

The National Academies of **SCIENCES • ENGINEERING • MEDICINE**

POLICY AND GLOBAL AFFAIRS DIVISION

Board on Higher Education and Workforce

SPEAKER BIOS (in alphabetical order by last name) **VIRTUAL TOWN HALL**

Morehouse College Virtual Town Hall: Successes in STEM Education, Research, and Workforce Preparedness

Webcast Live Here: <https://www.nationalacademies.org/event/04-27-2021/morehouse-college-town-hall-successes-in-stem-education-research-and-workforce-preparedness>

April 27, 2021 | 2:00-4:30 pm ET

Dr. Lawrence S. Blumer, Ph.D., Professor of Biology

Lawrence S. Blumer joined the faculty at Morehouse College in 1990. He earned his PhD from the University of Michigan in 1982 and previously taught at Michigan, The Ohio State University and Kenyon College. Blumer teaches undergraduate courses in ecology, environmental studies, introductory biology, and introductory-level course-based research experience laboratories. He has been a participant in the HHMI Science Education Alliance PHAGES program since 2011. His current research is focused on undergraduate laboratory curriculum development, assessing teaching-learning innovation and insect behavioral ecology. Currently, Blumer is co-principal investigator on two National Science Foundation research grants. An Improving Undergraduate STEM Education Grant, Collaborative Research - The Bean Beetle Microbiome Project: A Research-Education Collaboration; and an HBCU-Undergraduate Program Grant, Broadening Participation Research Center: HBCU STEM Undergraduate Success Research Center. Blumer has authored or co-authored 50 peer-reviewed publications including 15 in the past 5 years. Five of these recent publications were on STEM education research studies. In the past 5 years, Blumer has made 15 invited presentations, including faculty development workshops and poster presentations at scientific conferences. He co-authored and continues to maintain a dedicated website for information about the bean beetle model system (www.beanbeetles.org) and resources for the current Bean Beetle Microbiome Project. He was the 2007 recipient of the Vulcan Materials Company Teaching Excellence Award at Morehouse College. Blumer also is a past President of the Association for Biology Laboratory Education (2011 -2013) and remains an active member of the ABLE Board of Directors.

Dr. Kendrick T. Brown, Ph.D., Provost and Senior Vice President for Academic Affairs, Morehouse College

Dr. Kendrick T. Brown assumed his role as Provost of Morehouse College in January 2021. A veteran educator and senior administrator, Brown has spent more than 20 years of his career serving students and faculty with distinction at private liberal arts colleges on the West Coast and the Midwest. He has vast experience in developing effective strategic plans, managing \$50 -million budgets, launching new academic majors, and empowering faculty to become national instructional leaders by providing them with the resources necessary to innovate and inspire students to excel. Brown comes to Morehouse after serving as dean of the College of Arts and Sciences at the University of Redlands in Redlands, California, a mid-sized institution with more than 260 faculty members and 5,000 students. The former psychology professor earned his doctorate and master's degree in psychology at the University of Michigan, and his bachelor's degree in psychology at Mount Union College in Ohio. In his five years at Redlands, Brown led a multi-phased strategic planning process for the college that reimaged the institution's mission and vision and expanded academic programs. He also implemented strategies to

improve recruiting and talent development, which resulted in a more diverse workforce. Prior to his tenure at Redlands, Brown served as a senior administrator at Macalester College in Saint Paul, Minnesota, where he worked as acting provost and chief academic officer, as well as associate dean of the faculty.

Dr. Jeff Handy, Ph.D., Assistant Professor and Academic Program Director for Biology and Director of the Office of Science Training

Dr. Jeffrey Handy is an alumnus of Morehouse College and he completed the Ph.D. in Biomedical Sciences at Meharry Medical College in Nashville, Tennessee. Dr. Handy brings a passion for the success of Morehouse students after working in the Morehouse Office of Health Professions from 1992 - 1997. After graduating Meharry, Dr. Handy completed two postdoctoral fellowships: a Fellowship In Research and Science Teaching (FIRST) appointment in the Division of Digestive Diseases of the Emory University School of Medicine, where he received extensive training in science pedagogy while successfully completing a traditional postdoctoral research appointment, and a second appointment at the Winship Cancer Institute of Emory University. Dr. Handy mentors students towards success through his work as a faculty advisor for both the MBRS-RISE and MARC U-Star Programs at Morehouse, in addition to building a student-driven research program investigating the role(s) of adipokines in the development and progression of multiple myeloma and prostate cancer.

