



Innovation Award Winners

The Association of American Medical Colleges (AAMC) announces the winners of the **AAMC Award for Innovations in Research Training and Education**. The major goal of this inaugural award is to identify bright spots in research training and education. A total of five winners were selected by a panel of leaders in biomedical research, education and training from AAMC member institutions as well as AAMC senior staff. Entries were judged by the extent to which they advance creative, collaborative partnerships and their impact on institutional practices. Winners were announced at the GREAT Group* and GRAND** Joint Annual Meeting in Nashville on Sept. 21, 2012.

Robert Dittus, M.D., M.P.H. (award winner with distinction)
Vanderbilt University School of Medicine

Mark Hellmich, Ph.D.
The University of Texas Medical Branch

Stephen Hsu, M.D., Ph.D.
University of Florida College of Medicine

Ralph Keil, Ph.D.
Penn State College of Medicine

Richard Steinman, M.D., Ph.D.
University of Pittsburgh School of Medicine

Winning Abstracts

Clinical and Translational Research Studios: An Interdisciplinary Model

Robert Dittus, M.D., M.P.H., Vanderbilt University School of Medicine

Fundamental to the future successful research enterprise is the development and support of investigators who are not only capable of rigorous hypothesis generation, study design and analysis within their discipline, but also proficient at integrating advances in other fields to design, implement, evaluate, and spread creative, interdisciplinary solutions. Developing a formal infrastructure to provide, manage, and fund this transformed research process across academic disciplines has been challenging for academic health centers. We developed an innovative model, called a “Studio”, at Vanderbilt University School of Medicine to address these challenges, based on the premise that focused, timely, expert guidance from faculty representing multiple perspectives and disciplines would improve the quality and potential impact of today’s clinical and translational research. Studios are integrated, dynamic, and

interactive roundtable discussions that bring experts from diverse academic disciplines together to focus on a research project at a specific stage. From the 308 Studios conducted in the program's first five years, investigators agree that Studios have improved the quality of their science (99%), they would recommend a Studio to a colleague (100%), Studios were worth their time (100%), and Studio experts reported the Studios improved science (96%) and they would participate in future Studios (99%). [Awarded with distinction.]

Human Pathophysiology and Translational Medicine (HPTM) Graduate Program: Building the Foundation for Translational Research Collaborations

Mark Hellmich, Ph.D., The University of Texas Medical Branch

Through the Institute for Translational Sciences (ITS), The University of Texas Medical Branch (UTMB) demonstrates a strategic focus on advancing the collaboration between scientists and clinicians to benefit patient health. To meet the unique educational challenges of translational science, the ITS promotes a multidisciplinary, team-based model for research, education and training to all levels, from pre-doctoral students to senior faculty. The Human Pathophysiology and Translational Medicine (HPTM) doctoral program, housed within the ITS, is an educational collaboration between the ITS, UTMB's Graduate School (GSBS) and the School of Medicine's (SOM) Translational Research Track (TRT). Implemented in 2011, the goals of the competency-driven HPTM program are to engage graduate students with medical students in an interprofessional curriculum that promotes role understanding, interdisciplinary communication, and team-based skills in the acquisition of clinical and discipline-specific content knowledge needed to conduct effective translational research. The program achieves these aims through fostering an active learning community lead by an interdisciplinary faculty team, who ensure alignment between the program's educational philosophy, inquiry-based instructional methods, assessment and mentorship.

Using Paradigms as Organizing Principles to Create a Broad Disciplinary Landscape for the Training of MD-PhD Scholars

Stephen Hsu, M.D., Ph.D., University of Florida College of Medicine

The MD-PhD training program at UF (MPTP-UF) adopted several new, innovative and inter-related educational paradigms intended to diversify and broaden training across a broad disciplinary landscape. They address an unmet and urgent need to accommodate the training goals of nationally competitive scholars in the T2-T4 components of the clinical translational continuum. The MPTP-UF restructured its program to allow its scholars to attain non-wet lab skill sets and competencies necessary to contribute to the clinical translational mission. A second innovation was the introduction of patient-oriented research during the pre-clinical years. Each class of scholars engaged in the paradigm of team science by conceptualizing, designing, obtaining approval and conducting their own clinical trial. A third novel paradigm, the social mission, requires all scholars engaged in pre-doctoral studies to regularly attend a "free clinic." The implementation of these paradigms has increased the quality and diversity of applicants to our program; led to the training of scholars in clinical and genetic epidemiology, applied bioethics and biomedical engineering, not uncommonly achieved by partnering with other

national and international programs; introduced patient-oriented research into the curriculum; and sensitized scholars to real world health care needs, while preparing them for re-entry into the clinical years of training.

Interdisciplinary Graduate Education in Biomedical Sciences

Ralph Keil, Ph.D., Penn State College of Medicine

Despite the increasingly interdisciplinary and integrated approach to biomedical research, education of the future workforce has largely remained organized around traditional scientific disciplines. To address this issue, the core curriculum for graduate students at the Penn State College of Medicine was reorganized to integrate the teaching of fundamental principles from different disciplines. This curriculum serves to focus the attention of students on the importance and advantages of interdisciplinary approaches to study complex biological questions. Students develop an understanding of a wider variety of experimental approaches that can be brought to bear on solving scientific problems in their own research. A broader, unanticipated outcome of this curricular reorganization at the College was increased interdisciplinary communication within all components of the institution that catalyzed the development of an integrated Biomedical Sciences (BMS) Graduate Program that has now replaced the previous department-based graduate programs. In the wider scientific community, the importance and innovativeness of instituting this integrated, interdisciplinary curriculum was highlighted by being featured in a Leading Edge correspondence in the journal *Cell* [(2011) 147:1207-1208].

University of Pittsburgh Cancer Institute-Hampton University Education and Training Partnership

Richard Steinman, M.D., Ph.D., University of Pittsburgh School of Medicine

Despite a greater burden of cancer in the minority community, there is a paucity of minority biomedical and physician scientists actively involved in cancer research. Beginning in 2002, we established a formal cross-institutional partnership to bolster faculty and student interactions between Hampton University, an HBCU in Virginia focused on didactic teaching and the University of Pittsburgh Cancer Institute (UPCI) 400 miles away. Goals included the development of a cooperative curriculum, building of faculty competencies in teaching undergraduate cancer biology and undertaking cancer-related projects, building student skills to enable postbaccalaureate success in graduate and professional school. High level institutional support and cross-institutional Advisory committees enhanced the partnership process. Key components of the partnership involved the establishment of a molecular biology laboratory at Hampton and four undergraduate Cancer Biology courses jointly taught by Hampton and Pittsburgh faculty. Select Hampton undergraduates enrolled in a multi-year longitudinal "Cancer Fellow" curriculum undertook research rotations at the UPCI and accrued teaching responsibilities in the curriculum. Of the 19 students who participated in this track, 17 matriculated in graduate or professional school. Currently, 10 students are in medical school or residency, 2 in private practice, 2 conducting public health research, 1 completing her PhD and 1 in postdoctoral training.

**The GREAT (Graduate Research, Education and Training) Group is AAMC's professional development group for the faculty and administrative leaders of biomedical PhD, MD-PhD, and postdoctoral programs.*

***GRAND (Group on Research Advancement and Development) is AAMC's professional development group for research deans, deans of clinical research, and other research leaders at academic medical centers.*