Pinn Hall Conference Center, University of Virginia

AGENDA | Day 1 - July 11, 2024

8:00 - 8:30 AM
Breakfast – 1st Floor

8:30 AM - 8:45 AM
Opening Remarks

8:45 AM - 10:15 AM Session 1
What is the Bioeconomy?
Moderated by Bob Creeden, Managing Director, UVA Licensing and Ventures Group, Seed Fund and New Ventures

Michael Orrico, Managing Director, Advanced Regenerative Manufacturing Institute

Building the Biofabrication Industry: ReGen Valley and ARMI

Marsha Rolle, Ph.D., Associate Director, Life Science and BioPILOT Programs, The Roux Institute at Northeastern University and Research Professor, Chemical Engineering

BioPILOT: A Translational Research Collaboratory to Support the Maine Bioeconomy

Nathaniel (Nate) Remlinger, Director of Research and Product Development, Pinnacle Transplant Technologies

The Bioeconomy from the Perspective of a Regenerative Medicine Careerist

Michael Orrico is the Managing Director of the BioFab Startup Lab, which is a program that was launched through a grant from the U.S. Economic Development Administration, offers newly formed and nearly-formed companies an opportunity to translate biofabrication research toward commercialization. Michael is an experienced executive who has worked in combination of business development and technical roles in med-tech, biotech and consulting industries. He has led projects and organizations tissue engineering and regenerative medicine for over 25 years including the Cryobiology Lab at MIT, AxoGen, and Aastrom Biosciences (now Vericel). Michael holds an M.B.A. from Columbia Business School and an M.S. in biomedical and mechanical engineering from MIT.

morrico@armiusa.org | https://www.linkedin.com/in/michaelorrico/
**Marsha Rolle**, Ph.D. is the Associate Director of Life Science and BioPILOT Programs at the Roux Institute at Northeastern University in Portland, ME. In this role, she is developing a translational research lab to engage learners in use-inspired projects while supporting biotechnology startups in Maine. She holds Research Professor of Chemical Engineering and Affiliate Faculty Chemistry and Chemical Biology appointments at Northeastern University. From 2007-2023, Dr. Rolle was a member of the biomedical engineering faculty at Worcester Polytechnic Institute (WPI) in Worcester, MA. She published over 40 peer-reviewed articles with students and industry and international collaborators in the fields of tissue engineering and biomaterials and holds 10 issued U.S. patents.

m.rolle@northeastern.edu | https://www.linkedin.com/in/marsha-rolle-1111494/

**Nate Remlinger** has nearly 20 years of experience in the regenerative medicine field with extensive knowledge in product development, process engineering, and translational preclinical and clinical research. Nate received his Ph.D. in Bioengineering from the University of Pittsburgh, where he researched tissue decellularization and processing techniques at the McGowan Institute for Regenerative Medicine. He has held various R&D leadership roles in the medical device industry at ACell and Integra LifeSciences, where Nate directed efforts to design and develop innovative products and processes for Wound Care, General Surgery, and Cardiovascular clinical applications. Nate currently leads the R&D team at Pinnacle Transplant Technologies where he is responsible for all aspects of scientific research, product development, and process improvements, including the identification, management, and execution of opportunities within the product pipeline, with the goal to deliver the highest quality tissue-based implants.

nremlinger@gmail.com | https://www.linkedin.com/in/nathaniel-remlinger-Ph.D.-pmp0407081322/

10:15 AM - 10:30 AM

Coffee Break – 1st Floor

10:30 AM - 12:00 PM | Session 2

**Challenges with New Startups in Biomaterials**

Moderated by [David Chen](https://www.linkedin.com/in/david-chen-773a3218/), Managing Director of Wallace H. Coulter Center, University of Virginia and [Robert Gourdie](https://www.linkedin.com/in/robert-gourdie-a08b261), Director at Center for Vascular and Heart Research, Fralin Biomedical Research Institute, Virginia Tech

**Hina Mehta**, Ph.D., Director, University Programs, Virginia Innovation Partnership Corporation

**Perspectives From the Virginia Innovation Partnership Corporation**

[Aprajita Garg](https://www.linkedin.com/in/aprajita-garg-15b7851b0/), Ph.D., Biologist, Office of Orthopedic Devices, Office of Product Evaluation and Quality, Center for Devices and Radiological Health, U.S. Food and Drug Administration

**Biocompatibility Review of Orthopedic Devices**

[Peter Boyd](https://www.linkedin.com/in/peter-boyd-888b677), EVP Business Development & General Counsel of ReGelTec, Inc.

