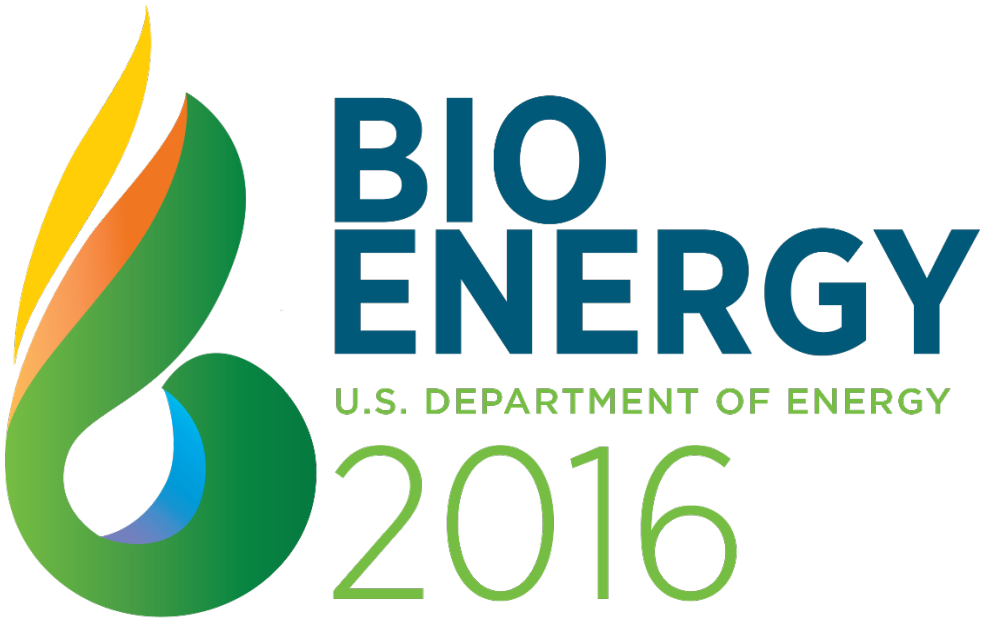

Speaker Biographies

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Keynote Speakers

Austin Brown

Assistant Director for Clean Energy and Transportation, Office of Science and Technology Policy

Austin Brown is the Assistant Director for Clean Energy and Transportation at the Office of Science and Technology Policy in the Executive Office of the President. His home institution is the Washington, DC, office of the National Renewable Energy Laboratory, where he leads analysis projects for the Department of Energy's Office of Energy Efficiency and Renewable Energy. He also teaches a class on transportation technology and policy at Johns Hopkins University.

Austin was a scientist in his previous life. He has a B.S. in Physics from Harvey Mudd College and received his Ph.D. in Biophysics from Stanford University. With this scientific training, he transitioned to Washington to connect science to policy decisions, especially federal clean energy and transportation research. Austin's primary career interest is to help put the United States on a pathway to a future where energy is clean, affordable, and reliable. This overall goal is at least partially selfish as it will ensure he can continue doing many of his favorite activities such as running, scuba diving, and skiing – while preserving invaluable resources for future generations.

Vann Bush

Managing Director, Energy Supply and Conversion

Gas Technology Institute

Mr. Bush has 40 years of experience in energy technology development and demonstration. For the past 12 years he has overseen the Gas Technology Institute's research, development, and demonstration programs, focused on increasing affordable and environmentally acceptable applications of all hydrocarbon energy resources. The portfolio of research and development (R&D) programs for low-carbon power and chemicals production includes developing and proving gasification and partial oxidation technologies, pressurized oxy-combustion processes, compact hydrogen generation, and supercritical CO_2 power cycle technologies. Recent biomass-focused R&D projects include development of feedstock pretreatment technology, evaluation of substitute natural gas production, development and testing of hydrogen production from syngas using membrane technology, development and testing of engineered catalysts for tar elimination, and development of advanced integrated conversion systems for gasoline and distillate fuels production.

Mr. Bush is co-chair of the International Conference on the Thermochemical Biomass Conversion Science. Mr. Bush has undergraduate degrees in mathematics and physics from the University of North Alabama, and a master's degree in physics from the University of Alabama-Birmingham.

Adam Cohen

Deputy Under Secretary for Science and Energy

Dr. Adam Cohen is the Deputy Under Secretary for Science and Energy at the U.S. Department of Energy (DOE) and currently oversees the day-to-day operations of the Office of the Under Secretary for Science and Energy (US/S&E). The office was created by Secretary of Energy Ernest Moniz to closely integrate DOE's basic science, applied research, technology development, and deployment efforts. As Deputy Under Secretary, he supports DOE's offices of Electricity Delivery and Energy Reliability, Energy Efficiency and Renewable Energy, Fossil Energy, Indian Energy Policy and Programs, Nuclear Energy, Science, and Technology Transitions. In total, these programs steward the majority of DOE's National Laboratories (13 of 17).

Dr. Cohen has more than 30 years of experience in management of research and development, strategic planning and operations at Princeton (PPPL), Argonne National Laboratory (ANL), and the Department of Energy. As Deputy Director for Operations at PPPL, he was responsible for both the engineering and operations function at PPPL, including design efforts, project management, human resources, financial activities, outreach, ES&H and applied research activities. He also served on the NJ DEP Oyster Creek Oversight Panel and on the Department of Energy's Laboratory Operations Board. Previously, he served as senior advisor to the DOE Under Secretary for Science for nuclear energy programs, and at Argonne as Chief Operations Officer, as the head of environment, safety and health, as a nuclear facility manager, and as a researcher/principal investigator on nuclear fuels and materials. Earlier in his career, he spent four years in the U.S. Navy as a submarine officer, and he worked at Babcock & Wilcox manufacturing nuclear fuel for research reactors.

Dr. Cohen earned his Bachelor's in Engineering from Columbia University, his M.B.A. from the University of Chicago, and his Ph. D. in Materials Science from Northwestern University.

The Honorable Chuck Fleischmann

Congressman, Tennessee

U.S. Rep. Chuck Fleischmann is a conservative Republican who represents the Third District of Tennessee. The district is made up of 11 counties: Anderson, Bradley, Campbell, Hamilton, McMinn, Monroe, Morgan, Polk, Roane, Scott, and Union.

Chuck received his undergraduate degree in political science from the University of Illinois. He received both Phi Beta Kappa and magna cum laude honors. He then went to the University of Tennessee law school, where he received his Doctor of Jurisprudence.

For 24 years, Chuck and his wife ran a small business together in Chattanooga after they both graduated from law school at the University of Tennessee.

Chuck has served on the board of the National Craniofacial Association and on the board of the Cherokee Area Council of Boy Scouts of America. He served as the president of the Chattanooga Bar Association and chairman of the Chattanooga Lawyers Pro Bono Committee.

David Friedman

Acting Assistant Secretary for Energy Efficiency and Renewable Energy

As acting assistant secretary for the Office of Energy Efficiency and Renewable Energy (EERE), David Friedman leads the organization to transition the nation to a clean energy economy. He oversees six major technology and strategic areas, including energy efficiency, renewable power, sustainable transportation, strategic programs, financial management, and business operations. In addition, he represents EERE before national, state, and local audiences to reinforce EERE's mission and leverage partnerships to transform the nation's economic engine to one powered by clean energy.

Before being named as EERE's assistant secretary, David served as the organization's principal deputy, overseeing day-to-day operations and a broad energy portfolio. He also served as both deputy and acting administrator of the National Highway Traffic Safety Administration, where he led the agency's mission to save lives, prevent injuries, and reduce economic costs due to road traffic crashes, through education, research, safety standards, and enforcement activity.

David has been an influential sustainable transportation and clean energy technologies expert for more than two decades, including service on several National Academies committees and the President's Hydrogen Technical Advisory Committee.

Specifically, David worked 12 years at the Union of Concerned Scientists in several different capacities, including senior engineer, research director, and deputy director of their clean vehicles program. He engaged in research and policy issues regarding conventional fuel economy technology, mass-size-safety interactions, and the energy and environmental impacts of hybrid, battery, and fuel cell electric vehicles. In 2007, his team's efforts helped lead to the first legislative increase in corporate average fuel efficiency standards since its creation in 1975. In recognition of that and other work, he was named an Automotive News All-Star and one of *Washingtonian* magazine's 30 People Changing the Environment in Washington in 2008.

In addition, before joining the Union of Concerned Scientists in 2001, he worked for the University of California, Davis (UC Davis), in the Fuel Cell Vehicle Modeling Program and also volunteered on the UC Davis FutureCar team that built a plug-in hybrid electric family car that doubled its fuel economy.

A Rhode Island native, he earned his bachelor’s degree in mechanical engineering from Worcester Polytechnic Institute and is a doctoral candidate at UC Davis with a focus on modeling and optimizing automotive fuel cell vehicle systems and their fuel efficiency.

Renato Domith Godinho

Head of Section, Division for New and Renewable Energy Resources, Ministry of Foreign Affairs, Brazil

A journalist and communicator by training with a master's degree in international diplomacy, in 2003, Renato Domith Godinho moved from technological and scientific journalism to career diplomacy at the Ministry of Foreign Affairs in Brazil. In this capacity, he has served in Brazil and abroad, focusing on multilateral governance and negotiation. As alternate permanent representative of Brazil to the United Nations' (UN) Food and Agriculture Organization from 2009–2012, he was a leading actor in the reform of the UN Committee on World Food Security, which resulted in higher impact outcomes and much stronger coordination with the private sector, academia, international organizations, and civil society. Since 2015, he has led the Division for New and Renewable Energy Resources in the Ministry of Foreign Affairs, promoting international policy dialogue and cooperation for all forms of renewable energy, including hydropower, wind, solar, and bioenergy. Since the advent of commercial-scale cellulosic second-generation biofuels in Brazil in 2015, his division has been looking for the best ways to advance the agenda of a modern, scalable, sustainable bioeconomy both domestically and abroad.

