

BENJAMIN P. KRAMER

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EDUCATION - TRAINING

Case Western Reserve University, Dept. of Population and Quantitative Health Sciences, *Cleveland, OH*
PhD Candidate
Research Advisor: Eugene Blackstone MD, Clinical Advisor: Eric Roselli MD

Cleveland Clinic Foundation, Department of Cardiothoracic Surgery, *Cleveland, OH*
Cardiac Surgery Research Fellow: July 2021 - *Present*

Cleveland Clinic Foundation, Department of General Surgery, *Cleveland, OH*
General Surgery Residency: July 2019 - *Present*

NYIT College of Osteopathic Medicine (NYITCOM), *Old Westbury, NY*
Doctor of Osteopathic Medicine (D.O.), August 2014 - June 2019
Master of Science (M.S.) Neuromuscular Medicine, January 2017 - June 2019 *, GPA 3.98

*Academic Medicine Scholars Program – Selected to participate in a competitive full tuition scholarship program which prepares students for a career in academic medicine through research, teaching, and clinical activities.

Villanova University, *Villanova, PA*
Bachelor of Science, Physics, 2014
Bachelor of Science, Chemistry, 2014
Minors: Ethics of Health Care

HONORS

Cardiothoracic Surgery Network – Research Scholar	Jun. 2022, 2023
Cleveland Clinic Crile Fellowship Research Award	July 2020, 2021
Associate Faculty, Comprehensive Lifelong Expeditious (CLE) Care of Aortic Disease	Sep. 2021
Associate Faculty, C3 Complex Cardiovascular Catheter Therapeutics	Jun. 2018
American Physiological Society – Professional Skills Training Program	Jan. 2018
Who's Who of Students Across Universities and Colleges	Jan. 2014
International Baccalaureate Academic Scholar	Jun. 2010
Eagle Scout - Boy Scouts of America	Aug. 2009

RESEARCH EXPERIENCE

Cardiothoracic Surgical Trial Network (CTSNet), New York, NY	Jun. 2021 - Present
Mentor: Emilia Bagiella, PhD – Cardiothoracic Surgery	

Subject: Quantitative Health Sciences, statistical analysis, clinical trials

Cleveland Clinic Heart, Thoracic and Vascular Institute, Cleveland, OH Jan. 2020 – Present
Mentors: Eugene Blackstone, MD, and Eric Roselli, MD – Cardiothoracic Surgery
Subject: Clinical Translational Science, Biomechanical engineering, histopathologic tissue architecture

Cleveland Clinic Digestive Disease Institute, Cleveland, OH Feb. 2020 – Present
Mentor: Jeremy Lipman MD – Surgical Education
Subject: Surgical Education, Medical Student Mentorship

St. Francis The Heart Center, Roslyn, NY Sep. 2017 – Jun. 2019
Mentor: Evan Schlofmitz, DO; Gregory Saggio DO, Maria Plummer – Cardiovascular Science
Subject: Interventional cardiology, anatomic cadaveric research studies

NYIT College of Osteopathic Medicine, Old Westbury, NY Jan. 2017 – Jun. 2019
Mentor: Maria Sepulveda, BSN, PhD – Cardiovascular Science
Subject: Cardiovascular basic science, vascular reactivity, epigenetic modification

Mentor: Qiangrong Liang PhD, A. Martin Gerdes PhD – Cardiovascular Science Jan. 2014 – Jun. 2017
Subject: Cardiovascular basic science, cardiomyocyte autophagy

UPMC Presbyterian, Pittsburgh, PA May 2013–Aug. 2013
Mentor: Ferruccio Galbiati M.D., PhD – Molecular Pharmacology
Subject: Thoracic Cancer basic science, cellular senescence in cancer therapeutics

GRANTS

NIH H Grant (HL088955)	Jun. 2021 – Present
Cleveland Clinic Crile Research Fellowship Award	Jul. 2020, 2021
Rossnick Humanitarian Grant – Travel Grant for International Medical Mission Experience	Sep. 2017
American Heart Association - Student Scholarship in Cardiovascular Disease	Jul. 2017

