# EDUCATIONAL/ DEVELOPMENT RESOURCES

A key component of the Vanderbilt University School of Medicine (VUSOM) mission is training the next generation of translational investigators.  In the VUSOM there are a wide variety of education and training resources which are leveraged by the project’s investigators, some of which are highlighted below.

**Studios:** One of the innovative resources available is the ability to participate in research studios, and this resource is heavily used by investigators.  A common problem hindering efficient clinical research nationally is limited communication between physician-scientists and needed experts. This often results in suboptimal collaboration and insufficient understanding of biostatistics and design principles. Fundamental to maximizing the value created by every dollar spent on research is ensuring the rigor and quality of the research itself. To support and strengthen individual clinical and translational research initiatives, we have established the infrastructure, services, and training needed to ensure that rigorous study design is enforced, and that critical methodologic, biostatistical, and ethical principles are regularly and reliably met. The studio program strives to improve research quality and rigor by offering and broadly implementing a wide range of supportive research from study design and set-up to analysis and publication, available to new and experienced researchers. There are seven different types of studios (hypothesis generation, design, implementation, analysis and interpretation, manuscript review, translation, and organization), each providing a different look at an investigator’s research study/program. A studio is scheduled to include the investigator, the investigator’s mentor/teacher (if applicable), an experienced moderator, and up to six content and process experts, and a biostatistician. Materials are distributed to the experts prior to the studio and discussed in detail during the studio. Studios offer an opportunity for experienced researchers to provide suggestions and critiques of a research plan or the data generated by a study. It also provides an opportunity for investigators to meet and begin collaborations with other experts who share interest in their field of research. Investigators are provided with minutes of the studio for reference. More than 730 studios have been conducted to date. **Studios are an asset during the protocol development phase to gain valuable insight from experts in the respective field of research.**

**Newman Society Career Development Seminars:** Elliot Newman was a distinguished cardiologist, scientist, medical scholar and teacher who arrived at Vanderbilt in 1952 to launch a fundamentally translational program in clinical physiology and research. He was a pioneer of medical engineering (including echocardiography) and use of applied mathematics and computer science for clinical problems. He founded our Clinical Research Center and was a consummate mentor and inspiration for the Newman Society. Membership in the Newman Society is granted to K-awardees at Vanderbilt and Meharry. All members, including MPH and MSCI students with K awards, attend this monthly career development seminar. K-alumni also take advantage of these forums. Lunch is provided and attendance is tracked. Topics for recent seminars and workshops include avoiding authorship woes, establishing an academic brand, leading teams, communication skills, negotiation, readiness for R-award, and stress management. Many of the topics also carry responsible conduct of research credit hours.

**Annual Visiting Clinical and Translational Research Scholars Day:** On this day, nationally known clinical and translational investigators to Vanderbilt to spend the day meeting with scholars from across Vanderbilt career development programs in small groups to discuss their work. The day is capped off by dinner and a lecture. In the past 5 years visiting scholars have been Dr. Charles Sawyers, Chair, Human Oncology and Pathogenesis, Memorial Sloan-Kettering Cancer Center; Dr. Roger Cone, Director of the U-M Life Sciences Institute, University of Michigan; Dr. Helen Hobbs, Professor of Internal Medicine & Molecular Genetics and Director of the McDermot Center for Human Growth & Development, UT Southwestern Medical Center; Dr. Sharon Kardia, Professor of Epidemiology and Senior Associate Dean for Administration, University of Michigan School of Public Health; and Dr. D. Craig Brater, Vice President for University Clinical Affairs, Indiana University.

**Annual Translational Research Forum**: This forum is held away from the medical campus and modeled on a Gordon Conference format, allowing trainees and their mentors to spend a day immersed in translational research. The event features plenary talks by those who received their first R01 or equivalent in the prior year with breakouts by those recently obtaining individual Ks, R21s, R03s, or similar awards. Presenting is considered an honor and publically marks successes. The Dean or Executive Vice President for Research inaugurates the retreat and a distinguished translational investigator gives a plenary talk. For the coming and past three years, these include Richard Platt, MD, MSc, Professor and Chair of Population Medicine at Harvard Medical School and Principal Investigator of the FDA Mini-Sentinel; Dr. Daniel Rader, Seymour Gray Professor of Molecular Medicine, Medicine & Pharmacology, University of Pennsylvania; Dr. David Ransohoff, Professor of Medicine & Epidemiology, UNC-Chapel Hill; Dr. Kathleen Neuzil, Professor of Medicine and Global Health, University of Washington, and Program Director, PATH. In 2015, VICTR introduced two campus-wide awards given at this event: Distinguished Service to Translational Scientists and Excellence in Mentoring Translational Scientists to underscore recognition of the central position of translational research.

