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Undergraduate Research Experiences Public Report Launch
Speaker Biographies

HEATHER J. BELMONT is Dean of the School of Science at Miami Dade College (MDC). During her career at MDC, she has served as faculty, chairperson of the Biology, Health/Wellness and Funeral Services Departments, and director of the Biotechnology Program. She has been instrumental in securing and administering millions in external grant funding from the U.S. Department of Education, National Science Foundation, and U.S. Department of Agriculture. Under Dr. Belmont's leadership, the School of Science has established an intrusive, in-house science advisement system, an extensive Peer-Led, Team-Learning network, and an undergraduate research program on six of MDC's eight campuses. Prior to joining MDC in 2005, Dr. Belmont worked for Sunol Molecular Corporation and Altor Bioscience Corporation, where she conducted research on therapeutic anti-viral and anti-cancer biologics. She has co-authored multiple peer-reviewed journal articles, two patent applications, serves on multiple boards, and is a Partnership for Undergraduate Life Science Education (PULSE) Leadership Fellow. Dr. Belmont holds a Bachelor of Arts degree from Ithaca College and a Doctor of Philosophy degree in neuroscience from the University of Miami.

SARA BROWNELL is currently an Assistant Professor in the School of Life Sciences at Arizona State University. She received her undergraduate degree in Biological Sciences from Cornell University, a Master's degree in Biology from The Scripps Research Institute, a Master's degree in Education from Stanford University, and a Ph.D. in Biology from Stanford University. Trained as a neuroscientist, she transitioned to doing biology education research and completed a postdoc with Kimberly Tanner at San Francisco State University and another postdoc with Scott Freeman and Alison Crowe at the University of Washington. Dr. Brownell's interests in undergraduate biology education are broad, but her current work focuses on three main avenues. She is investigating the impact of undergraduate research experiences on students, specifically students enrolled in course-based research experiences. She is developing a programmatic assessment for biology majors that focuses on the core concepts of biology. She is also exploring issues related to access and equity in undergraduate biology, specifically the experiences of women, religious students, LGBTQIA students, and transfer students.

DEBORAH FAYE CARTER is Associate Professor of Education in the School of Educational Studies, at Claremont Graduate University. Previously, she was an assistant professor of higher education at Indiana University where she also was program chair of the Higher Education and Student Affairs program. In 2004, Dr. Carter moved to the University of Michigan where she was an associate professor in the Center for the Study of Higher and Postsecondary Education (CSHPE). She was Director of CSHPE from 2006-2009. Among her honors, Dr. Carter won the Bobby Wright Dissertation of the Year Award in 1998 from the Association for the Study of Higher Education (ASHE) and she received the Harold Johnson Diversity Award in 2011 from the University of Michigan. Dr. Carter has been a member of and/or chaired several committees in national organizations like the American Educational Research Association (AERA) and the Association for the Study of Higher Education (ASHE), American College Personnel Association (ACPA). Her areas of research include the impact of college on students, especially students of color and/or low-income students, students' degree aspirations, students' transition to

college, and the effects of undergraduate research on students major choices and graduate school attendance. Her teaching interests include access & equity in higher education, impact of college on students, race and gender in higher education, and mentoring. She holds a B.A. in Sociology and Psychology from the University of California, Santa Cruz and an M.A. and Ph.D. in Higher Education from the School of Education at the University of Michigan.

MICHAEL DORFF is a professor of mathematics at Brigham Young University and is President-Elect of the Mathematical Association of America. He is the founder and co-director of CURM, the Center for Undergraduate Research in Mathematics, which has supported 400 undergraduates and 120 faculty members at 85 institutions nationally to do academic year undergraduate research in mathematics. Also, he is a co-director of PIC Math which is a national program to prepare students for industrial careers through a semester course in which students work in small groups solving a research problem from industry. During the past three years, 1400 undergraduates at 101 universities/colleges have participated in PIC Math. He received his PhD in complex analysis from the University of Kentucky.

SUE EBANKS is currently an assistant professor at Savannah State University for the Department of Marine and Environmental Sciences in the College of Sciences and Technology. There, she teaches and does research with students in areas of aquatic biology, environmental toxicology, physiological ecology, and behavioral ecology. She has also been working in geoscience education with the InTeGrate Program at the Science Education Resource Center (SERC) of Carleton College and has coauthored a paper on a K12 classroom activity in *Current* and one in *Oceanography* on proposed solutions to challenges of social diversity in the marine sciences. Dr. Ebanks earned a Master of Science in Marine Sciences (2005) from Savannah State University with her thesis on the prevalence and effect of isopod parasitism in grass shrimp on shrimp behavior. Her doctorate is from the Rosenstiel School of Marine and Atmospheric Science at the University of Miami (2010) where her dissertation was focused on physiological ecology and environmental toxicology of freshwater invertebrates.

MICA ESTRADA is an Assistant Professor at the University of California at San Francisco's School of Nursing and Research Faculty at California State University, San Marcos. Her area of expertise is social influence, including the study of identity, forgiveness, intergroup relations, and integrative education. Dr. Estrada is the co-PI for a longitudinal, theory-driven evaluation of minority science training programs funded by the National Institutes of Health. Her recent publication from this study assessed how a student's orientation towards the scientific community predicts their perseverance in and commitment to that social community. In addition, she is currently co-PI on a National Science Foundation Climate Change Education Partnership grant that provides educational tools and learning opportunities to San Diego regional leaders and residents regarding the changing climate. She also remains active in her local community promoting the *Quince Project* for Latina teens. A common characteristic of Dr. Estrada's work is designing and empirically testing interventions that can change individual behavior, social norms, and community consciousness**.** She received the Leadership Institute Graduate Award

from the Society for the Advancement of Chicanos and Native Americans in Science (SACNAS) in 2013. Dr. Estrada **e**arned her B.A. in Psychology from the University of California, Berkeley and her Ph.D. in Social Psychology from Harvard University.

