

DOS Research Toolkit Lecture: ***Overview of Research Training Programs***

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Daniela Ladner, Dave Bentrem, Karen Ho

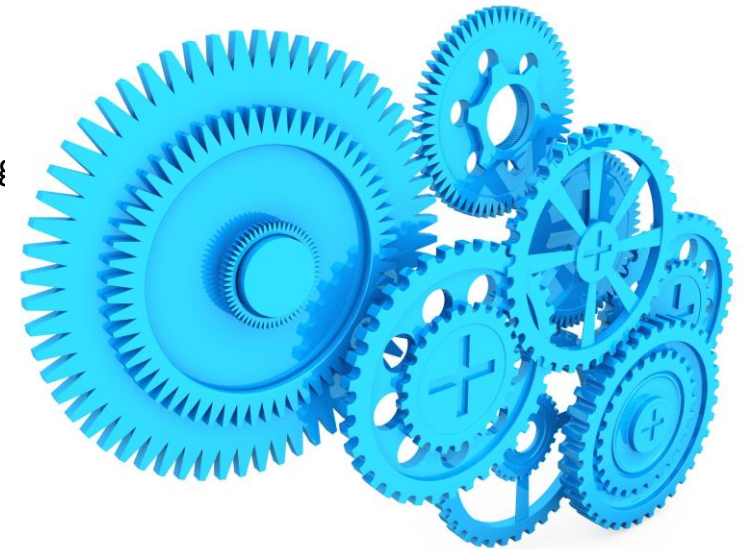
10/13/2022 9-10 am

Designing your “Research Years”

- Physician Scientist Training Program (“PSTP”) is the name given to the 2 years of dedicated research that are designed to facilitate the transition from residency training to a productive career as a surgeon-scientist
- Usually occurs after 3rd clinical year
- DOS PSTP:
 - Covers participation in AAS Fall Course (“Fundamentals of Surgical Research”; usually first year), participation in Academic Surgical Congress (usually first year), and travel for oral presentation to any national meeting

Key Components of the PSTP experience

- **Mentorship – Research recruitment dinner last week; trainees, please reach out to potential mentors!**
- **Funding opportunities – TODAY**
- **Nuts and bolts of preparing a grant application – 11/10/22**
- Scientific knowledge in your research area
 - critically evaluate the literature, integrate new info, identify knowledge gaps for investigation
- Methodologic and technical skills
 - study design, data integration, interpretation and presentation, problem solving
 - how to think creatively and propose solutions
- Career development
 - networking
 - grant writing
 - communication (writing, editing, speaking, presentation skills)
- Professionalism
- Responsible conduct of research
- Productivity



How will my research years be funded?

- Talk to your mentor (or prospective mentors) early!
- Possible funding sources:
 - Institutional training programs (T32, R38, etc.)
 - Major societal awards (AAS, ACS, SUS, etc.)
 - Individual training grant (F32)
 - Mentor funding
 - DOS funding – Stryker Endowment for GI Surgery Research
- ***All trainees are expected to submit an application for funding!***
 - ***Includes “gap funding”***



What funding opportunities are out there?



Feinberg Home > Home > Education > Residents > Resident Research > Funding Opportunities

Education

NU Surgical Education Center

Medical Students

Residents

General Surgery

Plastic Surgery

Thoracic Surgery

Vascular Surgery



Funding Opportunities for Residents & Students

PLAN AHEAD



Be sure you pay attention to deadlines!

