



AAMC Awards Innovations in Research and Research Education

The Association of American Medical Colleges (AAMC) has announced two recipients of the **2015 AAMC Building Bridges and Spanning Boundaries Award: Innovations in Research and Research Education**. This is the fourth annual award developed in collaboration with the GREAT Group and GRAND leadership. The GREAT (Graduate Research, Education, and Training) Group is the AAMC's professional development group for the faculty and administrative leaders of biomedical Ph.D., M.D.-Ph.D., and postdoctoral programs. The GRAND (Group on Research Advancement and Development) leadership is the AAMC's professional development group for research deans, deans of clinical research, and other research leaders at academic medical centers.

The primary goal of this year's awards program is to highlight innovative policies, programs, and structures that encourage basic research and research-focused training collaborations with partners across the spectrum of research. The two awarded projects were selected by a panel of leaders in biomedical research, education, and training from AAMC-member institutions as well as senior AAMC staff. Entries were judged on creativity, impact, and feasibility of replication of innovation. Awards were presented at the GREAT Group and GRAND Annual Professional Development Meeting in Baltimore on Sept. 11, 2015.

First Prize Winner –

The National Neuroscience Curriculum Initiative

Columbia University College of Physicians and Surgeons – Melissa R. Arbuckle, M.D., Ph.D.

Second Prize Winner –

BioVU, a shared resource enabling precision medicine research

Vanderbilt University Medical Center – Gordon R. Bernard, M.D.

Honorable Mentions –

Medical Science Communication

Stony Brook University Medical School – Markus Seeliger, Ph.D.

Integrating Clinical and Translation Research Training at Penn State University

Penn State College of Medicine – Michael Verderame, Ph.D.

An innovative research training program to train a highlight trained workforce of researchers and promote research collaboration

Michigan State University College of Medicine – Elahé Crockett, Ph.D., MSc.

Awardee Abstracts

The National Neuroscience Curriculum Initiative

Melissa R. Arbuckle, M.D., Ph.D., Columbia University College of Physicians and Surgeons; David A. Ross, M.D., Ph.D., Yale School of Medicine; Michael J. Travis, M.D., University of Pittsburgh; Jane Eisen, M.D., Alpert Medical School of Brown University

Developing a psychiatrist workforce with a strong neuroscience background will be critical in the ultimate translation of basic neuroscience to the field. In 2013, Residency Training Directors in Psychiatry at four major research institutions (Columbia, Brown, Pittsburgh and Yale) joined together to form the National Neuroscience Curriculum Initiative (NNCI). The goal of this multisite collaboration was to develop and disseminate effective resources for teaching psychiatry residents the latest advances in neuroscience research. To date, the NNCI has developed six example modules, each reflecting a distinct teaching approach founded on principles of adult learning and eschewing traditional lecture formats in favor of innovative and experiential learning exercises. All teaching materials are freely available online (www.NNCIonline.org) and include a facilitator's guide with step-by-step instructions for implementing in-class exercises, as well as additional resources (such as videos, worksheets and answer keys). Since its inception over 650 individuals have attended training programs hosted in the U.S. and Brazil. In addition, over 200 individuals have signed up to participate in the learning collaborative and more than 70 individuals have reported implementing NNCI teaching resources in residency training for psychiatry. To date the website has hosted 3,262 users from 48 countries with 17,146 page views.

BioVU, a shared resource enabling precision medicine research

Gordon R. Bernard, M.D., Dan M. Roden, M.D., Jill Pulley, M.B.A., Erica A. Bowton, Ph.D. Vanderbilt University Medical Center

