MM**. "Endothelial and smooth muscle-derived neuropilin-like protein (ESDN) modulates platelet-derived growth factor (PDGF) signaling in human vascular smooth muscle cells", *Journal of Biological Chemistry*, 2009, 284, 29376-29382.
24. Dobrucki LW, Meoli DF, Hu J, **Sadeghi MM**, Sinusas AJ, "Regional hypoxia correlates with the uptake of a radiolabeled targeted marker of angiogenesis in rat model of myocardial hypertrophy and ischemic injury", *Journal of Physiology and Pharmacology*, 2009, 60 Suppl 4:117-23.
25. **Sadeghi MM**, Glover DK, Lanza GM, Fayad ZA, Johnson LL. "Imaging atherosclerosis and the vulnerable plaque", *Journal of Nuclear Medicine*, 2010, 51:1S-15S.
26. Razavian M, Zhang J, Nie L, Tavakoli S, Razavian N, Dobrucki LW, Sinusas AJ, Edwards DS, Azure M, **Sadeghi MM**. "Molecular imaging of matrix metalloproteinase activation to predict aneurysm expansion in vivo," *Journal of Nuclear Medicine*, 2010, 51:1107-15.
27. Zhang J, Silva T, Yarovinsky T, Manes TD, Tavakoli S, Nie L, Tellides G, Pober JS, Bender JR, **Sadeghi MM**. "VEGF blockade inhibits lymphocyte recruitment and ameliorates immune-mediated vascular remodeling," *Circulation Research*, 2010, 107: 408-17.
28. Tavakoli S, Razavian M, Zhang J, Nie L, Marfatia R, Dobrucki DS, Sinusas AJ, Edwards DS, Robinson S, **Sadeghi MM**. "Monitoring the progression of vascular remodeling and response to dietary modification by molecular imaging of matrix metalloproteinase activation", *Atherosclerosis, Thrombosis and Vascular Biology*, 2011, 31:102-109.

29. **Sadeghi MM**, et al “Cardiovascular nuclear imaging: balancing proven clinical value and potential radiation risk”. *Journal of Nuclear Medicine*, 2011, 52:1162-4
30. Razavian M, Tavakoli S, Zhang J, Nie L, Dobrucki LW, Sinusas AJ, Azure M, Robinson S, **Sadeghi MM**. “Atherosclerosis plaque heterogeneity and response to therapy detected by in vivo molecular imaging of matrix metalloproteinase activation”. *Journal of Nuclear Medicine*, 2011, 52:1795-802.
31. Razavian M, Marfatia R, Mongue-Din H, Tavakoli S, Sinusas AJ, Zhang J, Nie L, **Sadeghi MM**. “Integrin-targeted imaging of inflammation in vascular remodeling”, *Atherosclerosis, Thrombosis and Vascular Biology*, 2011, 31:2820-6.
32. Fernandez AB, Wong TY, Klein R, Collins D, Burke G, Cotch MF, Klein B, **Sadeghi MM**, Chen J. “Age-related macular degeneration and incident cardiovascular disease: The multi-ethnic study of atherosclerosis”, *Ophthalmology*, 2012, 119:765-70.
33. Zhang J, Razavian M, Tavakoli S, Nie L, Tellides G, Backer JM, Backer MV, Bender JR, **Sadeghi MM**. “Molecular imaging of VEGF receptors in graft arteriosclerosis”, *Arterioscler Thromb Vasc Biol*, 2012, 32:1489-55.
34. Nie L, Guo X, Esmailzadeh L, Zhang J, Asadi A, Collinge M, Kim DJ, Jin SW, Dubrac A, Eichmann A, Simons M, Bender JR, **Sadeghi MM**. “Transmembrane protein ESDN promotes endothelial VEGF signaling and regulates angiogenesis”. *Journal of Clinical Investigation*, 2013, 123(12):5082-97. PMC: 3859420
35. Golestani R, **Sadeghi MM**. “Emergence of molecular imaging of aortic aneurysm; implications for risk stratification and management”. *Journal of Nuclear Cardiology*, 2014, 21(2):251-67.
36. Razavian M, Nie L, Challa A, Zhang J, Golestani R, Jung JJ, Robinson S, **Sadeghi MM**. “Lipid lowering and imaging protease activation in atherosclerosis”. *Journal of Nuclear Cardiology*, 2014, 21(2):319-28.
37. Yutzey KE, Demer LL, Body SC, Huggins GS, Towler DA, Giachelli CM, Hofmann-Bowman MA, Mortlock DP, Rogers MB, **Sadeghi MM**, Aikawa E. “Calcific aortic valve disease: challenges, questions, perspectives - A consensus summary from Alliance of Investigators on Calcific Aortic Valve Disease”, *Arterioscler Thromb Vasc Biol*, 2014, 34(11):2387-93.
38. Tavakoli S, Vashist A, **Sadeghi MM**. “Molecular imaging of plaque vulnerability”. *Journal of Nuclear Cardiology*, 2014, 21(6):1112-28.
39. **Sadeghi MM**. “18F-FDG PET and vascular inflammation: time to refine the paradigm?”, *Journal of Nuclear Cardiology*, 2015, 22(2):319-24.