- Steven J. Stryker, M.D., Gastrointestinal Surgery Resident Research and Education Endowment - Please contact Dr. Karen Ho for more information
- Association of Academic Surgeons (AAS)/AAS Foundation Trainee Research Awards (in areas of basic science, clinical, and education)
- American Association for Cancer Research (many opportunities)
- American College of Surgeons Resident Research Scholarships
- American Heart Association Postdoctoral Fellowship
- American Society of Transplant Surgeons Jon Fryer Resident Research Scholarship
- American Society of Plastic Surgeons Veloxis Fellowship in Plastic Surgery (New York, New York)
- American Society of Thoracic Surgeons Thoracic Research Fellowship
- American Society of Colon and Rectal Surgeons Research Fellowship
- American Society of Gastrointestinal and Endoscopic Surgeons
- The Society of Academic Surgeons Foundation Academic Surgical Congress Research Award
- Society of University Surgeons Resident Research Scholar Award
- SOQC Research Fellowship
- Surgical Outcomes Club Michael Zinner HSR Fellowship
- Thoracic Surgery Foundation Resident Research Fellowship
- Vascular and Endovascular Surgical Society/Medtronic Vascular Resident Research Award

Foundation Trainee Research Awards (in areas of basic science, clinical, and education)

■ American Association for Cancer Research (many opportunities)

Mentor Grant

■ AOA Carolyn L. Kuckein Student Research Fellowship

Association of Academic Surgery Senior Medical



Pay attention to deadlines!

- For July funding, deadline is September of the previous year
- Need to have mentor and project identified 11 months ahead of time!

The screenshot shows the American College of Surgeons website. The header includes the logo, the name 'AMERICAN COLLEGE OF SURGEONS', the tagline 'Inspiring Quality: Highest Standards, Better Outcomes', and a '100+ years' anniversary mark. Navigation links for 'COVID-19', 'Member Services', 'Quality Programs', 'Education', 'Advocacy', 'Publications', and 'About ACS' are visible. A search bar is present with 'Search Options' and 'Enter Keyword' fields. The breadcrumb trail reads: 'American College of Surgeons > Member Services > ... > Resident Scholarships > ACS Resident Research Scholarships'. The main content area is titled 'Resident Scholarships' and features a sub-section for 'ACS Resident Research Scholarships'. A red arrow points to the funding period: 'July 1, 2021–June 30, 2023'. Below this, the text states: 'The American College of Surgeons is offering two-year resident research scholarships. Eligibility for these scholarships is limited to the research projects of residents in surgery or a surgical specialty. These scholarships are supported by the generosity of Fellows, Chapters, and friends of the College, to encourage residents to pursue careers in academic surgery.' The page also lists 'Current Resident Research Scholars' for '2020–2022': Xavier Baldwin, MD; Julian Daza, MD; Cynthia Miller, MD; Maryam Mohammed, MD; Connie Shao, MD; and Tara Talaie, MD. A 'General Policies' section follows, stating: 'General policies covering the granting of the American College of Surgeons Resident Research Scholarships are:'

- The applicant must be a Resident Member of the College who has completed two postdoctoral years in an accredited surgical training program in the United States or Canada at the time the scholarship is awarded, July 1, 2021, and shall not complete formal residency training before June 2023. Scholarships do not support research after completion of the chief residency year.
- The scholarship is awarded for two years, and acceptance of it requires commitment for the two-year period. The award is to support a research plan for the two years of the scholarship, July 2021 through June 2023. Priority will be given to the projects of residents involved in full-time laboratory investigation. Study outside the United States or

NIH F32 Postdoctoral Fellowship

- Ruth L. Kirschstein Postdoctoral Individual National Research Service

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Application Receipt Dates and Review Schedule

Receipt Cycle	Receipt Date: Application, Resubmission	Initial Review Date	Council Review Date	Earliest Possible Start Date*
1	April 8	June/July	September/October	December
2	August 8	October/November	January/February	April
3	December 8	February/March	May/June	July