The Honorable Marcy Kaptur

Congresswoman, Ohio

U.S. Representative Marcy Kaptur, who represents Ohio's Ninth Congressional District, is currently serving her 16th term in the U.S. House of Representatives. She is the senior-most woman in the House and the longest-serving woman from Ohio in history. Congresswoman Kaptur ranks among the most senior members of the 114th Congress.

Congresswoman Kaptur, a native Toledoan, lives in the same modest house where she grew up.

She is a Polish-American with humble, working-class roots. Her family operated a small grocery store, and her mother later served on the original organizing committee of a trade union at the Champion Spark Plug factory in Toledo.

After graduating from St. Ursula Academy, she became the first member of her family to attend college, earning a bachelor's degree in history from the University of Wisconsin and later a master's degree in urban planning from the University of Michigan.

After working for 15 years as a city and regional planner, primarily in Toledo and Chicago, she accepted an appointment as a domestic policy advisor to President Jimmy Carter. During his administration, she helped maneuver 17 housing and neighborhood revitalization bills through Congress.

Jan Koninckx

Global Business Director for Advanced Biofuels, DuPont Industrial Biosciences

With integrated solutions for the production of fuel from biomass, DuPont is leading the industry in the commercialization of advanced biofuel technologies in markets around the world. As the Global Business Director for Advanced Biofuels at DuPont since 2007, Jan is responsible for driving the business models and commercialization for the company's cellulosic ethanol and biobutanol technologies.

In this position, Jan has championed renewable transportation fuels, testifying before the Senate Committee on Environment and Public Works in 2011 and the Senate Committee on Agriculture in 2014, and as a speaker at a variety of industry conferences and events, such as The Atlantic's Next Generation Energy Forum, the Biotechnology Industry Organization's World Congress, F.O. Licht in Budapest, the Fuel Ethanol Workshop conference and workshops sponsored by the Biobased Industry Center at Iowa State University. Jan also co-chaired the International Ligno-Cellulosic Ethanol conference in Brussels in 2015. He has been quoted in a number of news outlets, including Politico, The New York Times, Reuters, The Wall Street Journal, Financial Times, The Hill, USA Today, Des Moines Register, McClatchy News Service, Wilmington News Journal, Biofuels Digest, Ethanol Producer Magazine, and Chemical Processing Magazine.

Jan has worked for DuPont for over 25 years, since he joined the company in 1990 as part of Dordrecht Works in the Netherlands. Early in his career, he gained 10 years' experience in industrial operations, starting his work in Lycra® spandex fiber production and working in Teflon® fluoropolymer production in West Virginia and in Ethylene Co-Polymer production in Texas. In addition, Jan has held marketing and R&D management positions and had general business responsibility for a variety of chemicals and commodities. Jan serves as on the Board of Butamax Advanced Biofuels LLC since its inception in 2009.

Jan holds a Master of Science in Chemical Engineering from the University of Ghent in Belgium and a Ph.D in Chemical Engineering from the University of Maryland. He is active in his community and volunteers in a small organization assisting local homeless.

Jonathan Male

Director, Bioenergy Technologies Office
U.S. Department of Energy

Dr. Jonathan Male is the director for the Bioenergy Technologies Office (BETO) in the Office of Energy Efficiency and Renewable Energy (EERE). In this role, he leads the BETO's work to lower costs, reduce technical risk, and accelerate deployment of bioenergy and renewable chemicals technologies. He oversees research and development across the entire supply chain—from sustainable biomass growth and collection to biomass conversion technologies that include biochemical, catalytic, and thermochemical pathways to produce economically viable biofuels and bioproducts. The office's portfolio of demonstration activities involving public-private partnerships helps BETO staff to evaluate risks and enable industrial entities to move technologies to commercial scale in the emerging bioenergy industry.

Before joining the U.S. Department of Energy, Dr. Male was the laboratory relationship manager for biomass at Pacific Northwest National Laboratory, where he was responsible for business development and enabling high-quality and timely projects in alignment with BETO's needs. Previously, he worked at the General Electric Global Research Center in Niskayuna, New York, and developed programs in heterogeneous and homogeneous catalysts. In total, he has more than 17 years of research experience in catalysts, inorganic materials, high throughput experimentation, greenhouse gas emissions reduction technologies, production of chemicals, and biofuels.

Dr. Male received a Bachelor of Science in applied chemistry from the University of Greenwich, England, and his doctorate in organometallic chemistry at Simon Fraser University in Canada.

Dennis McGinn

Assistant Secretary of the Navy
Energy, Installations, and Environment

Mr. Dennis McGinn was appointed assistant secretary of the navy (energy, installations, and environment) on September 3, 2013. In this position, McGinn develops department-wide policies, procedures, advocacy, and strategic plans. He also oversees all Department of the Navy functions and programs related to installations, safety, energy, and environment. This includes effective management of Navy and Marine Corps real property, housing, and other facilities; natural and cultural resource protection, planning, and compliance; safety and occupational health for military and civilian personnel; and timely completion of closures and realignments of installations under base closure laws.

McGinn is the former president of the American Council on Renewable Energy (ACORE), an organization dedicated to building a secure and prosperous America with clean, renewable energy. While at ACORE, he led efforts to communicate the significant economic, security, and environmental benefits of renewable energy. Mr. McGinn is also a past co-chairman of the CNA Military Advisory Board and an international security senior fellow at the Rocky Mountain Institute.

In 2002, after 35 years of service, Mr. McGinn retired from the Navy after achieving the rank of vice admiral. While in the Navy, he served as a naval aviator, test pilot, aircraft carrier commanding officer, and national security strategist. His capstone assignment was as the deputy chief of naval operations for warfare requirements and programs, where he oversaw the development of future Navy capabilities. In a previous operational leadership role, he commanded the U.S. Third Fleet.

Mr. McGinn is a past member of the Steering Committee of the Energy Future Coalition, the U.S. Energy Security Council, and the Bipartisan Policy Center Energy Board. He earned a Bachelor of Science in naval engineering from the U.S. Naval Academy; attended the national security program at the Kennedy School of Government, Harvard University; and was a Chief of Naval Operations Strategic Studies fellow at the U.S. Naval War College.

Rueben Sarkar

Deputy Assistant Secretary for Transportation

U.S. Department of Energy

Reuben Sarkar is the deputy assistant secretary for transportation. He oversees the Office of Energy Efficiency and Renewable Energy's Sustainable Transportation area, which includes the Vehicle, Fuel Cell, and Bioenergy Technologies Offices. He oversees annual investment of more than $600 million with a focus to reduce our oil dependence, avoid pollution, and create jobs by designing and manufacturing petroleum alternatives and more energy-efficient cars and trucks.

Before joining Office of Energy Efficiency and Renewable Energy, he worked at Proterra Inc., a leading manufacturer of electric buses and fast-charging stations. Most recently, he was responsible for business development and strategy. During his time at Proterra, Reuben directed electric vehicle market analysis, competitive intelligence, product planning, technology roadmapping, intellectual property management, utility rate and grid integration activities, and other strategic initiatives. He also led engineering programs, including overseeing fuel cell bus demonstration programs and the development of Proterra's first-generation all-electric bus. This was the first electric bus to pass the rigorous federal bus testing requirements at Altoona, and it is deployed in public transit service today in multiple cities. He also spearheaded the definition of Proterra's second-generation electric bus platform.

Previously, Reuben spent more than 10 years at General Motors (GM) where his most recent position was as lead design release engineer on the electric drive unit for the Chevy Volt. He was responsible for the engineering execution from paper concept into production intent builds. He started his career at GM as a fuels and lubricants expert and has held various roles in new transmission and hybrid system development and production launch programs.

Reuben holds both a Bachelor of Science and a Master of Science in chemical engineering, as well as a Master of Business Administration with high distinction, all from the University of Michigan in Ann Arbor.

Bernardo Silva

Executive President

Brazilian Industrial Biotechnology Association

Bernardo Silva was appointed executive president of the Brazilian Industrial Biotechnology Association (ABBI) in January 2015. Prior to joining ABBI, Bernardo held management positions at the World Economic Forum headquarters in Cologny, Switzerland, overseeing corporate and membership affairs in South America. He also served in a variety of government affairs and policy advocacy roles within the Brazilian Trade and Investment Promotion Agency (ApexBrasil), and with the U.S. Department of Agriculture in Brasilia, Brazil.

Bernardo earned his Master of Arts from Tufts University's Fletcher School of Law and Diplomacy and his Master of Business Administration from Fundação Getúlio Vargas (FGV); he also holds a Bachelor of Science degree in economics. Bernardo was also the first Brazilian to ever be accepted as a Global Leadership Fellow at the World Economic Forum.

James J. Spaeth

Program Manager, Demonstration & Market Transformation, Bioenergy Technologies Office

U.S. Department of Energy

Mr. Spaeth serves as the U.S. Department of Energy's (DOE's) Bioenergy Technologies Office (BETO) demonstration & market transformation program manager. Demonstration and market transformation reduces the risk of bioenergy production technologies through validated proof of performance at the pilot, demonstration, and pioneer scale. The current BETO portfolio includes a DOE investment of more than $1 billion and consists of 28 projects focused on the development of advanced biofuels, including renewable hydrocarbons and cellulosic ethanol.

Prior to this position, Mr. Spaeth served as the senior advisor for DOE's Pacific Region activities. In this role, Mr. Spaeth led DOE's partnership efforts with the State of Hawaii and private-sector participants working in pursuit of the Hawaii Clean Energy Initiative's 70% clean energy by 2030 goal.

