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## Envisioning the Next Bioscience Workforce: Summit on Industry Trends and Needs

**Monday, June 26, 2023**

Kavli Auditorium, National Academy of Sciences  
2101 Constitution Avenue, Washington, DC

- 8:30–9:00 A.M. **Registration and Networking**
- 9:00–9:40 A.M. **Welcome and “Big Picture”**  
LINNEA FLETCHER, PHD, Executive Director, InnovATEBIO National Biotechnology Education Center  
DANIEL GOROFF, PHD, Deputy Director for Science and Society,  
White House Office of Science and Technology Policy (OSTP)  
JOANNA MIKULSKI, Senior Policy Advisor, Labor and Higher Education, Domestic Policy Council  
BRYANT M. MOORE, PHD, Director of Strategic Partnerships, University of North Carolina, Chapel Hill
- 9:40–10:25 A.M. **A Paradigm Shift: Combining Economic Development and Industry Research with Education**  
SUSAN SZATHMARY, MD, PHD, Executive Director, Open Biopharma Research and Training Institute
- 10:25–10:45 A.M. **Networking Break and Student Posters**
- 10:45–11:30 A.M. **Community Colleges as Bridges to the Bioscience Future**  
RICHARD RHODES, PHD, Chancellor, Austin Community College
- 11:30 A.M. –  
12:30 P.M. **KEYNOTE: Bio-Health: Regenerating Human Cells, Tissues, and Organs**  
ANTHONY ATALA, MD, Director, Wake Forest Institute for Regenerative Medicine
- 12:30–1:30 P.M. **Lunch/Networking and Student Posters**
- 1:30–2:15 P.M. **Alumni Fireside Chat:** LINNEA FLETCHER, PHD, Moderator  
JULIA MONREAL, Quality Control Analyst II, Partner Therapeutics  
KATHY PROCTOR, Quality Assurance and Regulatory Compliance Specialist, KBI Biopharma  
MANDI WARINGA, Global Quality Manager, International Flavors & Fragrances
- 2:15–3:00 P.M. **Bio-Health: Using AI to Engineer Human Antibodies**  
MONICA BERRONDO, PHD, Co-founder and CEO, Macromoltek
- 3:00–3:30 P.M. **Networking Break and Student Posters**
- 3:30–4:15 P.M. **Bio-Industrial: Emerging Trends in Biomanufacturing and Impact on Technician Training**  
DOUGLAS FRIEDMAN, PHD, Chief Executive Officer, BioMADE
- 4:15–5:00 P.M. **Bio-Industrial: Cell-based Food and Protein Innovation**  
MATT HOTZE, PHD, Director of Science and Technology, Good Food Institute
- 5:00–5:15 P.M. **Recap: Incorporating Emerging Trends into Bioscience Workforce Development**  
BRYANT M. MOORE, PHD, and LINNEA FLETCHER, PHD
- 5:15–6:30 P.M. **Networking Reception**

## Speakers



**Anthony Atala, MD** directs the Wake Forest Institute for Regenerative Medicine, which focuses on engineering laboratory-grown organs for transplant into humans. Sixteen technologies from his laboratory have been used clinically. He has published over 800 articles, is editor of 25 books and three journals, and has received over 250 patents. Dr. Atala received the Smithsonian Ingenuity Award, his work was listed twice as *Time* magazine's top 10 medical breakthroughs of the year and was named by *Nature Biotechnology* as one of 10 top world translational researchers. Dr. Atala was elected to the National Academy of Medicine and the National Academy of Inventors.

**Monica Berrondo, PhD** is Co-founder and CEO of Macromoltek, a company that uses computational modeling to design custom antibodies for drug development. She applies her expertise in antibody structure-prediction, protein functional and mutational analysis, and computational approaches to bridge the intersection between technology and biology. Dr. Berrondo is Chair of the Austin Chapter of Women in Bio and was voted *Austin Magazine's* Woman of the Year and Austin Startup Week's Founder of the Year. She received a BS in biomedical engineering from Rensselaer Polytechnic Institute and a PhD in Chemistry and Biomolecular Engineering at Johns Hopkins University.



**Douglas Friedman, PhD** is CEO of BioMADE, the Bioindustrial Manufacturing Innovation Institute. His interests lie in the fields of synthetic biology, bioindustrial manufacturing, and emerging biotechnologies as they relate to the development of the bioeconomy, public policy, and national security. He is a member of several advisory groups, including the Department of Commerce, Bureau of Industry & Security Materials and Equipment Technical Advisory Committee. Prior to joining BioMADE, Dr. Friedman was the inaugural Executive Director of Engineering Biology Research Consortium. He earned a BS in Chemical Biology from the University of California, Berkeley and a PhD in Chemistry from Northwestern University.

**Matt Hotze, PhD** is the Director of Science and Technology at the Good Food Institute, a global network of nonprofit organizations that is accelerating the production of plant-based and cultivated meat in order to bolster global protein supply, while protecting our environment, promoting global health, and preventing food insecurity. Dr. Hotze has more than a decade of experience in research, academic publishing, and leading an NSF-sponsored engineering research center. He holds a BS in chemistry from the University of Notre Dame, an MS in environmental engineering from Rice University, and a PhD in environmental engineering from Duke University.



**Richard Rhodes, PhD** is Chancellor of Austin Community College, where he works to improve pathways into higher education, strengthen awareness of the community college mission, and give students tools to accomplish their educational, professional, and personal goals. He was previously president of El Paso Community College. Dr. Rhodes is Chair of the American Association of Community Colleges and of the Trellis Foundation, and he serves on the boards of numerous community, youth, and workforce development agencies. He received a BBA and MA from New Mexico State University, and a PhD in community college leadership from the University of Texas at Austin.

**Susan Szathmary, MD, PhD** is Founder, Executive Director of Open Biopharma Research and Training Institute, a nonprofit organization in Carlsbad, California with the goal to drive innovation and accelerating biomanufacturing research and to provide project-based workforce development in biomanufacturing to create economic opportunities and to lead to a healthier population and a more sustainable planet. Dr. Szathmary has several patents and decades of experience in research/product development, academic publishing, and clinical research. Dr. Szathmary graduated with an MD degree and obtained a PhD in Immunology and Microbiology on pathogen-host interaction.



**Bryant Moore, PhD** is director of strategic partnerships in the UNC-Chapel Hill Office of Technology Commercialization. He advises and partners with faculty, senior leaders, and commercialization managers to develop relationships with industry and startups to create opportunities for university research. A 30-year veteran of the medical device industry, Dr. Moore has held senior leadership roles at Abbott Laboratories, Medtronic, Smith and Nephew, Johnson and Johnson and DuPont.



## Moderators

**Linnea Fletcher, PhD** is Principal Investigator of InnovATEBIO, the National Biotechnology Education Center, and Department Chair of Biotechnology at Austin Community College. She was awarded an Emerging Technology Fund grant in 2015 to build a Bioscience Incubator at ACC and received several Wagner Peyser grants to equip it. Today the incubator is full of start-up companies and students interning or working for these companies.