40. Golestani R, Razavian M, Nie L, Zhang J, Jung J-J, Ye Y, de Roo M, Hilgerink K, Liu C, Robinson SP, **Sadeghi MM**. “Imaging vessel wall biology to predict outcome in abdominal aortic aneurysm”. *Circulation: Cardiovascular Imaging*. 2015, 30;8(1). pii: e002471. doi: 10.1161/CIRCIMAGING.114.002471.
41. **Sadeghi MM**, Wu JC. “Cardiovascular molecular imaging: expanding the paradigms and parameters”, *Journal of Nuclear Cardiology*, 2015, 22(3):401-2.
42. Jung JJ, Razavian M, Challa AA, Nie L, Golestani R, Zhang J, Ye Y, Russell KS, Robinson SP, Heistad DD, **Sadeghi MM**, “Multimodality and molecular imaging of matrix metalloproteinase activation in calcific aortic valve disease”, *Journal of Nuclear Medicine*, 2015, 56(6):933-8.
43. Zhou J, Qin L, Yi T, Ali R, Li Q, Jiao Y, Li G, Tobiasova Z, Huang Y, Zhang J, Yun JJ, **Sadeghi MM**, Giordano FJ, Poher JS, Tellides G. “Interferon- γ -mediated allograft rejection exacerbates cardiovascular disease of hyperlipidemic murine transplant recipients”, *Circulation Research*, 2015, 117(11):943-55
44. **Sadeghi MM**. “Molecular cardiovascular imaging is ready for prime time: almost there”, *Journal of Nuclear Cardiology*, 2016, 23(1):67-70.
45. Toczek J, Meadows JL, **Sadeghi MM**. “Novel molecular imaging approaches to abdominal aortic aneurysm risk stratification”. *Circulation: Cardiovascular Imaging*, 2016 Jan;9(1):e003023. doi: 10.1161/CIRCIMAGING.115.003023.
46. Toczek J, **Sadeghi MM**. “Molecular imaging concepts”. *Journal of Nuclear Cardiology*, 2016, 23(2):271-3.
47. Li X, Jung JJ, Nie L, Razavian M, Zhang J, Samuel V, **Sadeghi MM**. “A neuropilin-like protein, ESDN regulates insulin signaling and sensitivity”. *American Journal of Physiology-Heart and Circulatory Physiology*, 2016, 310(9):H1184-93.
- 48 Toczek J, **Sadeghi MM**. “A new tracer for imaging atherosclerosis”. *Circulation: Cardiovascular Imaging*, 2016 May;9(5): e004889. doi: 10.1161/CIRCIMAGING.116.004889.
49. Golestani R, Jung JJ, **Sadeghi MM**. “Molecular imaging of angiogenesis and vascular remodeling in cardiovascular pathology”. *J Clin Med*. 2016 Jun 6;5(6). pii: E57. doi: 10.3390/jcm5060057
50. Bordenave T, Helle M, Beau F, Georgiadis D, Tepshi L, Bernes M, Ye Y, Levenez L, Poquet E, Nozach H, Razavian M, Toczek J, Stura EA, Dive V, **Sadeghi MM**, Devel L. “Synthesis and in Vitro and in Vivo Evaluation of MMP-12 Selective Optical Probes”. *Bioconjug Chem.*, 2016, 27(10):2407-2417
51. Jung JJ, Razavian M, Kim HY, Ye Y, Golestani R, Toczek J, Zhang J, **Sadeghi MM**. “Matrix metalloproteinase inhibitor, doxycycline and progression of calcific

aortic valve disease in hyperlipidemic mice.” *Scientific Reports*, 2016;6:32659. doi: 10.1038/srep32659

