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**Wm. David Burns** is the co-founder and principal investigator of SENCER and the executive director of the National Center for Science and Civic Engagement. Prior to establishing the National Center at Harrisburg University of Science and Technology, he served as senior policy director for the Association of American Colleges and Universities, where he established the CDC-sponsored Program for Health and Higher Education and created the Summer Symposia dedicated to exploring the power that students have to improve the health of colleges and communities. He is the principal author and editor of *Learning for Our Common Health* and, among other publications, the article, "Knowledge to Make Our Democracy." For 23 years, Burns was a member of the administration of Rutgers, the State University of New Jersey. In 2008, Burns and SENCER co-founder Karen Kashmanian Oates were honored by the American Society for Cell Biology with the Bruce Alberts Award for Excellence in Science Education.

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**Trace Jordan** serves as associate director of the NYU's general education curriculum - the Morse Academic Plan - with responsibility for the Foundations of Scientific Inquiry program. This program provides innovative mathematics and science courses for over 1400 students each semester who are majoring in the arts, humanities, social sciences, business, and education. He also holds the positions of Adjunct Associate Professor in the Department of Chemistry, Director of Special Projects in the Office of Faculty Resources, and faculty affiliate of CREATE (Consortium for Research and Evaluation of Advanced Technologies in Education). He is a recognized expert in the principles and practice of promoting scientific literacy for all undergraduate students and has been extensively involved with the SENCER project since its inception. He has served as a SENCER Leadership Fellow, a member of the Steering Committee for SCI-MidAtlantic, and his NYU course on "Energy and the Environment" has been recognized as a SENCER model course. Jordan is active in other national organizations, serving as a Faculty member for the 21<sup>st</sup> Century in Project Kaleidoscope and a member of the Program Committee in the Division of Chemical Education of the American Chemical Society. He has active research

projects in several areas of science education, which have been supported by grants from the Camille and Henry Dreyfus Foundation, the National Science Foundation, and the Institute for Education Sciences in the U.S. Department of Education. He has twice received NYU's Outstanding Teaching Award (in 1999 and 2006) and has been listed in *Who's Who Among America's Teachers*.

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**Eliza Jane Reilly** is Deputy Executive Director for Programs for the National Center for Science and Civic Engagement and Research Professor in the Department of Technology and Society at Stony Brook University. She is the former director of The Phillips Museum of Art at Franklin & Marshall and also taught in the American Studies program. She previously served as the director of the college's Center for Liberal Arts & Society for six years. Prior to joining Franklin & Marshall in 2003, she was the executive director of the American Conference of Academic Deans, a national organization of chief academic officers committed to advancing liberal education, and was

Director of Programs at the Association of American Colleges and Universities where her work focused on the improvement of undergraduate science education. She is currently a senior scholar at the National Center for Science and Civic Engagement. Reilly received an M.A. in the History of Art, and a Ph.D. in American History from Rutgers University. Her scholarly work focuses on modernist art, and in particular on the influence of the philosophers William James and John Dewey on painters in both the US and Europe. She serves on the editorial boards of two peer-reviewed journals, *The Radical History Review* (Duke University Press), and *William James Studies* (University of Illinois Press).

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**Marcy Dubroff** is the Associate Director of The POGIL Project in Lancaster, Pa. She formerly served as associate director of the Center for Liberal Arts and



Society and the director of the Seachrist Institute's Clemente Course in the Humanities. She has spent more than 20 years in higher education, working in various capacities including sports information and public relations. After working in sports information at both Cornell University and Connecticut College, she joined Franklin & Marshall College as the manager of the news bureau and also served as the associate director of college communications. Dubroff has also worked as a

photographer, and has had her images published in numerous publications and exhibited in several group shows. In addition, she has had articles appear in numerous publications, including LaxPower Newsletter, and several NCAA championship programs, She was the co-founder of the groundbreaking website College Lacrosse USA, which was purchased by Street & Smith's Sport Annuals, a division of Conde Nast Publications, in 2000. She has also taught courses in science writing and introductory photography. She became managing editor of *Science Education & Civic Engagement: An International Journal* in 2009. Dubroff earned her B.S. with distinction from Cornell University, where she majored in communications.

