

OPENING PATHWAYS TO EXCEPTIONAL CAREERS

Since 2020, the Division of Hematology/Oncology's commitment to promoting equitable access to care and eliminating health care disparities – both locally and globally – has redoubled. As part of this comprehensive effort, the Division conducted an assessment of grant funding from major organizations such as the National Institutes of Health (NIH) to determine how much external support was directed to our equity-related projects; and found **around 15% of the Division's projects fell under the umbrella of equity or health care disparities** – an underrepresentation, when considering the prevalence of these concerns within the populations we serve at Penn Medicine and within the broader global community.

Addressing this underrepresentation demands a creative, multi-faceted approach, and one essential way to eliminate health care disparities is to pave the way for the scholars of the future engaging in this research.

INVESTING IN OUR FELLOWS



“In the Abramson Cancer Center’s Division of Hematology/Oncology, we are committed to investing in health equity – and we want that commitment to extend to our fellows, whose fresh perspectives have the potential to reimagine the delivery of care for all patients. The Hematology-Oncology Research Scholars Fund has given us that rare opportunity to launch innovative, equity-rooted research while also uplifting our fellows’ early careers.” —**Yehoda Martei, MD, MSCE**, Vice Chief, Diversity, Inclusion, & Health Equity | Assistant Professor of Medicine

With support from the Hematology-Oncology Research Scholars Fund, the Division created pilot grants to fund second year Hematology/Oncology fellows addressing cancer and hematology health disparities. Investing in early-career physicians – and specifically, those in the second year of their fellowships – has a multitude of benefits:

- Developing trainee interest in disparity-related projects earlier in their careers, to stimulate and inform their lifelong career interests.
- Demonstrating the Division's commitment to supporting equity research for applicants, to ensure we continue to attract the best and brightest fellows to Penn Medicine.
- Supporting our fellows at a pivotal moment in their careers, when they need to generate pilot data to attract sustaining grants from organizations like the American Society of Clinical Oncology – extending their research, contributing to the diversity of research projects in the Division, and investing in our pipeline of equity-related projects.

Led by **Ariela Marshall, MD**, the Division encouraged fellows to submit RFPs for consideration, and **in October 2022, selected two inaugural fellows whose projects will receive \$10,000 each**. In selecting two upfront in this first year, the Division hopes to inspire future fellows with the diverse range of projects that can make a difference in reducing disparities and increasing equitable access to high-quality care in hematology and oncology: from implementation science or population science, to basic, translational, or clinical research.

With partnership from experienced mentors in the Division, and dedicated resources from the Hematology-Oncology Research Scholars Fund, **Penn's Division of Hematology/Oncology will ensure trainees' best ideas flourish and contribute to a diverse landscape of health equity research – one that looks to the future.**



DEBANJAN PAIN, MD: FINDING NEW WAYS TO SHARE LIFESAVING INFORMATION

“A Video Intervention to Increase Knowledge and Intention to Enroll in Clinical Trials among Black Individuals”

There are significant disparities in access to and participation in clinical trials nationwide. Notably, there has been a decrease in both Hispanic and Black enrollment in cancer clinical trials between 2003 and 2016, compared to historical figures – a gap further widened by the COVID-19 pandemic, which led to widespread reductions in cancer clinical trial participation and countered efforts at Penn Medicine's Abramson Cancer Center (ACC) to address this major disparity in access to care.

▶ **THE SOLUTION:** **Debanjan Pain, MD** seeks to improve clinical trial participation among Penn Medicine’s diverse patient populations through culturally-sensitive video outreach, leveraging the ACC’s partnerships with local community organizations to counter existing disparities in clinical trial access – particularly those found among Black cancer patients. Study participants will share their perspectives on and intention to participate in clinical trials both before and after viewing the video, to determine whether the outreach drives an increase in representation of minority groups in clinical trials.

