

CURRICULUM VITAE

Jason N MacTaggart, MD

CAMPUS ADDRESS: Department of Surgery-Vascular Surgery
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EDUCATION

1992 - 1996 BA, Undergraduate - Biology, Magna Cum Laude, Wartburg College; Waverly, IA
1996 - 2000 MD, Doctor of Medicine, University of Iowa College of Medicine; Iowa City, IA

POST DEGREE TRAINING

1996 - 1996 Research, Exercise Physiology; Preceptor: Fred Kolkhorst, University of Northern Iowa; Cedar Falls, IA
1997 - 1997 Research, Internal Medicine; Preceptor: John Weiler, MD, University of Northern Iowa; Cedar Falls, IA
7/2000 - 6/2003 Resident, Categorical General Surgery, University of Nebraska Medical Center; Omaha, NE
7/2003 - 6/2005 Research, Vascular Biology Postdoctoral Research; Mentor: B. Timothy Baxter, MD, University of Nebraska Medical Center; Omaha, NE
7/2005 - 6/2007 Resident, Categorical General Surgery, University of Nebraska Medical Center; Omaha, NE
7/2007 - 6/2009 Fellowship, Vascular and Endovascular Surgery, University of California - San Francisco; San Francisco, CA

CONTINUING EDUCATION AND TRAINING

10/2010 - 10/2010 Endoluminaries, Cook Medical; Toronto, Canada
07/2011 - 07/2011 Introduction to Systems Biology, Institute for Systems Biology; Seattle, WA
09/2011 - 09/2011 Rising Vascular Surgeons Course, Cook Medical; Bloomington, IN
03/2012 - 03/2012 Embolic Therapies, Cook Medical; Atlanta, GA
09/2012 - 09/2012 Fenestrated Stent Graft Training Course, Cook Medical; Tampa, FL
10/2015 - 10/2015 Endovascular Skills for Hemorrhage Control, American College of Surgeons; Chicago, IL
10/2016 - 10/2016 Endovascular Skills for Hemorrhage Control, American College of Surgeons; Washington, DC
04/2018 - 04/2018 Transcaval Endoleak Embolization Course, Terumo Medical / University of Alabama; Birmingham, AL
11/2019 - 11/2019 Advanced Peripheral Vascular Disease Critical Limb Ischemia Course, Terumo Medical/Advanced Cardiac and Vascular Amputation Prevention Center; Wyoming, MI

ACADEMIC APPOINTMENTS

2016 - Pres Associate Professor of Surgery, Vascular Surgery, University of Nebraska Medical Center, Omaha, NE
2009 - 2016 Assistant Professor of Surgery, Vascular Surgery, University of Nebraska Medical Center, Omaha, NE
2019 - Pres Associate Professor, University of Nebraska Graduate Faculty, Omaha, NE
2019 - Pres Adjunct Associate Professor, Department of Biomechanics, University of Nebraska - Omaha, Omaha, NE

CERTIFICATIONS AND LICENSES

2011 - Present	Diplomate, Vascular Surgery, American Board of Surgery 102184
2017 - 2022	Iowa Board of Pharmacy, Iowa, 1248469
2019 - 2021	Basic Life Support, Omaha, NE
2019 - 2021	Advanced Cardiac Life Support, Omaha, NE
2020 - 2024	Iowa DEA, Iowa, FM7296292
2003 - 2024	Medical License, State of Nebraska, Nebraska, 22606
2007 - 2021	Medical License, State of California, California, A99020
2009 - 2024	Nebraska DEA, Nebraska, BM6881987
2013 - 2021	Medical License, State of Iowa, Iowa, 41149

GRANTS AND CONTRACT SUPPORT

ACTIVE

Title:	Nebraska Center for Heart and Vascular Research
ID Number:	1P20GM152326-01
Funding Agency:	DHHS/NIH/NIGMS
Project Period:	2024 - 2028
Total Dollars:	\$11,807,061
Direct Cost:	\$1,797,522
Role:	Other (Gundry)

Title:	Center for Cardiovascular Research in Biomechanics
ID Number:	44-1014-1013-103
Funding Agency:	University of Nebraska - Omaha
Project Period:	2023 - 2028
Total Dollars:	\$392,160
Direct Cost:	\$85,592
Role:	Other (Pipinos)

Title:	Optimized Stents for the Femoropopliteal Artery
ID Number:	44-1014-1006-201
Funding Agency:	University of Nebraska - Omaha
Project Period:	2020 - 2025
Total Dollars:	\$937,091
Direct Cost:	\$135,559
Role:	Principal Investigator

Title: Effects of aortic compliance and Windkessel reduction on cardiac and aortic pathophysiology
ID Number: 44-1014-1004-201
Funding Agency: University of Nebraska - Omaha
Project Period: 2019 - 2024
Total Dollars: \$666,426
Direct Cost: \$100,390
Role: Principal Investigator

PENDING

Title: Above Knee Artery Calcification as a Driver of Below Knee Ischemia and Neuropathy
ID Number:
Funding Agency: University of Nebraska - Omaha
Project Period: 2024 - 2029
Total Dollars: \$1,130,005
Direct Cost: \$736,160
Role: Principal Investigator

Title: Above Knee Artery Calcification as a Driver of Below Knee Ischemia and Neuropathy
ID Number:
Funding Agency: University of Nebraska - Omaha
Project Period: 2024 - 2029
Total Dollars: \$1,272,505
Direct Cost: \$828,995
Role: Principal Investigator

Title: Optimizing Intravascular Lithotripsy in Peripheral Calcific Lesions
ID Number:
Funding Agency: University of Nebraska - Omaha
Project Period: 2024 - 2028
Total Dollars: \$1,149,008
Direct Cost: \$748,540
Role: Principal Investigator

Title: ANTIBACTERIAL ELASTIC MATERIALS FOR INFECTION-RESISTANT PROSTHETICS
ID Number:
Funding Agency: University of Nebraska - Omaha
Project Period: 2025 - 2028
Total Dollars: \$130,954
Direct Cost: \$85,312
Role: Co Investigator (Sadykov)

Title: Infection-resistant arteriovenous graft to minimize contamination risks in hemodialysis
ID Number:
Funding Agency: University of Nebraska - Omaha
Project Period: 2025 - 2028
Total Dollars: \$311,702
Direct Cost: \$203,063
Role: Co Investigator (Sadykov)

Title: Axially Prestretched Elastomeric Nanofibrillar Graft (APENG) for Lower Extremity Arterial Bypass
ID Number:
Funding Agency: University of Nebraska - Omaha
Project Period: 2024 - 2027
Total Dollars: \$302,115
Direct Cost: \$196,818
Role: Principal Investigator

COMPLETED

Title: Rapid Acute Endovascular Management of Non-Compressible Truncal and Junctional Hemorrhage and Long-Term Analysis of Stent-Graft Durability in Young Military Trauma Populations
ID Number: W81XWH-16-2-0034
Funding Agency: U.S. Army/USAMRAA/CDMRP
Project Period: 2016 - 2020
Total Dollars: \$1,429,240
Direct Cost: \$972,797
Role: Principal Investigator

Title: Optimal Stent Selection for the Femoropopliteal Artery
ID Number:
Funding Agency: DHHS/NIH/NHLBI
Project Period: 2014 - 2020
Total Dollars: \$3,274,411
Direct Cost: \$2,386,285
Role: Co Investigator (Kamenskiy)

Title: Non-Invasive Treatment of Abdominal Aortic Aneurysm Clinical Trial (N-TA3CT)
ID Number:
Funding Agency: University of Maryland
Project Period: 2011 - 2019
Total Dollars: \$6,957,554
Direct Cost: \$5,676,208
Role: Other (Baxter)

Title: Endovascular Skills for Trauma and Resuscitative Surgery (ESTARS) Curriculum Analysis and Development of Strategic Transition Plan (TO 0061)
ID Number:
Funding Agency: National Strategic Research Institute
Project Period: 2016 - 2018
Total Dollars: \$249,160
Direct Cost: \$163,139
Role: Principal Investigator

Title: Assessment of the Retrievable Endovascular Arterial Markers in a Cadaver Model of Peripheral Arterial Disease: A Pilot Study
ID Number:
Funding Agency: Abbott Vascular Solutions, Inc.
Project Period: 2015 - 2016
Total Dollars: \$6,294
Direct Cost: \$4,995
Role: Co Investigator (Kamenskiy)

Title: Quantitative Assessment of the Influence of Vascular Mimetic Implant Supera and its Competitor Conventional SFA Stent on the Natural LIMB-induced Deformations of the Femoropopliteal Artery (Cadevar Pilot Study)
ID Number: Work Order 1
Funding Agency: Abbott Vascular Solutions, Inc.
Project Period: 2014 - 2014
Total Dollars: \$9,109
Direct Cost: \$7,230
Role: Co Investigator (Kamenskiy)

