Feedstocks of the Future for a Circular U.S. Bioeconomy

ATTENDEE BIOS

Foundation for Food & Agriculture Research (FFAR)

Ms. Lauren Hershey, FFAR, Associate Director of Strategic Partnerships

As associate director of strategic partnerships at FFAR, Lauren Hershey supports the Advanced Animal Systems and Urban Food Systems Challenge Areas and the partnership efforts required to build collaborative research programs and secure matching funds for FFAR programs. Hershey has worked in development, both domestically and internationally for NGOs and in consulting – with private and public sector clients. She holds a master's degree from University College London in development administration and planning with an emphasis on sustainable infrastructure in the Global South and bachelor's degrees in Spanish and journalism from The University of Georgia.

Dr. John Reich, FFAR, Scientific Program Director of Urban Food Systems

Dr. John Reich joined FFAR in February 2016 as a Scientific Program Director. He currently manages FFAR's Urban Food Systems Challenge Area. Reich came to FFAR because he strongly believes that agricultural advancements are key to maintaining our quality of life and that the right investments at opportune moments provide the necessary tools to overcome future challenges in agriculture. Since coming to FFAR, John continues to build new and impactful partnerships, including creating FFAR's first consortium.

Ms. Samantha Bader, FFAR, Communications Officer

Sam Bader joined FFAR as a Communications Officer in June 2022. Sam supports communications for the Health-Agriculture Nexus and Urban Food Systems Challenge Areas. Bader has a background in public health, nutrition, health policy and communications.

Ms. Rebecca Gyawu, FFAR, Scientific Program Officer

Rebecca Gyawu is a Scientific Program Officer III at the Foundation for Food and Agriculture Research (FFAR). Rebecca develops and manages programs under the Urban Food Systems and Health-Agriculture Nexus Challenge Areas. She is a public health and nutritional scientist by training and has been working in the food and agriculture space for 8 years.

Ms. Rachel McGill, FFAR, Scientific Program Associate

Rachel McGill joined FFAR in December 2021 and supports the Urban Food Systems and Health-Agriculture Nexus Challenge Areas. Rachel performs project management and supports the development and implementation of grant programs. She has a background in environment science and public health through her bachelor's at the University of Virginia and prior work consulting to EPA and NIH. She has strong interests in optimizing public and environmental health through systems research and interdisciplinary collaboration.

Ms. Lauren Winstel, FFAR, Scientific Program Associate

Lauren Winstel joined the Foundation for Food & Agriculture Research in April 2020 and supports the Soil Health Challenge Area grants, as well as FFAR's Scientific Workforce Development programs and Diversity, Equity and Inclusion initiatives. Lauren earned a bachelor's degree in energy and environmental policy from the University of Delaware, with a double minor in sustainable energy technology and philosophy.

Ms. Nyasha Osifeso, FFAR, Communications & Legislative Associate

Nyasha Osifeso's early fascination with communication informed her passion for environmental advocacy and her interest in public policy. Osifeso joined the Foundation for Food & Agriculture Research (FFAR) in May 2019 as a Communications & Legislative Associate. In this capacity, she supports the Communications & Legislative Affairs Team by informing the public and legislative constituencies about FFAR's work and process. In her spare time, she continues to promote environmental justice and food policy.

Schmidt Futures

**Steering Committee member for this Convening are denoted by double asterisks.

Mr. Michael Clear, Schmidt Futures, Science Associate

Michael is Science Associate at Schmidt Futures. Michael is a microbiologist and bioinformatician whose research has focused on symbiotic interactions between microorganisms and photosynthetic partners. He previously held a postdoc at Brookhaven National Laboratory where he investigated the influence of the environment and bacterial interactions on bioenergy crops. As a NASA Space Grant Graduate Fellow, he used synthetic lichens to explore the latent capacity of fungi and algae to form stable mutualisms. Michael received his bachelor's degree in environmental science from the University of North Carolina at Chapel Hill and his Ph.D. in Biology from the University of Mississippi.