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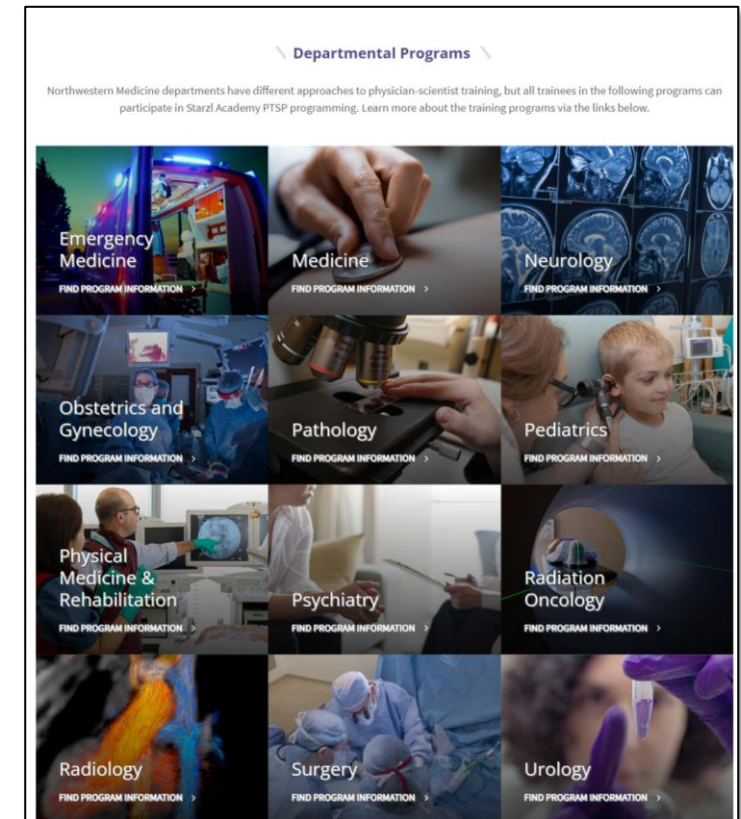
- Must submit to OSR at least 7 days before NIH deadline

Faculty presentations today

- [NU Minority Health and Health Disparities T37 Research Training Program \(NU-MHRT\)](#)
 - Melissa Simon, MD MPH
- [Chicago Kidney Urology Hematology network FOR city-Wide reseArch tRaining and career Development \(Chicago KUH FORWARD\)](#)
 - Terri Fraterrigo
- [Surg Onc T32 and R38, SOQIC, ACS Scholars Program](#)
 - Seema Khan and Ryan Merkow
- [Transplant Surgery Scientist T32 Training Program](#)
 - Daniela Ladner
- [VA Chief Resident in Quality and Patient Safety](#)
 - Dave Bentrem
- [Vascular Surgery Scientist T32 Training Program](#)
 - Karen Ho

Additional NU opportunities

- Steven J. Stryker, M.D., Gastrointestinal Surgery Research and Education Endowment
 - Contact Karen Ho or Melanie Mkrdichian
- Starzl Academy – [PSTP Programs at FSM](#)
 - Starzl Scholar Award – fellowship salary support for 2 years for postdocs from [underrepresented groups](#)



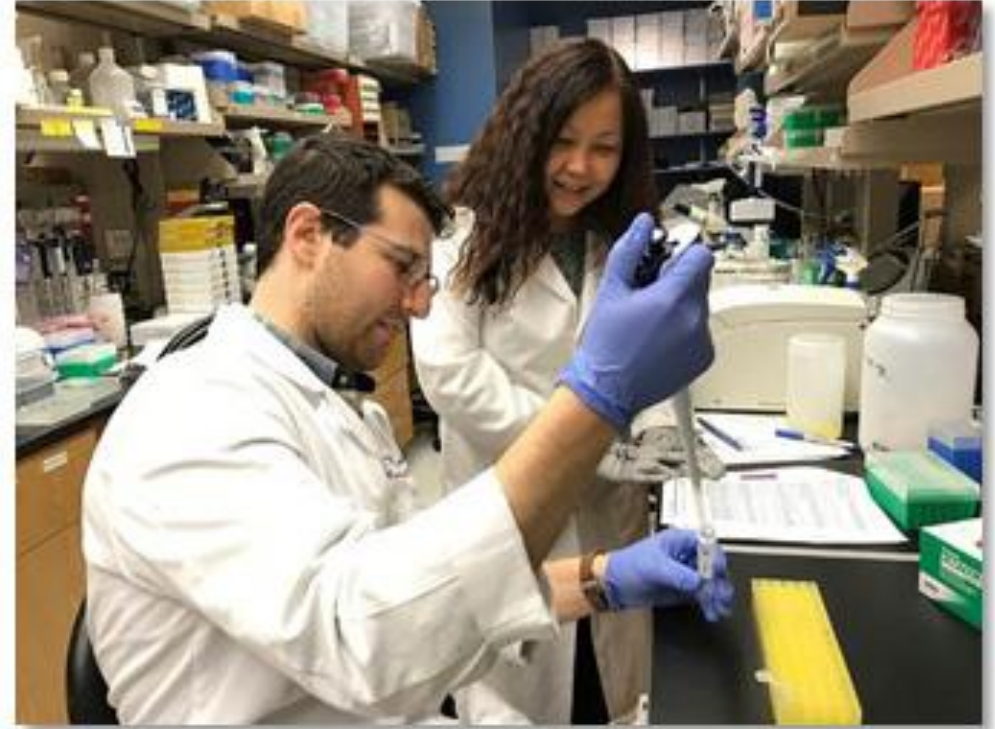
Vascular Surgery Scientist T32 Training Program (VSSTP)