Dr. John K. Haynes, Ph.D., David Packard Professor in Science

Dr. J. K. Haynes is the David Packard Professor in Science at Morehouse College. A Biology graduate of the College, he earned the Ph.D. at Brown University and completed postdoctoral fellowships at Brown University and Massachusetts Institute of Technology. In his tenure as a faculty member at Morehouse, he has served in a number of administrative capacities including as Director of the Office of Health Professions, Chair of Biology and Dean of Science and Mathematics. He has directed a number of externally funded programs at the College whose purpose was to increase the number of students pursuing careers in research and medicine, including grants from the Howard Hughes Medical Institute, the Centers for Disease Control, the National Institutes of Health, the National Science Foundation, the Department of Defense, the Department of Education and the Department of Energy (NNSA). At the national level, he served a six-year term as Chair of the Minorities Affairs Committee of the American Society for Cell Biology (ASCB) and an additional three years as Vice-Chair of this Committee. He has served on two National Academy of Science Committees, one on undergraduate science education and the other on programs for advanced study of Mathematics and Science in American high schools, and has also been a member of the Committee on Equal Opportunities in Science and Engineering (CEOSE), which advises the National Science Foundation. From 2005-2008, he served as co-chair of the College Board Biology Commission which was charged with helping to develop a new AP Biology course. Between 2010-2012, he served as a faculty member at AAC&U's Engaging Departments Institute. He was a member of the Board of Directors of the Sickle Cell Foundation of Georgia from 1979 to 2008, a member of the Board of World Learning/School for International Training between 2004-2010, a member of the National Advisory Committee for Project Kaleidoscope from 2010-2013 and a member of the Council of the American Society for Cell Biology from 2016-2019. He is currently a member of the Advisory Board for AAAS Vision and Change in Undergraduate Biology Education Initiative. Haynes is a Fellow of the American Society for Cell Biology and the American Association for the Advancement of Science. In 2015, he was the recipient of the White House Champion of Change at HBCUs Award, and in 2018 was the recipient of the Presidential Award (Whitehouse/NSF) for Excellence in Science, Mathematics and Engineering Mentoring (PAESMEM). He is a cell biologist who studied Sickle Cell Disease when he was actively involved in basic research. His principal teaching assignment at the College is Cell Biology for sophomores.

Dr. Triscia Hendrickson, Ph.D., Associate Professor of Biology, Director of Office of Sponsored Programs, and Director of NIH MARC U*STAR Program

Triscia W. Hendrickson earned a BS in Biology from the University of the Virgin Islands and a PhD in Cell Biology from Emory University. She completed her post-doctoral training in the FIRST-IRACDA program at Emory then joined the faculty of Morehouse College where she is now a tenured Associate Professor. Dr. Hendrickson is an alumna of the CASL program and HERS. She directs the MARC U-STAR program at Morehouse College and also the Director of Research and Sponsored Programs while maintaining an active research lab that investigates the role of primary cilia in disease and development.

Dr. Juana Mendenhall, Ph.D., Associate Professor and Walter E. Massey Endowed Professor of the Physical Sciences

Dr. Juana Mendenhall is currently the Walter E. Massey Professor of Physical Sciences at Morehouse College, Director of the Regenerative Biomaterials and Synthetic Functional Tissue lab, President and Founder of TheraVisc™, LLC, a company that specializes in developing viscosupplement injectable gels to help with knee injuries, the TEDx licensee for TEDx Morehouse College. Her ground-breaking patent-pending medical technology is one of the first medical technologies to show real potential in healing osteoarthritis. Her work has also been featured on Atlanta CBS 46 and at the Platform conference designed to promote diversity and entrepreneurship for new technologies in healthcare. Morehouse College houses Dr. Mendenhall's research lab, known as Regenerative Biomaterials and Synthetic Functional Tissue lab, which is charged with creating pivotal solutions using tissue engineering strategies that are geared to treat and prevent osteoarthritis. Currently, her lab focuses on the injectable therapeutic 3D viscosupplements for tissue engineering and cellular therapies. This laudable work is funded by National Science Foundation, DOE, and IBM, which provides the opportunity for Dr. Mendenhall to work with collaborators at Washington State University, University of San Antonio, Cornell University, the University of Georgia, and other HBCUs. As a true scientific educator and researcher, one mission of her company, TheraVisc, is to foster minority training and economic job growth in the metro Atlanta area by developing technical training and skills in science, technology, engineering, and mathematics (STEM) to minority students. Under her tutelage, Morehouse students have won numerous national and regional conference awards for their work in the Mendenhall research lab. Dr. Mendenhall is known for her commitment to exposing underrepresented minorities to science, technology, engineering, and mathematics (STEM) and the health sciences (HS). Her mantra is to set a tangible example of leadership for minorities to inspire their interest in STEM and encourage them to pursue degrees and careers in STEM. During her tenure at Morehouse, she has served as the chair of the faculty research committee, a faculty development fellow, mentored graduate students and served on dissertation research committees, in addition to mentoring postdoctoral fellows via the FIRST (Fellowships in Research and Teaching) from Emory University. More recently, she launched, as Editor, the Journal of HBCU Undergraduate Research to allow undergraduate students early exposure to the peer-review journal process. Dr. Mendenhall received her Bachelor in Science degree from North Carolina A&T State University. After graduating from N C A&T, she worked in the polymer industrial field until she decided to pursue her doctorate in polymer chemistry at Clark Atlanta University where she completed her program in 2006. This graduate experience led to her receiving numerous awards in the field of polymer chemistry from organizations such as the American Chemical Society (ACS) and the National Science Foundation (NSF). In recognition of her of graduate work, Dr. Mendenhall received a Diversity Postdoctoral Fellowship to work at Cornell University. Following this fellowship, she was accepted into Emory University's Fellowships in Research and Science Teaching (FIRST) fellowship. The FIRST fellowship teaches scientist how to become better science teachers while doing research. Dr. Mendenhall has received several awards throughout her career from organizations such as the American Chemical Society, National Science Foundation, Massachusetts Institute of Technology, Cornell University, and the American Society of Cell Biology. She serves as a reviewer for several