NON-SPONSORED / OUTSIDE GRANTS INFORMATION

Title: Mechanical and Morphological Analysis of a Novel Electrospun Nanofiber Arterial Substitute in a Swine Model of Atherosclerosis
Funding Agency: Nebraska Research Initiative
Project Period: 2012 - 2014
Total Dollars: \$0
Direct Cost: \$0
Role: Principal Investigator

Title: Modeling-Assisted Imaging to Optimize Surgical Interventions
Funding Agency: UNL/UNMC
Project Period: 2010 - 2011
Total Dollars: \$0
Direct Cost: \$0
Role: Co-Investigator ()

PATENTS

- 1 Temporary Endovascular Graft Repair of the Aorta (TEGRA) with Vascular Access, Hemorrhage Control, and Intravascular Navigation Equipment (VAHCINE) kit. 01/01/2013.
- 2 Manufacturing Technology of Biaxially Non-Linear and Anisotropic Nanofiber-based Vascular Graft Materials. (Provisional patent application) 01/01/2018.
- 3 Windkessel-preserving aortic stent-graft. (Provisional patent application) 04/02/2018.
- 4 Surgical Snare Device. (PCT/US15/28227) (UNMC Docket #WO 2015/168249) 04/29/2015.
- 5 Stent-graft. (PCT/US19/30041) (UNMC Docket #18104PCT) 04/30/2019.
- 6 Modular Endovascular Trainer. (Provisional patent application) 05/01/2017.
- 7 Surgical Devices and Methods (additional modifications to intravascular cutting device Aquablade). (PCT/US18/37334) 06/01/2018.
- 8 Automatically deployable intravascular device system. (PCT/US19/40489) 07/03/2019.
- 9 Automated Retrievable Hemorrhage Control System. (US10758386B2) 09/01/2020.
- 10 Bypass Graft with Segmentally Variable Tension and Longitudinal Pre-stretch. (Provisional patent application) 10/01/2018.
- 11 Fluid Jet Arterial Surgical Device. (US978219582) (UNMC Docket #14003 62/501,164) 10/10/2017.

OTHER APPOINTMENTS AND POSITIONS

2009 - Pres Attending Surgeon, Vascular Surgery, Nebraska/Western Iowa VA Medical Center, Omaha, NE, United States
2010 - Pres Attending Surgeon, Vascular Surgery, Children's Hospital, Omaha, NE, United States
2013 - Pres Attending Surgeon, Vascular Surgery, George C. Grape Community Hospital, Omaha, NE, United States

CONSULTING POSITIONS

EDITORIAL

2009 - Pres Reviewer, Journal of Vascular Surgery
2013 - Pres Ad hoc Reviewer, Journal of the American College of Surgeons
2014 - Pres Ad hoc Reviewer, Journal of Biomaterials Applications
2015 - Pres Ad hoc Reviewer, Vascular and Endovascular Surgery
2015 - Pres Ad hoc Reviewer, Journal of the American College of Cardiology
2018 - Pres Ad hoc Reviewer, American Journal of Physiology Heart and Circulatory
2020 - Pres Ad hoc Reviewer, JVS Vascular Science

OTHER

2016 - Pres Ad hoc Reviewer, PLOS one

2017 - 2018 Ad hoc Proposal Reviewer, DoD MRMC Broad Agency Announcement for Extramural Medical Research
Combat Casualty Care
2020 - Pres Ad hoc Reviewer, Acta Biomaterialia

HONORS AND AWARDS

LOCAL

2004-2007 In-Training Exam Highest Score Award, University of Nebraska Department of Surgery, Omaha, NE,
United States
2005 Alpha Omega Alpha Honor Medical Society Award, University of Nebraska Medical Center, Omaha, NE,
United States
2013-2014 Most Promising Invention Award, UNMC, University of Nebraska Medical Center, Omaha, NE, United
States
2016 Joseph P. Gilmore Distinguished, University of Nebraska Medical Center, Omaha, NE, United States
2018 New Investigator Research Award, University of Nebraska Medical Center, Omaha, NE, United States

REGIONAL

2006 American College of Surgeons Research Award, Nebraska Chapter of the American College of Surgeons,
Omaha, NE, United States

MEMBERSHIPS AND OFFICES IN PROFESSIONAL SOCIETIES

Pres Member, Society for Vascular Surgery (SVS)
Pres Member, American Medical Association (AMA)
Pres Member, Alpha Omega Alpha Society (AOA)
Pres Member, Midwestern Vascular Surgical Society (MVSS)
Pres Member, European Society for Vascular Surgery
Pres Member, American College of Surgeons (ACS)
Pres Member, American College of Surgeons, Nebraska Chapter
Pres Member, Association for Academic Surgery (AAS)
Pres Member, Biomedical Engineering Society (BMES)
Pres Member, International Society for Applied Cardiovascular Biology (ISACB)
Pres Member, International Society of Endovascular Specialists (ISEVS)
2010 - Pres Member, American Heart Association (AHA)

COMMITTEE ASSIGNMENTS

LOCAL/REGIONAL

2020 - 2020 Moderator, Abstract and Oral Presentation Judge, Creighton University Midwest Student Biomedical
Research Forum
2021 - 2021 Abstract and Oral Presentation Judge, Creighton University Midwest Student Biomedical Research Forum

MEDICAL STAFF

2009 - 2014 Committee Member, Nebraska Medicine Operating Room New Products Committee
2009 - 2018 Committee Member, Nebraska Medicine Transfusion Committee
2015 - 2018 Committee Member, Nebraska Medicine Cardiovascular Value Analysis Team

NATIONAL/INTERNATIONAL

2015 - 2015 Moderator, Annual Meeting of the International Academy of Cardiovascular Sciences, North American
Section

2019 - Pres Committee Member, Society for Vascular Surgery Research and Education Committee
2020 - 2020 Moderator, On-line session, Vascular Research Initiatives

UNMC

2013 - 2013 Committee Member, Department of Surgery Promotion & Tenure Committee
2016 - Pres Committee Member, University of Nebraska Medical Center Surgery Research and Development Committee

PRESENTATIONS

1. MacTaggart JN; Hansen MR; Kolkhorst FW. Effect of the Access Fat Conversion Activity Bar on Fat Utilization and Time to Exhaustion. American College of Sports Medicine 44th Annual Meeting; 1997 May 28-31. Denver, Colorado
2. MacTaggart JN; Johanning JM; Xiong W; Knispel RA; Pipinos II; Baxter BT. NADPH Oxidase Inhibition Suppresses Aortic Aneurysm Formation. Society of University Surgeons 2nd Annual Academic Surgical Congress; 2006 Feb 6-9. Philadelphia, Pennsylvania
3. MacTaggart JN; Johanning JM; Xiong W; Pipinos II; Knispel R; Baxter BT. NADPH Oxidase Inhibition Suppresses Aortic Aneurysm Formation. Research Initiatives in Vascular Disease; 2006 March 30-31. Washington, DC
4. MacTaggart JN; Xiong W; Knispel R; Baxter BT. Deletion of CCR2 but not CCR5 or CXCR3 Inhibits Aortic Aneurysm Formation. Society of University Surgeons 2nd Annual Academic Surgical Congress; 2007 Feb 6-9. Phoenix, Arizona
5. MacTaggart JN; Monahan TS; Hiramoto JS; Schneider DB; Chuter TAM; Eichler CM; Reilly LM. Cryopreserved Superficial Femoral Vein: An Alternative Conduit for Reconstruction of Infected Prosthetic Aortic Grafts. Society for Vascular Surgery Annual Meeting - Plenary Session; 2009 June. Denver, Colorado
6. Gupta PK; Gupta H; Miller WJ; Lynch TG; MacTaggart JN; Johanning JM; Longo GM; Pipinos II. Predictors of Cardiac Events after Major Vascular Surgery. 5th Annual Academic Surgical Congress; 2010 Feb 3-5. San Antonio, TX
7. Gupta PK; Gupta H; Miller WJ; Johanning JM; Lynch TG; MacTaggart JN; Longo GM; Pipinos II. Corticosteroid Use, Symptomatic Status, and Smoking Are Associated with Stroke after Carotid Surgery in the ACS NSQIP. 5th Annual Academic Surgical Congress; 2010 Feb 3-5. San Antonio, TX
8. Kamenskiy AV; Dzenis YA; Desyatova AS; Lynch GT; MacTaggart JN; Pipinos II. Toward Optimal Hemodynamics in the Endarterectomized Carotid: A Finite Element Study. 5th Annual Academic Surgical Congress; 2010 Feb 3-5. San Antonio, TX
9. Bochkarev V; Pipinos II; MacTaggart JN. Antegrade mesenteric bypass with bifurcated greater saphenous vein: a final option for chronic mesenteric ischemia after failed angioplasty and stenting. Southwestern Surgical Congress 62nd Annual Meeting; 2010 March 21-24. Tucson, AZ
10. Kamenskiy A; Dzenis YA; MacTaggart JN; Johanning JM; Longo GM; Lynch GT; Pipinos II. Biaxial Mechanical Properties of the Human Carotid Artery and Materials Used for Patch Angioplasty. 34th Annual Meeting of the Midwestern Vascular Surgical Society; 2010 Sep 9-11. Indianapolis, IN
11. Gupta PK; Natarajan B; Gupta H; Fang X; Balters M; Johanning JM; Lynch TG; Forse RA; Longo GM; MacTaggart JN; Pipinos II. Contemporary Outcomes Following Endovascular versus Open Repair of Abdominal Aortic Aneurysm. 2011 Vascular Annual Meeting; 2011 June 16-18. Chicago, IL
12. Gupta PK; Natarajan B; Reddy YM; Gupta H; Balters M; Johanning JM; Lynch TG; Longo GM; MacTaggart JN; Pipinos II. Open Revascularization for Chronic Mesenteric Ischemia. 2011 Vascular Annual Meeting; 2011 June 16-18. Chicago, IL
13. Gupta PK; Natarajan B; Reddy YM; Gupta H; Balters M; Johanning JM; Lynch TG; Forse AR; Longo GM; MacTaggart JN; Pipinos II. Thirty Day Outcomes Following Brachiocephalic and Brachio basilic Arteriovenous Fistula Formation: National Benchmarks for Standard of Care. 2011 Vascular Annual Meeting; 2011 June 16-18. Chicago, IL
14. Gupta PK; Natarajan B; Gupta H; Fang X; Balters M; Johanning JM; Lynch TG; Longo GM; MacTaggart JN; Pipinos II. Endovascular Repair of Abdominal Aortic Aneurysm does not improve survival versus Open Repair in Patients Sixty Years or Younger. 35th Annual Meeting of the Midwestern Vascular Surgical Society; 2011 Jun 16-18. Chicago, IL