PUBLICATIONS

Kramer, B., Thompson, M.A., ... Roselli E.E. Longitudinal versus Circumferential Biomechanical Behavior of the Aneurysmal Ascending Aorta. The Journal of Thoracic and Cardiovascular Surgery. (2023). *In Revision*

Thompson, M.A., **Kramer, B.**, ... Roselli E.E. Mechanical Behavior of the Ascending Aorta in Bicuspid Aortic Valve Aortopathy. The Journal of Thoracic and Cardiovascular Surgery. (2023). *In Revision*

Bhutada, S., Tran-Lundmark, K., **Kramer, B.**, ..., Apte, S.. Identification of protein biomarkers associated with congenital diaphragmatic hernia in human amniotic fluid, (2023), Nature – Scientific Reports. *In Revision*

Roselli, E. E., **Kramer, B.**, Germano, E., Toth, A., Vargo, P. R., Bakaeen, F., ... & Blackstone, E. H.. The modified frozen elephant trunk may outperform limited and extended-classic repair in acute type I dissection. *European Journal of Cardio-Thoracic Surgery*, (2023), 63(6). *In Press*

Tarraf, S., **Kramer B.**, et al., Lengthwise Regional Mechanics of the Human Aneurysmal Ascending Thoracic Aorta, *Acta Biomaterialia*, (2023). *In Press*

Kramer, B., Veckstein, A.M, et al. "Choosing Transcatheter Aortic Valve Replacement in Porcelain Aorta: Outcomes Versus Surgical Replacement." *European Journal of Cardio-Thoracic Surgery* (2023). *In Press*

Vianna, E., **Kramer, B.**, Tarraf, S., Gillespie, C., Colbrunn, R., Bellini, C., ... & Richardson, R. Aortic Diameter is a Poor Predictor of Aortic Tissue Failure Metrics in Patients with Ascending Aneurysms. *The Journal of Thoracic and Cardiovascular Surgery*. (2022). *In Press*

Kramer, B., Plitt, G., French, J., et al The Impact of COVID-19 on Junior Surgical Resident Operative Case Volume – A Retrospective Nationwide Multi-Institutional Cohort Study, *Journal of Surgical Research* 279 (2022): 208-217

Sepulveda, MA; Maddie, N.; Johnson, C.; Burke, C.; Lutz, O.; Yakub, B.; **Kramer, B.**; Persand, D. Vascular hyperacetylation is associated with vascular smooth muscle dysfunction in a rat model of non-obese type 2 diabetes. *Molecular Medicine* 28.1 (2022): 1-14.

Kramer, B., França, L. M., Zhang, Y., Paes, A. M. D. A., Gerdes, A. M., & Carrillo-Sepulveda, M. A. (2018). Western diet triggers Toll-like receptor 4 signaling-induced endothelial dysfunction in female Wistar rats. *American Journal of Physiology-Heart and Circulatory Physiology*, 315(6), H1735-H1747.

Burke, Cameron Michael & Franca, Lucas Martin & **Kramer, Benjamin** & Sepulveda, Maria Alicia Carrillo. *Ellagic Acid Ameliorates Insulin Sensitivity and Hepatic Oxidative Stress in Diabetic Female Rats: A Potential Anti-Oxidant Agent for Type II Diabetic Complications*. FASEB. 2018, Apr; 32(No. 1_supplement): 841.3.

Polce, Simran & Burke, Cameron & Franca Lucas, & **Kramer, Benjamin** & Paes, Antonio, & Sepulveda, Maria. *Ellagic Acid Alleviates Hepatic Oxidative Stress and Insulin Resistance in Diabetic Female Rats*. *Nutrients*. 2018, Apr; 10(5): 531. Cited in PubMed; PMID: 29693586.

Sepulveda, M. A. C., Johnson, C., Franca, L. M., & **Kramer, B.** (2018). Short-term Western Diet Induces Cardiometabolic Syndrome in Female Rats is Associated with Increased Cardiovascular Protein Lysine Acetylation. *The FASEB Journal*, 32, 900-7.

Kramer, Benjamin P., Zhang, K., Zhang, Y., Gerdes, A. M., & Carrillo-Sepulveda, M. A. (2017). Abstract P205: Short-term Western Diet Induced Hypertension in Female Rats is Associated with Vascular Epigenetic Modification. *Hypertension*, 70(suppl_1), AP205-AP205.

