## Life Sciences Workforce 2021

MassBioEd's **6th Annual Conference** 

June 2, 2021 **Online** 

www.MassBioEd.org **#LSWC** 





SANOFI GENZYME 🎲







#### **Upcoming Events**

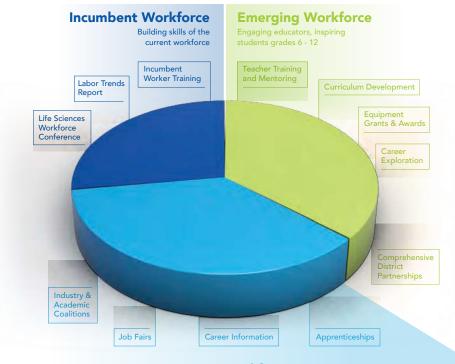
October 26, 2021

MassBioEd's 20th Anniversary Celebration, Honoring Champions for Biotechnology Education

#### About the MassBioEd Foundation

In 2001 the Massachusetts Biotechnology Council (MassBio) founded the Massachusetts Biotechnology Education Foundation (MassBioEd), a non-profit 501(c)(3) education foundation, to address the workforce needs of the Massachusetts life sciences industry.

Since its founding, MassBioEd has created and refined programs to train educators in biotechnology, excite students about science, and expose students to college and career opportunities within the life sciences. We work to bring industry and education stakeholders together to help align training with industry needs.



#### **Imminent Workforce**

Illuminating careers for college students and adults

### Conference Agenda

### Wednesday, June 2<sup>ND</sup>, 2021

10:00am - 10:15am Welcome Remarks:

**Sunny Schwartz** 

**Executive Director, MassBioEd** 

10:15am – 11:00am MassBioEd's 2021 Life Sciences Employment Outlook

Presentation and Q&A

Karla Talanian

Director of Talent & Workforce Development, MassBioEd

11:00am – 12:00pm Expanding the Pie: Specific Workforce Challenge Areas

**Presentations and Facilitated Group Discussions** 

Inspiring College Students to Pursue STEM Careers

Led by: Fred Ledley, Bentley University & Liz Zulick, Northeastern University

Ending Talent Wars: Growing the Clinical Research Talent Pool

Led by: Manny Lazaro, Jounce Therapeutics

Big Tech vs. Biotech: Winning the Competition for Talent in Data Science Led by: Jay Mettatel, AstraZeneca & Sarita Pillai, Education Development Center

Hiring and Securing Foreign-Born Talent

Led by: Jennifer Machat, Sanofi Genzyme

Meeting the Growing Demand for Biomanufacturing Talent

Led by: Jeffrey Savard, Bristol Myers-Squibb & Craig Meinhardt, Pfizer

Building Inclusivity and Belonging Into Our Workplaces

Led by: Wendy Richards, Sanofi Genzyme & Michael Lampa, Sanofi Genzyme Oncology

Shifting Strategies: Industry Opportunities to Fill the Talent Gap

Led by: Krista Licata, LabCentral

12:00pm – 1:00pm Open Networking & Lunch Break

Join Networking Groups A-D to chat with attendees over lunch!

### Conference Agenda

1:00pm – 1:55pm Flexibility and Mobility of the New Workforce

Panel Discussion and Q&A

Mark Bamforth, Chief Executive Officer, Arranta Bio

Jacquelyn Fouse, Chief Executive Officer, Agios Pharmaceuticals

John Maraganore, Chief Executive Officer, Alnylam Pharmaceuticals

**Sunny Schwartz,** Executive Director, MassBioEd (Moderator)

**1:55pm – 2:50pm** Expanding Landscape of the Life Sciences Across Massachusetts
Panel Discussion and Q&A

**Opening Remarks:** 

**Christopher Murphy,** Vice President and General Manager, Viral Vector Services, Thermo Fisher Scientific and Chair of the MassBioEd Board of Directors

Robert Coughlin, Managing Director - Life Sciences, JLL

Benjamin Bradford, Vice President, Membership and Economic Development, MassBio

**Rita Smith,** Director, Business Human Resources, AbbVie (Moderator)

2:50pm - 3:00pm Conclusion



Sanofi is dedicated to supporting people through their health challenges. We are a global biopharmaceutical company focused on human health. We prevent illness with vaccines, provide innovative treatments to fight pain and ease suffering. We stand by the few who suffer from rare diseases and the millions with long-term chronic conditions.