52. Ceneri N, Zhao L, Young BD, Healy A, Coskun S, Vasavada H, Yarovinsky TO, Ike K, Pardi R, Qin L, Qin L, Tellides G, Hirschi K, Meadows J, Soufer R, Chun HJ, **Sadeghi MM**, Bender JR, Morrison AR. “Rac2 Modulates Atherosclerotic Calcification by Regulating Macrophage Interleukin-1 β Production.” *Arterioscler Thromb Vasc Biol*. 2017; 37(2):328-340

53. Tavakoli S, Short JD, Downs K, Nguyen HN, Lai Y, Zhang W, Jerabek P, Goins B, **Sadeghi MM**, Asmis R. “Differential Regulation of Macrophage Glucose Metabolism by Macrophage Colony-stimulating Factor and Granulocyte-Macrophage Colony-stimulating Factor: Implications for 18F FDG PET Imaging of Vessel Wall Inflammation.” *Radiology*. 2017 Apr;283(1):87-97

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65. Chen K, Miller EJ, **Sadeghi MM**. “PET Based Imaging of Ischemic Heart Disease” *PET Clinics*, 2019, 14(2):211-221. doi: 10.1016/j.cpet.2018.12.003

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BOOK CHAPTERS

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3. Marfatia R, Tavakoli S, **Sadeghi MM**. "Applications of Molecular Small-Animal Imaging in Cardiology". In: Multimodality Molecular Imaging of Small Animals. Springer Science+Business Media New York. Ed. Zaidi H. 2014: Ch. 20, 525-560.

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ABSTRACTS

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25. Razavian M, Nie L, Tavakoli S, Sinusas AJ, Robinson S, Sadeghi MM, "MMP-targeted molecular imaging to assess the temporal effect of anti-lipid therapies in atherosclerosis", *Journal of Nuclear Medicine*, 2012, 53 (Supplement 1):1784 (selected as Best Poster, Cardiovascular Track)
26. Azariyas Challa, Laurent Devel, Mahmoud Razavian, Lei Nie, Jiasheng Zhang, Vincent Dive, and Mehran Sadeghi. "Novel MMP-12-targeted tracers for molecular imaging of inflammation in atherosclerosis", *Journal of Nuclear Medicine*, 2013, 54 (Meeting Abstracts): 133
27. Mahmoud Razavian, Lei Nie, Azariyas Challa, Jiasheng Zhang, Albert Sinusas, Chi Liu, Simon Robinson, and Mehran Sadeghi. "Molecular imaging of MMP activation in abdominal aortic aneurysm", *Journal of Nuclear Medicine*, 2013, 54 (Meeting Abstracts): 77