scientific journals, and guest editor of the Bioengineering Journal. She also serves on the board of non-profit companies such as the Black Bayou social justice organization. She has given numerous research talks domestically and internationally on her smart biomaterials research and published many articles in high impact peer-reviewed journals. Her TEDx talk on the Future of Knee Repair is already changing the narrative for treating patients with knee problems such as Osteoarthritis!

Dr. Lycurgus Muldrow, Ph.D., Executive Director of the HBCU STEM Undergraduate Success (STEM-US) Research Center

Dr. Lycurgus Muldrow received his Ph.D. in Cell and Molecular Biology from the University of Tennessee and did postdoctoral training at Morehouse College. He is currently the Director of Integrative Activities at Morehouse College, as well as the Director of the HBCU STEM Undergraduate Success (STEM-US) Research Center and the Morehouse College Makerspace Exploration Center. Dr. Muldrow has a 32-year track record of implementing and running large, complex projects, and managing large teams of individuals including being the former director of a research institution. During his fourteen-year tenure at Morehouse College he has successfully authored and/or received 20 broadening participation implementation and research grants. Muldrow is peer-review published in the area of education research and has authored three educational websites including the comprehensive Scientific Literacy Center. The Scientific Literacy Center contains an online utilitarian Scientific Literacy course which is currently being scaled to other HBCUs. This course targets pre and early freshmen STEM majors and has a proven track record of increasing retention.

Dr. Wallace Sharif, Ph.D., Senior Assistant Professor of Biology, Co-Director of NIH MBRS-RISE Program

Dr. Wallace Sharif is a Senior Assistant Professor of Biology at Morehouse College in Atlanta, GA. Morehouse College is the nation's only all-male, predominantly black liberal arts institution, and awards more baccalaureate degrees to African American men than any other college in the country. Dr. Sharif teaches the General Biology course, and serves as an academic advisor to several on-campus science research scholarship programs. Dr. Sharif received his Ph.D. from Vanderbilt University in 2003, where he studied meiotic homologous recombination in the laboratory of Dr. Wayne Wahls in the Department of Biochemistry. He did a postdoctoral fellowship at University of Texas Southwestern Medical Center in the laboratories of Drs. Woody Wright and Jerry Shay, studying the suppression of gene expression and recombination in telomeric regions of human chromosomes. His current research interests involve the role of telomerase in response to severe cellular hypoxia, and in using telomere length as a diagnostic measure of health status in African Americans.

Dr. David A. Thomas, Ph.D., President, Morehouse College

Dr. David A. Thomas became the 12th president of Morehouse College upon his installation in January 2018. The Board of Trustees selected Thomas for many reasons, including his visionary leadership as an Ivy League business school administrator and a proven track record as a fundraiser. Under his administration, the college raised \$107 million last fiscal year—a giving total that is higher than any other president in the history of the college. A visionary leader, Thomas is working to make Morehouse one of the top liberal arts colleges in the country. He has more than 30 years of experience in the business of higher education and is nationally respected as an expert in organizational change. He has served as the former Dean of Georgetown University's McDonough School of Business, and as a former business school professor at Harvard University and the University of Pennsylvania. Thomas is leading dynamic changes at Morehouse, which is mission-driven to produce leaders committed to community service. Under his guidance, the college has emerged as a national innovator in STEM education, has expanded its online class offerings from nine to more than 300 courses, and has increased its profile as the national epicenter for thought leadership on civil rights. Thomas has used his platform as president of Morehouse to speak out against injustice as the nation faces two pandemics—COVID-19 and the persistence of systemic racism. He believes that Morehouse has a responsibility to help the nation to

address the inequities caused by institutional racism, which have created disparities in income, employment, health, housing, and educational opportunities for people of African descent. Thomas holds a doctorate in Organizational Behavior Studies and a Master of Philosophy degree in Organizational Behavior, both from Yale University. He also has a master's degree in Organizational Psychology from Columbia University and a Bachelor of Administrative Sciences degree from Yale College. He is the co-author of three books.