With more than 100,000 people in 100 countries, Sanofi is transforming scientific innovation into healthcare solutions around the globe.

Sanofi, Empowering Life

Sanofi Genzyme is a proud supporter of MassBioEd and the 2021 Life Sciences Workforce Conference.



### Speaker Biographies



Mark R. Bamforth
President & CEO, Arranta Bio

Mark Bamforth founded Arranta Bio in May 2019. Previously, Mark founded Brammer Bio, a best-in-class viral vector CDMO for cell and gene therapies. Brammer's team grew from 110 in 2016 to over 600 in Florida and Massachusetts, at the time of its acquisition by Thermo Fisher Scientific in April 2019. In 2010, Mark founded a biologics CDMO, Gallus BioPharmaceuticals, and acquired a world-class facility and team in St. Louis, MO, with a commercial supply

agreement with Janssen. Gallus was sold to DPx Holdings B.V. in 2014. Mark previously spent 22 years in the UK and USA at Genzyme, latterly running the 12-site global manufacturing operation and a pharmaceutical CMO business and serving as a corporate officer for 9 years. He began his career as a petroleum engineer exploring for North Sea oil with Britoil, then as a chemical engineer in the whisky industry with Whitbread. Mark serves on the boards of Avid Bioservices, Continuus Pharma, Pneumagen, Enterobiotix, Inceptor Bio, and Entrepreneurial Scotland. He has a BS in Chemical Engineering from Strathclyde University and an MBA from Henley Management College.



**Benjamin Bradford**Vice President of Membership and Economic Development, MassBio

As Vice President of Membership and Economic Development, he oversees the recruitment of new member companies and the Member Services team's efforts to maximize the membership needs of existing members. He also works with member and non-member companies to support their decision making on relocation or expansions. Through relationships with foreign economic development agencies, Ben works to connect foreign companies to the US market.

Prior to MassBio, Ben worked as Director of Business Development and Regional Strategy at the Massachusetts Life Sciences Center where he was responsible for recruiting new companies to do business in Massachusetts and developing relationships with municipalities across the Commonwealth with the goal of expanding the industry state-wide.



**Robert Coughlin** *Managing Director - Life Sciences, JLL* 

Bob Coughlin is the Managing Director of Life Sciences at JLL. In this role, Bob will be a strong partner to life sciences companies to help identify opportunities to optimize their portfolios, whether it is through site selection, tax incentives or operational efficiencies. Most recently Bob served as the President and CEO of MassBio. In this role, Bob's mission was to advance Massachusetts's leadership in the life sciences to grow the industry, add value to the health care

system and improve patient lives. Over the 14 years Bob truly became a champion for patients by commercializing breakthrough therapies and cures for people around the world who need and deserve them. Bob played an integral role in making Massachusetts the best place in the world for the life sciences industry. Before joining MassBio, he served as the Undersecretary of Economic Development with Governor Deval Patrick's administration, where he prioritized both health care and economic development issues and was a strong advocate for the life sciences industry in Massachusetts. Prior to that, he served as state representative to the 11th Norfolk district for three terms. Bob has held senior executive positions in the environmental services, capital management, and venture capital industries.



Jacqualyn A. Fouse CEO, Agios

Dr. Fouse has served as a member of the Agios board of directors since December 2017 and became chief executive officer of Agios in February 2019. She previously served as president and chief operating officer of Celgene Corporation until April 2017, and as a member of Celgene's board of directors through June 2017. Dr. Fouse joined Celgene in 2010 as chief financial officer and was named president of the company's global hematology & oncology franchise in 2014.

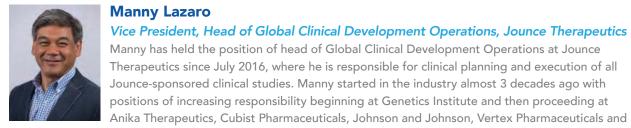
Before joining Celgene, Dr. Fouse served as chief financial officer of Bunge Limited, a leading global agribusiness and food company. Prior to Bunge, she served as senior vice president, chief financial officer, and head of corporate strategy at Alcon Laboratories, a leading ophthalmic pharmaceutical and medical device company. Prior to her tenure with Alcon, she held a variety of senior leadership roles with international companies, spending almost a decade of her career in Switzerland. She also serves on the board of directors at Incyte Corporation. Dr. Fouse earned her BA and MA in economics and a PhD in finance from the University of Texas at Arlington and her Master's in environmental management from the Yale School of Forestry & Environmental Studies.



