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

Melissa Simon, Terri Fraterrigo, Seema Khan, Ryan Merkow, 
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 3\textsuperscript{rd} 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?

Be sure you pay attention to deadlines!

PLAN AHEAD
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!
NIH F32 Postdoctoral Fellowship

- **Ruth L. Kirschstein Postdoctoral Individual National Research Service Award**
- **Purpose:** "support research training of highly promising postdoctoral candidates who have the potential to become productive, independent investigators in scientific health-related research fields relevant to the missions of the participating NIH Institutes and Centers"
- **Application deadlines:** "Standard dates" in every "cycle" - April, August, December
- **Must submit to OSR at least 7 days before NIH deadline

### Application Receipt Dates and Review Schedule

<table>
<thead>
<tr>
<th>Receipt Cycle</th>
<th>Receipt Date: Application, Resubmission</th>
<th>Initial Review Date</th>
<th>Council Review Date</th>
<th>Earliest Possible Start Date*</th>
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<tbody>
<tr>
<td>1</td>
<td>April 8</td>
<td>June/July</td>
<td>September/October</td>
<td>December</td>
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<tr>
<td>2</td>
<td>August 8</td>
<td>October/November</td>
<td>January/February</td>
<td>April</td>
</tr>
<tr>
<td>3</td>
<td>December 8</td>
<td>February/March</td>
<td>May/June</td>
<td>July</td>
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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

<table>
<thead>
<tr>
<th>Institution</th>
<th>Course Title</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Northwestern University</td>
<td>Grantsmanship for the Research Professional</td>
<td>Year 1</td>
</tr>
<tr>
<td>Northwestern University</td>
<td>Taking Responsibility for Responsible Conduct of Research</td>
<td>Year 1</td>
</tr>
<tr>
<td>Association for Academic Surgery</td>
<td>Fundamentals of Surgical Research Course</td>
<td>Year 1</td>
</tr>
<tr>
<td>Association for Academic Surgery</td>
<td>Career Development Course</td>
<td>Year 1</td>
</tr>
<tr>
<td>Northwestern University</td>
<td>Writing Workshop</td>
<td>Year 1</td>
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</tbody>
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## Curriculum for the MS in Health Services and Outcomes Research

### Year One Curriculum

<table>
<thead>
<tr>
<th>Semester</th>
<th>Course Title</th>
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<tbody>
<tr>
<td><strong>Fall</strong></td>
<td>HSR 433: Health Economics and Healthcare Financing (1)</td>
</tr>
<tr>
<td></td>
<td>HRS 461: HSR Topics: Methods &amp; Measurement (0.5)</td>
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<tr>
<td></td>
<td>PUB HLTH 302: Introduction to Biostatistics (1)</td>
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<tr>
<td><strong>Winter</strong></td>
<td>HSR 460: Ethical Issues in Health Services Research (0.5)</td>
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<tr>
<td></td>
<td>HSR 425: Introduction to Quantitative Methods in Health Services and Outcomes Research (1)</td>
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<tr>
<td></td>
<td>PUB HLTH 304: Introduction to Epidemiology (1)</td>
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<tr>
<td><strong>Spring</strong></td>
<td>HSR 462: HSR Topics: Grant-Writing (0.5)</td>
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<td>HSR 500: Capstone I (0.5)</td>
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<tr>
<td></td>
<td>*HSR 470: Health Policy (1)</td>
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<tr>
<td><strong>Summer</strong></td>
<td>HSR 463: HSR Topics: Quality and Safety (0.5)</td>
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<tr>
<td></td>
<td>PUB HLTH 445: Writing &amp; Peer Reviewing for Publication (1)</td>
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### Year Two Curriculum

<table>
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<tr>
<th>Semester</th>
<th>Course Title</th>
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<tr>
<td><strong>Fall</strong></td>
<td>*HSR 456: Applied Qualitative Methods &amp; Analysis for Health Researchers (1)</td>
</tr>
<tr>
<td></td>
<td>PUB HLTH 421: Intermediate Biostatistics (1)</td>
</tr>
<tr>
<td><strong>Winter</strong></td>
<td>HSR 440: Disparities in Healthcare (1)</td>
</tr>
<tr>
<td></td>
<td>HSR 465: Intermediate Quantitative Methods in Health Services and Outcomes Research (1)</td>
</tr>
<tr>
<td><strong>Spring</strong></td>
<td>HSR 501: Capstone II (0.5)</td>
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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
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