15. Gupta PK; Natarajan B; Gupta H; Fang X; Balters M; Johanning JM; Lynch TG; Longo GM; Mactaggart JN; Pipinos II. Suprarenal Abdominal Aortic Aneurysm: Which Patients Would Benefit More From Fenestrated Endograft Rather Than Open Repair?. 35th annual Meeting of the Midwestern Vascular Surgical Society; 2011 Sept 15-17. Chicago, IL
16. Kamenskiy AV; Dzenis YA; MacTaggart JN; Lynch TG; Kazmi SA; Pipinos II. Nonlinear Mechanical Behavior of the Common External and Internal Carotid Arteries In Vivo. 35th Annual Meeting of the Midwestern Vascular Surgical Society; 2011 Sep 15-17. Chicago, IL
17. Kamenskiy AV; Pipinos II; MacTaggart JN; Dzenis YA. Evaluation of Predictive Capabilities of Fung-Type and Structurally-Motivated Constitutive Models for Describing the Complex Mechanical Behavior of Soft Tissues. 48th Annual Technical Conference of Society of Engineering Science; 2011 Oct 12-14. Evanston, IL
18. Kamenskiy AV; Pipinos II; MacTaggart JN; Dzenis Y. Nonlinear Coupled Modeling of Patched Carotids: Towards Biomechanics-Assisted Optimization of Grafts and Surgery Interventions. 4th International Conference on the Mechanics of Biomaterials and Tissues; 2011 Dec 11-15. Big Island, HI
19. Kamenskiy AV; Pipinos II; MacTaggart JN; Dzenis YA. Comparative Analysis of Strain-Based and Invariant-Based Soft Tissue Constitutive Models: Experimental Evaluation of Predictive Capabilities. 4th International Conference on the Mechanics of Biomaterials and Tissues; 2011 Dec 11-15. Big Island, HI
20. MacTaggart JN. Endoleaks. Medical Grand Rounds, University of Nebraska Medical Center; 2012 Jan 18. Omaha, Nebraska
21. Bikhchandani J; Kamenskiy AV; Talukdar A; Mukkai DK; Otuwa N; Dzenis Y; Pipinos II; MacTaggart JN. Changes in Carotid Artery Geometry Following Revascularization: Endarterectomy Versus Stenting. 7th Annual Academic Surgical Congress; 2012 Feb 14-16. Las Vegas, NV
22. Kamenskiy AV; Bikhchandani J; Pipinos II; Gupta PK; Dzenis YA; MacTaggart JN. Geometric and Hemodynamic Effects of Carotid Artery Stenting. The American College of Surgeons 2012 Clinical Congress; 2012 Sep 30 - Oct 4. Chicago, Illinois
23. Grossman L; Gupta PK; Ramanan B; Mactaggart JN; Baxter BT; Fang X; Lynch TG; Pipinos II. Aortic Surgery for Aortic Graft Infections: Defining National Benchmarks for Standards of Care. 36th Annual Meeting of the Midwestern Vascular Surgical Society; 2012 Sept 6-18. Milwaukee, WI
24. Ramanan B; Gupta PK; Lynch TG; Gupta H; Longo GM; Mactaggart JN; Baxter BT; Johanning JM; Pipinos II. In-Hospital and Post-Discharge Venous Thromboembolism after Vascular Surgery. 36th Annual Meeting of the Midwestern Vascular Surgical Society; 2012 Sept 6-18. Milwaukee, WI
25. Gupta P; Ramanan B; Mactaggart JN; Fang X; Balters M; Longo GM; Lynch TG; Johanning JM; Pipinos II. Risk Index for Predicting Perioperative Stroke or Death Risk in Asymptomatic Patients undergoing Carotid Endarterectomy. Scientific Papers Sessions. 2012 Annual Clinical Congress of the American College of Surgeons; 2012 Sept 30-Oct 4. Chicago, IL
26. MacTaggart JN. Modern Management of Blunt Aortic Injury. Creighton University Department of Surgery Grand Rounds; 2013 Apr 1. Omaha, NE
27. Kamenskiy A; Lomneth C; Pipinos I; Longo GM; Johanning JB; Baxter T; MacTaggart J. Method to Quantify Femoropopliteal Artery Deformation During Knee Flexion. American Heart Association, Arteriosclerosis, Thrombosis, and Vascular Biology Scientific Sessions; 2013 May 1-3. Buena Vista, FL
28. Kamenskiy AV; Kazmi SA; Pemberton MA; Pipinos II; Dzenis YA; Lomneth CS; Phillips NY; MacTaggart JN. Biaxial Mechanical properties of the Human Thoracic and Abdominal Aorta, Common Carotid, Subclavian, Renal and Common Iliac Arteries. 9th Annual Academic Surgical Congress; 2014 Feb 4-6. San Diego, CA
29. MacTaggart JN. Modern Vascular and Endovascular Surgery. Nebraska State Assembly Association of Surgical Technologists; 2014 March 1. Omaha, NE
30. MacTaggart JN; Kamenskiy A. What are we doing with all of these femoropopliteal arteries?. Nebraska Organ Recovery Services; 2014 April 2. Omaha, NE
31. Kamenskiy A; Pipinos II; Phillips NY; Dzenis YA; MacTaggart JN. Effects of Age on the Mechanical Properties and Structural Characteristics of the Human Femoropopliteal Arteries. Biomedical Engineering Society Annual Meeting; 2014 October. San Antonio, Texas