Dr. Ethell Vereen, Jr., Ph.D., Assistant Professor of Biology and 2019 Vulcan Teacher of the Year

Dr. Ethell Vereen is highly motivated by a broad interest in environmental health, water quality, and environmental microbiology. He is an assistant professor in the Department of Biology, at Morehouse College (Atlanta, GA), one of the nation's leading Historical Black Colleges and Universities; and the nation's largest, private liberal arts college for men. Ethell's current research focuses on the ecology of waterborne diseases, with an emphasis on water quality. "My work on water quality is focused on understanding the sources, transformation, transport, and ecology of waterborne pathogens—specifically, Salmonella and Campylobacter, as well as fecal indicator organisms. I am also interested in exploring undergraduate STEM education and pedagogy, with an emphasis on Pan-African and Culturally Relevant Pedagogy in the sciences." Ethell was also recently awarded a \$300,000 Research Initiation Award from the National Science Foundation for his project, "Metagenomic Approach to Assess Water Quality and Microbial Load Variability of an Urban Watershed," which is expected to increase the research capacity at Morehouse College and provide additional training opportunities for the College's STEM students. Ethell earned a bachelor's degree in biology from South Carolina State University, a master's degree in environmental health at the University of Georgia College of Public Health, and a doctorate in ecology from the University of Georgia. He was also a FIRST (Fellowships in Research and Science Teaching) Postdoctoral Fellow in the Department of Health at the Emory University Rollins School of Public Health.

Dr. Ulrica Wilson, Ph.D., Associate Professor of Mathematics and Associate Director of Diversity and Outreach at The Institute for Computational and Experimental Research in Mathematics and Director of NIH MBRS-RISE Program

Dr. Ulrica Wilson is a mathematician specializing in the theory of noncommutative rings and in the combinatorics of matrices. She is an associate professor at Morehouse College, associate director of diversity and outreach at the Institute for Computational and Experimental Research in Mathematics (ICERM), and a former vice president of the National Association of Mathematicians. She is a 1992 graduate of Spelman College, and completed her Ph.D. at Emory University in 2004. Her dissertation, Cyclicity of Division Algebras over an Arithmetically Nice Field, was supervised by Eric Brussel. After two stints as a postdoctoral researcher, she joined the Morehouse College faculty in 2007, and became associate director at ICERM in 2013. Wilson was the Morehouse College Vulcan Teaching Excellence Award winner for 2016–2017. She was recognized by Mathematically Gifted & Black as a Black History Month 2017 Honoree. In 2018, she won the Presidential Award for Excellence in Science, Mathematics, and Engineering Mentoring. She is on the Board of directors of Enhancing Diversity in Graduate Education (EDGE), a program that helps women entering graduate studies in the mathematical sciences. She was included in the 2019 class of fellows of the Association for Women in Mathematics "for her many years of supporting the professional development of women in their pursuit of graduate degrees in mathematics, most visibly through mentoring, teaching and program administration within the EDGE Program, and also as associate director of diversity and outreach at The Institute for Computational and Experimental Research in Mathematics (ICERM)".

Dr. Lance Shipman Young, Ph.D., Associate Professor of Chemistry, James King Jr. Faculty Fellow and Director of Peer Led Team Learning

Dr. Lance Shipman Young serves as associate professor of chemistry and James King Jr. Faculty Fellow in the Division of Life Sciences at Morehouse College. He has served as a visiting scientist at the Fred Hutchinson Cancer Research Center in Seattle, Washington, and as Lewis-Sigler Institute Fellow at Princeton University. Young also served as department chair in chemistry at Morehouse from 2014 to 2019. Young has long been an advocate for curriculum reform geared toward more successful engagement of students in both the classroom and in the laboratory and has spearheaded several funded initiatives aimed at the total development of undergraduates in STEM, including the multidisciplinary implementation of the Peer Led Team Learning (PLTL) program. Young has served as PI or Co-PI on numerous grants supporting undergraduate curriculum reform and undergraduate research from the National Institutes of Health, the National Science Foundation and the Department of Education. Young was born and raised in New Jersey and received his bachelor's degree in chemistry from the Morehouse College in 1995 and his Ph.D. in chemistry from Texas A&M University in 2001. He completed the NIH-funded FIRST Postdoctoral Program at Emory University School of Medicine, before returning to his alma mater in 2003.