Goal

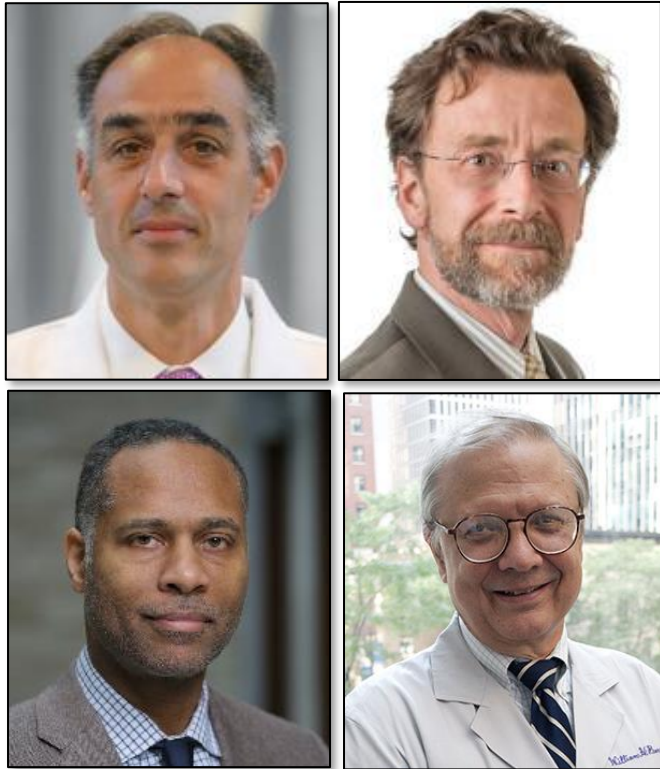
Our goal is to provide trainees with the scientific environment, didactic training, career development mentorship, and opportunities for collaboration required to jump start careers as surgeon-scientists

Design

- Established in 2008
- Supports 2 years of full-time research
- 2 positions/year (MD/DO only)
- Each mentor develops **an individualized training program**
- Each trainee has a primary mentor and co-mentor
- 3 tracks: vascular biology, HSOR, biomedical engineering



Program Leadership



Program Director: Mark Eskandari, MD (Division of Vascular Surgery)

Associate Program Directors:

- William Muller, MD PhD (Department of Pathology)
- Guillermo Ameer, ScD (Departments of Biomedical Engineering and Surgery)

Institutional Advisor: William Pearce, MD (Professor Emeritus, Division of Vascular Surgery)

Core Curriculum

Required Courses for Trainees of All 3 Tracks	
Northwestern University - Grantsmanship for the Research Professional	Year 1
Northwestern University - Taking Responsibility for Responsible Conduct of Research	Year 1
Association for Academic Surgery - Fundamentals of Surgical Research Course	Year 1
Association for Academic Surgery - Career Development Course	Year 1
Northwestern University - Writing Workshop	Year 1