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***Dr. Genevieve Croft, Schmidt Futures, Program Scientist*

Genevieve Croft is a Program Scientist at Schmidt Futures, working with the BioFutures Program to develop and manage research opportunities to advance a vibrant and circular U.S. bioeconomy. Prior to Schmidt Futures, Genevieve spent ten years in federal service, including technical and policy roles at the Congressional Research Service, U.S. Department of Agriculture, U.S. Agency for International Development, and U.S. Peace Corps. She has written numerous public reports on national agricultural policy, including reports on biotechnology, climate change, racial equity, and federal research investments. Genevieve holds a PhD in Biology and Biomedical Sciences from Washington University in St. Louis, and a BS in Biology from Georgetown University.

***Dr. Mary Maxon, Schmidt Futures, Executive Director of Biofutures*

Mary Maxon is the Executive Director of BioFutures at Schmidt Futures, a philanthropic effort focused on maximizing the potential of biotechnology toward a circular U.S. bioeconomy. Previously she was Associate Laboratory Director for Biosciences at the Lawrence Berkeley National Lab, and before that was Assistant Director for Biological Research at OSTP where she was the author of the Obama Administration's National Bioeconomy Blueprint. Mary is a State Department-appointed Delegate to OECD for bioeconomy, a member of the Global Bioeconomy International Advisory Council, and of the Carnegie Institution for Science's Board of Trustees. Mary holds a PhD in Molecular Cell Biology from the UC Berkeley, and did postdoctoral training in genetics at UCSF.

Ms. Elizabeth Young McNally, Schmidt Futures, Executive Vice President

Elizabeth Young McNally serves as Executive Vice President of Schmidt Futures, a philanthropic initiative founded by Eric and Wendy Schmidt. She is responsible for the organization's portfolio of programs addressing hard problems in science, technology, and shared prosperity. Previously, Liz was a Partner at McKinsey & Company and Global Leader of McKinsey Academy. She was also an officer in the US Army, and deployed twice to Iraq where she served as General David Petraeus's speechwriter. A graduate of West Point and Oxford, Liz is a Rhodes and Truman Scholar and served as a Presidential Appointee to the US Military Academy Board of Visitors. The through lines of her career are a commitment to public service, a desire to empower individuals and teams to solve hard problems, and a deep belief that individuals and groups can cut down silos and collaborate for a higher purpose. Liz lives with her husband and three children in New York.

Participants

*Panelists are denoted by an asterisk.
**Steering Committee member for this Convening are denoted by double asterisks.

**Dr. Kevin Barnett, Pyran, CTO & Co-founder*

Kevin Barnett is CTO and Co-founder of Pyran, a company producing renewable 5-carbon chemicals used in paints and coatings. Kevin completed his PhD in Chemical Engineering from the University of Wisconsin-Madison where he invented Pyran's technology and co-founded the company along with Professor George Huber. Kevin has since raised Pyran's Seed and Series A financing and overseen demonstration-scale production of several tons of Pyran's bio-based 1,5-pentanediol product.

**Dr. Gregg Beckham, National Renewable Energy Laboratory, Senior Research Fellow*

Gregg Beckham is a Senior Research Fellow and Group Leader at the National Renewable Energy Laboratory. He works in the areas of biomass conversion to fuels, chemicals, and materials and in plastics recycling and redesign. He received his PhD in Chemical Engineering from MIT in 2007.

Dr. Thomas Binder, University of Kansas, Scientist

Thomas Binder Ph.D., (retired) Senior Vice President of Research at Archer Daniels Midland Co He joined ADM in 1986 as a research scientist and has held various management positions in process development and fermentation research. He led the Biomass Team for the NPC report on Energy Supply by 2030 for the DOE. He served on the Federal Advisory Committee for Biomass Research from 2002 to 2008 and led the subcommittee developing the 2007-2008 Vision Statement and the Roadmap for Biomass Research as required by Congress.

**Prof. Tristan Brown, SUNY College of Environmental Science & Forestry, Director of the Bioeconomy Development Institute*

Tristan is Director of the Bioeconomy Development Institute and an Associate Professor of Energy Resource Economics in the Department of Sustainable Resources Management at the SUNY College of Environmental Science & Forestry in Syracuse, NY. His research focuses on the policy and law of the bioeconomy, including low-carbon fuels and biobased products. He has a Ph.D. in Biorenewable Resources and Technology from Iowa State University, a J.D. from the University of Missouri, and is a member of the Missouri Bar.