This kind of research lies at the intersection of public health and implementation science, finding the best methods to put theory and research into real-world practice. Dr. Pain is currently working towards his Masters of Science in Clinical Epidemiology, and the study’s design capitalizes on his background in study implementation and data analysis. Further, it builds on years of research led at the ACC by **Carmen Guerra, MD, MSCE**, who improved enrollment of Black patients in clinical trials through tailored marketing strategies, community partnerships, ride-share programs, and much more. She is excited to mentor Dr. Pain’s project, which will offer him a rare opportunity to conduct community-based participatory research and to learn to communicate essential medical information to a vulnerable population.

Dr. Pain completed his undergraduate training at Harvard University, where he majored in Government and minored in Global Health and Health Policy. Since, he has been committed to improving health outcomes in low resource settings – conducting clinical care and research in rural Tanzania. After receiving his medical degree from Johns Hopkins University School of Medicine, Dr. Pain completed his internal medicine residency at Beth Israel Deaconess Medical Center, where he participated in a study of high-risk HPV prevalence and type distribution in women presenting for cervical cancer screening to Karanda Mission Hospital in Zimbabwe. Dr. Pain began his fellowship here in the Division in 2021. During his first year, he participated in a review article with **Vivek K. Narayan, MD, MSCE** highlighting racial and ethnic disparities in clinical trial enrollment among patients with renal cell carcinoma. Most recently, he worked at Butaro Hospital in rural Rwanda, the central provider for cancer care in the country.

Long-term, Dr. Pain seeks to build a career in global oncology that expands access to cancer treatments and improves health care outcomes in low-resource settings in sub-Saharan Africa. He is traveling to rural Rwanda later this year to work at Butaro Cancer Hospital.



XIN WANG, MD: ENSURING EVERYONE BENEFITS FROM A REVOLUTION IN CARE

“Racial/Ethnic Disparities in Acute Myeloid Leukemia Survival in the Novel Therapy Era: An Exploration of the Underlying Mechanisms and Potential Targets for Intervention”

Since 2017, ten novel therapeutic agents have been approved by the FDA for acute myeloid leukemia (AML): **a tremendous level of discovery, which has ushered in a new era of care for AML patients.** For the first time, patients with AML – even those with relapsed/refractory disease – have therapeutic options that are effective, durable, and better tolerated. The impact of racial and ethnic disparities on AML outcomes, however, has been increasingly recognized in the face of this revolution in care. With new therapies come new challenges, such as the vigilant follow-up with clinical experts and the social support needs necessary to best address patient response, toxicity monitoring, and adjustments in treatment – and social determinants of health that influence how patients can overcome these challenges.

▶ **THE SOLUTION:** Before we can eliminate disparities in AML outcomes, we first must understand their roots. **Xin Wang, MD** plans to gather this critical insight through a retrospective cohort study of a nationwide cancer-focused database rich in patient diversity to 1) demonstrate survival disparities with regard to the recent advances of novel AML therapies, and 2) evaluate the role and magnitude of biological and non-biological factors that contribute to these disparities in modern AML care, using advanced epidemiological methods. Addressing the significant gaps in health disparity literature on AML survival outcomes and the factors that contribute to them is the first step in understanding the specific challenges racial or ethnic minorities face in treatment – and in allowing physicians to ultimately eliminate these challenges. With insight from this study, Dr. Wang aims to **identify potential interventions in clinical practice, health policy, and health care delivery to make meaningful steps toward mitigating disparities in modern AML care.**

Currently, Dr. Wang is working towards her MS in Clinical Epidemiology at the Perelman School of Medicine. A study of this scale offers her a valuable opportunity to enhance her skillsets in real-world large dataset processing and analysis, while providing her with formal exposure to and training in clinical trials under the guidance of mentor **Catherine Lai, MD, MS** – a leader in our leukemia clinical research unit.

Dr. Wang received her medical degree at Xiangya School of Medicine, Central South University in Hunan, China, before completing a residency at the University of Massachusetts Medical School in internal medicine. In her proposal, Wang highlighted her own perspective as a minority and first-generation immigrant, which has resulted in a particular interest in integrating health outcomes and quality of life for the patients she plans to treat in her career: those with acute leukemias and myeloid malignancies. Based on this project’s results, Dr. Wang plans to apply for an early career development award to further explore her findings.