32. MacTaggart JN; Kamenskiy A. Femoropopliteal artery disease. Nebraska Organ Recovery Services; 2015 March 11. Omaha, NE
33. Kamenskiy A; Miserlis D; Adamson P; Adamson M; Knowles T; Neme JR; Koutakis P; Phillips N; Pipinos II; MacTaggart JN. Detailed morphometric analysis of 3D vascular anatomy of the chest, abdomen, pelvis and upper thigh for the optimized design of endovascular devices targeted to different patient populations. BMES/FDA Frontiers in Medical Devices Conference: Innovations in Modeling and Simulation; 2015 May 18-20
34. Kamenskiy A; Nusz SD; Hunter W; Desyatova AS; Ruhlman M; Pipinos II; MacTaggart JN. Effects of Demographics and Clinical Risk Factors on Human Femoropopliteal Artery Histopathology. Thrombosis and Vascular Biology Scientific Sessions; 2015 May 7-9. San Francisco, CA
35. Kamenskiy A; MacTaggart JN. Structure, Properties and Function of the Human Femoropopliteal Artery. 13th United States National Congress on Computational Mechanics; 2015 July 26-30. San Diego, California
36. MacTaggart JN. Detection and Management of Abdominal Aortic Aneurysms. AAA Outreach Program; 2015 Aug 5. Omaha, NE
37. MacTaggart JN; Kamenskiy AV. Biomechanics of Femoropopliteal Artery Disease. Annual Meeting of the International Academy of Cardiovascular Sciences: North America Section; 2015 Sep 10 - Sep 12. Omaha, NE
38. Kamenskiy A; Seas A; Desyatova AS; Deegan, P; Bowen GA; MacTaggart JN. In Situ Longitudinal Pre-Stretch in the Human Femoropopliteal Artery. 6th International Conference on Mechanics of Biomaterials and Tissues; 2015 December 6-10. Big Island, HI
39. Desyatova AS; MacTaggart JN; Lomneth CS; Dzenis YA; Kamenskiy A. . Effects of Stenting on the Natural Limb Flexion-Induced Deformations of the Human Femoropopliteal Artery. 6th International Conference on Mechanics of Biomaterials and Tissues; 2015 December 6-10. Big Island, HI
40. Poulson W; Kamenskiy AV; Deegan P; Lomneth C; MacTaggart JN. Effects of Tethering Branches on Limb Flexion-Induced Deformations of the Human Femoropopliteal Artery. Atherosclerosis, Thrombosis and Vascular Biology; 2016 May 5 - May 7. Nashville, TN
41. Reilly A; Poulson W; Sim S; Deegan P; Kamenskiy AV; MacTaggart JN. Femoropopliteal Artery Calcification is Associated with Ageing, Diabetes, Elastin Fiber Degradation, and Anisotropic Stiffening. International Society for Applied Cardiovascular Biology 15th Biennial Meeting; 2016 Sep 7 - Sep 10. Banff, Alberta, Canada
42. Desyatova AS; Poulson, W; Deegan, P; Lomneth C; MacTaggart JN. Effect of Ageing on Arterial Stresses Due to Limb Flexion. International Society for Applied Cardiovascular Biology 15th Biennial Meeting; 2016 Sept 7-10. Banff, Alberta, Canada
43. Desyatova A; Poulson W; Deegan P; Lomneth C; MacTaggart JN. The Effect of Limb Flexion on Torsional Deformations and Stresses in the Human Femoropopliteal Artery. Biomedical Engineering Society Annual Meeting; 2016 Oct 5 - Oct 8. Minneapolis, MN
44. Seas A; MacTaggart JN; Castellanos M; Kamenskiy AV. Use of Neural Networks to Predict Peripheral Artery Pathology. Biomedical Engineering Society Annual Meeting; 2016 Oct 5 - Oct 8. Minneapolis, MN
45. Poulson W; Kamenskiy AV; Deegan P; Lomneth C; MacTaggart JN. The Popliteal Artery Demonstrates Significantly Higher Torsion than the Superficial Femoral Artery During Limb Flexion. American College of Surgeons Clinical Congress, Scientific Forum; 2016 Oct 16 - Oct 20. Washington, DC
46. Poulson, W; Kamenskiy A; Sim S; Deegan, P; MacTaggart JN. The Popliteal Artery Demonstrates More Elastin Breaks than the Superficial Femoral Artery. Scientific Forum program at the American College of Surgeons 2016 Clinical Congress; 2016 October 16-20. Washington, DC
47. MacTaggart JN. Endovascular Skills and Technology for Shock and Trauma. Omaha VA Nebraska-Western Iowa Health Care; 2017 Mar 17. Omaha, NE
48. Desyatova AS; MacTaggart JN; Poulson, W; Deegan, P; Kamenskiy A; Lomneth C. Torsion and Intramural Stresses in the Human Femoropopliteal Artery Due to Limb Flexion. Predictive Computational Vascular Mechanics. 5th International Conference and Mathematical Biomedical Engineering & CMBE 2017; 2017 April 10-12. Pittsburgh, PA
49. Poulson, W; Kamenskiy A; MacTaggart JN; Lomneth C; Seas A. Effects of Different Stent Designs on Limb-Flexion Induced Axial Compression, Bending, and Torsion. Plenary Session 6 Vascular Annual Meeting; 2017 May 30-June 3. San Diego, CA

50. Maleckis K; Deegan P; Sievers C; Desyatova A; MacTaggart JN; Kamenskiy AV. Mechanical Evaluation of Peripheral Artery Stents. BMES/FDA Frontiers in Medical Devices Conference; 2017 May 16 - May 18. College Park, MD
51. Poulson W; Rodgers A; Batra R; Deegan P; Kamenskiy AV; MacTaggart JN. Intramural Structural Changes in Human Femoropopliteal Arteries with Age. Arteriosclerosis, Thrombosis and Vascular Biology; 2017 May 4 - May 6. Minneapolis, MN
52. Poulson, W; Forney E; Adamson A; MacTaggart JN; Kamenskiy A. Geometric Features of the Carotid Artery at Baseline Improve Prediction of Stenosis Severity at Follow-up. Midwestern Vascular Surgical Society; 2017 September 7-9. Chicago, IL
53. MacTaggart JN; Evans CH; Schlitzkus LL. Endovascular Skills for Trauma and Resuscitative Surgery (ESTARS) Curriculum Analysis and Development of Strategic Transition Plan. Combat Casualty Care Research Program; 2017 Dec 12. Fort Detrick, MD
54. Desyatova A; MacTaggart JN; Romarowski R; Poulson W; Conti M; Kamenskiy AV. Effect of Aging on Mechanical Stresses, Deformations, and Hemodynamics in Human Femoropopliteal Artery Due to Limb Flexion. 7th International Conference on Mechanics of Biomaterials and Tissues; 2017 Dec 10 - Dec 14. Waikoloa, HI
55. Maleckis K; Dzenis Y; Kamenskiy AV; MacTaggart JN. Biomimetic Nanofiber-Based Graft Material for Vascular Applications. 7th International Conference on Mechanics of Biomaterials and Tissues; 2017 Dec 10 - Dec 14. Waikoloa, HI
56. Marmie BR; Sanderfer CR; Pipinos II; Fuchs JW; MacTaggart JN. Feasibility of Fluoroscopy-Free Endovascular Navigation in Trauma Patients of Different Ages. 13th Annual Academic Surgical Congress; 2018 Jan 30 - Feb 1
57. MacTaggart JN; Kamenskiy A; Evans CH; Schlitzkus LL. DoD Funded Endovascular Training at a Civilian Institution: The Nebraska Experience. Pan-American Endovascular Trauma Management Meeting. Houston, TX; 2018 February 8-9. Houston, TX
58. MacTaggart JN. Translational Arterial Biomechanics. Pushing on Arteries that Push Back; 2018 June 20 - 23. Boston, MA
59. Sanderfer C; Marmie B; Fuchs J; Tommeraasen M; Pipinos M; Aylward P; Kamenskiy AV; MacTaggart JN. Effects of Belly Curvature on the Accuracy of Simulated Fluoroscopy-Free Endovascular Navigation. Military Health System Research Symposium; 2018 Aug 20 - Aug 23. Kissimmee, FL
60. Maleckis K; Deegan P; Kalil T; MacTaggart JN; Kamenskiy A. Safe Balloon Occlusion Pressures and Volumes for Resuscitative Endovascular Balloon Occlusion of the Aorta. Military Health System Research Symposium; 2018 Aug 20 - Aug 23. Kissimmee, FL
61. Maleckis K; Kamenskiy AV; Lichter E; Deegan R; MacTaggart JN. Mechanically Biomimetic Nanofibrillar Elastomeric Vascular Graft Demonstrates Rapid Endothelialization and Complete Integration into the Porcine Iliac Artery Wall as Opposed to Conventional ePTFE. International Society for Applied Cardiovascular Biology; 2018 Sep 16 - Sep 19. Bordeaux, France
62. MacTaggart JN; Serio SJ. Transcaval Repositioning of Renal Artery Snorkel Stent and Coil Embolization of Type 1 Gutter Endoleak. Midwestern Vascular Surgical Society; 2018 September 13-15. St. Louis, Mo
63. Maleckis K; Desyatova A; Kamenskiy AV; Aylward P; MacTaggart JN. Windkessel Aortic Stent-Graft. Biomedical Engineer Society (BMES); 2018 Oct 17 - Oct 20. Atlanta, GA
64. Aylward P; Kamenskiy AV; Wichman C; Prathivadhi-Bhay S; Pipinos M; Venkataraman V; Poulson W; MacTaggart JN. Stent Design Affects Femoropopliteal Artery Stenosis Rates. 2019 May 13. Boston, MA
65. Kamenskiy AV; Maleckis K; Keiser C; Aylward P; Desyatova A; MacTaggart JN. Biomimetic Reinforced Nanofibrillar Elastomeric Bypass Grafts with Physiologic Pre-Stretch for Below-Knee Lower Extremity Peripheral Artery Disease. Combined International Symposium for Applied Cardiovascular Biology and Vascular Tissue Engineering; 2019 Jun 19 - Jun 21. Zurich, Switzerland
66. MacTaggart JN; Evans, C; Schlitzkus LL; Schiller AM; Kamenskiy A. Integrated DoD training and ESTARS: The Nebraska Experience. Pan American Endovascular Trauma and Resuscitation Management; 2019 November 17-18. Denver, CO
67. Kamenskiy A; Aylward PJ; Desyatova AS; DeVries M; Wichman CS; MacTaggart JN. Endovascular Repair of Blunt Thoracic Aortic Trauma is Associated with Increased Left Ventricular Mass, Hypertension, and Off-Target Aortic Remodeling. Vascular Research Initiatives; 2020 November 12. Online Session 2