Prior to the Pacific Region position, Mr. Spaeth served as DOE's director for the Office of Commercialization & Project Management, located in Golden, Colorado. Mr. Spaeth also led the Golden Field Office Bioenergy Technologies Office team, focusing on research, commercialization, outreach, and policy development in support of advanced biofuels. Mr. Spaeth joined DOE in 1994, initially working in project management in the areas of biomass power, biofuels, solar thermal, photovoltaics, and hybrid electric vehicle technologies. While at DOE, Mr. Spaeth also served as a legislative fellow for Senate Majority Leader Harry Reid on the Energy and Water Appropriations Subcommittee.

Prior to joining DOE, Mr. Spaeth worked for more than 10 years in the aerospace industry in engineering and business development positions with McDonnell Douglas and Boeing. Mr. Spaeth's educational background includes a Bachelor of Science in mechanical engineering earned with high honors from the University of Illinois and a Master of Business Administration with an emphasis in technology management and international market development.

Dr. Cathie Woteki

Under Secretary of Research, Education, and Economics, Department's Chief Scientist

U.S. Department of Agriculture

Dr. Cathie Woteki is under secretary for the U.S. Department of Agriculture's (USDA's) Research, Education, and Economics (REE) mission area, and the department's chief scientist.

Before joining USDA, Dr. Woteki served as global director of scientific affairs for Mars, Incorporated, where she managed the company's scientific policy and research on matters of health, nutrition, and food safety. From 2002–2005, she was dean of agriculture and professor of human nutrition at Iowa State University. Dr. Woteki served as the first under secretary for food safety at USDA from 1997–2001, where she oversaw U.S. government food safety policy development and USDA's continuity of operations planning. Dr. Woteki also served as the deputy under secretary for REE at USDA in 1996.

Prior to going to USDA, Dr. Woteki served in the White House Office of Science and Technology Policy as deputy associate director for science from 1994–1996. Dr. Woteki has also held positions in the National Center for Health Statistics of the U.S. Department of Health and Human Services (1983–1990), the Human Nutrition Information Service at USDA (1981–1983), and as director of the Food and Nutrition Board of the Institute of Medicine at the National Academy of Sciences (1990–1993). In 1999, Dr. Woteki was elected to the Institute of Medicine of the National Academy of Sciences, where she has chaired the Food and Nutrition Board (2003–2005). She received a Master of Science and a doctorate in human nutrition from Virginia Polytechnic Institute and State University (1974). Dr. Woteki received her Bachelor of Science in biology and chemistry from Mary Washington College (1969).

Plenary and Breakout Speakers

(Including Session Moderators)

Carol Babb

Vice President of Renewable Energy

Leidos Engineering

Carol Babb applies her 30 years of project management, engineering, and executive experience supporting clients investing in corn to ethanol, advanced ethanol, biodiesel, algae-based fuels, and other potential drop-in fuels. As a vice president for Leidos Engineering LLC, she manages a staff of specialists who advise on the development, financing, and application of the full spectrum of renewable energy and fuel technologies.

Ms. Babb leads project teams evaluating emerging technologies and complex project issues, as well as Leidos projects related to biorefinery technologies and bioproducts. She has served as the overall manager for a series of Leidos contracts with the U.S. Department of Energy and National Renewable Energy Laboratory aimed at advancing the entry of commercial-scale biofuels in the marketplace. She has also served as the lead reviewer for the Bioenergy Technologies Office project peer reviews in 2013 and 2015.

Bryan Bals

Process Development Engineer, MBI

Bryan joined MBI in 2011, after receiving extensive training in chemical engineering applications related to biomass processing, and in the techno-economic analysis and modeling of biomass supply and processing systems.

Prior to joining MBI, Bryan was a post-doctoral scientist in the Great Lakes Bioenergy Research Center (a national biofuels research initiative) under the guidance of Professor Bruce Dale, a leading biomass researcher at MSU. Bryan has applied engineering analysis to AFEX technology, and has performed extensive techno-economic modeling of AFEX depots in different configurations and geographies. Bryan is also well versed in biomass applications as a fermentation feedstock, cattle feed ingredients, and in formulating polymeric materials. He has published extensively on the above topics.

Bryan received his Ph.D. from Michigan State University.

Andrea Bailey

Oak Ridge Institute of Science and Education Fellow – Conversion Technologies, Bioenergy Technologies Office

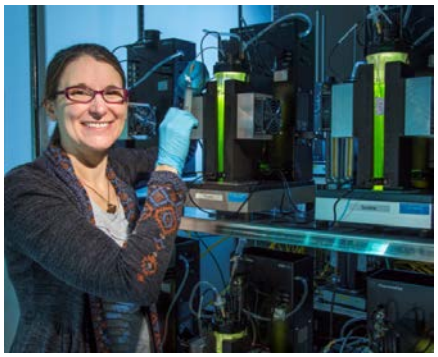
U.S. Department of Energy

Andrea Bailey is an Oak Ridge Institute of Science and Education (ORISE) Fellow supporting the conversion technologies platform within the Bioenergy Technologies Office, where she assists with a number of efforts related to using bioproducts to enable the production of biofuels.

Prior to this position, she provided contract support to the Bioenergy Technologies Office with BCS, Incorporated. Ms. Bailey holds a master's degree in environmental science and management from the Bren School at the University of California, Santa Barbara.

Amanda Barry

Technology Development Manager, Bioenergy Technologies Office
U.S. Department of Energy



Amanda Barry is serving as scientist/technology development manager on assignment to the Bioenergy Technologies Office from Los Alamos National Laboratory. Within the Bioenergy Technologies Office, Amanda supports the Advanced Algal Systems program, assisting in the development of Advanced Algal Systems strategic documents and in the managing of projects within the Advanced Algal Systems research portfolio. At Los Alamos National Laboratory, Amanda's primary research area of focus was the genetic manipulation of algae for economical biofuel production. She also managed the environmental photobioreactor matrix, a set of 33 photobioreactors utilized to examine algae under simulated environmental conditions, housed at the New Mexico Consortium in Los Alamos. Amanda serves as a scientist ambassador at the Los Alamos Bradbury Museum, where she is involved in educational outreach about algal biofuel production.

Amanda received two bachelor's degrees in biochemistry & biophysics and in bioresource research from Oregon State University and a master's degree in bacteriology from the University of Wisconsin-Madison. Her doctorate is from the Oregon Health and Science University in biochemistry and molecular biology. Her postdoctoral work included the study of human copper transporters as a Ruth L. Kirschstein National Research Service Award fellow at the Johns Hopkins University and algal genetic manipulation and protein expression at Los Alamos National Laboratory.

Brian Baynes

Chief Executive Officer

Joule Unlimited

Dr. Brian Baynes is an entrepreneur, inventor, and investor in sustainability and life sciences. He joined Flagship Ventures in 2009, and is currently CEO of Flagship portfolio company Joule Unlimited, which focuses on carbon-neutral fuel technology and project development. He founded and was CEO and chairman of Midori (healthy fiber products for food, feed, and pharmaceutical applications) and Celexion (protein and cell engineering, sold to Agenus [NASDAQ:AGEN]). Brian led Flagship's investments in Red Rock Biofuels (cellulosic diesel and jet production) and Be Power Tech (highly efficient energy systems for buildings).

Previously, he was CSO of Codon Devices (synthetic biology platform technology) and worked closely with several other early-stage biotech companies. Prior to joining Flagship, Brian was with an engineer at ExxonMobil, and a director in the Massachusetts Institute of Technology School of Chemical Engineering Practice at Mitsubishi Chemicals and General Mills. He holds a bachelor's degree in chemical engineering from the University of Delaware and a doctorate in chemical engineering from the Massachusetts Institute of Technology.

Jacques Beaudry-Losique

SVP Corporate and Business Development, Algenol Biotech LLC

Jacques Beaudry-Losique has served as senior vice president of corporate and business development for Algenol since July 2013. Mr. Beaudry-Losique leads Algenol business development and government and regulatory affairs for the company. Jacques has more than 20 years of experience working in the energy and technology sectors, and was previously vice president of corporate development and strategy for Codexis. From 2005 to 2011, Mr. Beaudry-Losique held senior policy and management positions at the U.S. Department of Energy (DOE). At DOE, Jacques led efforts to build a second-generation biofuels industry across two administrations, managed three clean energy programs, and served for two years as deputy assistant secretary for renewable energy. Mr. Beaudry-Losique was also instrumental in decisions to invest more than $1.5 billion of Recovery Act funds, including all Integrated Biorefinery Projects. Mr. Beaudry-Losique's additional experience includes GE Power Systems, Aspen Technologies, and Shell Canada, where he held various engineering and management roles. Finally, Jacques worked with and advised Fortune 500 companies while at McKinsey & Co. Mr. Beaudry-Losique holds a Bachelor of Science in chemical engineering from the University of Montreal, a Master of Science in engineering management from Stanford University, and a Master of Science in management from MIT.

Tim Bearnes

Chief Executive Officer

Laurel BioComposite LLC

Mr. Bearnes has led Laurel BioComposite LLC from its inception in 2007. He was board president and acting CEO until taking the full-time CEO role in April of 2012. He has experience with Evans Grain Company, Ciba Geigy, Syngenta and Bayer in management, employee hiring and evaluations, business planning, project management, organizational needs assessments, marketing, account management, and sales. Mr. Bearnes participated in Gallup's Entrepreneur Acceleration Systems Program in 2011.

Mary Biddy

Strategic Analysis Platform Lead/Senior Research Engineer

National Renewable Energy Laboratory

Dr. Mary J. Biddy is the strategic analysis platform lead and a senior research engineer in the National Bioenergy Center at the National Renewable Energy Laboratory (NREL). Her primary research focus is on techno-economic evaluations for the production of advanced biofuels and bioproducts. She has led numerous projects in this area, including serving as the chief modeler for the economic evaluations in the National Advanced Biofuels Consortium and the lead analyst in the Clean Energy Manufacturing Analysis Center focused on bioproducts.