**Michael Lampa** Drug Discovery Scientist, Sanofi Genzyme Oncology

Mike is a Drug Discovery Scientist for Sanofi Genzyme Oncology. His experience encompasses small molecule and immuno-oncology therapies with notable pre-clinical validation work with GLS1 and collaborative projects from the BioNTech partnership. He completed both his BA in Biology and MBA in Health Sector Management at Boston University. Mike aims to utilize his scientific expertise, knowledge of health care infrastructure, and growing business acumen to

develop effective marketing strategies to promote life-saving treatments for patients. In his downtime, he enjoys collecting memorabilia, fantasy football, and pub trivia.



**Manny Lazaro** 

Vice President, Head of Global Clinical Development Operations, Jounce Therapeutics Manny has held the position of head of Global Clinical Development Operations at Jounce Therapeutics since July 2016, where he is responsible for clinical planning and execution of all Jounce-sponsored clinical studies. Manny started in the industry almost 3 decades ago with positions of increasing responsibility beginning at Genetics Institute and then proceeding at

Forum Pharmaceuticals. Manny holds a Master's of Science in Drug Regulatory Affairs and Health Policy from the Massachusetts College of Pharmacy and a Bachelor's of Science in Biology from the University of Massachusetts. Before working in the device and biopharmaceutical industry, Manny served in the United States Air Force for 6 years as a Staff Sargeant.



Fred D. Ledley Director, Center for Integration of Science and Industry, Bentley University

Fred Ledley is Professor of Natural & Applied Sciences and Management as well as Director of the Center for Integration of Science and Industry at Bentley University. He has served previously on the faculties of the Baylor College of Medicine, Texas Children's Hospital, and the Howard Hughes Medical Institute, as the founder and Vice president R&D of GeneMedicine, Inc (formerly NASDAQ:GMED) and as President and CEO of Variagenics, Inc. (formerly NASDAQ:

VGNX). Joining Bentley University in 2005, he led a strategic reassessment of the goals and objectives of a science curriculum for business students that would better prepare them for careers in science and technology-driven industries. As Director of the Center for Integration of Science and Industry, he leads a broadly interdisciplinary research program focused on advancing the translation of scientific advances to create public value by better synergizing the advance of science with the investments and incentives of both the public and private sectors. He has published >200 scientific papers and mentored numerous students and post-doctoral fellows for successful careers in academia, government, and industry.



Krista Licata Managing Director, LabCentral

Krista Licata is the Managing Director of LabCentral Ignite: a platform for collective investment and a 'spark' for regional systemic change in STEM Education, talent development/placement and entrepreneurial support in the biotech industry. Prior to this role, Krista spent 7 years providing support to LabCentral's startups, most recently as Senior Director, overseeing all Site Operations. Prior to this, Krista worked with multiple non-profit and organizations in the arts,

education, and child advocacy. She is a Teach for America alumni, having engaged for two years with her students in the science classroom, their families and the greater community of Brownsville, Texas. She was proud to be selected as Besteiro Middle School's Teacher of the Year by her administrators and peers. Krista holds an MS in public administration from the Maxwell School at Syracuse University and a BA in natural resource management from Cornell University.



Jennifer Machat
Recruiting Director, Sanofi Genzyme

Jenn Machat has over 15 years of experience in Talent Acquisition and Human Resources. She is passionate about continuously learning about how technology can intersect with healthcare and can positively impact biopharma/biotech/health tech organizations. In her current role as Director, North America Early Career, Diversity Outreach & Employment Branding she is responsible for working collaboratively across the business in the creation, promotion, and establishment of

university and diversity talent fulfillment strategies. Jenn has been with Sanofi since 2013 in both contract and full-time capacities and was most recently hired in 2017 as a Talent Acquisition Manager leading the UR and Diversity Outreach effort. Prior to Sanofi, Jenn held various HR and UR roles with Verizon Wireless, Lehman Brothers, Landor Associates, and a Start Up Technology firm. Jenn holds a BS in Psychology from Bucknell University.



John Maraganore CEO, Alnylam

Dr. John Maraganore serves as the CEO and a Director of Alnylam, the company that translated Nobel-prize winning RNA interference (RNAi) into a whole new class of innovative medicines. Dr. Maraganore supports the industry at large, serving on the boards of directors for growing biotech companies like Agios Pharmaceuticals. He is a longtime member and former chair of the Biotechnology Industry Organization (BIO) Board and member of the BIO Executive Committee.