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**Sherryl Broverman** is an associate professor of the practice in the Department of Biology at Duke University. She has developed HIV/AIDS education programs with universities in Kenya, Uganda, and South Africa. At Duke, she teaches courses for non-science majors and a course focusing on HIV/AIDS. Broverman's research focuses on how non-majors respond to science courses that address civic issues, international connections, and social engagement. She is also working to create linked, international curricula for non-science and pre-major students at Duke University and Egerton University in

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**Shree Dhawale** earned a Ph.D. in genetics from Ohio State University. She is a broadly trained molecular geneticist with research interests in regulation of gene expression, biotechnology, molecular cloning, and use of herbal extracts for inhibiting cancer cell proliferation. Dhawale has won numerous grants and received the 1993 Researcher of the Year award from the Fort Wayne chapter of Sigma Xi Scientific Research Society. She was awarded a membership in Indiana University's Faculty Colloquium for Excellence in Teaching in 1995 and Science Teacher of the Year award from Sigma Xi in 2004. She is associate professor of biology and Honors Program director at Indiana University-Purdue

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**David Ferguson** is Distinguished Service Professor and chair of the Department of Technology and Society at Stony Brook University. He holds a joint appointment in the Department of Applied Mathematics and Statistics. He has directed numerous projects, including a half-dozen NSF projects, aimed at improving science, technology, engineering, and mathematics education at both the undergraduate and graduate levels. His research and teaching thrusts are in the areas of problem solving, advanced technologies in the learning and teaching of mathematics and science, and socio-technological decision making. Dr. Ferguson is a New York State and national leader in programs to enhance the participation of underrepresented groups in science and engineering. He directs two NSF-funded projects in this area: the SUNY Louis Stokes Alliance for Minority Participation (LSAMP), and the SUNY Alliance for Graduate Education and the Professoriate (AGEP). He is the recipient of several awards: U.S. Presidential Award for Excellence in Science, Mathematics and Engineering Mentoring (PAESMEM), Archie Lacey Award of the New York Academy of Sciences, and the Engineering Educator Award of the Joint Committee on Engineering of Long Island.

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**Matthew Fisher** is an associate professor of chemistry at Saint Vincent College and served as department chair for seven years. He is also a Senior Fellow with the National Center for Science and Civic Engagement. He received a bachelor's degree in biochemistry from Temple University in 1982 and a doctorate in biochemistry from the University of Wisconsin-Madison in 1990. In addition to his responsibilities as a faculty member, Matt was the director of Saint Vincent College's Teaching Enhancement and Mentoring Program for seven years. He has developed two SENCER model courses: Chemistry of Daily Life: Diabetes and Malnutrition (2005) and Undergraduate Biochemistry Through Public Health Issues (2009). Chemistry of Daily Life is a course for non-science majors that fulfills general education requirements while Undergraduate Biochemistry Through Public Health consists of two courses for undergraduate STEM majors. Matt has been an active member of the ACS Division of Chemical Education, serving on the Division Program Committee and as meeting program co-chair for the Division's program at the August 2008 ACS National Meeting in Philadelphia. He has been a member of the ACS Committee

on Environmental Improvement (CEI) for over a decade, has helped lead CEI's efforts in regards to education during that time, and serves as 2013 chair of the committee. Matt is a 2005 Carnegie Scholar and has given several presentations at conferences and facilitated workshops on integrative learning in the context of undergraduate science courses, published several book chapters on his work in SENCER, and coordinates NCSCE's scholarship of teaching and learning initiative.

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**Robert Franco** is Director of Planning and Institutional Effectiveness at the University of Hawaii, Kapiolani Community College. He is a recognized expert on contemporary Samoan, Polynesian, and Pacific Islander demographic, ecological, health, and cultural issues. He has published scholarly research on contemporary Samoan political and cultural change, traditional Hawaiian water management systems, and sociocultural factors affecting pelagic fisheries in Polynesia and Micronesia. He currently serves as the College's accreditation liaison to the ACCJC/WASC, Association of American Colleges and Universities, American Council on Education, Community College Survey of Student Engagement, Carnegie Foundation, and Campus Compact where he serves as Senior Faculty Fellow for community colleges. Franco conducts training, technical assistance and research dissemination in five states per year (35 states total) and provides community college, university, and conference audiences with research-based training designed to improve retention, degree completion, and transfer rates through service learning, community-based research, and authentic partnerships. His current national research and training focuses on service learning and reducing the minority academic achievement gap, and strengthening the liberal arts, workforce development and civic missions of community colleges. In 2008, he was selected a NSF-SENCER Leadership Fellow, and advisor to SENCER Center for Innovation (SCI) -Western Region. He also is the College's EPSCoR Coordinator and LSAMP Co-PI.