PUBLICATIONS

A. ARTICLES PUBLISHED IN SCHOLARLY JOURNALS

1. Kolkhorst FW, MacTaggart JN, Hansen MR. Effect of a Sports Food Bar on Fat Utilisation and Exercise Duration. *Canadian Journal of Applied Physiology*. 23 : 271-278. 1998
2. MacTaggart JN, Pipinos II, Johannning JM, Lynch TG. Acrylic cement pulmonary embolus masquerading as an embolized central venous catheter fragment. *Journal of Vascular Surgery*. 43 : 180-183. 2006
3. Xiong W, Knispel R, Mactaggart J, Baxter BT. Effects of tissue inhibitor of metalloproteinase 2 deficiency on aneurysm formation. *Journal of Vascular Surgery*. 44 : 1061-1066. 2006
4. MacTaggart JN, Xiong W, Knispel R, Baxter BT. Deletion of CCR2 but not CCR5 or CXCR3 inhibits aortic aneurysm formation. *Surgery*. 142 : 284-288. 2007
5. B. Timothy Baxter; Jason MacTaggart. Pathogenesis of Aortic Aneurysms. *Comprehensive Vascular and Endovascular Surgery*. 465-472. 2009
6. Xiong W, Mactaggart J, Knispel R, Worth J, Zhu Z, Li Y, Sun Y, Baxter BT, Johannning J. Inhibition of reactive oxygen species attenuates aneurysm formation in a murine model. *Atherosclerosis*. 202 : 128-134. 2009
7. Xiong W, Knispel R, MacTaggart J, Greiner TC, Weiss SJ, Baxter BT. Membrane-type 1 matrix metalloproteinase regulates macrophage-dependent elastolytic activity and aneurysm formation in vivo. *Journal of Biological Chemistry*. 284 : 1765-1771. 2009
8. Xiong W, MacTaggart J, Knispel R, Worth J, Persidsky Y, Baxter BT. Blocking TNF- α attenuates aneurysm formation in a murine Model. *Journal of Immunology*. 183 : 2741-2746. 2009
9. Kamenskiy AV, Dzenis YA, Mactaggart JN, Desyatova AS, Pipinos II. In vivo three-dimensional blood velocity profile shapes in the human common, internal, and external carotid arteries. *Journal of Vascular Surgery*. 54 : 1011-20. 2011
10. Kamenskiy AV, Pipinos II, MacTaggart JN, Kazmi SA, Dzenis YA. Comparative analysis of the biaxial mechanical behavior of carotid wall tissue and biological and synthetic materials used for carotid patch angioplasty. *Journal of Biomechanical Engineering*. 133 : 111008. 2011
11. Gupta PK, Mactaggart JN, Natarajan B, Lynch TG, Arya S, Gupta H, Fang X, Pipinos II. Predictive factors for mortality after open repair of paravisceral abdominal aortic aneurysm. *Journal of Vascular Surgery*. 55 : 666-673. 2012
12. Gupta PK, Ramanan B, Lynch TG, Gupta H, Fang X, Balters M, Johannning JM, Longo GM, MacTaggart JN, Pipinos II. Endovascular repair of abdominal aortic aneurysm does not improve early survival versus open repair in patients younger than 60 years. *European Journal of Vascular and Endovascular Surgery*. 43 : 506-512. 2012
13. Kamenskiy AV, MacTaggart JN, Pipinos II, Bikhchandani J, Dzenis YA. Three-dimensional geometry of the human carotid artery. *Journal of Biomechanical Engineering*. 134 : 064502. 2012
14. Kamenskiy AV, Dzenis YA, MacTaggart JN, Lynch TG, Jaffar Kazmi SA, Pipinos II. Nonlinear mechanical behavior of the human common, external, and internal carotid arteries in vivo. *Journal of Surgical Research*. 176 : 329-36. 2012
15. Gupta PK, Ramanan B, Lynch TG, Sundaram A, MacTaggart JN, Gupta H, Fang X, Pipinos II. Development and validation of a risk calculator for prediction of mortality after infrainguinal bypass surgery. *Journal of Vascular Surgery*. 56 : 372-379. 2012
16. Ramanan B, Gupta PK, Sundaram A, Lynch TG, MacTaggart JN, Baxter BT, Johannning JM, Pipinos II. In-hospital and postdischarge venous thromboembolism after vascular surgery. *Journal of Vascular Surgery*. 57 : 1589-1596. 2013
17. Gupta PK, Ramanan B, Mactaggart JN, Sundaram A, Fang X, Gupta H, Johannning JM, Pipinos II. Risk index for predicting perioperative stroke, myocardial infarction, or death risk in asymptomatic patients undergoing carotid endarterectomy. *Journal of Vascular Surgery*. 57 : 318-26. 2013
18. Kamenskiy AV, Mactaggart JN, Pipinos II, Gupta PK, Dzenis YA. Hemodynamically motivated choice of patch angioplasty for the performance of carotid endarterectomy. *Annals of Biomedical Engineering*. 41 : 263-78. 2013
19. Ramanan B, Gupta PK, Sundaram A, Lynch TG, MacTaggart JN, Baxter BT, Johannning JM, Pipinos II. In-hospital and postdischarge venous thromboembolism after vascular surgery. *Journal of Vascular Surgery*. 57 : 1589-96. 2013

20. Kamenskiy AV, Pipinos II, Dzenis YA, Bikhchandani J, Gupta PK, Phillips N, Kazmi SA, MacTaggart JN. Effects of Carotid Artery Stenting on Arterial Geometry. *Journal of the American College of Surgeons*. 217 : 251-62. 2013
21. Kamenskiy AV, Pipinos II, Dzenis YA, Bikhchandani J, Gupta PK, Phillips N, Kazmi SA, MacTaggart JN. Effects of carotid artery stenting on arterial geometry. *Journal of the American College of Surgeons*. 217 : 251-62. 2013
22. Kamenskiy AV, Pipinos II, Dzenis YA, Gupta PK, Jaffar Kazmi SA, Mactaggart JN. A mathematical evaluation of hemodynamic parameters after carotid eversion and conventional patch angioplasty. *American Journal of Physiology - Heart and Circulatory Physiology*. 305 : H716-24. 2013
23. Ramanan B, Gupta PK, Sundaram A, Gupta H, Johanning JM, Lynch TG, MacTaggart JN, Pipinos II. Development of a risk index for prediction of mortality after open aortic aneurysm repair. *Journal of Vascular Surgery*. 58 : 871-8. 2013
24. Ramanan B, Gupta PK, Sundaram A, Gupta H, Johanning JM, Lynch TG, MacTaggart JN, Pipinos II. Development of a risk index for prediction of mortality after open aortic aneurysm repair. *Journal of Vascular Surgery*. 58 : 871-8. 2013
25. Gupta PK, Sundaram A, Mactaggart JN, Johanning JM, Gupta H, Fang X, Forse RA, Balters M, Longo GM, Sugimoto JT, Lynch TG, Pipinos II. Preoperative anemia is an independent predictor of postoperative mortality and adverse cardiac events in elderly patients undergoing elective vascular operations. *Annals of Surgery*. 258 : 1096-102. 2013
26. Alexey V. Kamenskiy; Yuris A. Dzenis; Syed A. Jaffar Kazmi; Mark A. Pemberton; Iraklis I. Pipinos; Nick Y. Phillips; Kyle Herber; Thomas Woodford; Robert E. Bowen; Carol S. Lomneth; Jason N. MacTaggart. Biaxial mechanical properties of the human thoracic and abdominal aorta, common carotid, subclavian, renal and common iliac arteries. *Biomechanics and Modeling in Mechanobiology*. 2014
27. Jason MacTaggart. Back-table tailored stent grafts : Surgeon modified, surgeon approved. *JAMA Surgery*. 149 : 449-450. 2014
28. Alexey V. Kamenskiy; Iraklis I. Pipinos; Jeffrey S. Carson; Jason N. MacTaggart; B. Timothy Baxter. Disease-related geometric and structural remodeling of the carotid artery. *Journal of Vascular Surgery*. 2014
29. Kamenskiy AV, Pipinos II, Dzenis YA, Lomneth CS, Kazmi SA, Phillips NY, MacTaggart JN. Passive biaxial mechanical properties and in vivo axial pre-stretch of the diseased human femoropopliteal and tibial arteries. *Acta Biomater*. 10 : 1301-13. 2014
30. Kamenskiy AV, Pipinos II, Dzenis YA, Lomneth CS, Kazmi SA, Phillips NY, MacTaggart JN. Passive biaxial mechanical properties and in vivo axial pre-stretch of the diseased human femoropopliteal and tibial arteries. *Acta Biomater*. 10 : 1301-13. 2014
31. MacTaggart JN, Phillips NY, Lomneth CS, Pipinos II, Bowen R, Baxter BT, Johanning J, Longo GM, Desyatova AS, Moulton MJ, Dzenis YA, Kamenskiy AV. Three-dimensional bending, torsion and axial compression of the femoropopliteal artery during limb flexion. *J Biomech*. 47 : 2249-56. 2014
32. Kamenskiy AV, Dzenis YA, Kazmi SA, Pemberton MA, Pipinos II, Phillips NY, Herber K, Woodford T, Bowen RE, Lomneth CS, MacTaggart JN. Biaxial mechanical properties of the human thoracic and abdominal aorta, common carotid, subclavian, renal and common iliac arteries. *Biomech Model Mechanobiol*. 13 : 1341-59. 2014
33. Alexey V. Kamenskiy; Iraklis I. Pipinos; Yuris A. Dzenis; Nicholas Y. Phillips; Anastasia S. Desyatova; Justin Kitson; Robert Bowen; Jason N. MacTaggart. Effects of age on the physiological and mechanical characteristics of human femoropopliteal arteries. *Acta Biomaterialia*. 11 : 304-313. 2015
34. Alexey Kamenskiy; Dimitrios Miserlis; Peter Adamson; Micah Adamson; Thomas Knowles; Jamil Neme; Panagiotis Koutakis; Nicholas Phillips; Iraklis Pipinos; Jason MacTaggart. Patient demographics and cardiovascular risk factors differentially influence geometric remodeling of the aorta compared with the peripheral arteries. *Surgery (United States)*. 2015
35. Alexey Kamenskiy; Dimitrios Miserlis; Peter Adamson; Micah Adamson; Thomas Knowles; Jamil Neme; Panagiotis Koutakis; Nicholas Phillips; Iraklis Pipinos; Jason MacTaggart. Patient demographics and cardiovascular risk factors differentially influence geometric remodeling of the aorta compared with the peripheral arteries. *Surgery (United States)*. 158 : 1617-1627. 2015
36. Alexey V. Kamenskiy; Iraklis I. Pipinos; Jeffrey S. Carson; Jason N. Mactaggart; B. Timothy Baxter. Age and disease-related geometric and structural remodeling of the carotid artery. *Journal of Vascular Surgery*. 62 : 1521-1528. 2015
37. Prateek K. Gupta; Bala Ramanan; Leonid Grossman; Himani Gupta; Xiang Fang; Jason N. MacTaggart; Thomas G. Lynch; B. Timothy Baxter; Iraklis I. Pipinos. Outcomes of aortic surgery for abdominal aortic graft infections. *Vascular and Endovascular Surgery*. 50 : 256-260. 2016