Dr. Biddy recently published two studies in the area of bioproducts with her colleagues at NREL that (1) investigated biomass-derived chemicals with prospects for near-term deployment to understand the key drivers and challenges to move biomass-derived chemicals to market and assess ways in which chemicals production can be leveraged to accelerate the growth of biofuels and (2) provided a techno-economic motivation for coproduct manufacturing that enables hydrocarbon fuel production from lignocellulosic biomass. Prior to joining NREL in 2009, Dr. Biddy was a senior research engineer in the Aromatics and Acetyls division at BP. She received a doctorate in chemical engineering from the University of Wisconsin and was supported by a U.S. Department of Energy Computational Science Graduate Fellowship.

Dr. Adam Bratis

Associate Lab Director, BioEnergy Science and Technology

National Renewable Energy Laboratory

Adam joined the National Renewable Energy Laboratory (NREL) in 2008. His role is to lead NREL's bioenergy science and technology research and development efforts in support of the Department of Energy's mission in the bioenergy space. This includes technical and managerial oversight in the areas of biosciences, conversion of biomass to fuels, chemicals and materials, algal biofuels, techno-economic and life-cycle analyses, and fuels testing. He also serves as a spokesperson for the bioenergy research program at NREL both internally and externally.

Additionally, Adam leads the Renewable Carbon Fiber Consortium (RCFC), which is a multiyear, multi-institution research consortium made up of national lab, academic, and industrial partners. The objective of the RCFC is to demonstrate cost-effective production of renewable carbon fibers from lignocellulosic biomass-derived acrylonitrile.

Adam came to NREL with 11 years of experience with ExxonMobil in the areas of research and development, corporate planning, and refining and supply, and has extensive knowledge with respect to both alternative and conventional fuels.

He has a bachelor's degree in chemistry from Clarion University, a doctorate in organic chemistry from the University of Delaware, and Master of Business Administration from the University of Delaware.

Nate Brown

Alternative Jet Fuels Project Manager

Federal Aviation Administration

Nate Brown is alternative jet fuel project manager in the Federal Aviation Administration's (FAA's) Office of Environment and Energy, which is responsible for U.S. civil aviation environment and energy policy, research, and development. Nate is responsible for management of alternative jet fuel research and development under the Continuous Lower Energy Emissions and Noise program, coordination with other U.S. government agencies, and execution of international cooperative agreements. He manages FAA support for the Commercial Aviation Alternative Fuels Initiative, a public-private partnership to develop and deploy sustainable alternative jet fuels in which he also serves as head advisor for strategy and implementation. Nate is a member of the U.N. International Civil Aviation Organization's Committee on Aviation Environmental Protection Alternative Fuels Task Force.

In the past, Nate has worked for the U.S. Department of Transportation's Research and Innovative Technologies Administration and on international climate change initiatives at the U.S. Department of State. Prior to joining the FAA, he worked in international development and was a Peace Corps volunteer in Ecuador. He holds a master's degree in international environmental resource policy from the Fletcher School, Tufts University, and a bachelor's degree with honors from Haverford College.

Matthew Carr

Executive Director

Algae Biomass Organization

Matthew Carr, Ph.D., is the executive director of the Algae Biomass Organization (ABO), the nonprofit trade association for the algae sector. ABO represents the world's leading algae businesses, institutions, and individuals with a mission to promote the development of viable commercial markets for algae products. As executive director, Matt is the strategic and operational head of ABO with responsibility for the organization's advocacy, communications, and industry development initiatives, including the Algae Biomass Summit, the world's largest algae conference. Matt joined ABO in 2014 after nine years as director, then managing director, of the Industrial and Environmental Section at the Biotechnology Industry Organization (BIO), the world's largest trade association for the biotechnology sector. At BIO, Matt led successful efforts to establish a national mandate, tax incentives, and other federal programs for advanced biofuels and biobased products. Before joining BIO, Matt was the American Meteorological Society Congressional Fellow on the Senate Agriculture Committee for Senator Tom Harkin (D-IA), where he contributed to the development of the biomass provisions of the Energy Policy Act of 2005. Matt began his career as an environmental reporter for the *Dallas Morning News* after earning a doctorate in atmospheric sciences from the University of Washington and a bachelor's degree in atmospheric & ocean sciences (honors) from McGill University. Matt has also taught middle school math and science, and participated as an undergraduate in the world's largest tornado research field experiment. He lives in Alexandria, Virginia, with his wife and two children.

Dr. Joel Cherry

President, Research and Development

Amyris Inc.

Joel Cherry leads Amyris research and development, including various ongoing collaborations. Prior to joining Amyris in 2008, Dr. Cherry was senior director of bioenergy biotechnology at Novozymes. During his tenure at Novozymes, he was a member of the research and development management team, specializing in protein engineering and directed evolution technologies. He was also principal investigator and director of the BioEnergy Project, an effort funded by the U.S. Department of Energy to reduce the cost of enzymes used in converting biomass to sugar. This work was awarded an R&D 100 Award, *Scientific American* Top 50 Award, and a Frost and Sullivan Emerging Technology Award. Dr. Cherry is an inventor on more than 20 issued patents, author of three book chapters and more than 30 scientific publications, and an invited speaker at numerous international conferences on biofuels. He received his Bachelor of Arts in chemistry from Carleton College and a doctorate in biochemistry from the University of New Hampshire.

R. Brooke Coleman

Executive Director

Advanced Biofuels Business Council (ABBC)

Mr. Coleman cofounded and serves as the executive director of the Advanced Biofuels Business Council (ABBC), a coalition of industry leaders in the advanced biofuels and cellulosic ethanol sectors. Mr. Coleman also advises companies and campaigns in the clean energy sector.

Mr. Coleman has been involved with the energy and environmental sectors at the regulatory and policy levels since 1997. He began his career as the energy program director at Bluewater Network, where he exposed the environmental and public health risks of the gasoline additive MTBE and led a national campaign to ban the chemical in transportation fuels. Mr. Coleman later founded or cofounded several organizations and/or projects, including the Advanced Ethanol Council, the New Fuels Alliance, the California Renewable Fuels Partnership, the Northeast Biofuels Collaborative, and the Renewable Energy Action Project.

Mr. Coleman served as the chief strategist and spokesperson for clean energy advocacy campaigns during the 2008 and 2010 federal election cycles. He has also engaged in several state-level initiatives in recent years. He represented the advanced biofuel industry during the development of the California Low Carbon Fuel Standard and spearheaded an initiative in Massachusetts to pass the world's first cellulosic biofuels excise tax exemption.

Mr. Coleman is one of the leading national advocates for advanced biofuels at the state and federal level. He has testified before the U.S. House of Representatives and the U.S. Senate on various issues related to alternative fuels, including performance standards and tax. He has also testified before numerous state legislative committees. He has a deep level of expertise in a number of areas related to energy regulation, including the California Low Carbon Fuel Standard, carbon life-cycle accounting, the federal Renewable Fuel Standard, the California and Federal Reformulated Gasoline program, energy tax, and various other energy-related programs at the federal and state level. He is one of the leading national advocates for advanced biofuels at the state and federal level.

Mr. Coleman is a graduate of Wesleyan University and the Northeastern University School of Law and is a member of the Massachusetts State Bar. While studying law, he worked on several landmark environmental cases, including the largest ever settlement in Clean Water Act history and a common law climate change lawsuit filed on behalf of 11 state attorneys general.

Kevin Comer

Associate Principal

Antares Group Inc.

Kevin Comer is a mechanical engineer and associate principal of Antares Group Inc. with over 20 years of professional engineering and project management experience. Antares is a consulting and professional services firm, founded in 1992 to help accelerate the development and deployment of clean energy technologies for the private and public sector. Since the firm's inception, biomass and bioenergy applications and technologies have been core focus areas of the business. Mr. Comer has been a lead member of several multiyear, multipartner cooperative agreements cofunded by the U.S. Department of Energy and industry team members, primarily focused on biomass supply chain development, logistics, and preprocessing for herbaceous biomass crops and residues. These projects have included: design, permitting, construction, operation, and monitoring of automated biomass processing systems; development and demonstration of new biomass harvest and logistics equipment; and development of supporting information systems and tools. Over a dozen patents have been issued to date related to the work in those projects, with others in process. Mr. Comer is currently serving as a principal investigator on a recently awarded five-year cooperative agreement aimed at developing and demonstrating innovations for implementing landscape designs for sustainable bioenergy systems.

Bill Crump

Director of Renewable Energy and Chemicals

Leidos Engineering

Mr. Crump is the director of renewable energy and chemicals for Leidos Engineering. He has more than 30 years of experience in the energy and chemical fields. He currently performs independent engineering reviews of oil, gas, and biofuel, and biochemical projects in support of debt and equity investments and in support of grants and loan guarantees. Prior to joining Leidos Engineering, he was a senior supervisor for the engineering, procurement, and construction firm Worley-Parsons, where he provided process design services for projects in the Americas, Europe, Africa, former Soviet Union, Middle East, and Asia. He received his degree in chemical engineering from Arizona State University. Mr. Crump has served as the lead reviewer for the Bioenergy Technologies Office (BETO) project peer reviews in 2013 and 2015 and has participated in a number of BETO project merit reviews and conferences.

Steve Csonka

Executive Director

Commercial Aviation Alternative Fuels Initiative

Steve Csonka is the executive director of the Commercial Aviation Alternative Fuels Initiative (CAAFI, www.caafi.org) an industry partnership advancing the development and commercialization of sustainable alternative jet fuels. For the last decade, Steve has been a strong industry advocate who has worked in roles of developing pragmatic solutions to the challenges of aviation growth, and that interest led him to accept his current CAAFI role in 2012.