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**Ellen Goldey** is professor of biology at Wofford College, Spartanburg, S.C. She earned her B.S. degree from The University of the South, TN, and Ph.D. from Miami University, Ohio. An advocate of liberal arts education, she is particularly interested in disciplinary integration that fosters interdisciplinary respect, understanding, and facility among students and faculty members. She has served as project director for Wofford's NSF Division of

Undergraduate Education grant, "Seeing the Big Picture: Linking the Sciences and the Humanities," a senior fellow for the NSF-funded program SENCER (Science Education for New Civic Engagements and Responsibilities), and an executive council member of the Association for the Study of Literature and Environment (ASLE). In June 2007, Ellen co-hosted the 7th Biennial ASLE Conference at Wofford. Twice named Wofford's "Faculty Member of the Year" (1998 & 2004), she was also named the "Outstanding Educator of the Year" by the United Methodist Higher Education Foundation (2002), and she is the first recipient of the Roger Milliken Award for Excellence in the Teaching of Science (2004). In addition to being a Teagle scholar, she is co-recipient of a collaborative, four-institution grant from the Teagle Foundation to assess the value-added outcomes of integrative programs.

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**Nadezhda (Nana) Japaridze** is a senior scientist in neuroanatomy at the Georgian State University. Nana is a SENCER alumna who has been involved with the creation of teaching and learning centers in Georgia. She was also one of the leading organizers of the Georgia-Armenia SENCER Congress, which was convened at the Georgian Technical University.

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**Cindy Kaus** is an associate professor of mathematics at Metropolitan State University in St. Paul, Minn. She earned her B.S. and M.S. degrees in electrical engineering at Arizona State University and her Ph.D. in mathematics at the University of Arizona. An advocate of incorporating civic issues in mathematics to reach groups of students typically underrepresented in the STEM disciplines, she has directed and co-directed various grants leading to curriculum reform in mathematics. In addition, she served as co-director of M<sup>power</sup>, a year-round mathematics program for urban middle school girls. She has been rewarded for her service to women at Metropolitan State University and

has won awards for her outstanding teaching at Metropolitan State University, the University of Minnesota and the University of Arizona. To encourage teaching mathematics through civic issues, Cindy co-chaired a session at the Mathematical Association of America's MathFest 2008 titled "Teaching Mathematics and Statistics through Current Civic Issues"; hosted the 2009 Midwest SENCER Center for Innovation Fall Symposium titled "Teaching Quantitative Reasoning through Civic Issues"; and served as a visiting mathematician at the National Center for Science and Civic Engagement for the 2008-09 academic year. Cindy was elected to the inaugural class of SENCER Leadership Fellows in July of 2008.

Prior to coming to Metropolitan State University, Cindy was a visiting assistant professor of mathematics at the University of Minnesota and an electrical engineer at Honeywell Satellite Systems in Glendale, Ariz.

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**Theo Koupelis** is Dean of Pure and Applied Sciences at Florida Southwestern University. Previously, he was associate dean of Math and Sciences at Edison State College (Fort Myers, Fla.). He was previously a professor of physics and astronomy at the University of Wisconsin-Marathon. He has published research on the theoretical modeling of outflows from compact astrophysical objects and he is the author of the introductory astronomy textbook *In Quest of the Universe*. He is active in science education at many levels; while in Wisconsin, he served as the science adviser for the Birch Trails Girl Scouts (including 10,000 scouts in 10 counties), as organizer of the Science Alliance (which involved his school and area K-12 schools), and as an officer (and twice President) of the Wisconsin Association of Physics Teachers. He has been involved in the work of a number of committees of the American Association of Physics Teachers (AAPT) and is a board member of the Midwest Institute for International and Intercultural Education. He has created, supported through grants, and taught a number of interdisciplinary courses. He also gives workshops on service learning and civic engagement (especially as it relates to the sciences) at the national AAPT meetings. He has been actively involved in the work of the SENCER project since its inception.