Curriculum for the MS in Health Services and Outcomes Research	
Year One Curriculum	
Fall	HSR 433: Health Economics and Healthcare Financing (1) HRS 461: HSR Topics: Methods & Measurement (0.5) PUB HLTH 302: Introduction to Biostatistics (1)
Winter	HSR 460: Ethical Issues in Health Services Research (0.5) HSR 425 Introduction to Quantitative Methods in Health Services and Outcomes Research (1) PUB HLTH 304: Introduction to Epidemiology (1)
Spring	HSR 462: HSR Topics: Grant-Writing (0.5) HSR 500: Capstone I (0.5) *HSR 470: Health Policy (1)
Summer	HSR 463: HSR Topics: Quality and Safety (0.5) PUB HLTH 445: Writing & Peer Reviewing for Publication (1)
Year Two Curriculum	
Fall	*HSR 456: Applied Qualitative Methods & Analysis for Health Researchers (1) PUB HLTH 421: Intermediate Biostatistics (1)
Winter	HSR 440: Disparities in Healthcare (1) HSR 465 Intermediate Quantitative Methods in Health Services and Outcomes Research (1)
Spring	HSR 501: Capstone II (0.5)

Research mentors

Vascular Biology	Health Services Outcomes	Biomedical Engineering
Luisa Iruela-Arispe, PhD	Karl Bilimoria, MD MS	Guillermo Ameer, ScD
Hasan Alam, MD	Mark Eskandari, MD	James Carr, MD
Hossein Ardehali, MD PhD	Joseph Feinglass, PhD	Michael Markl, PhD
Karen Ho, MD	Andy Hoel, MD	Bin Jiang, PhD
Tsutomu Kume, PhD	Donald Lloyd-Jones, MD ScM	Sam Stupp, PhD
William Muller, MD PhD	Mary McDermott, MD	C. Shad Thaxton, MD PhD
Elizabeth McNally, MD PhD	Douglas Vaughan, MD	
Amy Paller, MD	Ashley Vavra, MD	
Susan Quaggin, MD		

Each trainee develops his/her individual research and training plan with mentor(s)

How to apply

- Coordinator: Marsha Blunt (marsha.blunt@nm.org)
- Application deadline: January 2023
- Get more info and download application from website

The screenshot shows the Department of Surgery website. The top navigation bar includes 'About Us', 'Education', 'Research', 'Patient Care', 'Divisions', and 'Faculty'. The 'Divisions' menu is circled in red. Below the navigation bar, the breadcrumb trail reads: 'Feinberg Home > Home > Divisions > Vascular Surgery > Research > Scientist Training Program'. The main content area is titled 'Vascular Surgery Scientist Training Program'. The left sidebar lists various divisions, with 'Vascular Surgery' highlighted and circled in red. The right sidebar contains a 'Show Details' button and three expandable sections: 'Curriculum', 'Eligibility & Requirements', and 'How to Apply', with the latter circled in red. A red arrow points to the 'Scientist Training Program' link in the bottom left sidebar.

Current and former trainees (*and mentors*)

- 2021-2023: **Jessie Ho** (*Hasan Alam*), **Eric Pillado** (*Andy Hoel*)
- 2020-2022: **Andres Guerra** (*Ashley Vavra/Karl Bilimoria*), **Debbie Li** (*Mark Eskandari/Karl Bilimoria*)
- 2019-2021: **Matt Chia** (*Ashley Vavra/Karl Bilimoria*), **Vivek Pamulapati** (*Karen Ho*)
- 2018-2020: Courtney Furlough (*Andy Hoel*), Rhami Khorfan (*Karl Bilimoria/Mark Eskandari*)
- 2017-2019: Ed Chen (*Karen Ho*), Pieter Norden (*Tsutomu Kume*)
- 2016-2018: Michael Nooromid (*Karen Ho*), Eddie Blay (*Karl Bilimoria*)

For more information

- Mark Eskandari, Program Director
meskanda@nm.org
- Karen Ho, Mentor
kho1@nm.org