

## **Selection of Sponsor and Institution**

**Sponsor:** When selecting a thesis mentor, I sought out a principal investigator who was established and well-funded, had a strong record for training MSTP students, and has a commitment to mentorship, collaboration, and creative thinking. **Dr. Sarah Ross**, an Associate Professor in the Department of Neurobiology and active faculty member in the Pittsburgh Center for Pain Research, is the best possible mentor for an aspiring physician scientist. As demonstrated by her excellent publication record, the Dr. Ross uses diverse methodologies to study fundamental questions about neural circuitry, including mouse genetics, imaging techniques, anatomical studies, behavior, and electrophysiology. These multifaceted approaches speak to Dr. Ross's rigor as a scientist. All of the graduate students in her lab have received NRSA support. She also shows enthusiasm for training aspiring physician scientists, as demonstrated by the recent successful dissertation defense by Michael Chiang, an MSTP student who will be returning to medical school in the fall. There is an additional MSTP student in the lab, which fosters a unique longitudinal mentorship environment through which I work closely with more senior MSTP students on a similar career path. Furthermore, Dr. Ross employs a variety of strategies to aid her trainees in their development as well-rounded independent investigators – she encourages creative but rigorous scientific approaches, scientific communication, and professional development. For these reasons Dr. Ross was named an honoree for the 2018 William E. Brown Outstanding MSTP Mentor Award. Taken together, Dr. Ross will certainly be a strong mentor to support me as I move towards becoming a physician scientist.

**Co-sponsor:** Before the development of this proposal, I sought out faculty who would best complement the mentorship of Dr. Ross and expand my intellectual and technical repertoire. **Dr. H. Richard Koerber** is a highly respected Professor in the Department of Neurobiology and an active faculty member in the Pittsburgh Center for Pain Research. Dr. Koerber is a highly respected, experienced scientist in the pain field and has mentored several successful trainees. He is an expert electrophysiologist with decades of experience performing carefully designed electrophysiology experiments in somatosensory circuits. Drs. Ross and Koerber have a strong collaborative relationship, co-authoring on numerous publications and serving as co-investigators on an R01. He has been an invaluable resource in the development of this proposal and promises to be an excellent co-mentor throughout my postdoctoral training. Furthermore, as he is in an advanced career stage, he can offer me career mentorship that will complement that of Dr. Ross. Thus, Dr. Koerber is well-qualified to supplement my scientific and professional development.

**Institution:** The main factors important to me when selecting an institution were a collaborative and distinguished neuroscience program with a community of accomplished research faculty, excellent clinical training, and a well-established MSTP program with a strong history of alumni success. The **University of Pittsburgh (Pitt) and Carnegie Mellon University (CMU) Medical Scientist Training Program (MSTP)** is a joint MD/PhD program which gives me the opportunity to acquire excellent training in a broad range of skills and to tailor my training to my interests and long-term goals (**Additional Educational Information**). The School of Medicine ranks among the nation's top medical schools and affiliates with University of Pittsburgh Medical Center, which is among the nation's most distinguished and competitive anesthesiology residency programs. To maintain clinical continuity, I will complete two Longitudinal Clinical Clerkships (LCCs), both within the Department of Anesthesiology. For my graduate studies, I have the pleasure of working within the Center of Neuroscience at the University of Pittsburgh (CNUP) which is an inter-institutional and multidisciplinary training program that includes over a hundred training faculty at both Pitt and CMU. During my fourth year of medical school, I will have the option to complete the MSTP Postdoctoral Fellowship, a 5-month experience of nearly 100% dedicated research time. Therefore, the Pitt-CMU MSTP is the best fit for me given my research interest in neuroscience and clinical interest in anesthesiology.

**Pittsburgh Center for Pain Research (PCPR):** I was especially drawn to the Pitt-CMU MSTP because of the Pittsburgh Center for Pain Research (PCPR). The PCPR brings together 41 faculty members spanning departments in Anesthesiology, Medicine, Neurobiology, Pharmacology, and Psychiatry to advance pain research in a collaborative and integrative environment. This will prove critical as I explore avenues to integrate both basic and clinical research. I believe the integration of basic and clinical research within the PCPR will positively impact my future as a physician scientist. Regarding networking and collaborations, the PCPR hosts frequent networking events and monthly seminars of distinguished scholars from throughout the country, many of whom I have had the opportunity to meet. The PCPR will actively contribute to my training through weekly pain journal clubs, monthly Current Research on Pain (CROP) talks given by trainees, and other course offerings including Mechanisms and Clinical Presentations of Pain. The PCPR provides travel awards, research prizes, and has an NIH-funded T32 grant to support 2 predoctoral and 2 postdoctoral trainees.