MEDI 502: Translational Science in the COVID-19 Pandemic - Accelerating and Enhancing our Response Across Preclinical, Clinical and Population Health Research

The course describes in detail a range of recent or ongoing research activities – from preclinical to clinical to population health – that were led or supported by NCATS in response to the COVID-19 pandemic. Through this lens, the course teaches students effective approaches and strategies in translational science that have been key to the success of these efforts and are generalizable to other translational research activities. The course begins with an introduction to translational research and translational science, as well as an orientation to NCATS' programs and resources, including our internal labs and extramural programs that are engaged in COVID research. We will highlight resources (e.g. access to technology, infrastructure, etc.) that allowed these programs to pivot quickly to respond to COVID-19. We then delve into an array of translational science challenges that NCATS and the broader scientific community have had to tackle to respond effectively to the COVID-19 pandemic. Having set up the challenges we move on to highlight specific examples of NCATS-led or supported projects responding to COVID-19 that effectively address these challenges Each week, students will learn about one or more NCATS-led or supported projects addressing the COVID-19 pandemic, and the translational science approaches and principles exemplified through the project. Overall, students will learn about the myriad ways NCATS is contributing to research to address the COVID-19 pandemic, and will leave the course equipped with a set of wide-ranging translational science strategies they can apply in their future work in translational research.

Learning Objectives

By the end of the course, students will be able to:

- Understand the definitions, scope, and goals of translational research and translational science, and how they differ
- Identify key translational science challenges in responding to the COVID-19 pandemic
- Identify effective translational science approaches NCATS has utilized to address multiple aspects of the COVID-19 pandemic, spanning preclinical to clinical translational research
- Explain how the translational science approaches NCATS utilized in the context of a variety of COVID-19 related projects could be applied broadly to research focused on other diseases and conditions
- Reflect on the translational science principles highlighted throughout this course and how these relate to one's own (current or future) work and career sector
- Learn about the partnerships and collaborations needed to advance translational research, as well as the legal approaches that help to establish effective partnerships.

Credits: 1
Class Type: Graduate Course
Program: Biology, Genetics, and Medicine
Availability Summer 2022