Steve is a commercial aviation professional with 30 years of broad, strategic airline and aviation original equipment manufacturer experience. He continues to serve in leadership, steering, and review committee roles with multiple aviation industry organizations in areas of applying technology and business concepts to enable environmental progression.

Maggie Davis

Research Scientist

Oak Ridge National Laboratory

Maggie is a research and development associate staff member at the Oak Ridge National Laboratory (ORNL) in the Global Change and Developing Countries Programs and the Impacts, Adaptation, and Vulnerability Group in ORNL's Climate Change Science Institute.

Her primary research interests lie in the field of forest and agricultural economics and the establishment of a global bioeconomy. Maggie's research aims to promote widespread adoption of clean, renewable energy; enhance growth in domestic clean-energy industries; and promote trade in sustainable bioenergy and bioproducts.

Cora Dickson

Senior International Trade Specialist

U.S. Department of Commerce

Cora Dickson is a renewable energy sector analyst in the Office of Energy and Environmental Industries at the International Trade Administration in the U.S. Department of Commerce. She currently covers solar, wind, geothermal, hydro, biofuels, biomass, and waste-to-energy.

Since joining the International Trade Administration in 2001, Ms. Dickson has worked on several sectors and markets (particularly in the Asia region) to address policy concerns with foreign governments on behalf of U.S. exporters. She earned a master's degree in international communication from American University in 1999.

Jeffrey Dietrich

CTO, Lygos

Jeffrey Dietrich received his Bachelor of Science in bioengineering from Rice University in 2005 and his doctorate in bioengineering from University of California, Berkeley, in 2011; Jeffrey was awarded a Siebel Scholarship in 2010 for his dissertation research in Dr. Jay Keasling's laboratory at the Joint BioEnergy Institute. He is inventor of a series of high-throughput screening and selection technologies for improving small-molecule biosynthesis in various microbial hosts. Jeffrey co-founded Lygos Inc. in 2010 and is currently chief technology officer. Lygos uses synthetic biology in combination with high-throughput screening approaches to engineer microbes for the production of chemicals. Lygos focuses on chemicals where biology has inherent cost advantages over petrochemical processes due to improved process yields or elimination of hazardous waste streams. Jeffrey has served as principal investigator on U.S. Department of Energy, National Science Foundation, and U.S. Department of Agriculture awards.

Sheila Dillard

Communications Lead, Bioenergy Technologies Office

U.S. Department of Energy

Sheila Dillard currently serves as the Department of Energy's (DOE) Bioenergy Technologies Office (BETO) communication lead. In this role, Sheila manages the development and execution of the office's traditional and digital media, stakeholder engagement, event management, and thought leadership to inform and engage target audiences. In addition, she manages BETO's education and workforce development portfolio.

Prior to her position with BETO, Sheila Dillard served as the principal DOE Office of Energy Efficiency and Renewable Energy (EERE) Office of Communications communication analyst for developing and managing technology-oriented public engagement campaigns. During this tenure, she managed and led large-scale EERE corporate communication efforts and events such as the international award-winning DOE Solar Decathlon. Despite the 2011 Solar Decathlon venue change, corporate communications efforts were able to significantly increase Solar Decathlon media presence (i.e., 2,200 plus total media stories, which is 37% more than 2009 total and 104% more greater than 2007); foster a steady and robust digital media presence across Facebook, Twitter, YouTube, Foursquare, and DOE's blog; and collaborate with the State Department to develop national and international working relationships to promote event participation.

Ms. Dillard has a Bachelor of Science in international business, business law, and government policy; Master of Science in management; and Master of Business Administration.

Jim Dooley

Chief Technology Officer

Forest Concepts LLC

Dr. James H. (Jim) Dooley is cofounder and CTO of Forest Concepts LLC in Auburn, Washington. Dr. Dooley built his career by combining a deep understanding of plant biology with disciplined engineering design and business development to create innovative products, processes, and equipment. Jim previously held a number of engineering, technical management, and business development positions with Weyerhaeuser Company in the timber industry, and with Amfac agricultural group in the sugar cane and tropical fruit industries. His bioenergy work is currently in its fifth iteration—following the cycles of energy crises in America. Current developments by Forest Concepts are reducing the energy intensity for comminution and drying, as well as devising new methods to collect and deliver biomass from fields to centralized depots and processing sites.

Dr. Dooley has been involved with the Bioenergy Technologies Office in the past three biennial reviews as a panel leader (2011), member of the Steering Committee (2013), and chair of the Steering Committee (2015). Jim Dooley holds engineering degrees from California Polytechnic State University, University of California, Davis, and the University of Washington. He is a registered professional engineer in Washington and Hawaii. He was recently awarded his 30th U.S. patent.

Deepak Dugar

President

Visolis Inc.

Dr. Deepak Dugar is the President of Visolis Inc. and has deep expertise in biobased products. He is also project lead at Cyclotron Road, Lawrence Berkeley National Laboratory. Previously, he worked as a management consultant at PwC Advisory, helping Cleantech clients with their commercialization efforts. He has also consulted for numerous entities like Royal DSM, the National Renewable Energy Laboratory, and Flagship Ventures, among others.

He has been a recipient of the Legatum Fellowship and the Martin Family Society for Sustainability Fellowship. Dr. Dugar completed his dual degree (Bachelor of Technology and Master of Technology) in biochemical engineering and biotechnology from the Indian Institute of Technology Delhi and his Master of Business Administration, Master of Science, and Doctor of Philosophy in chemical engineering practice from the Massachusetts Institute of Technology.

Jennifer Dunn

Biofuel Analysis Team Lead

Argonne National Laboratory

Dr. Jennifer B. Dunn is a principal environmental analyst and lead of the Biofuel Analysis Team at Argonne National Laboratory. She also serves as the Bioenergy Technologies Office-Argonne National Laboratory relationship manager. She investigates life-cycle energy consumption and environmental impacts of advanced transportation and fuel technologies, including biofuels and battery-powered electric drive vehicles.

Prior to joining Argonne, Jennifer led life-cycle analysis projects in the United States for URS Corporation and supported mobile source emission reduction programs at the U.S. Environmental Protection Agency. She holds a doctorate in chemical engineering from the University of Michigan.

Laurence Eaton

Research Economist

Oak Ridge National Laboratory

Laurence Eaton is an agricultural and natural resource economist in the Environmental Sciences Division at Oak Ridge National Laboratory. His area of expertise is the large-scale modeling of forestry and agricultural systems for biomass for energy and products. He contributed to the analysis and development of the 2011 *U.S. Billion-Ton Update* and *2016 Billion-Ton Report*. In 2015, he served on detail to the Bioenergy Technologies Office at the U.S. Department of Energy where he served on the Feedstock Supply and Logistics platform team, providing support in the area of resource assessment and economic analysis of new energy pathways and renewable energy systems. His current interests are examination of the economic and geographic aspects of bioeconomy development; large-scale geographic information system visualization of multivariate datasets; and the intersection of ecological, environmental, and energy systems for domestic renewable energy systems. He holds bachelor's and master's degrees in economics from Washington and Lee University and the University of Tennessee, respectively.

Mark Elless

Technology Manager, Bioenergy Technologies Office
U.S. Department of Energy

Dr. Elless is a technology manager at the U.S. Department of Energy's Bioenergy Technologies Office (BETO), with a focus on feedstock supply and logistics. Prior to joining BETO in 2012, Mark was the grants and alliances manager at FuturaGene, which focuses on development of woody biomass for biofuel production. Before FuturaGene, Mark was the director of grants and technology at Edenspace Systems Corporation, which focuses on the engineering of lignocellulosic biomass for enhanced biofuel production.

Mark received a Bachelor of Science in geology and a Master of Science in soil science from North Dakota State University, as well as a doctorate in soil science from the University of Maryland. He completed his postdoctoral training at Oak Ridge National Laboratory. Mark has published more than 20 peer-reviewed papers and has served on several review panels for the federal government.

Doug Elliott

Retired Laboratory Fellow

Pacific Northwest National Laboratory

Doug Elliott has more than 41 years of research and project management experience at Pacific Northwest National Laboratory, from which he retired earlier this year. The focus of his work has been on development of fuels and chemicals from biomass and waste.

His research has involved biomass liquefaction and hydroprocessing of product oils and catalytic hydrothermal gasification of wet biomass. Much of this research was funded by the U.S. Department of Energy but often included industrial and other partners

Bob Emory

Southern Environmental Affairs

Weyerhaeuser Company

Bob Emory is a 45-year veteran of the forest industry, all with Weyerhaeuser Company. Weyerhaeuser owns 14 million acres of timberland in the United and Bob is responsible for forest certification, biomass policy issues, and compliance with the Endangered Species Act and the Clean Water Act.

He has a bachelor's degree in Forest Management from Virginia Tech and is a board member of both the Forest Landowners Association and The Institute for Forest Bioscience. He is also a member of the Society of American Foresters.

Bob lives in New Bern, North Carolina.

Dr. Burton English

Professor

University of Tennessee Institute of Agriculture

Dr. English is nationally and internationally known for his work in renewable energy, production economics, economic impact analysis, and policy analysis. He has been called upon to evaluate the environmental and economic implications of proposed and enacted federal policy. The U.S. Department of Agriculture (USDA) has requested his analysis regarding the impacts of increased renewable energy crops on the nation's economic wellbeing. Dr. English was requested by USDA and Integrated Environmental Solutions LLC to provide economic impact analysis and environmental information for the *Problematic Environmental Impact Statement* conducted for the Biomass Crop Assistance Program. He also conducted renewable energy analysis for the economic and environmental consequences of a mature biomass to energy conversion industry. He conducted additional analysis on renewable energy for the Energy Information Administration, 25x'25, The Bipartisan Policy Center's National Commission on Energy Policy, and the Governors Renewable Energy Coalition.