Kramer, Benjamin P., Kobayashi, S., Gerdes, M. and Liang, Q. (2016), High Glucose limits Autophagy via inhibition of Nuclear Translocation of Transcription Factor EB. *The FASEB Journal*, 30: 1273.7-1273.7. https://doi.org/10.1096/fasebj.30.1_supplement.1273.7

ORAL PRESENTATIONS

American Association For Thoracic Surgery (AATS) 103rd Annual Meeting

Los Angeles, CA

May. 2023

- Longitudinal versus Circumferential Biomechanical Behavior of the Aneurysmal Ascending Aorta
- C. Walton Lillehei Resident Forum Finalist

European Association of Cardiothoracic Surgeons (EACTS) Annual Meeting

Milan, Italy

Oct. 2022

- Choosing Transcatheter Aortic Valve Replacement in Porcelain Aorta: Outcomes Versus Surgical Replacement
- Featured Oral Presenter

Comprehensive Lifelong Expeditious (CLE) Care of Aortic Disease Virtual Symposium

Cleveland, OH

Sep. 2021

- Regional heterogeneity in ascending aortic biomechanics of connective tissue disorders – early results from the MATADORS Study
- Featured Oral Presenter – Associate Faculty

C3 Complex Cardiovascular Catheter Therapeutics – Advanced Endovascular and Coronary Intervention Summit, Orlando, FL

Jun. 2018

- Coronary Artery Distribution – A Cadaveric Analysis
- Featured Oral Presenter – Associate Faculty

POSTER PRESENTATIONS

Gordon Research Conference – Vascular Biology 2023, Hadley, MA

Aug. 2023

- *Longitudinal versus Circumferential Biomechanical Behavior of the Aneurysmal Ascending Aorta*

AATS Annual Meeting 2023, Los Angeles, CA

May 2023

- *DeBakey Type II versus DeBakey Type I Acute Aortic Dissections: Differing Dissections Require Similar Follow-Up*

STS Annual Meeting 2023, San Diego, CA

Jan. 2023

- *Bigger is Better: Modified Single Patch Konno-Bentall Technique for Prosthesis-Patient Mismatch and Aortic Stenosis in Adults*

AATS Annual Meeting 2022, Boston, MA

May. 2022

- *DeBakey Type I Dissection is the Most Common Type in Bicuspid Aortic Valve Patients, regardless of Valve Phenotype: a 40-year Review*

American College of Surgeons, Boston, MA

Oct. 2018

- *Distribution of Coronary Artery Size and Calcification Localization - An Anatomical Cadaveric Analysis,*
- **Featured Oral Presenter – 2nd Place: Poster Competition Awardee**

American Heart Association – Council on Hypertension, San Francisco, CA

Sep. 2017

- *Short Term Western Diet Induced Hypertension in Female Rats is Associated with Vascular Epigenetic Modification*
- **1st Place: Onsite Poster Competition Graduate Student Awardee**

American Academy of Osteopathy – Convocation, Colorado Springs, CO

Mar. 2017

- *Osteopathic Treatment of the Autonomic Nervous System (ANS) to Address Upper Respiratory Infection (URI) Induced Broncholaryngitis, and Frontomaxillary Sinusitis: A Case Report*

Experimental Biology, San Diego, CA

Apr. 2016

- *High Glucose Limits Autophagy via Inhibition of Translocation of TFEB*

Osteopathic Medical Conference and Exposition– Poster Presentation, Orlando, FL

Oct. 2015

- *High Glucose Limits Autophagy via Inhibition of Translocation of TFEB*
- **2nd Place: AOA Research Poster Presentation Competition**

TEACHING EXPERIENCE

NYIT College of Osteopathic Medicine Old Westbury, NY

Jul. 2017

Instructor - Clinical Medicine Course

- Instructed the following topics to second year students entering hospital clerkships:
 - Advanced Clinical Medicine Education
 - Surgical Clinical Course: Scrubbing and Sterility
 - Advanced Surgical Suturing Techniques
 - EKG Clinical Applications and Analysis

NYITCOM Academic Medical Scholars Program, Old Westbury, NY

Jan. 2017-Jan. 2018

Academic Medicine Training, Research Component, Teaching Assistant for Medical Students

Lead Instructor – Doctor Patient Relationship - Clinical Skills Education Course

- Facilitated weekly, small group, case-based discussions with 1st year students on topics pertaining to clinical skills, case presentation, and patient management.

