

Distinguishing Characteristics of the Program

The Scholars program is based on the British system in which students perform doctoral research without required formal courses other than those which students choose to take in relationship to their own interests. Students selected for admission to the program have already developed a sophisticated scientific background by having engaged in research as undergraduates and through the completion of coursework in biology, chemistry, physics, and mathematics. Once admitted, if students are deficient in a foundational content area, they are granted access to courses and tutorials offered at the NIH and in the UK as a way to ensure they possess sufficient science background to take advantage of the research training the program makes available to them. Other dimensions of the program include the following.

INTERNATIONAL

All students divide their time equally between at least two laboratories—one in the NIH intramural program in Bethesda, MD and one at either Oxford or Cambridge Universities in the UK. Many projects take students to other sites around the globe where they may engage in field work. For instance, some students have conducted infectious disease work in Africa or Asia, genetics research in Australia, and so on. These experiences provide students direct international experience in the opportunities and challenges of leveraging scientific resources across international boundaries.

COLLABORATIVE, INNOVATIVE AND INTERDISCIPLINARY

All students work with at least two mentors (US and UK) and often other mentors in complementary research areas. The program strongly emphasizes the importance of innovation and offers students a degree of intellectual freedom not generally found in didactic academic environments. Mentors accept these Scholars knowing that the student may choose to investigate ideas outside of the mentor's own specific area of expertise. This offers both the student and mentor unlimited opportunity to expand the scientific horizon in search of novel areas of inquiry.

OUTCOMES-ORIENTED

We strive for high impact research outcomes whether basic or clinical. For basic research, the work is aimed at fundamental biological questions that will influence thinking in established disciplines and drive research across disciplines to create new areas of research. For clinical research, the same aims are pursued and students pursuing the combined M.D./Ph.D. pathway enjoy access to the NIH Clinical Research Center and similar clinical schools at both Oxford and Cambridge Universities.

MULTIDIMENSIONAL

Engagement in enrichment activities outside the lab enables Scholars to see first-hand the practical applications of medical research and to see how it fits into the broader social context. A few examples of this dimension of the program include visits to biotechnology, pharmaceutical and medical instrumentation companies, meetings with science policy leaders on Capitol Hill and in London. Some Scholars choose to invest their energy as activists by advocating for policy changes relative to issues such as the use of animals in research and stem cell research to name a few.

ACCELERATED

A disturbing trend in U.S. biomedical research is that new scientists generally obtain their first independent research position in their mid to late 30's and their first NIH R01 grant at 41.7 years of age. The Scholars projects are closely monitored to ensure "time-to-degree" takes no longer than necessary. Thus, most students complete their degrees in 3-5 years (average 4 years). According to the National Research Council, most individuals pursuing a biomedical research Ph.D. in the United States do so over the course of 7.8 years.

