

Operationalizing Excellence in Undergraduate Research within Institutions and Institutional Networks

Presented by Lindsay Currie, Jeffrey Osborn, Sharon O'Connor, William Green, Darrin Akins

Description: Undergraduate research is a powerful practice in view of the many benefits gained by students, professional rewards accorded to mentors, and contributions to the research community. Moreover, the educational and professional gains for students traditionally underserved are even greater than those of majority students. However, integrating undergraduate research into institutional structures and cultures to ensure broad participation and sustained research excellence is challenging. These transformational changes can be influenced by strategically leveraging institutional networks. Two INBRE programs will share their approaches to this challenge. OK INBRE has held several network-wide, multi-day workshops/retreats for institutional teams of faculty and administrators, where each campus has created strategic plans to institutionalize undergraduate research. These iterative events led to the creation of an OK INBRE Deans' Council and new funding mechanisms focused on supporting sustained institutional change in research excellence. With the same goal of building long-term capacity across the network, NH INBRE uses national standards (Characteristics of Excellence in Undergraduate Research, CUR) to benchmark each institution in their network. Using these standards as a framework to build a customized rubric, NH INBRE has evaluated institutional change at each partner campus over time to best support each institution given their unique stage of evolution.

Session theme or topic: Undergraduate research; Institutionalization; Culture change

Session format (Lecture, facilitated discussion, panel discussion, Q&A): Facilitated Discussion, Panel Discussion

3 anticipated participant learning outcomes:

- 1) Greater understanding of the holistic benefits of undergraduate research-- for students, mentors, institutions, institutional networks, and external partners (states, businesses, non-profits, funders).
- 2) Greater understanding of the strategic importance of making structural and cultural changes to positively influence sustained research excellence for the long-term.
- 3) Greater understanding of effective tactics to strategically engage network partners, including faculty mentors and institutional administrators.

Intended audience: INBRE, COBRE, Faculty, PI's

Name, title, Institution/bio for each facilitator/presenter:



Lindsay Currie
Executive Officer
Council on Undergraduate Research

Lindsay Currie is Executive Officer of the Council on Undergraduate Research (CUR). She has more than a decade of experience in nonprofit management and community engagement, focusing on empowering communities. She previously served as director of stakeholder engagement for the Regulatory Affairs Professionals Society in Rockville, MD (2015-summer 2019), and as CUR's director of communications and membership (2010-2015), building membership and volunteer service significantly in both positions. She is a frequent speaker on strategies for increasing involvement by members in nonprofit organizations. Her advocacy experience includes a past position as a legislative aide to New Jersey State Assemblymen Michael J. Panter (D, 12th District) and Robert L. Morgan (D, 12th District). Currie earned a B.A. in history and political science summa cum laude from Monmouth University, a master's certificate in public relations from Monmouth University, and an M.A. in women and gender studies from Rutgers University. She also holds a certified association executive credential from ASAE: The Center for Association Leadership.



Jeffrey Osborn
Dean of the School of Science, Professor of Biology
The College of New Jersey

Jeffrey M. Osborn is Dean of the School of Science at The College of New Jersey. His primary scientific research addresses questions about plant evolutionary biology, and his higher education foci include the undergraduate research, leadership of organizational and cultural change, teacher-scholar role of faculty, faculty workload models, and the integration of high-impact educational practices into the curriculum. He has served as President of the Council on Undergraduate Research (CUR), led a number of institutional and multi-institutional programs to support the institutionalization of undergraduate research and the advancement of undergraduates and faculty who have traditionally underserved by higher education and STEM. Through these efforts, Osborn has worked with over 400 colleges and universities across the U.S. His work has been funded by the Howard Hughes Medical Institute, National Science Foundation, J. William Fulbright Foundation, Henry Luce Foundation, Natural Sciences and Engineering Research Council of Canada, among others. His work has been recognized by the AAAS Fellows Award, CUR Fellows Award, Centennial Award from the Botanical Society of America, and the Antarctica Service Medal of the United States of America from the National Science Foundation. Among other roles, he serves as an Associate Editor for the American Journal of Botany and on the External Advisory Committee for the State of Oklahoma's NIH-INBRE program. He holds B.S. and M.S. degrees from Texas State University-San Marcos and a Ph.D. from Ohio State University. For more information: <https://osborn.pages.tcnj.edu/>.