***Dr. Doug Cameron, First Green Partners (FGP), Co-President*

Advisor and board member in sustainable chemistry, agriculture, and energy. Formerly professor at UW-Madison, chief scientist at Cargill, and venture investor (Khosla Ventures, First Green Partners, and Asia Green Fund).

**Dr. Katy Christiansen, Lawrence Berkeley National Laboratory, Interim Area Deputy for Science*

Katy Christiansen is the Interim Area Deputy for the Biosciences Area at Lawrence Berkeley National Laboratory, where she is responsible for strategic planning and program development for the Lab's biological research portfolio. She also leads a small team of program developers and is the Lab's Relationship Manager to the Department of Energy's Bioenergy Technologies Office. She has a Ph.D. in plant biology and genetics and served as a AAAS S&T Policy Fellow at DOE.

Dr. Trenton Colbert, BioGenerator/BioSTL, Consultant

Molecular biologist and entrepreneur working to develop affordable pilot scale fermentation facilities for the food and agriculture sector. Trent obtained his PhD at University of Washington and later entered the agricultural biotech world. He is not working to develop new bio-based businesses.

Dr. Casey Crooks, USDA-Forest Service, Forest Products Laboratory, Project Leader

I am at the USDA-Forest Service, Forest Products Laboratory, where I am the Project Leader for the Institute for Microbial and Biochemical Technology. Our unit primarily focuses on three areas: 1) studying the genetics (‘Omics) and biochemical mechanisms of forest lignocellulose utilization i.e., the microbial component of the forest carbon cycle, 2) identifying and characterizing enzymes for use in lignocellulose bioconversion with a particular focus on wood-derived hemicellulose, and 3) developing technologies for the production of platform chemicals from wood sugars.

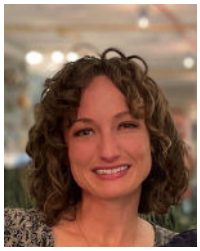
Dr. David Ertl, Iowa Corn, Director of Production Technology

Dr. David Ertl is Director Production Technology with Iowa Corn, which is composed of the Iowa Corn Growers Association and Iowa Corn Promotion Board. This is a corn grower led and funded non-profit commodity group. David has 33 years of experience working in agricultural research. His career began with DuPont Pioneer working as a Research Manager and corn breeder and later as a Research Director where he managed a team of scientists working in the areas of performance predictability and emerging technologies. In his current role with Iowa Corn, he manages contract and funded research projects in both the public and private sectors. Projects include the areas of proprietary biotechnology trait development as well as public genomics and phenomics projects. Dr. Ertl received his B.S. degree in Agronomy from the University of Connecticut and his M.S. and Ph.D. degrees in Plant Breeding from Iowa State University.

Dr. Steven Evans, BioMADE.org, Senior Technical Fellow

Steve Evans is a Senior Technical Fellow at BioMADE.org, a Manufacturing Innovation Institute focused on propelling bioindustrial products to the marketplace, while increasing domestic supply chain resiliency, preparing a skilled workforce, and advancing efforts on safety, security, sustainability and social responsibility. Steve brings 35 years of experience in agricultural biotechnology, from R&D to commercialization. He has a track record of leadership in vibrant public-private partnerships which drive advances in biotechnology innovations through thoughtful engagement of stakeholders to maximize chances for commercial translation and positive societal impact.

**Dr. Nichole Fitzgerald, US DOE Bioenergy Technologies Office, Program Manager*



Dr. Nichole Fitzgerald is Renewable Carbon Resources (RCR) Program Manager in the Bioenergy Technologies Office (BETO) at the U.S. Department of Energy. As the Program Manager for the RCR Program, Nichole oversees over $80M in annual appropriations aimed at advancing the state of technology for algal biofuels production and biomass feedstock supply and logistics. Nichole served as an AAAS Science and Technology Policy Fellow at BETO and was an NIH post-doctoral fellow at the University of California, Berkeley where she developed reagents for pharmaceutical applications. Nichole earned her Ph.D. in Chemistry from Stanford University and a B.S. in Chemistry from the College of William and Mary.

