

Dear Candidate,

Thank you for your interest in our NIH T32 Training Program in Gastrointestinal Epidemiology.

Gastroenterologists and hepatologists trained in clinical research are needed to translate new discoveries in basic science into better patient care, sustain future generations of scientists, and advance scientific innovation. **The purpose of our Training Program is to fulfill these critical needs** **by providing selected 1st year GI fellows with:** (1) core methodological skills in the design and execution of clinical research; and, (2) a structured, mentored research experience under the guidance of our world-class Core Faculty. With this training, fellows leave GI fellowship poised to compete for tenure-track faculty positions and secure external funding for further career development. Ultimately, we expect our trainees to become **independently funded researchers** who spend the majority of their time conducting clinical, outcomes, or health services research.

**The goals of the T32 Program are:** (1) completion of a Master’s degree focused on the design and execution of clinical research; (2) completion of a focused GI clinical research seminar series and a comprehensive epidemiology/health policy seminar series; (3) successful design, execution, and publication of multiple research projects under the guidance of a team of mentors, including content experts (e.g., gastroenterologists) and methodologists (e.g., epidemiologists); and, (4) preparation of a career development award or other grant application. **Each trainee focuses on a specific topic and completes 3 interrelated projects: (1) a systematic review or meta-analysis; (2) a secondary data analysis; and, (3) design of a prospective study.** These projects provide the foundation and preliminary data for a **career development award application, to be submitted in 3rd year of fellowship.**

**Our training program is greatly enhanced by the rich, collaborative environment of the University of Michigan**, with its vast resources, centers, and research institutes, including: (1) the NIH-supported [Michigan Institute of Clinical & Health Research](https://michr.umich.edu/) (MICHR); (2) the [Institute for Healthcare Policy & Innovation](https://ihpi.umich.edu/) (IHPI); and, (3) the [VA Center for Clinical Management Research](https://www.annarbor.hsrd.research.va.gov/ANNARBORHSRDRESEARCH/index.asp) (a VA Health Services Research and Development [HSR&D] Center of Innovation). Our multi-disciplinary [Core Faculty](https://medicine.umich.edu/dept/intmed/divisions/gastroenterology-hepatology/education-training/fellowship-training-programs/gi-fellowship-training-program-3-year/nih-funded-t32-clinical-research-training-program#core-faculty) includes expert biostatisticians, epidemiologists, behavioral economists, policymakers, and translational, clinical, and outcomes researchers from not only the Division of Gastroenterology and Hepatology, but also the Division of General Internal Medicine and the School of Public Health. Most faculty, many of whom have trained in the program, are federally funded for their ongoing research, and these faculty offer a broad spectrum of research expertise with multiple levels of established collaboration and many years of mentoring experience.

We look forward to reviewing your application and hope to see you in Ann Arbor in the coming year!

Sincerely,

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| Anna Lok, MD  Alice Lohrman Andrews Professor  Director, Clinical Hepatology  Assistant Dean, Clinical Research  University of Michigan | Peter D. Higgins, MD, PhD, MSc  Professor of Medicine  Director, Inflammatory Bowel Disease Program  University of Michigan | Sameer D. Saini, MD, MS  Professor of Medicine  Director, VA HSR&D Center for Clinical Management Research  University of Michigan |

**Application Instructions for T32 Training Program in Gastrointestinal Epidemiology**

The application for our T32 Training Program in Gastrointestinal Epidemiology has 2 components:

1. Brief responses to 3 “Short Answer Questions” to assess your research motivations, experiences, and interests.
2. Completion of a “Research Design Task” to assess your critical thinking about basic study design. Hopefully you will have fun with this!

**Please keep in mind that you will not be required to work on the projects that you propose.** Rather, these questions serve to help us better understand your interests and how you think about research and will help us tailor your mentoring and training so you can get the most out of the T32 program. Please also note that you will have the option of ranking the T32 track and the clinical track separately.