28. Reza Golestani, Mahmoud Razavian, Lei Nie, Jae-Joon Jung, Yunpeng Ye, Chi Liu, Simon Robinson, and Mehran Sadeghi. "MMP imaging to predict aortic aneurysm rupture", *Journal of Nuclear Medicine*, 2014, 55 (Meeting Abstracts): 25 (Reza Golestani received the Cardiovascular Council's Young Investigator Award)
29. Andrew Rittenbach, Jingyan Xu, Chi Liu, Mahmoud Razavian, Mehran Sadeghi, and Benjamin Tsui. "Application of a direct regional activity characterization approach to focal uptake activity quantification in pinhole SPECT". *Journal of Nuclear Medicine*, 2014, 55 (Meeting Abstracts): 2119
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32. Mahmoud Razavian, Thomas Bordenave, Dimitris Georgiadis, Jiasheng Zhang, Reza Golestani, Yunpeng Ye, Jakub Toczek, Kim Hye-Yeong, Jae-Joon Jung, Vincent Dive, Laurent DEVEL, and Mehran Sadeghi. "Molecular imaging of MMP-12 activation in aneurysm", *Journal of Nuclear Medicine*, 2016, 57:1224
33. Reza Golestani, Jakub Toczek, Mahmoud Razavian, Jiasheng Zhang, Jae-Joon Jung, Yunpeng Ye, Chun Geun Lee, Jack Elias, Robert Homer, and Mehran Sadeghi. "Matrix metalloproteinase-targeted imaging of lung inflammation and remodeling", *Journal of Nuclear Medicine*, 2016, 57:488
34. Yunpeng Ye, Jakub Toczek, Mahmoud Razavian, Jiasheng Zhang, Reza Golestani, Jae-Joon Jung, Hye-Yeong Kim, and Mehran Sadeghi. "A New Arginine-containing Macrocyclic Hydroxamate Analog for MMP-targeted SPECT Imaging: Design, Synthesis, ^{99m}Tc-labeling, and Evaluation", *Journal of Nuclear Medicine*, 2016, 57:1140
35. Jakub Toczek, Yunpeng Ye, Jiasheng Zhang, Mahmoud Razavian, Reza Golestani, Jae-Joon Jung, Hye-Yeong Kim, and Mehran Sadeghi. "An improved hydroxamate-based matrix metalloproteinase targeting tracer for aneurysm imaging", *Journal of Nuclear Medicine*, 2016, 57:1628 (Best cardiovascular poster award).
36. Jakub Toczek, Yunpeng Ye, Kiran Gona, Jiasheng Zhang, Jinah Han, Jae-Joon Jung, and Mehran M. Sadeghi "A Novel Matrix Metalloproteinase Targeting Tracer for PET Imaging of Aneurysms", *Journal of Nuclear Cardiology* (2017) 24: 1461. <https://doi.org/10.1007/s12350-017-0984-y> (abstract 330-01, Winner of the Young Investigator Award)

37. Jakub Toczek, Ansel Hillmer, Jinah Han, Hamed Emami, Chi Liu, Dana Peters, Irina Esterlis, Kelly Cosgrove, and Mehran Sadeghi “FDG PET imaging of vascular and systemic inflammation in patients with PTSD”. *Journal of Nuclear Medicine*, 2018, 59 supplement 1: 302.

38. Jakub Toczek, Kiran Gona, Jinah Han, Jiasheng Zhang, Jae-Joon Jung, and Mehran Sadeghi “Molecular imaging of phagocytic activity in abdominal aortic aneurysm”. *Journal of Nuclear Medicine*, 2018, 59 supplement 1: 104.

INVITED LECTURES

November 20, 2018: Cedars-Sinai Special Seminar, Los Angeles, CA: “Molecular Imaging of Vascular Remodeling in Aortic Aneurysms”

November 19, 2018: UCLA Cardiovascular Theme Distinguished Seminar Series, Los Angeles, CA: “Molecular Imaging and Biology in Aortic Valve Disease and Aneurysms”

September 7, 2018: American Society of Nuclear Cardiology Annual Meeting, San Francisco, CA: “Molecular Imaging of Aneurysms and Peripheral Arterial Disease”

June 26, 2018: Society of Nuclear Medicine and Molecular Imaging Annual Meeting, Philadelphia, PA: “Application of Novel Tracers in Vascular Imaging: Coronaries and Beyond”

June 26, 2018: Society of Nuclear Medicine and Molecular Imaging Annual Meeting, Philadelphia, PA: “2018 SNMMI Highlights Lecture: Cardiovascular Nuclear and Molecular Imaging”

April 14, 2018: Heart Valve Society Annual Meeting, New York, NY: “Molecular Imaging of CAVD”

October 18, 2017: Vascular Biology 2017, Monterey, CA: “Matrix metalloproteinase-targeted imaging of vascular remodeling in aortic aneurysms”

September 16, 2017: American Society of Nuclear Cardiology Annual Meeting, Kansas City, MO: “New Tracers on the Horizon”

June 10, 2017: Society of Nuclear Medicine and Molecular Imaging Annual Meeting, Denver, CO: “Nuclear Imaging of Aortic Stenosis”

May 7, 2017: International Conference on Nuclear Cardiology and Cardiac CT, Vienna, Austria: “Coronary Atherosclerosis Imaging: Is It a Reality?”