Dr. William Gong, Origin Materials, Senior Research Scientist

Bill is a Senior Research Scientist with Origin Materials, world's leading carbon negative company. In his 30+ years of experience (BP-Amoco and Origin Materials), he's specialized in catalytic oxidation catalysis R&D in the production of purified terephthalic acid (PTA), and has been involved in process development for renewable chemicals since 2005.

Dr. Erik Hagberg, ADM, Technical Director, Process Chemistry and Sustainable Materials

At Archer Daniels Midland (ADM), Dr. Hagberg is Technical Director, Process Chemistry and Sustainable Materials where he focuses on developing renewable routes to polymer feedstocks. He received his B.A. in Chemistry from Gustavus Adolphus College in 1998. In 2003, he received his Ph. D. from Iowa State University in Organic Chemistry working with Prof. Valerie Sheares Ashby. He conducted his post-doctoral studies at IBM Almaden Research Center working with Dr. Ken Carter and Dr. James Hedrick. He joined ADM Research in 2007 and currently leads a team responsible for developing novel sustainable materials to enable the circular economy.

Dr. John Hannon, Vertimass, COO

Dr. John Hannon started his career in oil exploration with Schlumberger and then migrated into sustainable fuel and chemical spaces (focusing on green jet fuel and chemicals) and the sustainable food spaces (focusing on agricultural and cellular sources of proteins and fats). His expertise is in process economics, scale-up, technical due diligence, life cycle analysis and identifying critical technical areas for cost improvements. He has served as an independent technical and life cycle due diligence expert for a number of investment firms and federal agencies in renewable energy and food spaces. He holds a PhD in Engineering Sciences from Dartmouth College and BS and MS degrees in Chemical Engineering from Northeastern University.

Dr. Amit Hasabnis, Viridis Chemical, Manager Process Development

Working with Viridis Chemical as Manager Process Development. PhD Chemical Engineer with 12+ years' experience in development of alternate technologies considering sustainable solutions. Has experience in different stages of technology maturation.

Mr. Andrew Held, Virent, Inc., VP Engineering and Business Operations

Andrew Held has over 25 years of broad management, engineering, and operations experience. He joined Virent in 2007 and currently leads the engineering and project efforts to de-risk and implement commercial scale projects. He also manages EHSS and IT, as well leading Virent's feedstock development efforts with commercial and next generation cellulosic feedstocks. Prior to joining Virent, Andrew had 10 years of operations and R&D experience at Cargill, Inc. leading technical, engineering, and operations management teams. Andrew has a BS from the University of Minnesota-Twin Cities and an MS from the University of Wisconsin-Madison, both in Chemical Engineering.

Mr. Noah Helman, Industrial Microbes, Inc, Founder & President

I am a Founder and President of Industrial Microbes where I focus on corporate partnerships, intellectual property, and fundraising. At IM, we are working on bioprocess systems for converting waste methane into valuable chemicals and materials. Previously, I was a scientist in Synthetic Biology at LS9, postdoc at UCSF, and a graduate student at Stanford in Applied Physics.

Dr. Kevin Jarrell, Modular Genetics, Inc., CEO

Dr. Kevin A. Jarrell (PhD in molecular genetics) is Co-Founder and CEO of Modular Genetics, Inc. (Modular). Modular uses its proprietary microbial engineering technology to develop microbes that convert carbohydrate into renewable chemicals by fermentation. The company also develops fermentation and downstream processing methods and is building a US manufacturing plant. Dr Jarrell was a member of the Boston University faculty prior to launching Modular. He was a member of the National Biodefense Science Board, is on the Advisory Board of the Alternative Fuels & Chemicals Coalition and is an active reviewer for the National Science Foundation (NSF).

Dr. Jeffrey Lacey, Idaho National Laboratory, Senior Staff Scientist, Researcher

Dr. Jeff Lacey is a research scientist and group lead at the Idaho National Laboratory in the Bioenergy Feedstock Technologies Department. His experience includes bioenergy research, gene expression profiling, and environmental remediation. His interests lie in feedstock valorization by characterizing the complexity of biomass and municipal solid waste (MSW) and using this information to improve the economics and performance of these feedstocks in conversion processes. His current work has focused on the development of deployable waste processing systems to produce clean, sorted, and uniform feedstocks from MSW. He is also working on biomass

feedstock quality improvement through the deconstruction and separation of biomass into fractions with unique physical and chemical properties.