BioVU, the Vanderbilt DNA Databank, is a repository of deidentified DNA extracted from discarded blood collected during routine clinical testing. Samples are accrued without an a priori disease focus, therefore reducing ascertainment bias and broadening the opportunities for research. BioVU includes 205,000 DNA samples linked to deidentified EHRs (electronic health records, in a resource called the Synthetic Derivative, or “SD”). The SD combines clinical information contained in Vanderbilt’s EHR, but the data have been stripped of personal identifiers and formatted to improve data reusability and utility for research. The SD contains the core elements of health-related phenotypes, e.g., diagnoses, procedures, medications, laboratory results, radiology reports, family history, social history, vital signs, demographics, hospitalizations, and all information from clinical narratives. We have used these collective resources in progressively more refined ways that now include not only accurately identified diagnoses, but temporal and sequence based events, medication dosages, use of radiographic tests, and key concepts mined from voluminous clinical narratives. BioVU is a shared and equitably accessible resource, and is primarily institutionally-funded (although it receives related support for operations and expansion from several federal awards).

Honorable Mention Abstracts

Medical Science Communication

Markus Seeliger, Ph.D., Elizabeth Bass, M.P.H., Valeri Lanz-Gefroh, M.F.A., Evonne Kaplan-Liss, M.D., M.P.H., Michael Frohman, M.D., Ph.D.

Stony Brook University and Stony Brook University School of Medicine

The Alan Alda Center for Communicating Science at Stony Brook University has developed an innovative training program for scientists and medical students. Students have a strong need to communicate efficiently with different audiences. During the program, students learn to understand the communication needs of their audience (e.g. patients, thesis committees, politicians), develop strategies to satisfy these communication needs (e.g. use of appropriate analogies) and mechanisms to obtain feedback on the communication. The program draws on the experience of journalists and actors to communicate with their audiences. Students are offered various courses during their graduate career and due to the success of a pilot program, the new LEARN curriculum at Stony Brook School of Medicine contains a mandatory communication class developed with the Alan Alda Center.

Integrating Clinical and Translational Research Training at Penn State University

Michael Verderame, Ph.D., Sarah K. Bronson, Ph.D., James A. Pawelczyk, Ph.D.

Penn State College of Medicine and Penn State College of Health and Human Services

The Penn State College of Medicine in conjunction with partners at our University Park campus has implemented an innovative approach to incorporating clinical and translational science education into traditional doctoral degree programs. The Penn State Dual Title Degree in Clinical and Translational Sciences provides a unique opportunity for students in a variety of traditional doctoral programs to enhance their study by the incorporation of coursework and research in clinical and translational science into the requirements of their primary field of study. Although the initial programs adopting the dual title degree are all in the life sciences this novel structure offers the opportunity for pairing clinical and translational research with engineering, demography, materials science, etc. – any program where incorporating clinical and translational science would advance health. In contrast to other approaches (for example post baccalaureate credit certificate programs), this approach ensures epidemiology, biostatistics, public health and other aspects of clinical and health services research will be integrated into the doctoral student's course of study from the beginning. The Dual Title Degree in Clinical and Translational Sciences is being widely adopted across Penn State, and has been embraced by the faculty and students in a variety of programs.

An innovative research training program to train a highly trained workforce of researchers and promote research collaboration

Elahé Crockett, Ph.D., MSc.

Michigan State University College of Human Medicine

We have developed an innovative research-training program to train a highly-trained workforce of researchers in biomedical, behavioral and clinical sciences by providing an inspiring and supportive environment for accomplishment and advancement. The goal is to provide a research-training to foster career development for students/trainees from diverse backgrounds. The program incorporates the best practices for the training and sustaining of learners/students in health-related research through the design of the program and partnerships with other existing programs at MSU and other health-care institutions. The program recognizes the essentiality of high-quality mentoring and career guidance for the next generation of scientists. The goal is accomplished through an innovative on-line course (Basics/ Methods in Biomedical Research), which is presented to the learners prior to hands-on-research experience. The students/learners receive standard training in research concepts/strategies, literature search, ethics, methods/laboratory techniques applied in biomedical research as well as data collection/analysis, and scientific writing/presentation. To learn laboratory technical-skills, students use a research laboratory Tool-Kit (a lab in-a-box). Following the completion of the course, students/learners participate in the summer hands-on research experience with knowledge and confidence gained through the course. Many of the students/learners have continued their research beyond this research training promoting continuation of research and collaboration.