Jay Labov, National Research Council, U.S.A.  
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**Jay Labov** is senior advisor for Education and Communication in the National Research Council's Center for Education. He also has been the study director for the NRC reports, *State Science and Technology Policy Advice: Issues, Opportunities, and Challenges*(2008); *Enhancing Professional Development for Teachers: Potential Uses of Information Technology*(2007), *Linking Mandatory Professional Development to High Quality Teaching and Learning: Proceedings and Transcripts* (2006); *Evaluating and Improving Undergraduate Teaching in Science, Mathematics, Engineering, and Technology*(2003); *Learning and Understanding: Improving Advanced Study of Mathematics and Science in U.S. High Schools*(2002); *Educating Teachers of Science, Mathematics, and Technology: New Practices for the New Millennium* (2000); *Transforming*

*Undergraduate Education in Science, Mathematics, Engineering, and Technology*(1999); *Serving the Needs of Pre-College Science and Mathematics Education: Impact of a Digital National Library on Teacher Education and Practice*(1999); and *Developing a Digital National Library for Undergraduate Science, Mathematics, Engineering, and Technology Education*(1998). He has served as Director of the Center's Committee on Undergraduate Science Education, Deputy Director for the Center for Education, and oversees the National Academy of Science's efforts to improve the teaching of evolution in the public schools. Prior to assuming his position at the NRC Dr. Labov was a member of the biology faculty for 18 years at Colby College, Maine, where he taught courses in Introductory Biology, topics in Neurobiology, Animal Behavior, Mammalian and Human Physiology, and Tropical Ecology. He was elected as a Fellow in Education of the American Association for the Advancement of Science in 2005.

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**Debra Meyer** is a researcher and senior lecturer in the Biochemistry division of South Africa's Rand Afrikaans University. Her research efforts are on a vaccine or other therapies against HIV/AIDS. Beginning as a graduate student, she has been very active in HIV/AIDS education projects on campus, in high schools, and at various community forums. In Gauteng Province, she has done HIV/AIDS education for over 10,000 teenagers and young adults. Meyer advises the Township AIDS Project (an NGO) to help them initiate voluntary counseling and testing programs funded by international organizations, and continues her independent work in education and prevention efforts. She is regularly interviewed on TV, radio and for international and national magazines and newspapers regarding HIV/AIDS, and has written articles on the subject in South Africa for the secular media.

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**Kirk Miller** is B. F. Fackenthal, Jr. Professor of Biology at Franklin & Marshall College. At F&M, he teaches Biostatistics, Epidemiology, Vertebrate Anatomy, and Comparative Physiology. He is a winner of the Christian R. and Mary F. Lindback Award for Distinguished Teaching. At Franklin & Marshall, he has served as Department Chair, and on the Professional Standards, Educational Policy, and Pre-Healing Arts committees. Miller is a comparative physiologist and biostatistician with a principal interest in how the embryonic environment affects embryonic growth and neonatal fitness.

He helped create and teach Gov/Pub/Sts/Wgs 388, Public Health Research: pregnancy outcomes in American women, which was named a SENCER model course in 2008. He has done field research in Nebraska on the influence of the nest environment on the fitness of hatching snapping turtles. He now does research on pregnancy outcomes in Amish women. He is a member of the Editorial Board for *Copeia*, the journal of the American Society of Ichthyologists and Herpetologists, and he has served as Associate Editor of *American Zoologist*, the journal of the Society for Integrative and Comparative Biology. He is the author of numerous 25 publications and has sponsored more than 30 undergraduate research projects. Miller received his B.A. from Antioch College with majors in Biology and Philosophy, his M.S. in Zoology from Colorado State University, and his Ph.D. in Zoology from the University of Oklahoma. He has received training in epidemiology from the Johns Hopkins University Bloomberg School of Public Health.

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**Amy Shachter** is the associate provost for research initiatives at Santa Clara University. She received her baccalaureate at Knox College and earned her Ph.D. in inorganic chemistry at the University of Colorado-Boulder. Her research interests center on porphyrin synthesis. Her work to improve undergraduate science education has been supported by the Howard Hughes Medical Institute, the National Science Foundation, and the Camille and Henry Dreyfus Foundation.

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**Garon Smith** is a professor of chemistry at the University of Montana. He started his work at UM 1991, coming from State University of New York College at Fredonia. He received his Ph.D. in 1983 from the Colorado School of Mines and taught at Colorado College before moving to Fredonia. Smith is an analytical/environmental chemist with broad interests in air and water characterization. He teaches freshman chemistry and undergraduate and graduate courses in analytical and environmental chemistry.