***Mr. Jim Lane, The Daily Digest, Editor & Publisher*

Editor & Publisher of The Daily Digest

Dr. Josette Lewis, Almond Board of California, Chief Scientific Officer

Josette Lewis oversees grower-funded research for the almond industry, spanning almond production, human nutrition and almond co-product utilization. Dr. Lewis has worked in agriculture for more than twenty five years, spanning government, industry, university and non-governmental organizations.

Dr. Matt Lipscomb, DMC Biotechnologies, Inc., CEO

Matt Lipscomb, Ph. D., CEO & Founder of DMC Biotechnologies, Inc. Expertise in bioprocess engineering for industrial and biopharmaceutical markets. Multiple FDA approvals in biologics.

Ms. Molly Morse, Mango Materials, CEO

Dr. Molly Morse is the CEO and co-founder of Mango Materials, a San Francisco Bay Area-based, next generation, biomanufacturing, start-up company. Mango Materials converts abundant methane gas into low-cost, high-value, biodegradable materials. Molly received her Ph.D. in Civil & Environmental Engineering–with an emphasis on anaerobic biodegradation of biocomposites for the building industry–from Stanford University, and her B.S. in Civil and Environmental Engineering from Cornell University.

Dr. William Orts, USDA-ARS, Center Director (Acting), Research Lead (Bioproducts)

Dr. William Orts leads a multi-disciplinary team of researchers at the USDA's Western Regional Research Center that optimizes biorefinery strategies that help to commercialize sustainable materials, reduce carbon footprints, and add value to under-utilized crop coproducts. Over 35 years of experience in research in bioproducts/ biofuels with >250 publications and 15 patents. He and his team take special pride in transforming lab results into commercial reality.

Dr. Ajikumar Parayil, Manus Bio, CEO

Dr. Ajikumar (Aji) Parayil is the Founder & CEO of Manus Bio. Aji Parayil is an entrepreneur with more than 20 years of experience in technological innovation and commercialization. He is the Founder & CEO of Manus Bio Inc and co-founder of Mirakel Technologies Inc. He invented Manus Bio's core technology platform at MIT, launched Manus Bio in 2011, and led the successful commercialization of multiple products made through precision fermentation. Notably, Aji has pioneered several novel methods for engineering chemistry using biology to bio-manufacture complex natural products. His contributions are reflected in more than 180 U.S. & international granted and pending patents and more than 60 publications in the area of biotechnology and chemical biology. Aji obtained his Ph.D. from Mahatma Gandhi University, India, and carried out his post-doctoral research at the Singapore-MIT Alliance, Singapore, and the Massachusetts Institute of Technology. He is an elected fellow of the American Institute of Medical and Bioengineering (AIMBE) and received the Society of Industrial Microbiology's (SIMB) Raphael Katzen Award in 2021 for enabling the deployment and commercialization of biotechnology to produce fuels and chemicals from renewable resources.

Mr. Darcy Prather, Kalion, Inc., CEO

Mr. Prather serves as CEO of Kalion, Inc. Kalion's approaches developing glucaric acid with high purity, high value applications resulted in EPA's 2019 Green Chemistry Award. Mr. Prather started his career at McKinsey & Co spending significant time studying R&D. He advised a major agriculture player on potential impact of various intellectual property strategies for a seminal biotech product that continues to drive value. Mr. Prather received degrees from the Massachusetts Institute of Technology in Electrical Engineering; and Science, Technology and Society before studying Philosophy, Politics and Economics at Oxford University which he attended on a Rhodes Scholarship.

**Dr. Vineet Rajgarhia, Praj Americas, Senior VP, Advanced Biofuels & Renewable Chemicals*

Biotechnology Executive with 25+ years' experience in developing, scaling bioproducts such as Biofuels, renewable bioplastics, nutraceuticals, and Pharmaceuticals. Currently SVP, Advanced Biofuels & Renewable Chemicals, Praj Industries. Started career developing Poly-lactic Acid Bioplastics for Cargill/Natureworks, then built Mascoma's renewable sugars to ethanol technology. Led Total Energies (Oil & Renewables major) World-wide biotech that established R&D partnerships in SAF including obtaining ASTM certification, in lipid biofuels and high-performance lubricants using both

yeast and algae, and in Bioplastics and renewable chemicals. Has a Ph.D. in Industrial Microbiology from Ohio State, Global executive MBA from Columbia University/London Business School.