**Lessons Learned and Recommendations for Professors and Students Working on Innovative Technologies Within a University System**

**Hina Mehta** currently serves as Director for University Programs for the Commercialization Division at VIPC. In this role, she oversees university-focused grant funding program to advance research commercialization throughout the state of Virginia. Prior to VIPC, Hina was the Director of Office of Technology Transfer at George Mason University where she led the efforts related to technology transfer and new venture formation, as well as activities focused on management of the intellectual property assets of the university. She serves as an technology transition advisor and expert reviewer for several state and federal agencies. Prior to Mason, Hina worked in biomedical research, in strategic consulting and co-founded a startup. She is the recipient of The President’s Lifetime Achievement Award for her volunteer service. She holds a Ph.D. in Neuroscience from the Indian Institute of Chemical Biology, and an MBA from the University of Maryland.
Aprajita Garg is a medical device reviewer in the Office of Orthopedic Devices within the Center for Devices and Radiological Health. She has held this position since October 2016, specializing in Biocompatibility and Sterility consulting reviews for both premarket and postmarket submissions. Additionally, she actively contributes to standard development as a member of the US Technical Advisory Group for ISO Working Group 06 on Mutagenicity, Carcinogenicity, and Reproductive Toxicity, and Working Group 18 on Cleanliness of Medical Devices. Before joining the FDA, Aprajita conducted post-doctoral research at the Yale University School of Medicine, focusing on malaria research. She earned her Ph.D. in Cell Biology and Molecular Genetics from the University of Maryland, College Park, in 2012.

Peter Boyd is a business executive, board member and angel investor in multiple medical device startups. He is a graduate of the University of Virginia School of Law and the Darden School of Business, and completed his undergraduate degree in biology from the University of North Carolina. Peter's professional career in the healthcare industry started as a Batten Venture summer intern at Vapotherm, Inc. before taking a leave of absence from graduate school to stay with the company full-time at the end of the summer. Eventually he returned to UVA to complete the JD/MBA program, and moved to the San Francisco Bay Area to sell his soul to a large law firm, Latham & Watkins where he represented startups and venture capitalists on everything from company formation to financings and exit transactions. After Latham, Mr. Boyd teamed back up with Bill Niland, the inventor and founder of Vapotherm, to co-found Harpoon Medical, Inc. with Dr. James Gammie, the Chief of Cardiac Surgery at the University of Maryland. Harpoon developed a beating heart mitral valve repair device that received CE Mark and was sold to Edwards Lifesciences via a structured acquisition in less than five years. Since leaving Edwards, Mr. Boyd has held multiple executive leadership roles in startup healthcare companies and occasionally makes angel investments in promising companies he is advising.

Justin Strader, Principal MSAT Engineer, Humacyte, Inc.

From Concept to Clinical Application: Developing and Engineering a Commercial Scale Bioprocessing Platform

An expert in tissue engineering, Justin Strader has two decades of experience in bioprocessing of tissue-engineered products. One of the first employees of Humacyte, his tenure with the company has spanned from work in benchtop process optimization to developing process solutions for clinical manufacturing at scale for the commercial launch of the company’s Human Acellular Vessel product candidate. Mr. Strader holds a BSE in Biomedical Engineering from Duke University.

