

RESIDENT RESEARCH

IN THE DEPARTMENT OF SURGERY

Dear Prospective Residents,

We are excited that you're considering the University of Washington for your residency. This is a dynamic department that offers comprehensive training in both the clinical practice of surgery and other components of professional development that will help you be successful in the years ahead. For many of you that involves research. The Department of Surgery aims to be the premier home for surgical research. We strive to do research that is innovative, collaborative, and impactful and we are consistently ranked as one of the top programs in the nation for NIH and extramurally funded research. We look forward to you being a part of research during your training.

There are many research training and practice opportunities for you to participate in during your years here. The Department has two NIH-sponsored T32 research training programs: one in basic science (led by [Grant O'Keefe, MD](#)) and one in clinical and health services research led by faculty at the [Surgical Outcomes Research Center \(SORCE\)](#). Beyond these training programs, the Department includes a group of investigators eager to work with you in their labs and many other faculty around the School of Medicine who enjoy collaborating with surgical research fellows. No matter the path you choose for research, we are committed to helping you develop as a researcher and supporting you in your career development as surgeon-scientists.

Research in the Department of Surgery is organized into 10 cores: Injury, Burn, and Inflammation; Cancer; Reperfusion; Transplant; Device and Pharmaceutical Clinical Trials; Vascular Biology; Gastrointestinal Physiology and Metabolism; Simulation and Education; Global and Rural Health; and Health Services. Each of these cores includes faculty with substantial experience who are excited to work with you in short-term research projects as well as longer research fellowships.

This publication highlights the work of residents, most who are currently undertaking two-year research fellowships. You can learn more about all resident research opportunities by visiting the [research section](#) of the Department of Surgery website. There you will find investigator profiles, information about our many research labs and centers, abstracts from the most recent Schilling Research Symposium, and much more.

We hope you will join us in pursuing research during your time as a surgical resident and welcome you to be part of what we believe is the premier home for surgical research.

Sincerely,

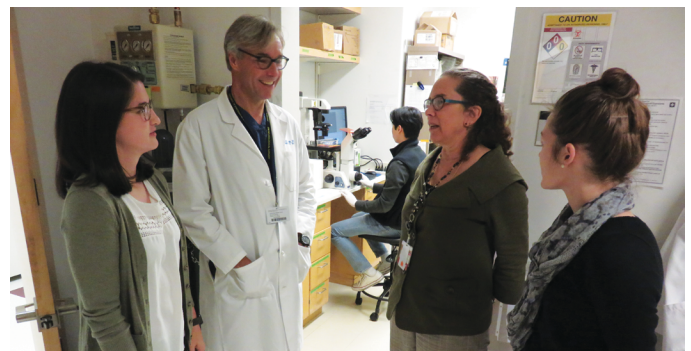


David R. Flum, MD, MPH, FACS

*Professor of Surgery, Adjunct Professor, Pharmacy and Health Services
Associate Chair for Research, Department of Surgery
University of Washington*

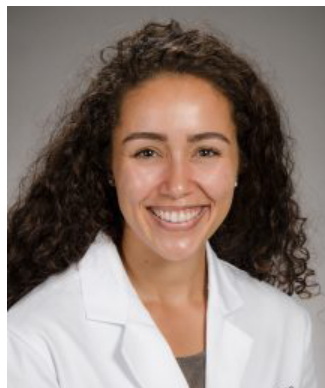


David R. Flum, MD,
MPH, FACS
Associate Chair for Research



Drs. Dara Horn (2018–20 Research Resident), Grant O'Keefe,
Nicole Gibran and Sara Daniel (2018–20 Research Resident)

RESIDENT RESEARCHERS



Lauren Agoubi, MD, MA, 2022-2024

Dr. Agoubi is a research fellow in the NIH-funded [T32 Pediatric Injury Research Training Program](#) at the [Harborview Injury Prevention and Research Center](#). She is working under the mentorship of Drs. [Frederick Rivara](#), [Monica Vavilala](#), and [Rebecca Maine](#). Dr. Agoubi's research interests include systems-based improvement to surgical care access, the effect of social determinants of health on firearm injury pattern, and evidence-informed policy-making in global health. During her fellowship, Dr. Agoubi will also complete a Master of Public Health in Epidemiology with a focus on Global Health. Following residency, she plans to pursue a career focused on global public health research and injury prevention.