38. Alexey Kamenskiy; Andreas Seas; Grant Bowen; Paul Deegan; Anastasia Desyatova; Nick Bohlim; William Poulson; Jason Mactaggart. In situ longitudinal pre-stretch in the human femoropopliteal artery. *Acta Biomaterialia*. 32 : 231-237. 2016
39. Jason MacTaggart; William Poulson; Maheen Akhter; Andreas Seas; Katherine Thorson; Nick Phillips; Anastasia Desyatova; Alexey Kamenskiy. Morphometric roadmaps to improve accurate device delivery for fluoroscopy-free resuscitative endovascular balloon occlusion of the aorta. *Journal of Trauma and Acute Care Surgery*. 2016
40. Caleb M. Steffen; Patrick J. Hawkes; Jason N. Mactaggart; G. Matthew Longo. Aortic endografting failure due to deviation from device instructions for use. *Journal of Vascular Surgery*. 63 : 1088-1089. 2016
41. Alexey Kamenskiy; Andreas Seas; Paul Deegan; William Poulson; Eric Anttila; Sylvie Sim; Anastasia Desyatova; Jason MacTaggart. Constitutive description of human femoropopliteal artery aging. *Biomechanics and Modeling in Mechanobiology*. 1-12. 2016
42. Anastasia Desyatova; Jason MacTaggart; William Poulson; Paul Deegan; Carol Lomneth; Anjali Sandip; Alexey Kamenskiy. The choice of a constitutive formulation for modeling limb flexion-induced deformations and stresses in the human femoropopliteal arteries of different ages. *Biomechanics and Modeling in Mechanobiology*. 1-11. 2016
43. William Poulson; Alexey Kamenskiy; Andreas Seas; Paul Deegan; Carol Lomneth; Jason MacTaggart. Limb flexion-induced axial compression and bending in human femoropopliteal artery segments. *Journal of Vascular Surgery*. 2016
44. Anastasia Desyatova; Jason MacTaggart; Alexey Kamenskiy. Constitutive modeling of human femoropopliteal artery biaxial stiffening due to aging and diabetes. *Acta Biomaterialia*. 2017
45. Anastasia Desyatova; William Poulson; Paul Deegan; Carol Lomneth; Andreas Seas; Kaspars Maleckis; Jason MacTaggart; Alexey Kamenskiy. Limb flexion-induced twist and associated intramural stresses in the human femoropopliteal artery. *Journal of the Royal Society, Interface*. 14 : 2017
46. Anastasia Desyatova; Jason MacTaggart; Rodrigo Romarowski; William Poulson; Michele Conti; Alexey Kamenskiy. Effect of aging on mechanical stresses, deformations, and hemodynamics in human femoropopliteal artery due to limb flexion. *Biomechanics and Modeling in Mechanobiology*. 1-9. 2017
47. Kaspars Maleckis; Paul Deegan; William Poulson; Cole Sievers; Anastasia Desyatova; Jason MacTaggart; Alexey Kamenskiy. Comparison of femoropopliteal artery stents under axial and radial compression, axial tension, bending, and torsion deformations. *Journal of the Mechanical Behavior of Biomedical Materials*. 75 : 160-168. 2017
48. Kaiwen Sun; Rishi Batra; Nicholas W Markin; Melissa Suh; Iraklis I Pipinos; Ellen K. Roberts; Jason N Mactaggart; Bernard Timothy Baxter. Transesophageal Echocardiogram-Guided Stent Placement in Superior Vena Cava Syndrome Secondary to Granulomatous Lung Disease. *Vascular and Endovascular Surgery*. 51 : 562-566. 2017
49. Kaspars Maleckis; Eric Anttila; Paul Aylward; William Poulson; Anastasia Desyatova; Jason MacTaggart; Alexey Kamenskiy. Nitinol Stents in the Femoropopliteal Artery. *Annals of Biomedical Engineering*. 1-21. 2018
50. Alexey Kamenskiy; William Poulson; Sylvie Sim; Austin Reilly; Jiangtao Luo; Jason Mactaggart. Prevalence of Calcification in Human Femoropopliteal Arteries and its Association with Demographics, Risk Factors, and Arterial Stiffness. *Arteriosclerosis, thrombosis, and vascular biology*. 38 : e48-e57. 2018
51. Desyatova A; Poulson W; MacTaggart JN; Maleckis K; Kamenskiy A. Cross-sectional pinching in human femoropopliteal arteries due to limb flexion, and stent design optimization for maximum cross-sectional opening and minimum intramural stresses. 2018 Aug
52. Charity H Evans; Lisa L Schlitzkus; Alicia Schiller; Alexey Kamenskiy; Jason N Mactaggart. Comparison of simulation models for training a diverse audience to perform resuscitative endovascular balloon occlusion of the aorta. *Journal of Endovascular Resuscitation and Trauma Management*. 3 : 111-119. 2019
53. Eric Anttila; Daniel Balzani; Anastasia Desyatova; Paul Deegan; Jason N Mactaggart; Alexey Kamenskiy. Mechanical damage characterization in human femoropopliteal arteries of different ages. *Acta Biomaterialia*. 2019
54. Majid Jadidi; Anastasia Desyatova; Jason N Mactaggart; Alexey Kamenskiy. Mechanical stresses associated with flattening of human femoropopliteal artery specimens during planar biaxial testing and their effects on the calculated physiologic stressâstretch state. *Biomechanics and Modeling in Mechanobiology*. 2019