Dr. English has been invited to give numerous talks at industrial trade shows, universities, and conventions. From his vita, in the past 10 years Dr. English has been invited to Tuskegee University, Mississippi State University, Iowa State University, Georgia Tech, University of Minnesota, North Carolina State University, and Florida International University. He has been invited to present material at several Renewable Fuels annual meetings, the Farm Foundation, Nature Conservancy, Soil Conservation Society of America, Monsanto, 25x'25 summit meetings and Livestock Forum, Platts (a division of McGraw Hill Financial), Biomass Conference and Trade Show, Bio International Convention, Appalachian Regional Commission Conference (luncheon), and the National Press Club, to name a few. He has also made presentations to senators and representatives and their staff at arranged breakfasts, workshops, and dinners.

Dr. Christine M. English

Senior Scientist

National Renewable Energy Laboratory

Dr. Christine English is a senior scientist working for the Bioenergy Technologies Office (BETO) on assignment from the National Renewable Energy Laboratory (NREL). Dr. English began her assignment in January of 2016 and has been working with the Conversion and Algae Programs. Prior to this position, Dr. English worked with the Systems Engineering and Integration Team at NREL, providing technical support for BETO's validation processes. For approximately 5 years prior to joining NREL in 2014, Dr. English worked as a contractor for BETO, providing project management support. Dr. English completed a postdoctoral research position at NREL in 2009 after completing her doctorate in biochemistry from the University of Colorado Health Sciences Center in 2006. Dr. English received her bachelor's degree from the College of Wooster in chemistry.

Brent Erickson

Executive Vice President

Biotechnology Industry Organization

Brent Erickson is executive vice president in charge of the Industrial and Environmental Section at the Biotechnology Industry Organization (BIO). BIO represents more than 1,200 biotechnology companies, academic institutions, and state biotechnology centers across the United States and in more than 30 other nations.

Mr. Erickson holds a Bachelor of Science in biology and a Master of Arts in international studies. After completing his undergraduate degree, he was involved in fossil fuel research for three years at the U.S. Department of Energy's Laramie Energy Technology Center. After completing graduate school, Mr. Erickson joined the staff of U.S. Senator and Republican Whip Alan K. Simpson (R-WY) as a legislative assistant handling defense, energy, and environmental issues. In 1993, Mr. Erickson was promoted to legislative director.

In 1996, Mr. Erickson joined the American Petroleum Institute as a Washington representative, where he directed government relations efforts on energy and environmental issues. Mr. Erickson joined BIO in 2000.

In 2001, Mr. Erickson was elected as vice-chair of the Organization for Economic Cooperation and Development's Task Force on Biotechnology for Sustainable Industrial Development, a position he held until 2005. In 2005, he was named consulting editor of the journal *Industrial Biotechnology,* a post he continues to hold today.

Since 2000, Brent has served as a member of the board of directors of the Western Research Institute, the not-for-profit arm of the University of Wyoming Research Corporation. From 2010 to 2015, he was selected to serve on the Scientific Advisory Board of the Synthetic Biology Engineering Research Center (SynBERC). SynBERC is a multi-institution research center with researchers from the University of California, Berkeley, Massachusetts Institute of Technology, University of California, San Francisco, Harvard University, and Stanford University.

Julie Felgar

Managing Director, Environmental Strategy and Integration
Boeing Commercial Airplanes

Julie Felgar, managing director of environmental strategy and integration at Boeing Commercial Airplanes, leads the team responsible for identifying opportunities to improve the company's and industry's environmental performance by working with a broad range of stakeholders across the enterprise and industry. Felgar is responsible for ensuring an integrated strategy and coordinated approach to environmental policy advocacy, biofuels commercialization, and marketing for Boeing Commerical Airplanes. She works closely with the Product Development Team in articulating design for the environment into future products.

Prior to her current role, Julie served as the director of international operations in Washington, D.C., where she represented Boeing Company interests with U.S. government agencies, embassies, and trade and professional organizations promoting commercial aircraft programs in the Americas and Asia.

Previously, Julie was the senior manager of government relations and licensing in global trade controls. As such, she was responsible for Boeing's dual-use license submissions to the U.S. government and for maintaining/developing the appropriate relationships within the government and the aviation industry, to aid in shaping the export control regulatory environment and facilitating enterprise business objectives.

Prior to her time at Boeing, Julie worked in the U.S. government in a series of roles related to export controls at the Department of Commerce, Bureau of Industry and Security. She graduated in 1997 with a master's degree in international studies/business from George Washington University and has a bachelor's degree in international studies from Florida State University. She is originally from Zimbabwe and is the active mother of three young sons.

Daniel Fishman

Technology Manager, Bioenergy Technologies Office
U.S. Department of Energy

Daniel B. Fishman is a technology manager with the Bioenergy Technologies Office at the U.S. Department of Energy. He joined the office in 2012. Prior to joining the Bioenergy Technologies Office, Daniel was a lead analyst with consulting firm BCS, Incorporated. Daniel received his Master of Science in aquatic science from the University of Michigan's School of Natural Resources and the Environment and has a background in aquatic ecology, dynamic ecosystem mathematical modeling, and harmful algal blooms. Daniel received a Bachelor of Science in environmental systems from Revelle College at the University of California, San Diego.

Brian Foody

President and Chief Executive Officer

Iogen Corporation

Brian joined Iogen in 1982 and is responsible for the strategic direction and overall operations of the company. Brian has been Iogen's CEO since 1986 and has a wide range of experience in the biofuel and biochemical industry. He has been responsible for the formation and operation of the company's critical strategic alliances and overseen Iogen's technology development and technology positioning. Under his leadership, Iogen has developed into a world leader in cellulosic ethanol and built a successful business manufacturing industrial enzymes. Brian holds bachelor's degrees in mechanical engineering and civil engineering and a master's degree in mechanical engineering from the Massachusetts Institute of Technology, all received in 1980.

Matt Garcia

Senior Science & Technology Policy Fellow, Jobs Strategy Council, U.S. Department of Energy, Office of the Secretary

Dr. Matthew Garcia received his PhD in Neuroscience from the University of Kentucky, and after completing his postdoctoral work, he participated in the AAAS Science & Technology Policy Fellowship for two years, at the U.S. Department of Energy (DOE), where he is now currently an Oak Ridge Institute of Science (ORISE) Senior Science and Technology Policy Fellow for the DOE's Jobs Strategy Council in the Office of the Secretary. There he is involved in the strategic planning, and analysis as it relates to energy education, energy workforce, innovation and economic development policy specifically, but in general to national and international assessment and analysis of science, technology and education policies in support of the DOE and Administrations initiatives in innovation, education and workforce training.

Dan Goodwin

Director of Corporate Affairs

Oberon Fuels Inc.

Oberon's director of corporate affairs, Dan Goodwin, is responsible for Dimethyl Ether market analysis and personal engagement with fleet owner/operators, equipment manufacturers, government officials, and advocacy groups. Dan leads the development efforts in bringing Dimethyl Ether to market as a clean-burning, cost-effective transportation fuel.

Prior to joining Oberon, Dan served as vice president of engineering and programs at Aethercomm Inc., where he managed the engineering team and program managers responsible for designing and bringing to market new microwave radio-frequency, solid-state power amplifiers and sub-systems for multiple prime defense contractors.

Before transitioning to the commercial sector, Dan served in the U.S. Marine Corps, attaining the rank of lieutenant colonel. He served with Navy, Marine Corps, and Air Force units as an F/A-18 and F-15C fighter pilot. He commanded a 175-person F/A-18 "Hornet" squadron aboard Marine Corps Air Station Miramar in San Diego County. Dan also served as a staff officer in the Pentagon, lobbying for Marine Corps issues with senior Department of Defense officials and members of Congress.

Dan earned a Master of Business Administration from Norwich University and a bachelor's degree, with merit, in systems engineering from the U.S. Naval Academy, where he earned the Brigadier General Hommel Award as the Outstanding Marine Graduate of his class.

Alison Goss Eng

Technology Manager, Bioenergy Technologies Office
U.S. Department of Energy

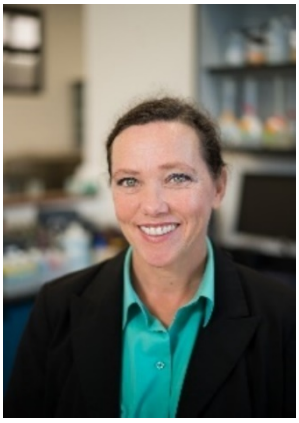
Alison Goss Eng is the program manager for advanced algal systems and feedstock supply and logistics for the Bioenergy Technologies Office (BETO) at the U.S. Department of Energy. In that role, she guides a diverse research portfolio developing technologies to provide a reliable, affordable, and sustainable biomass supply to the growing advanced bioenergy industry. Primary areas of focus are terrestrial and algal feedstock resource assessment, feedstock logistics (e.g., harvesting/dewatering, handling, collection, storage, preprocessing, and transportation), algae biology and cultivation, feedstock-conversion interface, and techno-economic/life-cycle analyses. She is the liaison between the Biomass Research and Development Board and the Biomass Research and Development Operations Committee, an interagency collaborative composed of senior decision-makers from federal agencies and the White House; she co-chairs the Biomass Research and Development Initiative Interagency Working Group on Feedstock Logistics.