Kyle Bilodeau, MD, 2021-2023

Dr. Bilodeau is a research fellow in the [T32 NIH-NIGMS Institutional Postdoctoral Research Fellowship in Trauma, Injury and Inflammation](#) under the guidance of Dr. [Grant O'Keefe](#), Professor in the Division of Trauma, Burn, and Critical Care Surgery. Dr. Bilodeau is focused on clinical and translational research involving extracorporeal membrane oxygenation (ECMO). His interests include the association between ECMO support type, complications, and mortality, as well as the effect of current circuit technologies on hemostasis, thrombosis, and inflammation. During his fellowship, Dr. Bilodeau will also complete a Master of Science in the UW School of Public Health and Health Services, with a concentration in Clinical and Translational Research. Following his residency, Dr. Bilodeau plans to pursue a fellowship in Cardiothoracic Surgery.



Nina Clark, MD, 2022-2024

Dr. Clark is a T32 research fellow in [Gastrointestinal Surgical Outcomes Research](#) funded by the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK) in the [Surgical Outcomes Research Center \(SORCE\)](#) under the guidance of Dr. [David Flum](#), Professor in the Division of General Surgery. Dr. Clark is studying interfacility transfer and resource utilization in emergency general surgery, with the aim of limiting avoidable transfers while ensuring access to appropriate resources in this population. During her fellowship, Dr. Clark will complete a Master of Science in Epidemiology with a concentration in Clinical and Translational Research at the University of Washington. She is also working to develop surgical education resources with the podcast, "Behind the Knife." Dr. Clark plans to pursue a fellowship in trauma and surgical critical care, followed by a career in academic surgery.

Lindsay Dickerson, MD, 2022-2024

Dr. Dickerson is a research fellow in the [UW Tumor Immune Microenvironment \(TIME\) Lab](#) under the mentorship of Dr. [Venu Pillarisetty](#), Professor of Surgical Oncology. Her work is funded by the Cancer Research Institute (CRI)/Fibrolamellar Cancer Foundation (FCF) Irvington Postdoctoral Fellowship program. Dr. Dickerson will be using tumor slice culture and mouse models to investigate the tumor-immune landscape in liver and pancreatic cancers, with a specific focus on fibrolamellar cancer (FLC), pediatric liver cancer. Her ultimate goal is to contribute research that leads to more effective immunotherapy for FLC. Dr. Dickerson is also interested in the incorporation of palliative care into surgical oncology clinical practice, and plans to pursue research focused on surgical palliative care and patient-centered communication in pancreatic cancer.