A 30-year industry veteran, Dr. Maraganore is a sought after speaker at national healthcare forums such as the Forbes Healthcare Summit, Financial Times' Biotech and Pharmaceutical Global Conference, J.P. Morgan, Prix Galien USA, World Orphan Drug Congress and FDA/CMS Summit, and is also a trusted industry expert for top media outlets including The Wall Street Journal, New York Times, Forbes, Bloomberg, The Boston Globe and CNBC. Dr. Maraganore has also received major industry kudos - listed in the Bloomberg 50 Who Defined Global Business in 2018, voted Best Biopharma CEO of 2017 and 2019 by STAT News, won the CEO award from Xconomy's Best of Boston Life Science in 2018, honored with MassBio's Innovative Leadership Award in 2016 and honored by PharmaVOICE 100 in 2009. Before joining Alnylam, Dr. Maraganore served as an officer, member of the management team, and Senior Vice President, Strategic Product Development for Millennium Pharmaceuticals, Inc. He oversaw the company's franchises in oncology, and cardiovascular, inflammatory and metabolic diseases. Prior to Millennium, Dr. Maraganore served as Director of Molecular Biology and Director of Market and Business Development at Biogen, Inc., where he invented and led the discovery and development of Angiomax<sup>TM</sup> (bivalirudin for injection, formerly Hirulog<sup>TM</sup>) currently marketed by The Medicines Company. Dr. Maraganore received his M.S. and Ph.D. in biochemistry and molecular biology at the University of Chicago.

#### **Networking Sponsors**

















Craig Meinhardt

Director, Engineering, Maintenance, and Utilities & Environmental, Health, and Safety/Security, Pfizer

Craig Meinhardt is the Director, Engineering, Maintenance, Utilities and Environmental, Health, & Safety/Security at the Pfizer Andover, MA site supporting the research, development, clinical, and commercial supply of biopharmaceutical materials. Craig has worked at the Andover site since 2003 when he started in Process Technical Services leading technology

transfer and support teams. In 2008, Craig assumed production operations leadership for mammalian drug substance production lines, and then transitioned to bacterial production operations lead for drug substance intermediates. In 2014, Craig was appointed as Andover Pfizer Global Supply Strategy lead supporting the design and advancement of a long-term site business plan. Prior to joining Pfizer, Craig worked for various engineering consulting firms and a biomedical company supplying a calcium phosphate delivery vehicle for bone growth. Craig received his BS in Chemical Engineering from Northeastern University and is also a veteran of the United States Air Force. Away from work, Craig enjoys spending time with his wife and three children, summers by the pool and winters on the slopes skiing.



Jay Mettetal
Director of Early Oncology Bioscience, AstraZeneca

Jay Mettetal is a Director in Early Oncology Bioscience at AstraZeneca, leading the preclinical drug combination strategy, and coordinating AZ preclinical efforts on late-stage programs. He initially joined AstraZeneca in 2013 to build a Modelling and Simulation group focusing on translational safety and ADME. The team heavily supported the oncology portfolio with an emphasis on Quantitative and Systems approaches to common adverse events for single

agent and combination therapies. Prior to joining AstraZeneca, he worked at CombinatoRx developing algorithms for identification of optimal combinations, and subsequently held positions at Pfizer in the biologics unit as well as Millennium/Takeda where he was modelling and simulation team leader in DMPK. He earned his PhD in Physics at the Massachusetts Institute of Technology applying quantitative approaches to problems in population heterogeneity and cellular signaling.



Christopher K. Murphy

Vice President & General Manager of Viral Vector Services, Thermo Fisher Scientific

Christopher Murphy is Vice President and General Manager of Viral Vector Services at Thermo Fisher Scientific. Prior to joining Thermo Fisher, Chris served as chief operating officer for Brammer Bio and as general manager for the Sanofi-Genzyme Allston Landing site in Boston. Chris has more than 30 years of experience in biopharmaceutical manufacturing, process development, and plant operations and has an M.Sc. in biochemistry from New York Medical

College, and a B.Sc. in biology from Rutgers University. In addition to his work at Thermo Fisher, Chris serves as a Vice President on the Board of Directors at West End House Boys and Girls Club, as Board Chair for the Massachusetts Biotechnology Foundation, and as a Board Member of Mass Bio.