Frontiers in Biomaterial Design

Moderated by Chris Highley, Assistant Professor at University of Virginia and Steven Caliari, Associate Professor, University of Virginia
**Yonghui Ding**, Ph.D., Assistant Professor, Worcester Polytechnic Institute  
Additive Manufacturing for Regenerative Engineering

**Christopher Rodell**, Ph.D., Assistant Professor, Drexel University, School of Biomedical Engineering  
Development of a Geometrically-Tunable Blood Shunt for Pediatric Heart Reconstruction Surgery

**Catherine Kuo**, Ph.D., University of Maryland, Associate Professor  
Therapeutic Design Based on Embryonic Tendon Material Property Development

**Yonghui Ding** is currently an Assistant Professor of Biomedical Engineering at WPI. Prior to joining WPI, Yonghui Ding held the position of Research Assistant Professor of Biomedical Engineering at Northwestern University from 2019 to 2023. His research focuses on the integration of materials science and additive manufacturing for tissue regeneration with the long-term goal of providing clinically relevant solutions to patients. His research efforts have resulted in 40 peer-reviewed publications with more than 3000 citations and H-index of 28. Dr. Ding was a recipient of American Heart Association Career Development Award (2021) and NIH NIBIB Trailblazer R21 Award (2022). He is passionate about teaching, educating, and training the next generation of workforce in regenerative engineering. He has also been looking to expand his skills as a professional STEM educator. He is a certificated CIRTL Associate.

yding7@wpi.edu | [https://www.linkedin.com/in/yonghui-ding-a6759b5a/](https://www.linkedin.com/in/yonghui-ding-a6759b5a/)

**Christopher Rodell** is an Assistant Professor in the School of Biomedical Engineering, Health and Science Systems at Drexel University. He conducted his doctoral research at the University of Pennsylvania, working on the development and in vivo application of injectable supramolecular hydrogels. Following completion of his Ph.D., Chris was a postdoctoral scholar with the Center for Systems Biology at Massachusetts General Hospital and Harvard Medical School, exploring drug delivery platforms for innate immune activation and their applications toward cancer immunotherapy. To date, Chris has authored more than 50 peer-reviewed publications, 7 patent applications, and numerous editorials. He has served as an editor for Science Translational Medicine, Advanced Drug Delivery Reviews, and ACS Biomaterials Science & Engineering. His recent awards include a Materials Research Society Gold Award, an Individual Biomedical Research Award from the Hartwell Foundation, an NIH R35 MIRA, and a Career Development Award from the American Heart Association. His research aims to better understand the pathophysiology of organ failure and develop biomaterials to intercept disease progression, particularly through immune modulation.

cbr58@drexel.edu | [https://www.linkedin.com/in/christopher-rodell-58b36a13/](https://www.linkedin.com/in/christopher-rodell-58b36a13/)

**Catherine K. Kuo** is an Associate Professor in the Fischell Department of Bioengineering and in the Department of Orthopaedics, a Fischell Fellow of the Fischell Institute for Biomedical Devices, and is appointed in the Institute for Physical Science and Technology at the University of Maryland – College Park. Dr. Kuo’s laboratory focuses on tendon tissue engineering and regenerative medicine strategies informed by the mechanobiology of embryonic tendon development. She has been honored with several prestigious awards for her research, including an NSF CAREER Award, March of Dimes Basil O’Connor Starter Scholar Research Award, Sweden GoLife Innovation in Research Award, and Emerging Investigator Award by Stem Cell Research and Therapy. Dr. Kuo is also an elected Fellow of the American Institute for Medical and Biological Engineering (AIMBE). She is President-Elect of the Tissue Engineering and Regenerative Medicine International Society-Americas Chapter (TERMIS-AM), Editor-in-Chief of the Journal of Tissue Engineering and Regenerative Medicine, and Associate Editor for Science Advances. Dr. Kuo earned her B.S. in Materials Science and Engineering and her Ph.D. in Biomaterials and Macromolecular Science and Engineering from the University of Michigan, Ann Arbor, and completed her postdoctoral training in the Cartilage Biology and Orthopaedics Branch of the NIAMS at the NIH.