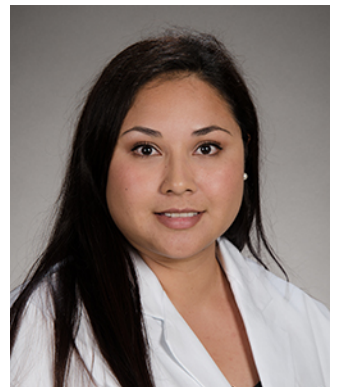
Anna Morenz, MD, 2022-2024

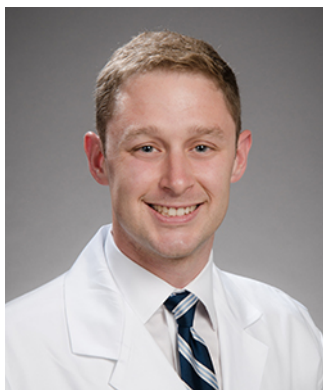
Dr. Morenz is T32 research fellow in [Gastrointestinal Surgical Outcomes Research](#) funded by the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK) in the [Surgical Outcomes Research Center \(SORCE\)](#) under the guidance of Dr. [David Flum](#), Professor in the Division of General Surgery, and Dr. [Joshua Liao](#), Associate Professor, Division of General Internal Medicine, Department of Medicine. Through research, she is passionate about increasing the access to and quality of health care for historically marginalized communities. Currently she is focused on projects interrogating the impact of insurance type and neighborhood-level measures of social risk on access to kidney and liver transplant for patients living with end-stage kidney and liver diseases, respectively. She is also interested in evaluating the effect of audio-only telemedicine on access to health care for historically marginalized patients. During her fellowship, Dr. Morenz will complete a Master of Public Health in Health Services with a concentration in Health Systems and Policy at the University of Washington. Clinically, she is a graduate of the UW Internal Medicine Residency Program and practices as a primary care physician at Harborview Adult Medicine Clinic. She ultimately plans to pursue a career in academic general internal medicine with an emphasis in health equity research and advocacy or in public policy at the state or local level.



Elina Serrano, MD, MPH, 2021-2023

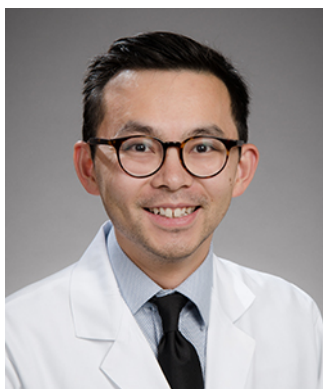
Dr. Serrano is a research fellow in the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK) funded T32 fellowship in [Gastrointestinal Surgical Outcomes Research at the Surgical Outcomes Research Center \(SORCE\)](#) under the mentorship of Dr. [David Flum](#), Professor in the Division of General Surgery. She is studying the impact of language barriers on commonly reported surgical outcomes such as complication rates, readmission rates, and mortality, as well as on patient reported measures of health, satisfaction, and quality of life. Dr. Serrano hopes to accomplish this through an integration of qualitative and quantitative research. Her goal is to use research findings to inform interventions aimed at improving surgical care access and delivery for underserved communities. During her fellowship, Dr. Serrano will also complete a Master of Science in Health Services with a concentration on Clinical and Translational Research at the University of Washington. She ultimately plans to pursue a career in academic surgery with an emphasis on surgical disparities research.





Mike Weykamp, MD, 2021-2023

Dr. Weykamp is a research fellow in the [T32 NIH-NIGMS Institutional Postdoctoral Research Fellowship in Trauma, Injury and Inflammation](#) under the guidance of Dr. [Grant O'Keefe](#), Professor in the Division of Trauma, Burn, and Critical Care Surgery. Dr. Weykamp is interested in translational research with a focus on pre-hospital trauma care, shock, and device development and is collaborating with researchers at Madigan Army Medical Center including Chief of Surgery, Dr. Jason Bingham, to develop therapies to improve the care of combat casualties. Dr. Weykamp plans to pursue a fellowship in trauma and critical care.



Frank Yang, MD, 2021-2023

Dr. Yang is a research fellow in the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK) funded [T32 fellowship in Gastrointestinal Surgical Outcomes Research](#) at the [Surgical Outcomes Research Center \(SORCE\)](#) under the guidance of Dr. [David Flum](#), Professor in the Division of General Surgery. Dr. Yang's research interests include clinical outcomes, cost-effectiveness, and resource utilization in general and endocrine surgery. Dr. Yang will also be enrolled in the Master of Science program in Health Services with coursework in biostatistics, epidemiology, and other methodology in health services research. Following general surgery residency, Dr. Yang plans to pursue a fellowship in surgical oncology or endocrine surgery.