You should feel free to work with your local mentors as you put together your application materials. Should you have any questions, please email the T32 Coordinator Team at [umgiclinicalt32@umich.edu](mailto:umgiclinicalt32@umich.edu). Finalized applications should also be emailed to this address. **Applications are due by 5 pm EST on November 1, 2021.**

**Short Answer Questions**

1. What motivates you to apply for the NIH T32 Training Program in Gastrointestinal Epidemiology? What do you hope to accomplish with your training? (Limit: 100 words)
2. Describe your most significant research experience to date. What was the project? What was your involvement? What did you learn? (Limit: 250 words)
3. Please propose 2-3 potential projects that you would like to pursue while training as a University of Michigan T32 Fellow. What is the key question you would address? What is the hypothesis? What methods would you use? Who would you seek out as potential mentors inside and outside the Division of Gastroenterology and Hepatology? See the attached list of faculty mentors to help you identify individuals who may be a good fit for your research interests. You can also find more information about these and other faculty members online at <https://medicine.umich.edu/dept/intmed/divisions/gastroenterology-hepatology/faculty>, [ihpi.umich.edu/our-experts](http://ihpi.umich.edu/our-experts), or [experts.umich.edu](http://experts.umich.edu/) (Limit: 500 words).

**Research Design Task**

You are seeing an increasing number of patients on call with food impactions due to eosinophilic esophagitis (EoE). These patients usually come into the emergency department (ED) at night after eating multiple pieces of meat at dinner time. The ED tries a dose of IV glucagon, which rarely helps, and you end up performing a prolonged endoscopy to extract multiple pieces of meat in the middle of the night.

After one of these late-night scoping sessions, you hypothesize that EoE-related food impaction might respond to IV steroids to treat the causative inflammation, followed by IV glucagon, which relaxes the esophagus and allows food to pass. When you wake up in the morning after a busy night on call, you decide to outline a randomized controlled trial to address this question.

**Please answer the questions below to the best of your ability.** There may not be a good answer to every question. This is entirely open book/open internet/phone a friend, like the real world. Be sure to justify your choices.

1. What will your intervention and control arms be?

**Control arm:**

**Intervention arm:**

1. How will you select subjects (important inclusion & exclusion criteria)?

**Inclusion criteria:**

**Exclusion criteria**:

1. What endpoint (outcome) data will you collect?
2. What covariates that could influence the outcome will you collect?
3. How will you measure and stratify for baseline severity?
4. How would you estimate the sample size, based on your primary outcome endpoint and a reasonable estimate of the effect size? *(Remember, this is open book, so feel free to use any and all resources to answer this question, and justify your answer as best you can.)*

| **List of Potential Mentors** | | |
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| **Name** | **Clinical and Research Interests** | **Other Interests** |
| Adams, Megan | Appropriate use of endoscopic resources, high-value care | Health law and policy, specialty care access |
| Chey, William | Functional bowel disorders | H. pylori, fecal incontinence, pelvic floor disorders |
| De Vries, Raymond | Mixed-methods research, deliberative methods, intervention design |  |
| Fontana, Robert | Liver transplant, acute liver failure, drug induced liver injury |  |
| Hayward, Rodney | Execution and interpretation of clinical trials, quality of care |  |
| Higgins, Peter | Inflammatory bowel disease, advanced data science | Statistical modeling |
| Lok, Anna | Viral hepatitis, NAFLD, hepatocellular carcinoma | Clinical research in hepatology, research administration and policies |
| Menees, Stacy | Colorectal cancer screening and quality, functional bowel disorders |  |
| Parikh, Neehar | Liver cancer, liver transplant, cirrhosis outcomes | Econometrics, quality of life |
| Rubenstein, Joel | Esophageal disorders | Health services, simulation modeling |
| Saini, Sameer | Colorectal cancer prevention, quality of care, performance measurement | Informed decision making, simulation modeling |
| Speliotes, Elizabeth | NAFLD, obesity, bioinformatics | Personalized medicine, genetics |
| Stidham, Ryan | Inflammatory bowel disease, analysis of imaging and other unstructured data |  |
| Stoffel, Elena | Hereditary cancers, colorectal cancer risk stratification |  |
| Su, Grace | Analytic morphomics in the care of patients with chronic liver disease | Subspecialty care access |
| Tapper, Elliott | Outcomes research in chronic liver disease, cirrhosis care | Hepatic encephalopathy, PROs |
| Vijan, Sandeep | Simulation modeling and economic analysis |  |
| Waljee, Akbar | Inflammatory bowel disease, machine learning, predictive modeling |  |
| Zikmund-Fisher, Brian | Medical decision-making, risk communication, survey design | Behavioral economics |