She joined the office as a Presidential Management Fellow and previously served as the lead for sustainability research and development programming and the operations lead. Alison was responsible for establishing a portfolio of research within BETO focused on the environmental impacts of bioenergy production, which she originated as a program in 2009 with the 2011 Congressional Budget Justification. She received her doctorate from Purdue University in earth and atmospheric sciences and a bachelor's degree in biology, English, and communications. Her academic background focuses on modeling land-water-climate interactions, geographic information systems, hydrogeography, and human impacts on natural resources. Alison is the national team lead for Task 38 of IEA-Bioenergy, which is focused on climate change effects of biomass and bioenergy systems. Alison also represented the United States as a lead author on the bioenergy chapter of the *International Panel on Climate Change Special Report on Renewable Energy and Climate Change Mitigation*.

Valerie Harmon

President and Chief Executive Officer

Harmon Consulting Inc.



Harmon has 27 years of experience in microalgae production. Most recently, she is CEO at Harmon Consulting Inc., a business in support of microalgae biotechnology industry development. Prior to this, she served as senior director of research and development for Cellana LLC, overseeing cultivation, quality, and research. She served as director of cultivation, environmental, and safety systems for Aurora Algae Pty Ltd in Western Australia, where she was in charge of cultivation, quality, safety, and environmental systems. She worked in multiple roles of increasing responsibility for Cyanotech Corporation, a world leader in microalgae products: technical sales/animal feed sales manager, director of business development, and director of cultivation. Before working exclusively in microalgae, Harmon worked in the Shellfish Hatchery Management. Harmon holds a master's degree in agriculture, with an emphasis on aquaculture, fisheries economics, and business strategy, from Oregon State University and a bachelor's degree in biology from Davidson College.

Dr. Michael R. Hilliard

Research Staff

Oak Ridge National Laboratory

Michael Hilliard is a research staff member in the Oak Ridge National Laboratory Center for Transportation Analysis and the Center for Bioenergy Sustainability with a background in operations research, data analytics, and visualization. He works with multidisciplinary teams to develop analysis tools leveraging optimization, simulation, and interactive visualization for biofuels and transportation applications.

As a member of the *2016 Billion-Ton Report* (*BT16*) team, Mike helped model and analyze the logistics of moving biomass from county-level origins to refineries. He also developed most of the interactive visualization tools used in analysis, publication, and dissemination of the *BT16* results. The visualization tools allow users to select a combination of summary and detailed data specific to their interests using interactive aggregation and filtering.

In other projects, Dr. Hilliard developed optimization-based models such as the Biofuel Infrastructure, Logistics, and Transportation Model for supply chain analysis and the Biomass Location for Optimal Sustainability Model for determining bioenergy crop locations to meet specified environmental and economic objectives. He is currently developing an online tool for aggregation and visualization of bioenergy sustainability indicators.

Dr. Hilliard obtained a bachelor's degree in mathematics from Furman University and a doctorate in operations research from Cornell.

Joe Hrdlicka

Executive Director

Iowa Biotechnology Association

Since 2014, Joe Hrdlicka has been the executive director of the Iowa Biotechnology Association. He serves as chief executive of this 100-member organization of biotech companies, where he is responsible for annual budgeting and direction of all operations including strategic planning, member communication, events, and advocacy. Prior to that, he was vice president, public affairs for the Iowa Communications Alliance—the state's broadband industry organization. He was responsible for developing and influencing legislation in the Iowa General Assembly, monitoring federal and state regulatory developments, and maintaining positive relationships with congressional offices. Hrdlicka came to Iowa to work for the campaign of U.S. Rep. Jim Lightfoot in 1992. He then went on to serve as the congressman's district office director. He is a graduate of the University of Missouri-Columbia School of Journalism.

George Huber

Professor, Chemical and Biological Engineering

University of Wisconsin-Madison

George Huber is the Harvey Spangler Professor of Chemical Engineering at University of Wisconsin-Madison. His research focus is on developing new catalytic processes for the production of renewable liquid fuels and chemicals. In 2015, Thomson Reuters listed George as a "highly cited researcher," indicating that he is one of the "world's most influential scientific minds" who rank in the top 1% of cited scholars in the field of chemistry. He has authored over 118 peer-reviewed publications and has 13 issued patents. He is cofounder of Anellotech (www.anellotech.com). In June 2007, he chaired a workshop funded by the National Science Foundation and the U.S. Department of Energy. The workshop was entitled, "Breaking the Chemical and Engineering Barriers to Lignocellulosic Biofuels" (www.ecs.umass.edu/biofuels). George completed a postdoctoral stay with Avelino Corma at the Technical Chemical Institute at the Polytechnical University of Valencia, Spain (UPV-CSIC). He obtained his doctorate in chemical engineering from University of Wisconsin-Madison (2005), and his bachelor's (1999) and master's (2000) degrees in chemical engineering from Brigham Young University.

Jeffrey M. Jacobs

President and Chief Executive Officer

Ensyn Corporation

Jacobs was appointed president and CEO of Ensyn Corporation in November 2015. Founded in 1984, Ensyn is a leader in the production of renewable, low-carbon chemicals and fuels. Ensyn maintains direct operations in New York and Canada and has joint-venture interests in the United States, Brazil, Canada, and Malaysia.

Previously, Jacobs was vice president of Chevron Technology Ventures. In this capacity, he identified, sponsored, and demonstrated emerging technology and championed its integration into Chevron. Jacobs led strategic collaborations for developing advanced biofuels and acquiring primary carbon-emission offset credits that allowed the enterprise to reliably meet its compliance obligations. In this capacity, Jacobs led the formation of Catchlight Energy LLC and served as its chairman. The joint venture was launched by Weyerhaeuser and Chevron in 2008 to develop advanced biofuels from forest-based biomass.

Jacobs was previously responsible for the development of Chevron's hydrogen business and evaluated technologies and business models that enabled its use as a transportation fuel. Earlier, he led a team responsible for the design, sale, and delivery of integrated power quality, reliability, and distributed generation systems throughout the United States. Jacobs' experience in the unregulated energy industry has also included management and executive roles within Pennzoil, PG&E, and other companies. In these positions, he directed teams in all aspects of the energy value chain, analyzing and opening new markets, developing business models while leading new ventures, and directing energy and financial operations. Jacobs began his professional career as a geologist with Texaco, working in the Gulf of Mexico and later on Alaska's North Slope.

Jacobs is currently chairman of the U.S. Department of Energy's National Renewable Energy Laboratory's Bioenergy Technical Review Panel. In addition, he serves as the chairman of the Commercial Advisory Board for the U.S. Department of Energy's Algae Testbed Public-Private Partnership, centered at Arizona State University. Until his retirement from Chevron, Jacobs was a member of the Executive Steering Group for the Department of Energy's U.S. Drive Initiative. Jacobs was previously a member of the board of directors of the National Hydrogen Association and Fuel Cells Canada.

Jacobs holds a Bachelor of Arts in biology/geology from Amherst College, a Master of Science in marine studies/geology from the University of Delaware, and a Master of Business Administration in finance and economics from the Katz Graduate School of Business at the University of Pittsburgh.

K'Lynne Johnson

Non-Executive Board Member

FMC Corporation

Ms. K'Lynne Johnson serves as one of the 11 directors on the FMC Corporation's board of directors. From November 2011 to October 23, 2015, K'Lynne served as the CEO and president of Elevance Renewable Sciences Inc., a Chicago-based global specialty chemicals company that transforms natural oils into high-performance, cost-effective, and eco-friendly alternatives to petrochemicals. Elevance products and technologies are used in personal care products, detergents and cleaners, lubricants and additives, engineered polymers, and other specialty chemicals markets. Prior to that, Ms. Johnson was senior vice president of the global derivatives at Innovene Inc.

Ms. Johnson has worked within the oil and petrochemicals industry for over 17 years for Amoco, BP PLC, and Innovene. During this time, she has worked in a variety of roles covering general business management, e-commerce, supply-chain optimization, human resources management, strategy development, leadership development, and organizational design and effectiveness.

She served as senior vice president of global derivatives for Innovene Inc. In this role, she was responsible for profit and loss accountability for multiple global commodity and specialty chemicals businesses across North America, Europe, and Asia.

Ms. Johnson served as the head of the global derivatives segment at Innovene Inc. From May 2005 to June 2005, Ms. Johnson served as senior vice president of global derivatives for BP's olefins and derivatives business. From January 2004 to April 2005, Ms. Johnson led BP's global nitriles business as performance unit leader and vice president of business optimization. From September 2002 to December 2003, Ms. Johnson was responsible for the global development of BP's petrochemical e-commerce business, back office and demand supply planning automation. From February 2001 to September 2002, she served as a Director for demand supply planning at BP. From January 1999 to February 2001, Ms. Johnson served as a human resources manager for BP's global specialty intermediates chemical business and the petrochemical technology function.

She has been executive chairperson of Elevance Renewable Sciences Inc. since October 23, 2015. She has been an independent director at FMC Corp. since September 23, 2013. She served as a director of TPC Group Inc. from October 7, 2011 to December 20, 2012.

Ms. Johnson holds a bachelor's degree in organizational psychology from Brigham Young University and a master's degree in organizational behavior from the Marriot School of Management at Brigham Young University.

Kristen Johnson

Sustainability Technology Manager, Bioenergy Technologies Office
U.S. Department of Energy

Kristen Johnson is the sustainability technology manager with the U.S. Department of Energy's Bioenergy Technologies Office (BETO), where she coordinates BETO's efforts to understand and enhance the environmental and socio-economic benefits of advanced bioenergy while reducing potential negative impacts. She manages analysis and research projects that focus on landscape design, water quality and quantity, air emissions, climate, and biodiversity. She represents BETO on sustainability-related topics at diverse interagency and stakeholder meetings and serves as a representative to the Global Bioenergy Partnership and IEA-Bioenergy.