FROM RESEARCH RESIDENT TO ACADEMIC SURGEON

Giana H. Davidson, MD, MPH

Associate Professor, Division of General Surgery
Section Chief, Emergency General Surgery
Medical Director of Post-Acute Care, UW Medicine
Associate Medical Director of Clinical Resource Management, UW Medical Center



"During my clinical training in General Surgery, I completed a two-year research fellowship to gain expertise in outcomes and health services research. This program was in the Pediatric Injury Research T32 program under the mentorship of Dr. [Frederick Rivara](#) and Drs. [Saman Arbabi](#) and [Eileen Bulger](#) at the [Harborview Injury Prevention and Research Center](#). During these two years, I completed my Master of Public Health in Epidemiology and gained invaluable experience in grant writing and outcomes research, allowing me to publish and present our work at various surgical and public health conferences. This was the foundation for my current research focused on pragmatic clinical trials to better understand how we can improve patient-centered health outcomes, especially for those who are at higher risk for poor outcomes in our healthcare system. In addition to my academic projects during my research training, my husband and I expanded our family (of two dogs) to include two children and five chickens! My research fellowship years were a wonderfully busy time in my life. The mentoring, training in epidemiology and statistics, and departmental support were instrumental in launching my career in academic surgery and as faculty in obtaining independent funding as a surgeon-scientist. One of the best parts of my job is the opportunity to mentor our current surgical research fellows and to be able to support them in finding their passion in clinical research."

FELLOWSHIP ACCOMPLISHMENTS

SIGNIFICANT PUBLICATIONS

1. Davidson GH, Hamlat CA, Rivara FP, Koepsell TD, Jurkovich GJ, Arbabi, S. [Long-term Survival of Adult Trauma Patients](#). JAMA. 2011;305(10):1001–1007.
2. Davidson GH, Rivara FP, Arbabi S. [Trauma and Long-term Mortality–Reply](#). JAMA. 2011;305(23):2413–2414.
3. Davidson GH, Maier RV, Arbabi S, Goldin AB, Rivara FP. [Impact of Operative Delay on Pediatric Trauma Outcomes](#). J Trauma Acute Care Surg. 2012 Jul;73(1):162–7.
4. Davidson GH, Rivara FP, Mack CD, Kaufman R, Jurkovich GJ, Bulger ME. [Validation of Pre-Hospital Trauma Triage Criteria for Motor Vehicle Collisions](#). J Trauma Acute Care Surg. 2014 March; 76(3):755–761.

AWARDS AND HONORS

- 1st place—Region 10 American College of Surgeons Committee on Trauma Resident Paper Competition.
- 1st place—American College of Surgeons Committee on Trauma. Washington Committee on Trauma clinical paper presentation Tacoma, WA. November 2010.

PRESENTATIONS

- UW Department of Epidemiology 29th Annual Society for Epidemiologic Research Meeting. Injury as a Risk Factor for Fatal Unintentional Overdose following Hospitalization: A Population Based Analysis. Seattle, WA. June 2010.
- Washington State Joint Conference on Health. Injury as a Risk Factor for Fatal Unintentional Overdose After Hospitalization. Yakima, WA. October 2010.
- Washington State Joint Conference on Health. Public Opinion About Gun Regulation in Washington State. Yakima, WA. October 2010.
- Regional American College of Surgeons Committee on Trauma Resident Paper Competition. Long Term Survival of Adult Trauma Patients. Tacoma, WA. November 2010.
- Washington State Department of Health Emergency Medical Services and Trauma Steering Committee. Outcome of WA State Adult Trauma Patients. January 2011.
- UW Department of Surgery Schilling Research Symposium. Long Term Survival of Adult Trauma Patients. Seattle, WA. February 2011.
- American College of Surgeons, Washington–Oregon Chapter. Long Term Survival of Adult Trauma Patients. Lake Chelan, WA. June 2011.