September 24, 2016: American Society of Nuclear Cardiology Annual Meeting, Boca Raton, FL: “Advances in Radiotracer Design: Imaging Vascular Biology”

September 23, 2016: American Society of Nuclear Cardiology Annual Meeting, Boca Raton, FL: “Imaging for Advanced Coronary Disease”

June 11, 2016: Society of Nuclear Medicine and Molecular Imaging Annual Meeting, San Diego, CA: “Targeting the Vulnerable Plaque with Multimodality Techniques”

February 18, 2016: Stony Brook University Hospital Radiology Grand Rounds, Stony Brook, NY: “Molecular Imaging; an Emerging Conduit for Paradigm Shift in Cardiovascular Medicine”

January 29, 2016: Society of Nuclear Medicine and Molecular Imaging Midwinter Meeting, Orlando, FL: “Imaging of the “Vulnerable” Atherosclerotic Plaque: An Overview”

September 19, 2015: American Society of Nuclear Cardiology Annual Meeting, Washington DC: “Vulnerable Plaque Imaging; Not on the Horizon Anymore”

June 9, 2015: Society of Nuclear Medicine and Molecular Imaging Annual Meeting, Baltimore, MD: “PET/SPECT Imaging of Cardiovascular Diseases: State of the Art: Overview of Cardiovascular Pathology and Potential Imaging Targets”

June 6, 2015: Society of Nuclear Medicine and Molecular Imaging Annual Meeting, Baltimore, MD: “Aortic Aneurysms and Aortitis: Correlative Imaging”

May 3, 2015: The International Conference on Nuclear Cardiology and Cardiac CT, Madrid, Spain: “Multi-modality Cardiovascular Molecular Imaging Applications: Vascular Remodeling”

January 24, 2015: Society of Nuclear Medicine and Molecular Imaging Midwinter Meeting, San Antonio, TX: “Cardiovascular Molecular Imaging: Atherosclerosis”

November 9, 2014: Society of Nuclear Medicine and Molecular Imaging Annual Northeast Scientific Meeting, Stamford, CT: “Molecular Imaging of Atherosclerosis: Emerging Concepts”

September 8, 2014: American Society of Nuclear Cardiology Annual Meeting, Boston, MA: “Molecular Imaging in Aortic Aneurysm: Predicting Aneurysm Expansion and Rupture”

June 8, 2014: Society of Nuclear Medicine and Molecular Imaging Annual Meeting, St. Louis, MO: “Imaging Vascular Inflammation and Atherosclerosis”

June 7, 2014: Society of Nuclear Medicine and Molecular Imaging Annual Meeting, St. Louis, MO: “Novel PET Tracers and Targets for Clinical Vascular Imaging”

April 30, 2014: 4th Annual Donald W. Drew, MD Lecture, Internal Medicine Grand Rounds, Eastern Virginia Medical School, Norfolk, VA: “Molecular Imaging: An Emerging Conduit for Paradigm Shift in Cardiovascular Medicine”

February 9, 2014: Society of Nuclear Medicine and Molecular Imaging Midwinter Meeting, Palm Springs, CA: “New approaches to coronary atherosclerosis: FDG and NaF”

September 28, 2013: American Society of Nuclear Cardiology Annual Meeting, Chicago, IL: “Imaging Vascular Biology and Inflammation”

June 8, 2013: Society of Nuclear Medicine and Molecular Imaging Annual Meeting, Vancouver, BC, Canada: “Imaging the Vulnerable Plaque: An Overview of the Radionuclide and Other Imaging Techniques”

April 21, 2013: Experimental Biology 2013, Boston, MA: “Imaging of Inflammation and Vascular Remodeling”

January 27, 2013: Society of Nuclear Medicine and Molecular Imaging Midwinter Meeting, New Orleans, LA: “Imaging Inflammation and Vascular Remodeling”

June 12, 2012: Society of Nuclear Medicine Annual Meeting, Miami, FL: “New and Emerging Radiotracers in Cardiovascular Molecular Imaging: Atherosclerosis Imaging”

June 12, 2012: Society of Nuclear Medicine Annual Meeting, Miami, FL: “Imaging Plaque Biology and Treatment Response”

June 10, 2012: Society of Nuclear Medicine Annual Meeting, Miami, FL: “Vascular Molecular Imaging: Past, Present and Future”

April 20, 2012: 3rd Multimodality Cardiovascular Molecular Imaging Symposium, Bethesda, MD: “Imaging Inflammation and Vascular Remodeling”

December 16, 2011: VA VISN 1 Primary Care Grand Rounds Webinar: “Advanced Cardiac Imaging”