55. Anastasia Desyatova; Jason N Mactaggart; Alexey Kamenskiy. Effects of longitudinal pre-stretch on the mechanics of human aorta before and after thoracic endovascular aortic repair (TEVAR) in trauma patients. *Biomechanics and Modeling in Mechanobiology*. 2019
56. Jason N Mactaggart; William Poulson; Andreas Seas; Paul Deegan; Carol Lomneth; Anastasia Desyatova; Kaspars Maleckis; Alexey Kamenskiy. Stent Design Affects Femoropopliteal Artery Deformation. *Annals of surgery*. 270 : 180-187. 2019
57. William J. Moorhead; William J. Moorhead; Claire C. Chu; Claire C. Chu; Rolando A. Cuevas; Rolando A. Cuevas; Jack Callahan; Jack Callahan; Ryan Wong; Ryan Wong; Cailyn Regan; Cailyn Regan; Camille K. Boufford; Camille K. Boufford; Swastika Sur; Swastika Sur; Mingjun Liu; Mingjun Liu; Delphine Gomez; Delphine Gomez; Jason N. Mactaggart; Alexey Kamenskiy; Manfred Boehm; Cynthia St. Hilaire; Cynthia St. Hilaire; Cynthia St. Hilaire; Cynthia St. Hilaire; Cynthia St. Hilaire; et al. Dysregulation of FOXO1 (Forkhead Box O1 Protein) Drives Calcification in Arterial Calcification due to Deficiency of CD73 and Is Present in Peripheral Artery Disease. *Arteriosclerosis, Thrombosis, and Vascular Biology*. 1680-1694. 2020
58. Samuels JM, Sun K, Moore EE, Coleman JR, Fox CJ, Cohen MJ, Sauaia A, MacTaggart JN. Resuscitative endovascular balloon occlusion of the aorta-Interest is widespread but need for training persists. *The journal of trauma and acute care surgery*. 89 : e112-e116. 2020
59. Majid Jadidi; Mahmoud Habibnezhad; Eric Anttila; Kaspars Maleckis; Anastasia Desyatova; Jason MacTaggart; Alexey Kamenskiy. Mechanical and structural changes in human thoracic aortas with age. *Acta Biomaterialia*. 103 : 172-188. 2020
60. Samuels JM; Sun K; Moore EE; Coleman JR; Fox CJ; Cohen MJ; Sauaia A; MacTaggart JN. Resuscitative endovascular balloon occlusion of the aorta - Interest is widespread but need for training persists. PMID:33009200. *Journal of Trauma and Acute Care Surgery*. 2020 Oct; p. e112-e116
61. Dimitrios Miserlis; Maria E. Tecos; Nitin Garg; Jason N. MacTaggart; Mark G. Davies; Iraklis I. Pipinos. The "two-cut monorail" technique, for the over-the-wire removal of the Impella CP device. *Journal of Vascular Surgery Cases and Innovative Techniques*. 6 : 622-625. 2020
62. Kaspars Maleckis; Courtney Keiser; Majid Jadidi; Eric Anttila; Anastasia Desyatova; Jason MacTaggart; Alexey Kamenskiy. Safe balloon inflation parameters for resuscitative endovascular balloon occlusion of the aorta. *Journal of Trauma and Acute Care Surgery*. 91 : 302-309. 2021
63. Kaspars Maleckis; Alexey Kamenskiy; Eliezer Z. Lichter; Rebecca Oberley-Deegan; Yuris Dzenis; Jason MacTaggart. Mechanically tuned vascular graft demonstrates rapid endothelialization and integration into the porcine iliac artery wall. *Acta Biomaterialia*. 125 : 126-137. 2021
64. Majid Jadidi; William Poulson; Paul Aylward; Jason MacTaggart; Christian Sanderfer; Blake Marmie; Margarita Pipinos; Alexey Kamenskiy. Calcification prevalence in different vascular zones and its association with demographics, risk factors, and morphometry. *American Journal of Physiology - Heart and Circulatory Physiology*. 320 : H2313-H2323. 2021
65. Alexey Kamenskiy; Paul Aylward; Anastasia Desyatova; Matthew Devries; Christopher Wichman; Jason Mactaggart. Endovascular Repair of Blunt Thoracic Aortic Trauma is Associated with Increased Left Ventricular Mass, Hypertension, and Off-target Aortic Remodeling. *Annals of surgery*. 274 : 1089-1098. 2021
66. Courtney Keiser; Kaspars Maleckis; Pauline Struczewska; Majid Jadidi; Jason MacTaggart; Alexey Kamenskiy. A method of assessing peripheral stent abrasiveness under cyclic deformations experienced during limb movement. *Acta Biomaterialia*. 2022
67. Annalise M. Panthofer; Sydney L. Olson; Brooks L. Rademacher; Larry W. Kraiss; William C. Blackwelder; B. Timothy Baxter; Jason N. MacTaggart; Barry T. Katzen; Scott S. Berman; Jon S. Matsumura. Effect of Two Years of Doxycycline Treatment on Infrarenal Aortic Neck Diameter. *EJVES Vascular Forum*. 59 : 43-48. 2023
68. Pauline Struczewska; Sayed Ahmadreza Razian; Kaylee Townsend; Majid Jadidi; Ramin Shahbad; Elham Zamani; Jennifer Gamache; Jason MacTaggart; Alexey Kamenskiy. Mechanical, structural, and physiologic differences between above and below-knee human arteries. *Acta Biomaterialia*. 177 : 278-299. 2024
69. Margarita I. Pipinos; Elizabeth A. Amato-Hanner; Aaron M. Murray; Shalmali Mirajkar; Jennifer L. Gamache; Safina Hafeez; Tanya M. Wildes; Jason N. MacTaggart. Blood letting as an ancient cure for an unusual manifestation of polycythemia. *Annals of Vascular Surgery - Brief Reports and Innovations*. 4 : 2024

B. ARTICLES ACCEPTED FOR PUBLICATION IN SCHOLARLY JOURNALS

Not Applicable

C. ARTICLES SUBMITTED FOR PUBLICATION IN SCHOLARLY JOURNALS

Not Applicable

D. BOOKS PUBLISHED, IN PREPARATION, SUBMITTED OR IN PRESS

Not Applicable

E. CHAPTERS IN BOOKS

1. Baxter BT; MacTaggart JN. Greenfield's Surgery Scientific Principles and Practice. 4th Ed. Michael W Mulholland et al. Lippincott Williams & Wilkins; 2005. Pathogenesis of Aneurysms
2. Rapp JH; MacTaggart JN. Current Surgical Diagnosis and Treatment. Appleton and Lange; 2010. Arteries
3. MacTaggart JN; Longo GM. New Findings in Vascular Surgery. Shelton, CT: People's Medical Publishing House; 2012. Endovascular Reconstruction of the Aortic Arch
4. MacTaggart JN; Baxter BT. Current Therapy in Vascular and Endovascular Surgery. Saunders: James Stanley et al; 2014. Management of Acute Limb Ischemia Complicating Aortic Reconstruction

F. BOOKS OR JOURNALS EDITED

BOOKS EDITED

1. Baxter BT; MacTaggart JN, Editors. Comprehensive Vascular and Endovascular Surgery. 2nd. Mosby; 2009. Pathogenesis of Aortic Aneurysms

G. ABSTRACTS AND PRELIMINARY COMMUNICATIONS

1. Gupta PK; Gupta H; Miller WJ; MacTaggart JN; Johanning JM; Longo GM. Predictors of Cardiac Events after Major Vascular Surgery. Quick shot oral presentation; San Antonio, Texas. 5th Annual Academic Surgical Congress. 2010 Feb
2. Gupta PK; Gupta H; Miller WJ; Johanning JM; Lynch TG; MacTaggart JN; Longo GM; Pipinos II. Corticosteroid Use, Symptomatic Status, and Smoking Are Associated with Stroke after Carotid Surgery in the ACS NSQIP. Quick shot oral presentation; San Antonio, Teas. 5th Annual Academic Surgical Congress. 2010 Feb
3. kamenskiy av; Dzenis YA; MacTaggart JN; Johanning JM; Longo GM; Lynch GM; Pipinos II. Biaxial Mechanical Properties Of The Human Carotid Artery and Materials Used for Patch Angioplasty. Oral Presentation at the 2010 Scientific Meeting of the Midwestern Vascular Society; Indianapolis, IN. 2010 Sep
4. Gupta PK; Arya S; Natarajan B; Fang X; Gupta H; Balters M; Johanning JM; Lynch TG; Longo GM; MacTaggart JN; Pipinos II. Endovascular Repair of Abdominal Aortic Aneurysm Does Not Improve Survival versus Open Repair in Patients Sixty Years or Younger. 2011 Scientific Meeting of the Midwestern Vascular Surgical Society; Chicago, Illinois. 2011 Sep
5. Baxter BT; Eksi, Andrew; Lieber DJ; Cook JR; Thompson JR; MacTaggart JN. Neurogenic TOS: can the relative length of C-7 help with diagnosis?. 2023

H. PUBLISHED AUDIOVISUAL OR COMPUTER-BASED EDUCATIONAL MATERIALS AND COMPUTER SOFTWARE

Not Applicable

I. PUBLISHED CONTINUING EDUCATION MATERIALS

Not Applicable

J. EDITORIALS

Not Applicable

K. CONFERENCE PROCEEDING

Not Applicable

COMMUNITY SERVICE

2014 - 2015 High School Alliance Shadowing Experience, University of Nebraska Medical Center

2015 - 2015 Free Abdominal Aortic Aneurysm Community Screening Event

EDUCATION/TEACHING ACTIVITY

A. COURSES, INDIVIDUAL TAUGHT

M3 Peripheral Vascular Disease

University of Nebraska Medical Center, 2012 - 2014

Engineering Senior Design Project

Lecture: University of Nebraska - Lincoln, 2012 - 2013

M1 Summer Externship Program

University of Nebraska Medical Center, 2011

M4 Surgery Boot Camp Suturing Workshop

University of Nebraska Medical Center, 2013 - 2016

B. GRADUATE STUDENT INSTRUCTION

Graduate Student

Kaspars Maleckis, University of Nebraska - Lincoln, Mechanical & Materials Engineering Dpt. PhD program.
Project 1: Development of the nanofiber-based vascular graft with artery-mimicking properties. Submitted AHA post-doctoral fellowship.
Project 2: Experimental assessment of bending, torsion and compression of the lower extremity stents., 2015 - 2016