FROM RESEARCH RESIDENT TO ACADEMIC SURGEON



Farhood Farjah, MD, MPH, FACS

Endowed Chair in Lung Cancer Research

Associate Professor, Division of Cardiothoracic Surgery

Associate Medical Director, Surgical Outcomes Research Center

"I interrupted my clinical training in General Surgery to pursue a post-doctoral fellowship in outcomes and health services research under the mentorship of Drs. [David Flum](#) and [Douglas Wood](#) through the [Surgical Outcomes Research Center \(SORCE\)](#). During that time, I obtained a Master of Public Health in Epidemiology and completed post-doctoral level coursework in biostatistics and health services research. In addition, I gained practical experience studying the delivery of care and outcomes of patients with lung cancer using the Surveillance, Epidemiology, and End-Results (SEER)-Medicare database. Moreover, I cultivated a diverse network of mentors and collaborators throughout the department and institution. This unparalleled experience was critical in providing me the training, experience, and networks to legitimately pursue a career in academic surgery. The research products listed below vastly underestimate what I gained from the research fellowship."

FELLOWSHIP ACCOMPLISHMENTS

SIGNIFICANT PUBLICATIONS

1. Farjah F, Symons RG, Krishnadasan B, Wood DE, Flum DR. [Management of pleural space infections: a population-based analysis](#). J Thorac Cardiovasc Surg. 2007 Feb;133(2):346-351.
2. Farjah F, Wood DE, Yanez D 3rd, Symons RG, Krishnadasan B, Flum DR. [Temporal trends in the management of potentially resectable lung cancer](#). Ann Thorac Surg. Jun 2008;85(6):1850-1855; discussion 1856.
3. Wood DE, Farjah F. [Global differences in the training, practice, and interrelationship of cardiac and thoracic surgeons](#). Ann Thorac Surg. 2009 Aug;88(2):515-521; discussion 521-512.
4. Lao OB, Farjah F, Flum DR, Yeung RS. [Adverse events after radiofrequency ablation of unresectable liver tumors: a single-center experience](#). Am J Surg. 2009 Jul;198(1):76-82.
5. Farjah F, Wood DE, Yanez ND 3rd, Vaughan TL, Symons RG, Krishnadasan B, Flum DR. [Racial disparities among patients with lung cancer who were recommended operative therapy](#). Arch Surg. Jan 2009;144(1):14-18.
6. Farjah F, Flum DR, Ramsey SD, Heagerty PJ, Symons RG, Wood DE. [Multi-modality mediastinal staging for lung cancer among Medicare beneficiaries](#). J Thorac Oncol. Mar 2009;4(3):355-363.
7. Farjah F, Flum DR, Varghese TK Jr, Symons RG, Wood DE. [Surgeon specialty and long-term survival after pulmonary resection for lung cancer](#). Ann Thorac Surg. Apr 2009;87(4):995-1004; discussion 1005-1006.
8. Farjah F, Wood DE, Mulligan MS, Krishnadasan B, Heagerty PJ, Symons RG, Flum DR. [Safety and efficacy of video-assisted versus conventional lung resection for lung cancer](#). J Thorac Cardiovasc Surg. Jun 2009;137(6):1415-1421.
9. Farjah F, Wood DE, Varghese TK Jr, Massarweh NN, Symons RG, Flum DR. [Health care utilization among surgically treated Medicare beneficiaries with lung cancer](#). Ann Thorac Surg. Dec 2009;88(6):1749-1756.
10. Wood DE, Farjah F. [Training, certification and practice of cardiac and thoracic surgeons in Europe: a comparison of the members of the European Association for Cardio-Thoracic Surgery and the European Society of Thoracic Surgeons](#). Eur J Cardiothorac Surg. 2010 Mar;37(3):511-515.