ckk@umd.edu | [https://www.linkedin.com/in/catherine-k-kuo-838758b/](https://www.linkedin.com/in/catherine-k-kuo-838758b/)

3:00 PM - 3:30 PM

Break
Heather Branscome, Ph.D., Senior Scientist, ATCC

Extracellular Vesicles: Beyond Stem Cells for Cellular Repair

D. Kacy Cullen, Ph.D., Professor of Neurosurgery & Bioengineering, University of Pennsylvania, Corporal Michael Crescenz VA Medical Center

Biomanufacturing and Biopreservation of Engineered Nervous System and Neuromuscular Tissue

Scott Verbridge, Ph.D., Program Director, Tissue Engineering and Regenerative Medicine Research Program, National Institute of Dental and Craniofacial Research

NIDCR: Accelerating Innovation for Clinical Adoption

Heather Branscome is a Senior Scientist at the American Type Culture Collection. She has over 17 years of experience in both industry and academic settings. She has extensive experience in cell and molecular biology and completed her graduate training in Biosciences from George Mason University. While at ATCC, Dr. Branscome has managed and led cross-functional teams to support the manufacturing of a diverse portfolio of products including CRISPR/Cas9 engineered cell lines, luciferase reporter cells, hTERT-immortalized cells, primary cells, induced pluripotent stem cells, neural progenitor cells, and extracellular vesicles. In her current role she manages a team of biologists to support the CDC’s International Reagent Resources program. She has been studying extracellular vesicles (EVs) for over 5 years and her research is focused on advanced methods for EV production and mechanistic studies of stem cell EVs in various models of cellular repair.

hbranscome@atcc.org | https://www.linkedin.com/in/heather-b-8ab3431a0/

D. Kacy Cullen is a Professor (with tenure) of Neurosurgery & Bioengineering at the Perelman School of Medicine at the University of Pennsylvania. He serves as the founding Director of the Center for Neurotrauma, Neurodegeneration & Restoration at the Corporal Michael Crescenz VA Medical Center in Philadelphia. He received a Ph.D. in Biomedical Engineering from the Georgia Institute of Technology, followed by postdoctoral fellowships in Neuroengineering at Georgia Tech and then at the Center for Brain Injury & Repair at Penn. Dr. Cullen’s research program operates at the intersection of Regenerative Medicine, Neurotrauma, and Neural Engineering. He oversees a multi-disciplinary laboratory and thriving training environment consisting of postdoctoral fellows, doctoral candidates, medical fellows, and undergraduate researchers spanning the disciplines of bioengineering, neuroscience, and neurosurgery. Dr. Cullen is a leading innovator in neural tissue engineering and nervous system repair strategies, having pioneered “living scaffolds” to promote neural regeneration, microtissue engineering to restore brain circuitry, and living biological electrodes for neuroprosthetic interfaces. Dr. Cullen has authored over 130 peer-reviewed scientific publications, in addition to an article in Scientific American.

dkacy@pennmedicine.upenn.edu | https://www.linkedin.com/in/d-kacy-cullen-b2b33b1a/

Scott Verbridge is the Director of the Tissue Engineering and Regenerative Medicine Research Program at the National Institute of Dental and Craniofacial Research. He received his Ph.D. in physics from Cornell University, with a focus on bio-nanoelectromechanical systems (bio-NEMS). His postdoctoral research was carried out in the Cornell Departments of Biomedical and Chemical Engineering, with a focus on developing micro-engineered tissue-engineered models of tumor angiogenesis. Dr. Verbridge then spent over a decade as a Principal Investigator in the Virginia Tech – Wake Forest School of Biomedical Engineering and Sciences. There his laboratory leveraged tissue engineering approaches to explore novel concepts in targeting of the tumor microenvironment, as well as to model the role of host-microbe interactions in the acquisition of the hallmarks of cancer. Dr. Verbridge is currently overseeing projects involving both basic and translational approaches to the reconstruction, repair, and regeneration of dental, oral, and craniofacial tissues.
5:00 PM
Scenic walk across the UVA Academical Village, to the Happy Hour or back to the E-3 Lot.