September 19, 2011: Multimodality Molecular Imaging of the Cardiovascular System Symposium, Buenos Aires, Argentina: “Imaging Atherosclerosis and Vulnerable Plaque”

June 24, 2011: Molecular Function and Imaging Symposium, Ottawa Heart Center, Ottawa, Canada: “Translational Imaging of the Vasculature”

June 23, 2011: Molecular Function and Imaging Symposium, Ottawa, Canada: “Animal Models of Vascular Disease and Novel Imaging Approaches”

June 4, 2011: Society of Nuclear Medicine Annual Meeting, San Antonio, TX: “Recent Advances and New Directions in Vascular Molecular Imaging”

April 15, 2011: Molecular and clinical cardiovascular Imaging Symposium, Geneva, Switzerland: “Emerging Applications of Cardiovascular Molecular Imaging”

June 9, 2010: Society of Nuclear Medicine Annual Meeting, Salt Lake City, UT: “Molecular Imaging for Early Detection of Atherosclerosis and Vascular Remodeling”

June 5, 2010: Society of Nuclear Medicine Annual Meeting, Salt Lake City, UT: “Recent Advances in Imaging Vessel Wall Biology”

June 13, 2009: Society of Nuclear Medicine Annual Meeting, Toronto, ON: “Beyond Stenosis: Molecular Imaging Markers of Plaque Vulnerability”

April 30, 2009: NIH Multimodality Cardiovascular Molecular Imaging Symposium, Bethesda, MD: “Imaging Pathobiology of the Vessel Wall”

April 30, 2009: NIH Multimodality Cardiovascular Molecular Imaging Symposium, Bethesda, MD: “Imaging of Unstable Plaque”

February 7, 2009: Society of Nuclear Medicine Midwinter Conference, Clearwater Beach, FL: “Biologic Imaging Targets in the Vessel Wall”

June 18, 2008: Society of Nuclear Medicine Annual Meeting, New Orleans, LA: “Imaging angiogenesis and inflammation in Cardiovascular Disease

September 8, 2007: American Society of Nuclear Cardiology Annual Meeting, San Diego, CA: “Radiotracer Imaging of Atherosclerosis”

September 7, 2007: American Society of Nuclear Cardiology Annual Meeting, San Diego, CA: “Non-invasive Characterization of Vascular Biology”

June 2007: University of Toronto, Toronto, ON: “Imaging Molecular Pathobiology in Vascular Disease”

April 2007: American Heart Association 3rd Annual Research Symposium, New York, NY: “Molecular Imaging in Mouse Models of Vascular Remodeling”

February 2007: Society of Nuclear Medicine Midwinter Conference, San Antonio, TX: “Novel Applications in Vascular Molecular Imaging”

September 2006: American Society of Nuclear Cardiology Annual Meeting, Montreal, QC: “ $\alpha v\beta 3$ Integrin-targeted Imaging of Vascular Cell Proliferation and Migration in Graft Arteriopathy”

June 2006: The 28th International Society for Heart Research Meeting, Toronto, ON: “Imaging Vascular Remodeling and Angiogenesis”

June 2006: Society of Nuclear Medicine Annual Meeting, San Diego, CA: “Targeting Vulnerable Plaque and Vascular Remodeling”

February 2006: Society of Nuclear Medicine Midwinter Conference, Phoenix, AZ: “Imaging of Vascular Remodeling”

September 2005: American Society of Nuclear Cardiology Annual Meeting, Seattle, WA: “The Biology of the Vessel Wall”

July 2005: Yale Interdepartmental Program in Vascular Biology and Transplantation Joint Retreat: “Imaging Vascular Remodeling in Graft Arteriopathy”

June 2005: Society of Nuclear Medicine Annual Meeting, Toronto, Canada: “Imaging of Cell Proliferation and Matrix in Vascular Remodeling”

May 2005: Medicine Grand Rounds, Department of Internal Medicine, Yale University: “Molecular Imaging: A new Tool for Diagnosis of Vascular Disease”

November 2004: Therapeutic Angiogenesis and Myogenesis, New Orleans, LA: “ $\alpha v \beta 3$ Imaging of Angiogenesis”

July 2004: American Society of Nuclear Cardiology 7th Nuclear Cardiology Invitational Meeting, Park City, UT: “Integrins and Other Novel Vascular Targets”