AWARDS AND HONORS

- Ruth L. Kirschstein National Research Service Award, (NIH/NCI), 2007
- Looking to the Future Scholarship, Society of Thoracic Surgeons, 2008
- 3rd Prize—14th Resident Research Symposium, University of Washington, Department of Surgery, 2008
- Society of Thoracic Surgeons J. Maxwell Chamberlain Memorial Paper, 2009

PRESENTATIONS

- Farjah F, Wood DE, Varghese TK, Massarweh NN, Symons RG, Flum DR. Adverse events following pulmonary resection for lung cancer. American College of Surgeons 94th Annual Clinical Congress, October 2008, San Francisco, CA. Oral presentation.
- Farjah F, Wood DE, Varghese TK, Massarweh NN, Symons RG, Flum DR. Non-fatal adverse events following pulmonary resection: a performance-based quality metric for hospital level care. Combined Washington and Oregon Chapters American College of Surgeons Meeting, June 2008, Stevenson, WA. Oral presentation.
- Farjah F, Wood DE, Yanez D 3rd, Symons RG, Krishnadasan B, Flum DR. Temporal trends in the management of potentially resectable lung cancer. Society of Thoracic Surgeons 44th Annual Meeting. Fort Lauderdale, Florida. January 2008.
- Farjah F, Flum DR, Varghese TK Jr, Symons RG, Wood DE. J. Maxwell Chamberlain Memorial Paper for General Thoracic: Surgeon specialty and long-term survival following pulmonary resection for lung cancer. Society of Thoracic Surgeons 45th Annual Meeting. San Francisco, California. January 2009.

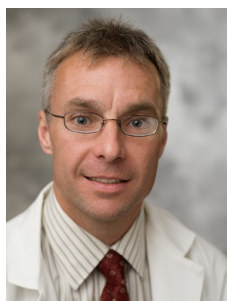
FUNDED RESEARCH TRAINING PROGRAMS

The University of Washington is a rich environment for resident research, with many clinical investigators across departments and schools available to serve as mentors and resources for funding. Some examples of popular, ongoing NIH-funded training programs are below, but there are numerous opportunities for funding through grants and other mechanisms. We will work with you to find the right fit to accomplish your professional goals.



GASTROINTESTINAL SURGERY OUTCOMES RESEARCH T32 PROGRAM

PI: [David Flum](#), MD, MPH
Department of Surgery



T32 NIH-NIGMS INSTITUTIONAL POSTDOCTORAL RESEARCH FELLOWSHIP IN TRAUMA, INJURY AND INFLAMMATION

PI: [Grant O'Keefe](#), MD, MPH
Department of Surgery

There are 45 other training grants in the School of Medicine, including the programs below which have recently accepted Surgery residents:

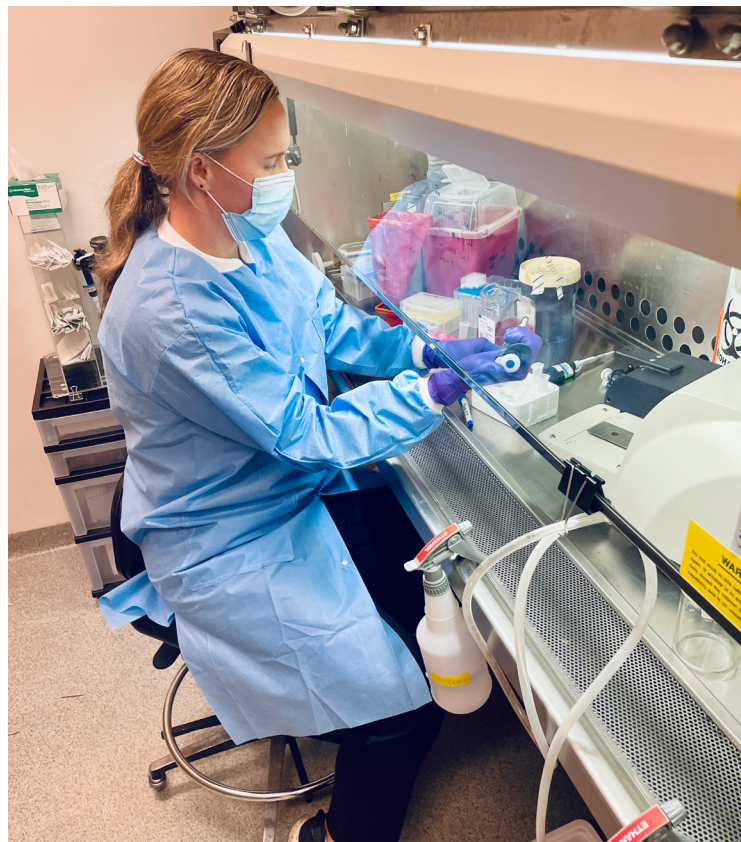
- [Northern/Pacific Fogarty Global Health Fellowship](#)
- [Palliative Care Research T32 Fellowship Program](#)
- [Pediatric Injury Research Training Program](#)