COURTNEY FABER is a Research Assistant Professor and Lecturer in the Cook Grand Challenge Engineering Honors Program at the University of Tennessee. She completed a Ph.D. in Engineering & Science Education at Clemson University. Prior to her Ph.D. work, she received her B.S. in Bioengineering at Clemson University and her M.S. in Biomedical Engineering at Cornell University. Dr. Faber's research interests include epistemic thinking in the context of design and problem solving and researcher identity.

JAMES GENTILE is Emeritus Dean for the Natural & Applied Sciences at Hope College in Holland, MI., and the Past President of Research Corporation for Science Advancement, a Tucson, AZ-based foundation dedicated to science since 1912. A geneticist by training, Dr. Gentile has conducted extensive research on the role of metabolism in the conversion of natural and xenobiotic agents into mutagens and carcinogens. He serves on numerous Boards, including the Biosphere2 Governing Board, the Science Friday Foundation, the Cures Now Foundation, and the American Association of Colleges & Universities Project Leap Initiative. He received his B.A. in Biology from St. Mary's College in Winona, MN. After he received his Ph.D. in genetics from Illinois State University he undertook postdoctoral studies in the Department of Human Genetics at the Yale University School of Medicine.

PAUL R. HERNANDEZ is an Assistant Professor of Educational Psychology in the Department of Learning Sciences and Human Development at West Virginia University, USA. His research focuses on psychological factors that promote academic/career success (particularly among underrepresented groups in STEM) and on the design, measurement, and evaluation of interventions aimed at broadening participation in science. Dr. Hernandez earned a Ph.D. in Educational Measurement, Evaluation, and Assessment, with a specialization in Quantitative Methods, from the University of Connecticut.

MARCO MOLINARO is the Assistant Vice Provost for Educational Effectiveness at the University of California, Davis where he oversees the Center for Educational Effectiveness which includes learning and teaching support, instructional research and development and educational analytics. Dr. Molinaro has over 20 years of educational experience creating and leading applications of technology for instruction, scientific visualization and simulation, tools for evidence-based instructional actions, curriculum development and evaluation, and science exhibits for students from elementary school through graduate school and for the general public. He received a B.S. in biophysics and chemistry from Wayne State University and a Ph.D. in biophysical chemistry from the University of California, Berkeley.

JEFFREY M. OSBORN is Dean of the School of Science and Professor of Biology at The College of New Jersey. His primary scientific research focus addresses questions about plant evolutionary biology, and his higher education foci include the 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 are underrepresented in higher education and STEM. Through these efforts, Dr. Osborn has worked with over 400 colleges and universities across the U.S. His work has been recognized by the 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.

SUSAN RUNDELL SINGER is Vice President for Academic Affairs and Provost at Rollins College. Previously, she was Division Director for Undergraduate Education at NSF and Laurence McKinley Gould Professor, in the Biology and Cognitive Science Departments at Carleton where she served for 30 years and, also, directed Carleton's Perlman Center for Learning and Teaching. She pursues a career that integrates plant science and education with a focus on improving undergraduate education at scale. Susan is a AAAS fellow and received American Society of Plant Biology teaching award and Botanical Society of America teaching awards. She served on numerous boards, including the NSF Education and Human Resources advisory committee and the National Academies' Board on Science Education, where she chaired the committees responsible for America's Lab Report, Promising Practices in STEM Undergraduate Education, and Discipline-based Education Research: Understanding and Improving Learning in Undergraduate Science and Engineering.

HEATHER THIRY is a Researcher at the Ethnogaphy and Evaluation Research Center of the University of Colorado, Boulder. She has conducted research and evaluation studies on the underrepresentation of women and minorities in STEM disciplines, the professional socialization of graduate students, and pedagogical reform initiatives in science, technology, engineering, and mathematics education. Her research interests include the social and cultural factors that enhance or hinder educational reform, scientific career paths and career decision-making, and the underrepresentation of women and minorities in the sciences. She has published journal articles on the professional development of education-engaged scientists and the overrepresentation of women scientists in teaching and outreach. Her current work includes a focus on learning progressions, when students are most receptive to learning certain skills along the path from novice to experienced researcher. Dr. Thiry received her Ph.D. in Educational Foundations, Policy and Practice from the University of Colorado, Boulder.

GABRIELA WEAVER serves as vice provost for Faculty Development and director of the Center for Teaching and Faculty Development at the University of Massachusetts, Amherst. In her early career as an assistant professor in the Department of Chemistry at the University of Colorado at Denver she shifted the focus of her research work from physical chemistry to STEM education. From 2001 to 2014 she served on the faculty at Purdue University as associate professor and professor of chemistry and science education and later as the Jerry and Rosie Semler Director of the Discovery Learning Research Center. In 2012, she was elected as a fellow

of the American Association for the Advancement of Science for distinguished contributions to transforming science education at the undergraduate and pre-college levels through the use of inquiry-based pedagogies and innovative technologies. She has been a co-author on two different first-year chemistry textbooks, and numerous book chapters on topics in science education and the 2015 book Transforming Institutions: Undergraduate STEM Education for the 21st Century. From 2004-2012, she served as director of the NSF-funded multi-institutional CASPiE project (Center for Authentic Science Practice in Education) dedicated to involving first- and second year undergraduate students in real research experiences as part of their regular laboratory course curricula. Her research interests include the development, implementation and evaluation of instructional practices that engage students and improve their understanding of science, and the institutionalization of such practices through the transformation of cultures and processes in higher education. She earned a B.S. degree in chemistry from the California Institute of Technology and a Ph.D. in chemical physics from the University of Colorado at Boulder.