5:30 PM - 6:30 PM | Happy Hour
Beverages and light food in Rice Hall Commons in Thornton Hall, UVA School of Engineering and Applied Science

**Agenda | Day 2 - July 12, 2024**

8:00 AM - 8:30 AM
Breakfast

8:30 AM - 8:45 AM
Opening Remarks

8:45 AM - 10:15 AM | Session 5
Biomanufacturing Instrumentation, The Cutting Edge
Moderated by D. Kacy Cullen

**Rodrigo Somoza**, Ph.D., Research Associate Professor, Case Western Reserve University
Sensing Strategies for Non-Destructive Monitoring of Tissue Development

**Vinay Abhyankar**, Ph.D., Associate Professor, Department of Biomedical Engineering, Rochester Institute of Technology
Engineering the Tumor Microenvironment: A Little Stretch Goes a Long Way

**Sunil Saini**, Senior Director, R&D, Integra LifeSciences
Manufacturing of Integra’s Regenerative Products

Rodrigo Somoza, Ph.D. is currently a Research Associate Professor and co-director of the Skeletal Research Center at Case Western Reserve University where he is developing projects in areas of cartilage and bone tissue engineering, biosensor development, molecular mechanisms of pain and bone metastasis. He received his Ph.D. in Biotechnology from the Santa Maria University (Valparaiso-Chile). He has more than 20 years of previous experience in stem cell biology. He participates in the Center for Multimodal Manufacturing of Structural Tissues as one of the TR&D components director which focuses on the generation of molecular tools for the evaluation of engineered tissues.
Vinay Abhyankar earned his Ph.D. in Biomedical Engineering from the University of Wisconsin–Madison, followed by a postdoctoral fellowship at Sandia National Laboratories in Livermore, California. He is currently an Associate Professor of Biomedical Engineering at the Rochester Institute of Technology, where he also directs the Biomedical and Chemical Engineering Ph.D. program. His research program, funded by the NIH and NSF, focuses on developing 3D microengineered models of disease.

vvabme@rit.edu | https://www.linkedin.com/in/vinay-abhyankar-6347b42/

Sunil Saini has over 20 years of experience in the medical device industry, specifically in the area of developing regenerative medicine products. He currently serves as the Senior Director of R&D at Integra LifeSciences overseeing all aspects of Regenerative R&D. He came to Integra as part of the acquisition of Theken Spine in 2008. At Integra, he served as Director of R&D for the Orthobiologics division until 2014. Prior to joining Integra, Sunil had roles of increasing responsibility at Therics Inc. (Theken Spine), developing regenerative products using a 3D printing technology platform. Sunil received a B.S. degree in Chemical Engineering from the University of Maryland and a Ph.D. in Chemical Engineering from Georgia Tech.

saini.saini@integralife.com | https://www.linkedin.com/in/sunil-saini-51a2a56/

10:15 AM - 10:30 AM
Coffee Break

10:30 AM - 12:00 PM | Session 6
Biomanufacturing for Cell Therapy
Moderated by Lloyd Rose, Program Manager, BioFabUSA

Cynthia Wilkins, Ph.D., MBA, Senior Director, Process Development, Mayo Clinic Center for Regenerative Biotherapeutics
Bringing Cures to Patients by Building a Regenerative Biotherapeutic Ecosystem

Jan Jensen, Ph.D., CEO and CSO of Trailhead Biosystems Inc.
Towards Successful Biomanufacturing Through Mathematics, Not Guesswork: Utilizing the Power of HD-DoE

Lawrence Lum, MD, DSc, Marion McNulty Weaver and Malvin C. Weaver Professor of Oncology, Director of Cell Therapy, Scientific Director of BMT, Hematology/Oncology in the Department of Medicine at the University of Virginia
From Bench to Bedside with Bispecific Antibody Targeted T-Cells for Solid Tumors and Liquid Tumors