NIH LOAN REPAYMENT PROGRAM (LRP)

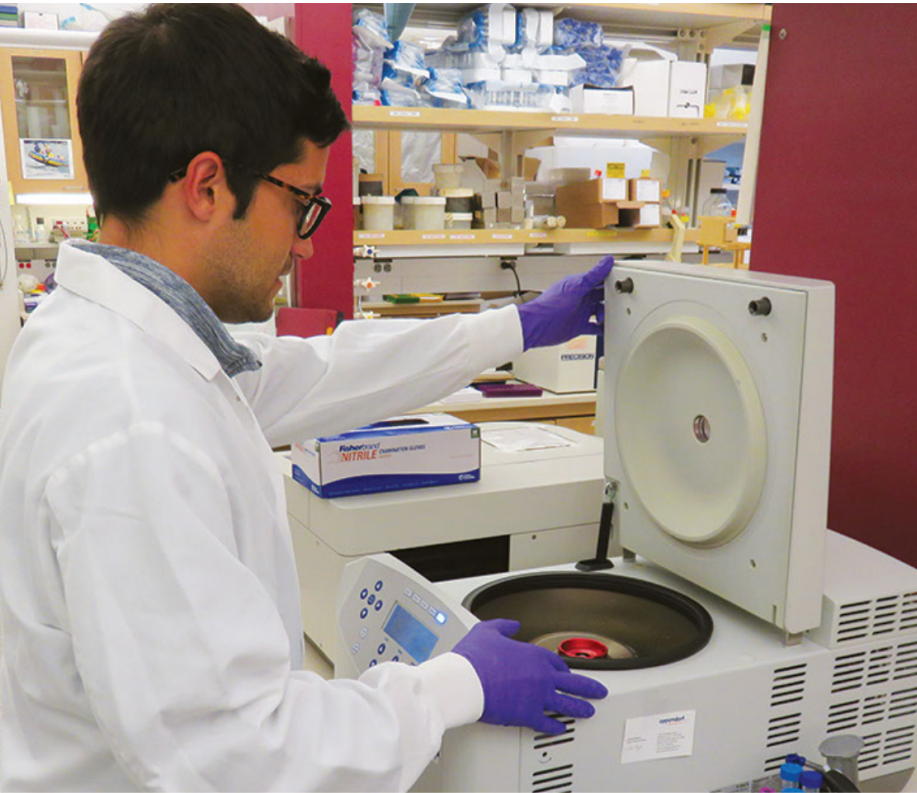
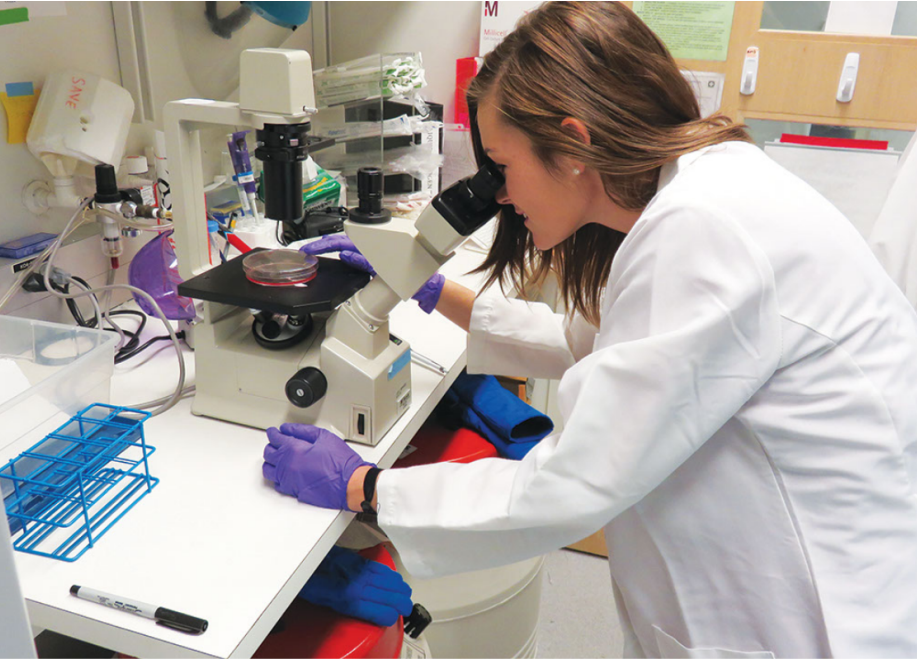
To encourage health professionals to pursue careers in biomedical, behavioral, social, and clinical research, the NIH Loan Repayment Program may repay up to \$35,000 of qualified student loan debt per year for individuals committing at least two years to conducting qualified research funded by a domestic nonprofit organization or U.S. federal, state, or local government entity. This loan repayment benefit is in addition to institutional salary received during your time in research. Learn more about this program at: <https://www.lrp.nih.gov/>.