February 2004: Society of Nuclear Medicine Midwinter Conference, Irvine, CA: “Introduction to Molecular Imaging”

December 2003: Yale Interdepartmental Program in Vascular Biology and Transplantation Joint Retreat: “In vivo Detection of Vascular Remodeling”

July 2003: Dartmouth, UConn, and Yale Molecular Imaging Workshop: “Non-invasive Imaging of Vascular Remodeling; a Multilevel Approach”

September 2002: American Society of Nuclear Cardiology 6th Nuclear Cardiology Invitational Meeting, Lake Tahoe, NV: “Imaging Endothelial Contribution to Vascular Disease”

September 2001: Yale Interdepartmental Program in Vascular Biology and Transplantation Joint Retreat: “Imaging Vascular Activation in Small Animal Models”

GRANT SUPPORTACTIVE

1 R01 HL138567-01 PI: Mehran M. Sadeghi 06/01/2017-05/31/2021
NIH-NHLBI

Title: Novel Regulators of Calcific Aortic Valve Disease

The major goal of this project is to study the molecular mechanisms of calcific aortic valve disease.

Role: Principal Investigator

W81XWH-18-1-0105 PI: Mehran M. Sadeghi 04/15/2018-10/15/2019
DOD

Title: Monitoring mitochondrial dysfunction in diabetic heart

The major goal of this project is to develop imaging and biomarker tools for tracking mitochondrial dysfunction in diabetic cardiomyopathy.

Role: Principal Investigator

I01BX004038 PI: Mehran M. Sadeghi 01/01/2019 - 12/31/2022
VA

Title: Mechanistic studies of disease progression in aortic aneurysms

The goal of this project is to evaluate the interaction between matrix metalloproteinase activation, inflammation and rupture in abdominal aortic aneurysms.

Role: Principal Investigator

U01HL142518-01 PI: Jay Humphrey 07/01/2018 -06/30/2023
NIH-NHLBI

Title: Multimodality imaging-driven multifidelity modeling of aortic dissection

The goals of the project are to gain broad understanding of the bio-chemo-mechanical processes that lead to aortic dissection and to introduce a new machine learning based multifidelity modeling approach to develop predictive probabilistic multiscale models of dissection.

Role: Co-investigator

W81XWH-19-1-0044 PI: Mehran M. Sadeghi 04/01/2019-09/30/2020
DOD

Title: Reversal of Valvular Calcification in Bicuspid Aortic Valve

The major goal of this project is to identify drugs to reverse valvular calcification in bicuspid aortic valve.

Role: Principal Investigator

19POST34450142 (Fellowship) PI: Jakub Toczek 01/01/2019-12/31/2020
American Heart Association

Title: Molecular imaging of phagocytic activity in abdominal aortic aneurysm

The major goal of this project is to develop a CT-based approach for imaging vascular inflammation

Role: Mentor/Sponsor

W81XWH-19-1-0107

PI: Jakub Toczek

04/01/2019-09/30/2020

DOD

Title: Impact of Cellular Senescence on Myocardial Dysfunction

The major goal of this project is to develop imaging tools to investigate the effect of cellular senescence on cardiac function

Role: Supervisor

COMPLETED

PI: Mehran M. Sadeghi

07/01/99-06/30/00

American Society of Nuclear Cardiology

Title: Detection of Endothelial Activation in Human Artery Transplanted into SCID Mice; Development of a Vascular Imaging Model

The major goal of this project was to perform pilot studies on feasibility of in vivo detection of endothelial activation.

Role: Principal Investigator

PI: Mehran M. Sadeghi

07/01/00-06/30/01

American College of Cardiology

Title: Noninvasive Targeted Imaging of Neointimal Hyperplasia in vivo

The major goal of this project was to perform pilot studies on imaging neointimal hyperplasia in vivo.

Role: Principal Investigator

P01-HL70295

PI: Jordan S. Pober

09/20/01-08/31/06

NIH

Title: Chronic DTH and IFN- γ in Human Graft Arteriosclerosis (Project 3: Imaging DTH, IFN- γ Responses and GA in Human Arteries)

The major goal of the project was to develop a non-invasive imaging method for the detection of graft arteriosclerosis (GA).