Eric Anttila, University of Nebraska - Lincoln, Mechanical & Materials Engineering Dpt. PhD program.
Role: Graduate Committee Member
Project: Experimental and computational assessment of the femoropopliteal artery stents., 2016 - Present

Majid Jadidi, University of Nebraska - Lincoln, Mechanical & Materials Engineering Dpt. PhD program.
Role: Graduate Committee Member
Project 1: Growth and remodeling of the femoropopliteal artery using constrained mixture theory.
Project 2: Assessment of bending stresses associated with flattening of the biaxial sample during testing., 2016 - 2020

C. RESIDENT INSTRUCTION

General Surgery Resident Vascular Exposures Cadaver Lab

University of Nebraska Medical Center, 2012 - 2016

Post-doctoral Fellow

Anastasia Desyatova, University of Nebraska Medical Center, Role: Consultant on NIH F32 Fellowship
Project: Computational Tool to Assess Performance of the Aortic Trauma Stent Grafts, 2015 - 2018

Post-doctoral Fellows

Kaspars Maleckis, University of Nebraska Medical Center, Project 1: Assessment of balloon occlusion and rupture pressures in thoracic and abdominal aortas in subjects of different ages
Project 2: Mechanical properties of femoropopliteal stents
Project 3: Comparison of femoropopliteal artery stents abrasiveness using multilayered artery-mimic nanofiber tubes
Project 4: Interaction of vascular smooth muscle cells with the nanofiber matrices under cyclic stretch and compression
Project 5: Nanofiber-based stent-graft for young aortas with Windkessel effect
Project 6: Nanofiber axially pre-stretched bypass graft for lower extremity applications, 2017 - Present

Surgery Resident

William Poulson, MD, University of Nebraska Medical Center, Project 1: Effects of stenting on limb flexion-induced deformations of the femoropopliteal artery
Project 2: Assessment of bending, torsion, axial and radial compression of the femoropopliteal artery with limb flexion
Project 3: Quantitative analysis of femoropopliteal artery histopathology
Project 4: Development of perfused cadaver system., 2015 - 2017

Paul Aylward, MD, University of Nebraska Medical Center, Project 1: Restenosis after femoropopliteal artery stenting
Project 2: Blind navigation of endovascular equipment, 2017 - 2019

D. ADDITIONAL INSTRUCTION

CASEA Research Lab Trainee Mentoring

Other: University of Nebraska Medical Center, 2013 - Present

Endovascular Skills for Trauma and Resuscitative Surgery

ESTARS, University of Nebraska Medical Center, Organize an institutional effort to partner with the University of Michigan and the Department of Defense to help disseminate endovascular knowledge and techniques to military and civilian trauma care providers on a national level., 2016 - Present

E. FACULTY ADVISING/MENTORING

Graduate Students

Other: Andrea Seas, MD/PhD, University of Nebraska Medical Center, Andrea Seas, MD/PhD - Duke University. UNMC summer student in 2014 and 2015.
Project 1: Automated image analysis of elastin characteristics in the human femoropopliteal artery.
Project 2: Bootstrapping techniques to determine unique set of constitutive parameters for the human femoropopliteal artery four-fiber family model.
Project 3: Demographics-based constitutive model for the human femoropopliteal artery.
Recipient of Barry Goldwater Scholarship.
, 2014 - 2015

Laboratory Personnel

Justin Kitson, Research Technologist, University of Nebraska Medical Center, Justin Kitson - Project 1: Mechanical testing of arteries
Project 2: Processing of histopathological sections
Position: Certified anesthesiology assistant, Case Western Reserve University., 2013 - Present

Sheridan Nusz, Research Technologist, University of Nebraska Medical Center, Sheridan Nusz - Project 1: Mechanical testing of arteries.
Project 2: Processing of histopathological sections.
Current position: US Army Research Laboratory.

, 2014 - 2015

Paul Deegan, MS, Researcher, University of Nebraska Medical Center, Project 1: Mechanical and structural characterization of human arteries.
Project 2: Computer-aided design of the lower extremity stents.
Project 3: Quantitative analysis of femoropopliteal artery histopathology.
Project 4: Development of perfused cadaver system.
, 2015 - 2019

Sylvie Sim, MS, Researcher, University of Nebraska Medical Center, Project: Assessment of cell viability in an ex vivo artery subjected to flow, pressure, axial load and torque loads, 2016 - Present

Medical Students

Katherine Thorson, University of Nebraska Medical Center, Project: Morphometric analysis of human vascular system using computed tomography angiography scans.
Current position: UNMC medical student.
, 2015 - Present

Patrick Kirland, University of Nebraska Medical Center, Project: Long-term effects of trauma stent-grafts on aortic morphometry in young trauma patients., 2015 - 2016

Peter Adamson, University of Nebraska Medical Center, Peter Adamson - Project 1: Morphometric analysis of human vascular system in different age groups.
Project 2: Quantification of elastin characteristics in the femoropopliteal artery histological sections.
Current position: Orthopedic Surgery Residency at UTMB., 2015 - 2016

Anna Adamson, University of Nebraska Medical Center, Project: Morphometric changes in the human carotid artery with ageing and disease., 2016 - Present

Cole Sievers, University of Nebraska Medical Center, Project: Comparative analysis of the femoropopliteal artery stents., 2016 - Present

Eric Forney, University of Nebraska Medical Center, Project: Morphometric changes in the human carotid artery with ageing and disease., 2016 - Present

Instructor: Christian Sanderfer, University of Nebraska Medical Center, Project 1: Endovascular balloon occlusion navigation using an electronic simulator and morphometric roadmaps., 2017 - 2020

Other: Jamil Neme, Creighton University Medical Center, Jamil Neme - Project: Morphometric analysis of human vascular system in different age groups
Position: Family Medicine Resident; University of Nebraska Medical Center, 2012 - 2013
Nicholas Phillips, University of Nebraska Medical Center, Nicholas Phillips - Project 1: Assessment of mechanical properties in various human arteries
Project 2: Measurement of limb flexion-induced deformations in the human femoropopliteal artery
Position: Anesthesia Resident; Johns Hopkins, 2012 - 2015
Tom Knowles, Creighton University Medical Center, Tom Knowles - Project: Morphometric analysis of human vascular system in different age groups
Position: Surgery Resident, University of Oregon Medical Center, 2012 - 2013
Micah Adamson, University of Nebraska Medical Center, Micah Adamson - Project 1: Morphometric analysis of human vascular system in different age groups
Project 2: Quantification of elastin characteristics in the femoropopliteal artery histological sections
Position: Orthopedic Surgery Resident, University of Texas Medical Branch, 2013 - 2015
Joseph Marion, University of Nebraska Medical Center, Joseph Marion - Project: Long-term effects of trauma stent-grafts on aortic morphometry in young trauma patients. Current position: General Surgery Intern, University of Minnesota., 2015 - 2016
Alexis Rogers, University of Nebraska Medical Center, Project: Closed Loop Fixed Pressure System., 2016 - Present
Austin Reilly, University of Nebraska Medical Center, Project: Medial calcification in the femoropopliteal artery, 2016 - Present
Ethan Monhollon, University of Nebraska Medical Center UneMed, Project: Development of the REBOAKen model for endovascular training., 2016 - Present
Hannah Johnke, University of Nebraska Medical Center, Project: Detailed Morphometric Characterization of the Femoropopliteal Artery in Patients with Peripheral Arterial Disease at Baseline and After Endovascular Stenting., 2016 - Present
Noah Hammond, University of Nebraska Medical Center, Project: Arterial Storage Solution., 2016 - Present
Blake Marmie, University of Nebraska Medical Center, Project 1: SureSnare prototype development.
Project 2: Endovascular balloon occlusion navigation using an electronic simulator and morphometric roadmaps., 2017 - Present
Kevin Sun, University of Nebraska Medical Center, Kevin Sun - Project: Survey of trauma surgeons on REBOA practice and opinion, 2018

Undergraduate Students

Maheen Akhter, University of Nebraska Medical Center, USC student; UNMC undergraduate summer student. USC.
Project 1: Physical model of the femoropopliteal artery.
Project 2: Morphometric analysis of human vascular system using computed tomography angiography scans.

, 2015 - Present
Nick Bohlim, University of Nebraska Medical Center, UNL student; UNMC undergraduate summer student. UNL. Biological Systems Engineering.
Project: Determination of equivalent strains in human femoropopliteal artery plaques.
, 2015 - Present
Thomas Kalil, Notre Dame, Project: Algorithm for real-time tracking of aortic deformations with a digital camera, 2017 - 2019
Grant Bowen, University of Nebraska Medical Center, Rhodes College, TN student; UNMC undergraduate summer student. Rhodes College, TN.
Project 1: Measurement of longitudinal pre-stretch in various human arteries.
Project 2: Quantitative histological analysis of femoropopliteal artery sections., 2014 - 2015
Margarita Pipinos, University of Michigan, Project: Morphometric analysis of vascular anatomy in the chest, abdomen, and pelvis and endovascular navigation using electronic simulator and morphometric roadmaps, 2017 - 2018