LEARN MORE ABOUT DEPARTMENT OF SURGERY RESEARCH

This brochure covers research conducted by the current cohort of residents who have undertaken a structured two-year research fellowship, but there are many other opportunities to pursue shorter-term, discrete projects throughout your residency. To learn more about these opportunities, please be sure to visit the [research section](#) of the Department of Surgery website.



Dr. Lindsay Dickerson (2022-24 Research Resident)



DEPARTMENT OF SURGERY RESIDENT RESEARCH LEADERSHIP

Douglas E. Wood, MD, FACS, FRCSEd
The Henry N. Harkins Professor and Chair

David R. Flum, MD, MPH, FACS
Professor of General Surgery
Associate Chair for Research

Jeffrey B. Friedrich, MD, MC
Professor of Plastic Surgery
Interim Associate Chair, Education
Chief, Division of Education

Grant O'Keefe, MD, MPH
Professor of Trauma, Burn and Critical Care

Susan Marx, MBA, PMP
Vice Chair, Finance and Administration

Kate Rimmer, MBA
Administrator, General Surgery,
Plastic Surgery UWMC-Montlake, Vascular Surgery UWMC-NW
Manager, Research Enterprise

MANAGING EDITORS

Kate Rimmer, MBA
Administrator, General Surgery,
Plastic Surgery UWMC-Montlake, Vascular Surgery UWMC-NW
Manager, Research Enterprise

Stacy Nagy
Administrator of Program Operations,
Marketing and Communications

Michael Hilleary, BS
Public Information Specialist

LAYOUT AND PUBLICATION

Michael Hilleary, BS
Public Information Specialist

PHOTO CREDITS

PORTRAITS

UW Medicine Strategic
Marketing & Communications

FRONT AND BACK COVER PHOTOS

Michael Hilleary, BS
Public Information Specialist

University of Washington
Box 356410
Seattle, WA 98195-6410
206-543-3680
206-685-6912 (FAX)
surgeditors@uw.edu

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