Sarita Pillai
Vice President and Director of STEM & Workforce Success,
Education Development Center (EDC)

Sarita Pillai is the Vice President and Director of STEM & Workforce Success at Education Development Center (EDC), and an expert in effective strategies to broaden participation in STEM. Drawing on her training as computer scientist, Sarita oversees a portfolio of work at EDC focused on building the foundational skills and competencies needed for success in

STEM educational and career pathways, including computer science and the data sciences. Sarita leads national centers that advance innovative research and development and deepen understanding of effective strategies to

enhance the quality and equity of K-12 and post-secondary STEM education. She is principal investigator (PI) of the National Science Foundation (NSF)-funded STEM Learning and Research Center and the co-PI of NSF's Center for Integrative Research in Computing and Learning Sciences. She has led research and scholarship on the 'Future of Work' and the educational, workforce, policy, and ethical implications related to the proliferation artificial intelligence and other advanced technologies. She is dedicated to closing opportunity gaps, advancing equity in education, and diversifying STEM fields. She is co-author of the book More than Title IX: How Equity in Education has Shaped the Nation which examines some of the most influential moments for gender equity in education and tells the stories of the women and men who made change possible.



#### Wendy M. Richard, JD, MSSW

Director, Corporate Social Responsibility (CSR) & Community Relations, Sanofi Genzyme Wendy M. Richard is currently CSR Director at Sanofi Genzyme. She joined the organization in 2012 as a Thought Leader Liaison for the MS Business Unit, where she supported the successful global launches of Aubagio and Lemtrada. From 2017-2020, she led Public Affairs & Patient Advocacy for both the Neurology and Immunology Franchises in the US. Wendy is also a DEI facilitator and teaches classes on unconscious bias at Sanofi. Before joining Sanofi

Genzyme, Wendy spent 8 years with EMD Serono, with the US medical and commercial organizations based in Rockland, MA, where she was a Senior Medical Science Liaison and Key Account Manager. Wendy spent the first part of her career working in policy research, government affairs and ADA consulting, on behalf of individuals and families who are living with chronic disease and illness, for MD Anderson Cancer Center and the National Multiple Sclerosis Society. Wendy received her BA from Dartmouth College, JD from the University of Houston Law Center, and her MSSW from the University of Texas at Austin. In her spare time, Wendy enjoys running, hiking, listening to music, playing with her kids and dogs, reading books and traveling with the family.



**Jeffrey Savard**Director of Manufacturing, Bristol Myers Squibb

Jeff Savard is currently the Director of Manufacturing at the Bristol Myers Squibb Devens campus (Devens, MA). In this role, he leads the site's Single Use Facility and is responsible for late-stage clinical biologics manufacturing. Prior to this, Jeff was Director of Commercial Manufacturing and led the large-scale commercial biologics manufacturing team. Jeff has also served in leadership roles within the Quality and Manufacturing Sciences & Technology

organizations. Jeff serves as sponsor for both the University Relations and the Diversity & Inclusion Devens campus teams; he is passionate about removing biases and improving equity in hiring practices for entry-level candidates, particularly those from non-traditional educational backgrounds. Jeff holds a Ph.D. in Chemical Engineering from Carnegie Mellon University and a B.S. in Chemical Engineering from Worcester Polytechnic Institute.



**Sunny Schwartz** Executive Director, MassBioEd

Sunny is the Executive Director of the Massachusetts Biotechnology Education Foundation (MassBioEd), a non-profit organization with a mission of building a sustainable life sciences workforce in Massachusetts. In her previous positions, Sunny served as President & CEO of the MassHire Metro North Workforce Board, charged with leading workforce development policy and partnership building for a 20-city region, Chief Operating Officer of the Asian

American Civic Association, a direct service education and training provider, and Program Development Manager at Commonwealth Corporation, a quasi-public state agency under the Executive Office of Labor and Workforce Development. Sunny has been a leader in the education and workforce development fields in Massachusetts since 2000, building partnerships to provide employers with a highly skilled workforce and expanding access to great careers for low-income residents. Sunny also has previous experience in community organizing and social work. Sunny holds a Master's Degree in Public Policy and a Master's Degree in Social Work.