Sharon O'Connor
Senior Research Scientist, Center for Program Design & Evaluation
Dartmouth College

Sharon O'Connor is a Senior Research Scientist with the Center for Program Design & Evaluation (CPDE) at Dartmouth College. With 25 years of experience in mixed-methods research, she specializes in program evaluation of multi-year grant-funded research. She is the Evaluation Director for both the New Hampshire and Rhode Island INBRE programs, and serves the same role for other NIH as well as Health Resources & Services Administration (HRSA) grants. She has an MS in Clinical and Health Services Research from the Dartmouth Institute for Health Policy and Clinical Practice, and an MBA from Boston University.



William Green
Director, NH INBRE Past Director, Dartmouth Immunology COBRE Professor of Microbiology and Immunology
Dartmouth College

William R. Green is PI/Program Director of the New Hampshire INBRE. The NH INBRE grant supports intensive research training and mentoring of faculty and trainees across eight colleges and small universities in NH. Dr. Green also served for over 15 years as PI of the IDeA COBRE grant in Molecular, Cellular, and Translational Immunology at Dartmouth College, and for 20 years as PI/Program Director of an NIAID Immunology Training Grant, and mentor of several T32 and RO1-grant supported student and postdoc trainees in the immunology and retrovirology research programs in his lab. Dr. Green has served, and continues to serve, as a Member or Chair of several EAC advisory groups for COBREs at other institutions, as well as ad hoc committee memberships for other IDeA programs: leadership on the regional tech hub/DRIVEN, and two elected terms on the NAIPI group of COBRE, INBRE, and CTR IDeA PIs. He has also served as Chair of the Department of Microbiology and Immunology at the Geisel School of Medicine at Dartmouth (2002-2018); Dean of the then Dartmouth Medical School (2007-2010); and in various national leadership venues and awards, including for the American Association of Immunologists. Dr. Green's research has focused on retrovirus-mediated diseases, most recently, a mouse retrovirus causing a disease complex that includes profound and broad immunodeficiency -- murine AIDS (MAIDS), with many similarities to HIV/AIDS. His lab has worked at the intersection of cellular and molecular immunology with molecular retrovirology, focusing on retroviral pathogenesis vs. protective CD8 T-cell immunity. His work has included the first description of myeloid derived suppressor cells in a retroviral model, with both T and B cells as targets for MDSCs.



Darrin Akins
Director, OK INBRE, Professor, Microbiology & Immunology
University of Oklahoma Health Sciences Center

Darrin R. Akins is a Professor in the Department of Microbiology & Immunology at OUHSC and a well-established biomedical research scientist with a long history of past and current laboratory-based NIH research funding. He has been heavily involved in career development and mentoring and has helped numerous junior faculty members throughout Oklahoma onto successful R01 and career development awards. Developing a diverse pipeline of new researchers and healthcare professionals at OUHSC and throughout Oklahoma continues to be a primary focus for Dr. Akins. As PI of the Oklahoma IDeA Network of Biomedical Research Excellence award (OK-INBRE; P20GM103447) from the NIH and in his prior role as the Associate Dean for Research in the College of Medicine, Dr. Akins has been able to engage a vast array of high school teachers and students as well as college undergraduates in Oklahoma. Additionally, as Associate Dean, Dr. Akins helped hundreds of clinical and postdoctoral trainees and faculty throughout the OUHSC campus with various training, mentoring, and career development programs. He has been a standing member of a National American Heart Association study section and was a full member of the Microbiology and Infectious Disease Research Committee study section at NIAID where he reviewed only T and K awards (2005-2009). He has also served as a standing member of the Bacterial Pathogenesis study section (BACP) at NIH from 2012-2016 and currently is a standing member of the NIGMS Advisory Council (2019-2022). As an established scientist and member of the Cherokee tribe (registry #C0167837), Dr. Akins also has served ad hoc on several underrepresented minority pre-doctoral fellowship study sections at the NIH and directed all summer undergraduate research programs on the OUHSC campus as the Graduate College Assistant Dean from 2006-2011.