**Dr. Sarah Richardson, MicroByre, CEO*

Sarah is a computationally inclined microbiologist and entrepreneur: she speaks charmingly to computers, bacteria, and people. After training at the Johns Hopkins School of Medicine and the Department of Energy's Lawrence Berkeley National Laboratory she founded the biotech startup MicroByre.

Dr. Lisa Schulte Moore, Iowa State University, Co-director of the Bioeconomy Institute

Dr. Lisa Schulte Moore is a professor in the Department of Natural Resource Ecology and Management and co-director of the Bioeconomy Institute at Iowa State University. Her research addresses ways to return more value from agricultural supply chains to rural communities and the land. She develops relationships and institutional capacity so diverse groups of people can more effectively work together. She is a Fellow of the Leopold Leadership Program, Ecological Society of America, and the MacArthur Foundation.

Dr. Vincent Sewalt, IFF, Head of Science & Advocacy

Dr. Vince Sewalt leads the Regulatory Science & Advocacy function of IFF, a Nourish-Scent-Health & Biosciences-Pharma Solutions multinational resulting from the merger of DuPont Nutrition & Biosciences and International Flavors & Fragrances. IFF's Biosciences portfolio is aimed at improving sustainability of the food chain, consumer products, and the biobased economy at large. With 25 years' experience managing innovation and market access of food & bioscience products in four US companies, Vince is passionate about capacity building in commercializing biotech applications with regulators and other stakeholders. Vince is co-editor of the journal Industrial Biotechnology.

Dr. Sean Simpson, LanzaTech Inc., Advisor

Founded LanzaTech in 2005 in New Zealand and served as the company's Chief Scientific Officer from 2010-2022. LanzaTech has successfully developed, scaled, and commercialized a novel industrial platform for the manufacture of sustainable fuels, chemicals and materials from sustainable waste streams. Today over 200,000 tons of sustainable products are produced annually by the LanzaTech process.

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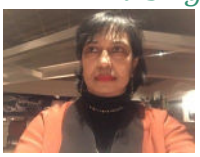
***Dr. Rina Singh, Alternative Fuels & Chemicals Coalition, Executive Vice President*



Dr. Rina Singh serves as Executive Vice President at Alternative Fuels & Chemicals Coalition (AFCC). In this role, Dr. Singh manages and directs AFCC's public policy and advocacy development, educational initiatives, provides regulatory and legislative solutions to companies having leadership in technologies such as feedstock development and/or crop fertilizer booster production, synthesizing renewable chemicals, biofuels, and biobased products. Prior to joining AFCC, Dr. Singh was the Managing Director at the Biotechnology Innovation Organization (BIO) in the Industrial and Environmental Section (IES). Before her work with BIO, Dr. Singh had been with Ashland Inc., working in general management positions in technology and business development, including renewable chemicals and biobased products.

Mr. Jordan Solomon, Ecostrat Inc., CEO/President

Jordan R. Solomon has held the position of CEO of Ecostrat for over 20 years where he oversees the Biomass Advisory Group and the Biomass Supply Group. Jordan has overseen development and national accreditation of the Standards for Biomass Supply Chain Risk and operation of biomass supply chains for over 5,000,000 tonnes of feedstock for biofuel, renewable chemical and biogas projects. He has led project consulting teams for JP Morgan, Shell, Coca-Cola, Siemens, Enviva, Drax, NREL, DTE Energy, Macquarie Bank, Tennessee Valley Authority (TVA), Southern Company, EDF, LaFarge, PGE, Johnson Controls, and Live Oak Bank. He currently serves as Chairman of the Bioeconomy Development Opportunity (BDO) Zone Initiative (www.bdozone.org).