Lead Laboratory Instructor - Osteopathic Manipulative Medicine

- Instructed Osteopathic Treatment and Consideration, Practice and Principles

Lecture Presenter

- Presented to over 400 students with the Cardiopulmonary Renal System
 Topic: *Hemodynamics and Circulation: Advanced Cardiac Physiology Principles and Practice*
 Topic: *Aortic Aneurysms, Dissection, and Disease*
 Topic: *Cardiac Valvular Pathology: Pathophysiology and Clinical Applications* Topic:
USMLE/COMLEX Boards: Strategies, Studying, and Success

Anatomy Lab Lead Dissector/Presenter Aug.-Sep. 2018

- Presented to over 150 students on dissection techniques and taught the appropriate course material that corresponded with the Gross Anatomy section.

Topic: *Anterior Chest Wall, Pleura, and Anterior Mediastinum*
 Topic: *Heart*
 Topic: *Superior and Posterior Mediastinum*

Osteopathic Manipulative Medicine Lead Table Trainer Jan. 2017-Dec. 2018

- Presented to over 300 students osteopathic manipulative techniques regarding principles and practice. Hands-on facilitation of treatment techniques and osteopathic approaches to patients.

Topic: *OMM: Osteopathic Approach to the Gastrointestinal Patient*
 Topic: *Thoracic and Thoracic Cage (Rib) Diagnosis Review, Thoracic MFR, Thoracic MET, Thoracic and Ribs HVLA Clinical Case Correlation*
 Topic: *Thoracic and Lumbar Diagnosis / Assessment of Fascial Planes*

CLINICAL EXPERIENCE

HNI Healthcare, Cleveland, OH Jan. 2022 – Present
Surgical House Physician – General/Trauma Surgery

- Independent on-call surgical house physician managing surgical traumas and in-house critical care procedure

International Children's Heart Foundation, Santo Domingo, DR Mar. 2019
Surgical Assistant - Hospital Infantil Dr. Robert Reid Cabral

- Served as a first assist for congenital cardiac surgeon during medical mission

Eximius Scribe Solutions, Emergency Department Scribe, Bryn Mawr, PA Jan. 2013 – May 2014
Chief Medical Scribe - Main Line Health Emergency Departments

- Served as a medical scribe for ED, and organized scribe schedule and training

LEADERSHIP

NYITCOM, Old Westbury, NY

<i>Vice President, Sigma Sigma Phi (Osteopathic Academic Honor Society)</i>	Jan. 2017 – Jan. 2018
<i>Parliamentarian, Student Government Association</i>	Aug. 2016 – Jul. 2017
<i>President, NYITCOM ACOEP Student Chapter</i>	May 2015 – May 2016
<i>Student Ambassador</i>	Aug. 2015 – May 2016
<i>Director, Note-o-Chords NYITCOM A Capella Group</i>	Aug. 2014 – Dec. 2017

PROFESSIONAL MEMBERSHIPS

<i>Resident and Associate Society – Membership Committee</i>	Jun. 2019 – Present
<i>American College of Surgeons (ACS)</i>	Mar. 2017 – Present
<i>Society of Thoracic Surgeons – Pre-Candidate Membership (STS)</i>	Nov. 2016 – Present

American Medical Association (AMA)
American Heart Association (AHA)

Aug. 2014 – Present
Jan. 2017 - Present

CERTIFICATIONS

<i>Stop the Bleed</i>	Nov. 2017
<i>ATLS</i>	Jun. 2020 – Jun. 2024
<i>ACLS</i>	Jun. 2021 – Jun. 2025
<i>BLS</i>	Jun. 2021 – Jun. 2025

INTERESTS

Tenor - Choir, Villanova University Singers, *Notable Performances: Vatican, Vatican City; Notre Dame Basilica, Montreal, Canada; Basilica of Our Lady of Angels, Cartago, Costa Rica*

Hiking/Backpacking