Cynthia Wilkins received her MS and Ph.D. from Albany Medical College in Albany NY, where her research focused on the impact of extracellular matrix molecules and proteins such as fibronectin, vitronectin and plasminogen activator inhibitor-1 (PAI-1), on mechanisms of wound healing and cancer progression. She also received an MBA from the State University of New York at Albany. Currently, Dr. Wilkins directs the process development efforts within Mayo Clinic's Center for Regenerative Biotherapeutics, supporting translation of regenerative therapies into GMP manufacturing for clinical trial. In previous roles, she directed process development for translation of cell-based and tissue engineered therapies at Wake Forest Institute for Regenerative Medicine, and provided R&D, process development and life cycle management support for cellular, small molecule and biologics-based therapeutics including Dermagraft® for diabetic foot ulcers, Vascugel® for arteriovenous fistula maturation (Advanced BioHealing; Shire), and Xiidra® for dry eye disease (Shire).

Wilkins.Cynthia@mayo.edu | https://www.linkedin.com/in/cynthia-wilkins-Ph.D.-mba-9096a117/
Jan Jensen is the CEO and CSO of Trailhead Biosystems Inc., a company that merges developmental biology and stem cell biology with cutting-edge hardware and software solutions. Trailhead is made up by a diverse and talented team of trailblazers. Together, they are building the company that makes human cells available as the material of tomorrow: "Wet Lego Bricks." Tiny, but impactful: cells to build organs from, to study disease, to find a future drug, or used to cure a chronic disease. Jan's core competencies include cell biology, biochemistry, cell culture, high-dimensional design of experiments, mathematical modeling, and quality-by-design principles. Trailhead Biosystems is the first in the world to do truly high dimensional experimentation. They developed HD-DoE, a method that rivals technologies such as PCR, sequencing, or gene editing in its power. He is passionate about advancing the field of developmental biology and creating innovative solutions that can improve human health.

jjensen@trailbio.com | https://www.linkedin.com/in/janjensen1/

Lawrence Lum received his medical degree from the University of California San Francisco (UCSF) and did his Pediatric Residency at the UCSF and the University of Colorado followed by a fellowship in Immunology in the Metabolism Branch of NCI. He received an honorary DSc from the University of Redlands. Dr. Lum has served as Director of Immunotherapy and Gene Therapy Program, Director of Immunotherapy and Stem Cell Processing Laboratory, Scientific Director of BMT at Karmanos Cancer Institute (KCI) and UVA, Director of the Immunotherapy and KCI and UVA. He is Professor of Oncology, Department of Medicine, Endowed Chair Marion McNulty Weaver and Malvin C. Weaver Professor of Oncology, Scientific Director of BMT, Director of Cellular Therapy, and Director of Center for Human Therapeutics cGMP Facility at UVA. His research focuses on adoptive T cell immunotherapy using bispecific antibodies to target solid and liquid tumors. He sponsors INDs that support multiple protocols for treatment of metastatic breast, prostate, and pancreatic cancer and neuroblastoma. The phase I/II trials are clinical encouraging and show that patients can be immunized against their own tumors. He has over 240 publications, reviews, or book chapters. He has received grants from the NCI, ACS, LLS, DOD, Hyundai Hope on Wheels, Komen Foundation, Gateway for Cancer Research, Komen Foundation, GM, Wayne State University, Karmanos Cancer Institute, Farrell Foundation, and University of Virginia.

lgl4f@uvahealth.org

12:00 PM - 12:40 PM
Lunch 2nd Floor Room 2ABC

12:40 PM - 1:30 PM
Keynote Address

Steve Badylak, DVM, Ph.D., MD, Professor, Department of Surgery, Professor, Department of Bioengineering, University of Pittsburgh and Senior Faculty, McGowan Institute for Regenerative Medicine

The ECM as an Inductive Microenvironment for Functional Skeletal Muscle Reconstruction