**The Masters in Public Health and Masters of Science in Clinical Investigation Programs:** The Vanderbilt School of Medicine offers two masters level courses that complement this training program. Participating trainees have the option of participating in either program with tuition paid by the grant. The Master of Public Health (MPH) program is a two-year program offered by the School of Medicine for physicians and other doctoral-level health care professionals. The primary objective of the program is to provide training for clinical and patient-oriented researchers who will conduct non-experimental studies or clinical trials with large sample sizes. The MPH includes didactic course work and mentored research, the latter resulting in a thesis.  The Master of Science in Clinical Investigation (MSCI) Program was developed in order to train investigators in the techniques and processes utilized in patient-oriented research. This program is intended to provide direct, mentored experience in clinical investigation and, through didactic work, to provide trainees with a strong foundation in study design, biostatistics, biomedical ethics, clinical pharmacology, human genetics and assay methods. It is expected that graduates of this program will successfully compete for grants such as the K23, Clinical Associate Physician Award, major foundation grants and ultimately fully independent major awards such as the R01.  A wide variety of supplemental courses are available to trainees and may be audited free of charge. This program supports trainees interested in simultaneously pursuing a masters’ degree (MSCI or MPH) during their training experience.

**Faculty Research Scholars:** provides junior faculty and fellowship-level trainees who have been offered a faculty appointment and are committed to a career in clinical or translational investigation with a mentored research apprenticeship, including protected time for mentored research, didactic training, and career development.

Scholars are selected during their final year of fellowship training or the first year following appointment to faculty. The program provides 75% salary support, up to $85,000, as well as $15,000 toward supplies, tuition, and travel to 14-18 scholars in clinical or other biomedical research departments to allow them to join the research programs of established investigators throughout the institution. The sponsoring department chair must commit to provide 75-80% protected research time and an additional $10,000 per year supply support during the three-year duration of the award. The chair must also identify a downstream space and resource plan for the applicant’s eventual emergence from the mentored setting, when independent federal funding is secure. Since the program is designed to catalyze successful mentoring relationships that lead to extramural funding, the renewal of the award in the second and third years is contingent upon evidence that the applicant has already, or soon will, submit an NIH award.

Predecessor programs VPSD (Vanderbilt Physician-Scientist Development) and VCTRS (Vanderbilt Clinical and Translational Research Scholars), which were merged in 2015 as VUMC Faculty Research Scholars, have been highly successful programs as documented by acquisition of promotion and federal funding achieved by award recipients. They have a 73% success rate for awardees receiving extramural funding and a 67% K to R or R equivalent conversion rate. The national average is only 30%. Three VCTRS scholars were selected in the inaugural year; all three of these achieved K23 funding within three years, have an R01 (2) or a U01 (1) and are on faculty. Fifteen subsequent scholars have achieved K23 (9), K01 (1), R03 (2), R01 (2), U01 (1), UCB Young Investigators Research Award (1), Young Investigator Award in Geriatrics 2009 by the Association of Specialty Professors-IDSA (1), NARSAD Young Investigator Award (1), American College of Cardiology Foundation Award (1), Thrasher New Investigator Award (1), Thrasher Research Fund Award (1), Harold Amos Medical Faculty Development Award from the Robert Wood Johnson Foundation (1), American Heart Association Research Award (1), Pharmaceutical Research and Manufacturers of America Foundation (PhRMA) Award (1), Pediatric Infectious Disease Fellowship Award (1), National Kidney Foundation Fellowship Award (1), or Parker B Francis Fellowship Award (1).

**ADDITIONAL EDUCATION RESOURCES**

Download the file titled “Vanderbilt Research-Related Resources” maintained on the [VICTR Tools for Grant Writing site](https://starbrite.vanderbilt.edu/research/writing/grantwriting.html).

1. Vanderbilt Research Related Educational In-services, Workshops and Clinics
2. Vanderbilt Research Related Required Training
3. Vanderbilt Research Related Educational Courses and Degree Programs