Rita L. Smith
Director of Human Resources, AbbVie

Rita L. Smith is currently the Director, Business Human Resources for AbbVie Bioresearch Center (Worcester, MA) and Cambridge Research Center (Cambridge, MA), the company's centers of excellence for biologics and neuroscience. In this role, Rita leads the Human Resources team supporting the Research & Development, Operations and Corporate Functions across the sites. Prior to this role, Rita was Director, Business Human Resources to AbbVie's Chief Human

Resources Officer and EVP and the global HR function. Rita joined AbbVie in December of 2013, as an HR Business Partner supporting Purchasing and Supplier Management and Manufacturing Science & Technology. She also held a previous role in Executive Development leading the manager level key talent workshop, the Emerging Leader Program and Executive Coaching program for the global senior leaders. Prior to AbbVie, Rita held progressively responsible HR and Labor Relations positions at Rolls Royce and Ford Motor Company. Rita has a JD and MPA from The Ohio State University in Columbus, Ohio, and a BA in Political Science from Wittenberg University.



**Karla Talanian**Director of Talent & Workforce Development, MassBioEd

As the Director of Talent & Workforce Development for MassBioEd, Karla's mission is to strengthen and grow the region's life sciences workforce. Her analyses of life sciences labor markets are widely used to align educational practices to industry requirements. She is directing the launch of two novel apprenticeship programs, which will produce qualified workers while opening doors for under-represented individuals to access meaningful careers. Karla

also oversees the Career Exploration programs for MassBioEd, which provide life science career information to students from high school through graduate school. Karla holds a BA in Chemistry from Smith College, an MS in Biotechnology and an MBA from WPI.



**Elizabeth Zulick, PhD, MPH**Director of the Lowell Institute School, Northeastern University

Elizabeth Zulick, PhD, MPH is an Associate Teaching Professor, Faculty Director for the Healthcare and Biotechnology Domain, and Director of the Lowell Institute School within the College of Professional Studies at Northeastern University. In these roles, Dr. Zulick oversees the STEM degree completion portfolio, as well as the graduate programs in the Healthcare and Biotechnology space. Dr. Zulick has oversight over curriculum design, the learner experience,

faculty, program-wide assessment, and development of new, industry-aligned courses, programs and badges. In addition, she leads local community college outreach and program alignment, and cultivates relationships with local industry partners to create learning opportunities for students and serve as the talent acquisition solution for employer partners. Additionally, Dr. Zulick is the principal investigator of a 5-year NSF S-STEM grant: "An Accelerated Pathway from Associates to Master's Degree in Biotechnology", which is a collaboration with Middlesex Community College, Northeastern University College of Science, and the College of Professional Studies.





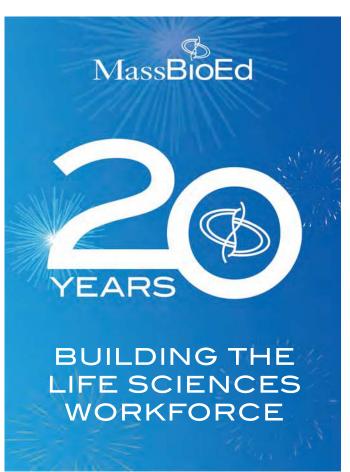






















A L E X A N D R I A.

Alexandria is the leader in creating collaborative life science, agtech, and technology clusters and campuses, where the world's most innovative companies develop breakthrough discoveries aimed at advancing human health.

www.are.com | NYSE:ARE



## Making a Real Difference in the Life Sciences.



### Our Impact

15,000

Students served in hands-on labs and college and career exploration events >50%

Schools reached were low or very low income 30+

Companies and universities served as Career Ambassadors and event hosts 200+

Teachers received hands-on training in leading authentic biotechnology labs

350+

People accessed our annual Massachusetts Life Sciences Employment Outlook report 99%

Teachers reported acquiring greater knowledge & confidence

220

Professionals obtained new skills through professional development courses MassBioEd's programs and services are designed for SUCCESS.

### Join Our Mission

Get involved in our mission through volunteering, contributing, or engaging your company in a variety of ways.

**Become a Career Ambassador -** Help build a critical bridge between classroom and careers by speaking to students about the opportunities in the life sciences.

**Host a College or Career Exploration Event -** Host students at your company or campus to expose students to the diverse career opportunities in the life sciences.

**Become an Apprenticeship Employer -** Receive a larger, diverse pool of trained applicants for difficult to fill, critical positions.

**Donate** - Your donation helps students get excited about science, helps schools and teachers deliver quality science classes with up-to-date equipment, and offers new opportunities to underserved students and often overlooked adults.

## Life Sciences Workforce 2021



# A Special Thank You to Our Sponsors!

Break-Out Group Sponsor





**Networking Sponsors** 







Session Sponsors







Supporting Sponsors





Northeastern University