Dr. Badylak is a professor in the Department of Surgery and senior faculty in the McGowan Institute for Regenerative Medicine (MIRM) at the University of Pittsburgh. In 1976, Dr. Badylak received his D.V.M. from Purdue University. He then obtained an M.S. in Clinical Pathology from Purdue in 1978, a Ph.D. in Anatomic Pathology from Purdue University in 1981 and graduated with an MD from Indiana University Medical School in 1985. Dr. Badylak practiced veterinary medicine for two years before beginning his academic career and associated 18 yrs of medical practice. Dr. Badylak holds over 75 U.S. patents, and 400 patents worldwide, and has authored more than 425 scientific publications and 60 book chapters. He has served as the Chair of several Study Sections at the National Institutes of Health (NIH) and has either chaired or been a member of the Scientific Advisory Board of several major medical device companies. He currently serves on the Immunology Devices Panel of the Medical Devices Advisory Committee of the Food and Drug Administration. He is a charter member and past president of the Tissue Engineering Regenerative Medicine International Society (TERMIS). Dr. Badylak has received numerous awards, the most recent being the Jensen Tissue Engineering Award “for sustained scientific contributions, translational impact towards clinical realization and professional distinction in the field of tissue engineering and regenerative medicine.” More than 20 million patients have been treated with biologic scaffold materials that originated in Dr. Badylak’s laboratory.

badylaks@upmc.edu
Snapshots from the Biomanufacturing Workforce

Moderated by Shayn Peirce-Cottler, Professor and Chair of Biomedical Engineering at University of Virginia and Lisa Bowers, Executive in Residence, University of Virginia Licensing & Ventures Group

Lauren Costella, Lauren Costella, Principal Scientist and Head of Biomaterials, Luna Labs USA, LLC

Insights from a Small Business Perspective

Jamie Bagwell, Engineer I, LifeNet Health

Beyond UVA: A Day in the Life Preparing Research Cells and Clinical Grafts for Recipients

Lauren Costella graduated from UVA Biomedical Engineering with a B.S. in 2009, completing her Capstone project with Luna Labs (then part of Luna Innovations) on a novel bone graft substitute material. She accepted a position as a Biomaterials Researcher with Luna after graduation and began working in the lab on the development of early-stage R&D technologies with various wound healing applications. She completed a part-time Masters of Engineering program through the Materials Science and Engineering Department and achieved Double ‘Hoo status in 2015. Over the last 15 years working at Luna Labs, she has transitioned from working in the lab to serving as a Principal Scientist in the Biotech group, writing proposals and managing more than $13M in funding to develop novel biomaterials with applications in wound healing, drug delivery, and traumatic wound care. This includes the development of AeroVeil, a sprayable hydrogel for the prevention of postoperative adhesions, which has been validated in several animal models. She is now directing efforts to standardize product manufacturing and interface with FDA to complete definitive safety and efficacy studies required for regulatory approval. As the Head of Biomaterials, she manages a team of scientists working towards the commercial transition of a portfolio of novel materials and drug delivery platforms, working with clinical and research partners around the world to drive these technologies from the benchtop and into the clinic.

Lauren.Costella@LunaLabs.us | https://www.linkedin.com/in/lcostella/

Jamie Bagwell is a dynamic engineer whose expertise spans nuclear, process, and biomedical engineering. At the University of Virginia, she majored in Mechanical Engineering (‘14) while conducting cutting-edge biomedical research in the Peirce-Cottler Laboratory before joining Norfolk Naval Shipyard as a nuclear engineer. In 2019, she returned to her healthcare roots at LifeNet Health as a process engineer. Her passion for new product development and operational sustainability drove innovations such as validating the TruVivo® Hepatic Tri-Culture System (first all-human 2D+ hepatic system for toxicology) and optimizing tissue transfer operations to increase cleanroom capacity across cardiovascular, dermal, and placental value streams. During her downtime, Jamie enjoys indulging in the creative arts, exploring the outdoors, and serving her community.

jamie_bagwell@lifenethealth.org | https://www.linkedin.com/in/jamie-bagwell/

3:00 PM - 3:10 PM

Concluding Remarks