Mr. David Sudolsky, Anellotech, Inc., CEO

David Sudolsky, who co-founded Anellotech with George Huber, secured the initial angel funding for the company, recruited the management team and scientific advisory board, and is leading the expansion of the company. Prior to joining Anellotech, he was a business officer or CEO of five biotechnology, specialty pharmaceutical and bioprocessing start-ups, one of which (Dura Pharmaceuticals) was sold for $1.8 billion. He and his wife, Marcia, are firm believers in environmental education and led a successful five-year effort ending in 2011 to build a multi-faceted Eco Center on the roof of P.S. 6 in New York City.

**Dr. Deepti Tanjore, Lawrence Berkeley National Laboratory, Director, ABPDU*

Deepti Tanjore is Director of the ABPDU and interfaces with several scientists from industry, academia, and start-ups that are each individually trying to resolve scale-up challenges for their synthetic biology–based technologies. Deepti's interests lie in articulating industry-wide issues and developing technologies that no single company is incentivized to pursue. Her research at ABPDU focuses on modeling the impact of bioprocess conditions on microbial heterogeneity and developing in-line analytical tools for real-time adaptation of process development in bioreactors.

**Ms. Karen Warner, BEAM Circular, Founder, CEO*

Karen Warner is the founder and CEO of BEAM Circular, a new hub for the circular bioeconomy in California's Central Valley that is transforming waste into value across food and agricultural systems through the scale-up of innovations in bioindustrial manufacturing. A leader in cross-sector partnership development, Karen has worked in the US and internationally across a variety of nonprofit, governmental, and private sector roles, including as District Chief of Staff for US Congressman Josh Harder. Karen has a BA and MBA from Stanford University and an MPA from the Harvard Kennedy School of Government. She lives in Modesto, CA.

Dr. Oliver Yu, Conagen Inc., Chief Technology Officer

Dr. Yu has a BSc. from the Dept. of Biophysics at the Fudan Univ in Shanghai; a PhD. from Dept. of Biology at the Uni of South Carolina; a postdoc at the DuPont Co. He joined the Danforth Plant Science Center in 2001, serving as a Principal Investigator until 2012, and co-founded Conagen in 2010. He has published more than 120 papers and patents. Conagen focuses on enzyme and pathway engineering, and protein/peptide production. Conagen now has more than 40 ingredients in commercial-scale production.

**Dr. Luca Zullo, AURI, Senior Director of Science and Technology*

Luca started his career at Shell Research in the Netherlands, where he was involved in designing novel petrochemical. He continued this work in the software industry, leading the development of some of the world's most extensive process plant simulations. Later, he worked in corporate R&D at Cargill on novel agricultural commodities transformation processes. After Cargill, he has worked with several early-stage companies leading or supporting the transition to commercialization from early-stage R&D. He's currently a consultants and technology director for AURI, a Minnesota based non for profit helping State farmers find new uses for ag commodities. Luca holds a Degree in Chemical Engineering from the University of Padova,

Italy, and a Ph.D. in Chemical Engineering from the Imperial College of Science, Technology, and Medicine of London, United Kingdom.

Consultants

Ms. Gina Bartlett, Consensus Building Institute, Senior Mediator and Director, CBI West

Gina Bartlett is a Senior Mediator at the Consensus Building Institute and directs CBI's practice in the American West. Gina has more than 20 years of experience in consensus building and collaborative planning on complex public policy and organizational issues.

Dr. Raymond RedCorn, Consultant, FFAR Scientific Writer

Raymond has worked to recover chemical feedstocks from municipal organic waste, including developing fermentations and specialized bioreactors to produce lactic acid, glycogen, and rhamnose from food waste and sewage. He is attending as a Scientific Writer to document the convening. Prior, he received his Ph.D. from the Laboratory of Renewable Resources Engineering at Purdue but has also worked as a Post-Doc in Civil Engineering at the U. of Washington, and as an AAAS fellow in the U.S. Senate.

Student Notetakers

Mr. Ryan Blevitt, San Diego State University, Undergraduate Student

I am a student at San Diego State University studying Biology. I am passionate about environmental biotechnology and I am excited to be a part of this conference to learn more about related topics.

Mr. Richard Hamilton, San Diego State University, PhD Candidate

Richard is currently a PhD candidate in the cell and molecular biology joint doctoral program between SDSU and UCSD. His research deals with engineering methanotrophic bacteria which consume C1 feedstocks to produce novel products.