VANDERBILT UNIVERSITY®

2019 TRANS-INSTITUTIONAL PROGRAM AWARD RECIPIENTS

Human Immunology Discovery Initiative – VRA

Participants:
School of Medicine (Clinical): **Jeffrey Rathmell,** David Aronoff, Jim Connelly, Nancy Cox, Leslie Crofford, Young Kim, W. Rathmell, Yu Shyr
College of Arts and Science: Brian Bachmann, John McLean
School of Medicine (Basic Sciences): Jonathan Irish

By applying cutting-edge Vanderbilt technologies to the immune and genetic analysis of patients with immune diseases, this VRA will generate educational opportunities, discover new biology of immune regulation, and advance personalized immune medicine. The funds will be utilized to coordinate leading-edge trans-disciplinary research and accelerate Vanderbilt's ability to generate paradigm-shifting fundamental discoveries of impact by leveraging knowledge of immunodeficiency states and genetic signatures and extending those findings to biomarker and drug discovery.

The Computational Thinking and Learning Initiative (CTLI) – ViA

Participants:
School of Engineering: **Akos Ledeczi**, Gautam Biswas
College of Arts and Science: Madeleine Casad, Jonathan Gilligan, Ole Molvig, Lynn Ramey
Peabody College: Corey Brady, Noel Enyedy, Heather Johnson
Staff: Christopher Vanags

Computational thinking (CT) is the cornerstone of the modern Information Age: the capacity to frame, analyze, disaggregate and reconfigure problems to best leverage ever-expanding computational capability. Every field and K-16 subject area has different approaches and needs that define their disciplinary knowledge and practices, and thus computational thinking in each discipline is a hybrid creation, connecting general computational methods with specific disciplinary ways of thinking and inquiring in generative ways. This initiative will work to develop the institutional capacity necessary to foster innovative disciplinary computational thinking research and education across the university as well as in K-12 education. The group will participate in a strategic planning process to coordinate and enhance existing university resources and services designed to stimulate new collaborations and allow faculty to consider research questions from new perspectives.

GlobalVU Initiative – ViA

Participants:
College of Arts and Science: **Edward Fischer**, Steven Goodbred, Moses Ochonu
Law School: **Ingrid Wuerth**
Blair School of Music: Joy Calico
Divinity School: Choon-Leong Seow

Peabody College: Xiu Cravens, Carolyn Heinrich
School of Engineering: David Kosson
School of Medicine (Basic Sciences): Roger Colbran
School of Medicine (Clinical): Muktar Aliyu

The GlobalVU Initiative will support and foster international research by Vanderbilt faculty and graduate students, bring more foreign scholars to campus and increase our prominence abroad. The initiative will strengthen and nourish existing units engaged in international activity and lower barriers to international work for all units. The core mission will be to enhance the quality of academic research, scholarship and artistic performance in terms of global significance and impact. Its mandate will include identifying Vanderbilt's existing international strengths, supporting the work of faculty across the institution and connecting Vanderbilt with researchers, policy makers and public intellectuals from around the world to develop and enhance cutting-edge and intellectually diverse research.

International Initiative for the Study of Slave Societies – ViA

Participants:
College of Arts and Science: **Jane Landers**, Brandon Byrd, Maria Campos-Pons, Celso Castilho, Dennis Dickerson, Marshall Eakin, William Luis, Kimberly Welch, Alexis Wells-Oghoghomeh
Law School: Daniel Sharfstein
School of Medicine (Clinical): Michael DeBaun

The Slave Societies Digital Archive preserves the oldest records for the slave societies of the Americas and is now the largest archive of its kind in the world, documenting the lives of approximately six million free and enslaved Africans, their descendants, and the indigenous, European, and Asian people with whom they interacted. Funding will be used to help build the archive and to facilitate the process of preservation as well as data extraction and aggregation.

Novel NMR-based profiling platform for research and clinical applications – ViA

Participants:
College of Arts and Science: **Markus Voehler**, John McLean
School of Medicine (Basic Sciences): Kevin Schey, David Wasserman
School of Medicine (Clinical): James Luther, Kevin Niswender, Danxia Yu
Staff: Donald Stec

There is rapidly expanding knowledge associated with the health effects related to changes to the metabolome. Examples of this powerful diagnostic tool have been used for early detection of newborn diseases, diabetes and cancer to name just a few. This initiative will develop a novel Nuclear Magnetic Resonance (NMR) based in vitro diagnostic research (IVDr) platform at Vanderbilt. Through this investment in IVDr, Vanderbilt clinicians and researchers will gain access to this leading-edge technology and its powerful diagnostic features.