Role: Co-investigator

R01-HL65662

PI: Albert J. Sinusas

07/01/01-04/31/10

NIH

Title: Hybrid Imaging of Angiogenesis and Arteriogenesis

The major goal of the project was to develop a non-invasive method for imaging angiogenesis.

Role: Co-investigator

Scientist Development Grant
(relinquished 09/07)

PI: Mehran M. Sadeghi

07/01/04-6/30/08

American Heart Association (National Center)

Title: Imaging Alpha v beta 3 Integrin in Injured Arteries

The major goal of the project was to image $\alpha\beta 3$ integrin expression/activation after vascular injury.

Role: Principal Investigator

VA Merit PI: Mehran M. Sadeghi 10/01/04-9/30/07

Department of Veterans Affairs

Title: ESDN, a Novel Early Marker for Vascular Remodeling

The major goal of the project was to study the role of ESDN in vascular remodeling

Role: Principal Investigator

P01-HL70295 PI: Jordan S. Pober 09/01/06-08/31/11

NIH

Title: Chronic DTH and IFN- γ in Human Graft Arteriosclerosis (Project 4: An IFN- γ -Integrin-Growth Factor Axis in GA Biomarker Development)

The major goal of the project was to study the interaction between vascular endothelial cell growth factor, integrin signaling and ESDN in the pathogenesis of graft arteriosclerosis.

Role: Co-investigator

0826025D (Fellowship) PI: Sina Tavakoli 07/01/08-6/30/10

American Heart Association

Title: $\alpha v\beta 3$ -targeted imaging of injury-induced vascular remodeling and response to rosiglitazone in type 2 diabetic mice

The major goal of this project was to image vascular remodeling in diabetes.

Role: Mentor/Sponsor

VA Merit PI: Mehran M. Sadeghi 04/01/08-3/30/12

Department of Veterans Affairs

Title: Molecular Imaging of Plaque Vulnerability

The major goal of the project was to develop an imaging approach for plaque vulnerability.

Role: Principal Investigator

R01-HL085093 PI: Mehran M. Sadeghi 7/01/07-6/30/13

NIH-NHLBI

Title: Molecular Imaging of Vascular Remodeling

The major goal of this project was to develop novel integrin and MMP-based imaging approaches for vascular remodeling.

Role: Principal Investigator

I0-BX001750 PI: Mehran M. Sadeghi 10/01/12-9/30/16

Department of Veterans Affairs

Title: Molecular imaging of protease activation in aneurysm

The major goal of the project is to develop an imaging approach for aneurysm rupture.

Role: Principal Investigator

R01-HL112992 PI: Mehran M. Sadeghi 02/01/13-01/31/18

NIH-NHLBI

Title: Macrophage elastase and its imaging in vascular inflammation and remodeling

The major goal of this project is to develop novel MMP12--based imaging approaches for imaging vascular remodeling and inflammation.

Role: Principal Investigator

PI: Mehran M. Sadeghi 02/01/17-12/31/17

VA NCPTSD

Title: PTSD and Arterial Inflammation

The major goal of this project is to obtain pilot data regarding the association between PTSD and inflammation.

Role: Principal Investigator

RFP2015-091 PI: Mehran M. Sadeghi 10/01/15-09/30/17

CT Department of Public Health

Title: Molecular Imaging of the Lung

The major goal of the project is to develop an imaging approach for detection of lung inflammation.

Role: Principal Investigator

R01-HL114703 PI: Mehran M. Sadeghi 08/23/12-06/31/18

NIH-NHLBI

Title: Imaging protease activation in calcific aortic valve disease

The major goal of this project is to develop novel MMP-based imaging approaches for tracking the biology of CAVD.

Role: Principal Investigator

PENDING

1 R01 AG065917-01 PI: Mehran Sadeghi/R. Gropler 10/01/19-09/30/24

NIH-NIA \$499,524 direct/year

Title: PET Imaging of MMP Activation in AAA: First in-Human Evaluation

The major goal of this project is to evaluate a new MMP tracer for imaging vascular remodeling in abdominal aortic aneurysm.

Role: Co-principal Investigator

PR192383 PI: Mehran M. Sadeghi 04/01/20-03/31/22

DOD \$100,000 direct/year

Title: A Theranostic Approach to Maladaptive Remodeling

The major goal of this project is to develop a new theranostic approach for cardiomyopathy

Role: Principal Investigator