Kristen joined BETO in 2009 as a Presidential Management Fellow. She holds a Bachelor of Science in biology and a Master of Science in natural resources from the University of Michigan.

Stacy Jordahl

Vice President, Corporate Development & Strategic Sourcing

Ingevity

Ingevity (NYSE:NGVT) is an established pioneer of the bioeconomy with 2015 revenues of $968 million. The company develops, manufactures, and sells a wide range of specialty chemicals and materials derived from coproducts of the forest products industry. Products include performance chemicals used in asphalt paving, adhesives, agrochemical dispersants, publication inks, lubricants, petroleum, and other diverse industrial uses, as well as activated carbon utilized in automobile evaporative emission control systems and other purification applications. Key raw materials supporting the business include crude tall oil and lignin, which are each coproducts of the kraft pulping process, and hardwood sawdust.

Stacy earned a Bachelor of Business Administration from Iowa State University. With 20 years of experience in specialty chemicals, he has worked with Ingevity since 1999, serving in numerous senior business leadership roles during that time. He has developed strategies, recruited commercial and technical talent, built teams, created partnerships, invested in manufacturing capabilities, mitigated risks, and commercialized products. The result has been over $500 million growth in annual sales.

Stacy lives in Charleston, South Carolina, with his wife, Rana, daughter, Kennedy, and son, Mason.

Wes Jurey

Chairman

Texas Workforce Investment Council

Wes Jurey was president and CEO of the Arlington Chamber of Commerce from October 2001 to August 2015, having previously served as president and CEO of the Greater El Paso Chamber of Commerce since 1990. Within the first six months of his tenure at the Chamber, Wes launched the Arlington Research & Technology Initiative, a strategic plan for technology-led economic development that comprises seven projects to be implemented by 2007. One of the initiative's first projects, the Arlington Technology Incubator, was established in April 2003 in partnership with University of Texas at Arlington. Modeled after the Stanford Research Institute, the incubator serves as a facilitator, connecting the business community and private sector to the university identifying commercialized technology. Wes also serves on the advisory boards of University of Texas at Arlington's College of Business, the Southwestern Regional Advisory Council of Fannie Mae, the University of Texas System Metroplex Council, and the Alliance for Higher Education.

Virginia Klausmeier

Chief Executive Officer and Founder

Sylvatex Inc.

Virginia is the founder and CEO of a green nanochemistry company, Sylvatex Inc. She has been involved with the development of Sylvatex's nanoparticle technology since 2000, assisting the founding chemist, the late Dr. William Klausmeier, in laboratory testing and helping to develop the intellectual property portfolio. Virginia attended Singularity University, completing the executive program, and previously earned her Bachelor of Science in chemistry and economics and Master of Science at the University of Oregon. Virginia/Sylvatex currently has 10+ patents pending and has been a speaker at a number of domestic and international events alongside thought leaders within the petroleum and alternative fuels industry.

Prior to this venture, she managed the new development ideas for Fortune 500 medical-device companies and led the U.S. clinical and research. Virginia was recently featured as one of the "Top 10 women in biofuels" and was selected by *Forbes* as one of its "30 under 30 in Energy." Sylvatex has won numerous awards and funding at industry conferences and venture funding competitions (e.g., Silicon Valley LAUNCH & Greenstart) and has recently developed collaborations with Lawrence Berkeley National Laboratory and the U.S. Department of Agriculture. Virginia is currently active in Alliance of CEO's, Astia, and Silicon Valley Leadership Group, and is actively working on the growth and commercialization of Sylvatex Inc.

Keith Kline

Senior Research Scientist

Oak Ridge National Laboratory

Keith Kline is a senior researcher in the Environmental Sciences Division at Oak Ridge National Laboratory. Keith lived and worked in developing nations for over 22 years, promoting renewable energy systems, natural resource management, and biodiversity conservation.

His research interests include land-use change, causal analysis, sustainability standards, monitoring and evaluation to support continual improvement in quality of life, and productive ecosystems.

Jan Koninckx

Global Business Director of Biorefineries

DuPont

With integrated solutions for the production of fuel from biomass, DuPont is leading the industry in the commercialization of advanced biofuel technologies—such as cellulosic ethanol and biobutanol—in markets around the world. As the global business director for biorefineries at DuPont since 2007, Jan oversees the development of these processes and technologies.

In this position, Jan has championed renewable transportation fuels, testifying before the Senate Committee on Environment and Public Works in 2011, and has spoken at a variety of industry conferences and events, such as *The Atlantic*'s Next Generation Energy Forum, the Biotechnology Industry Organization's World Congress, the Fuel Ethanol Workshop, and workshops sponsored by the Biobased Industry Center at Iowa State University. He has been quoted in a number of news outlets, including *Politico*, *The New York Times*, *McClatchy News Service*, *Wilmington News Journal*, *Biofuels Digest*, *Ethanol Producer Magazine*, and *Chemical Processing Magazine*.

Jan has worked for DuPont for more than 20 years, since he joined the company in 1990 as part of Dordrecht Works in the Netherlands. He started his work in Lycra® spandex fiber production and worked in Teflon® fluoropolymer development in West Virginia and in ethylene copolymer production in Texas. In addition, Jan has held marketing and research and development management positions and had general business responsibility for chemicals and commodities.

Jan serves as the chair of the board for Butamax Advanced Biofuels LLC since its inception in 2009. He is also a member of the board of directors for Vivergo Fuels and received a DuPont Work Life Award in 2001. Prior to joining DuPont, Jan served as a lieutenant in the Belgian army and began his career as a research assistant at the University of Maryland.

Jan holds a Master of Science in chemical engineering from the University of Ghent in Belgium and a doctorate in chemical engineering from the University of Maryland.

Borislava Kostova

Technology Manager, Bioenergy Technologies Office
U.S. Department of Energy

Borislava Kostova has been a demonstration and technology manager at the Bioenergy Technologies Office in the U.S. Department of Energy since 2015.

Previously, she was at ExxonMobil Research and Engineering, where she took on a variety of roles in the optimization, logistics, scheduling and planning areas. She worked closely with North American, European, and Asia-Pacific chemicals and refineries, and also spent a few years working in one of the largest U.S. Gulf Coast refineries.

She holds a doctorate in chemical engineering from University of Massachusetts-Amherst, where she serves on the advisory board of the University of Massachusetts Chemical Engineering Department. She has also a Master of Science in chemical and biochemical engineering from the Slovak Technical University.

Devinn Lambert

Technology Manager for the Advanced Algal Systems

Bioenergy Technologies Office

Devinn Lambert is a technology manager for the Advanced Algal Systems Program in the Bioenergy Technologies Office (BETO) at the U.S. Department of Energy. She joined BETO in 2015 as a Presidential Management Fellow and brings with her a background in biotechnology and molecular biology research. Prior to working for BETO, Devinn attended the Watson School for Biological Sciences at Cold Spring Harbor Laboratory as a National Science Foundation Graduate Research Fellow. In 2013, Devinn was awarded the Gates Cambridge Scholarship, a prestigious international award for postgraduate students with demonstrated leadership experience and commitment to public service. As a Gates Cambridge Scholar, she pursued a master's degree in plant sciences at the University of Cambridge. Her thesis was entitled, "Rational design and engineering of the THI4 riboswitch for regulated transgene expression in microalgae." In her undergraduate career at Rutgers University, she was the 2013 salutatorian for the School of Environmental and Biological Sciences and a recipient of the Goldwater Scholarship.

Matthew Langholtz

Natural Resource and Environmental Economist

Oak Ridge National Laboratory

Dr. Matthew Langholtz is a natural resource economist in the Bioenergy Group at Oak Ridge National Laboratory. He is principal investigator of the Resource Analysis Project of the Bioenergy Resource and Engineering Systems Team at Oak Ridge National Laboratory.

His research interests include biomass resource economics, short-rotation woody crops, and bioenergy from forest resources. He has worked on valuation of nonmarket externalities and developed biomass supply curves for commercial projects, the South, and the United States.

Dr. Lieve Laurens

Senior Research Scientist, Bioprocess Research and Development Group

National Renewable Energy Laboratory

Dr. Laurens is a senior research scientist in the Bioprocess Research and Development Group at the National Renewable Energy Laboratory, which is primarily responsible for research in analytical biochemistry, investigating ways to understand lipid, carbohydrate, and protein production and composition in microalgae and other microorganisms. She has over 15 years of experience in biotechnology, applied to plants, algae, and microbial organisms with a focus on bioenergy; she has worked in national laboratories as well as in academic and industrial environments, covering algal and plant biochemistry, cell biomass conversion and characterization, techno-economic analysis, and biotechnology.

She is currently the lead on multiple projects for the Office of Energy Efficiency and Renewable Energy's Bioenergy Technologies Office on characterization and conversion (extracted lipids and hydrothermal liquefaction [HTL] oils). In addition, she holds a leadership position for biochemical characterization within the ATP3 network and the establishment of standardized methods in the algal biofuel sector. Her group has recently published a set of laboratory analytical procedures specifically tailored for algal biomass characterization. Dr. Laurens is also the chair of the Algae Biomass Organization's Technical Standards Committee, where she leads the development of a guidance document for Industrial Algae Measurements for biomass, bioproducts, and biofuels development from algae.

G. Jeremy Leong

Conversion R&D Fellow, Bioenergy Technologies Office

U.S. Department of Energy

G. Jeremy Leong is a conversion research and development (R&D) fellow for the Bioenergy Technologies Office at the U.S. Department of Energy's Office of Energy Efficiency and Renewable Energy. He received his Bachelor of Science in chemistry from the Rochester Institute of Technology, served as a post-baccalaureate research associate at the National Renewable Energy Laboratory's Chemical and Materials Science Center, and earned a doctorate in applied inorganic chemistry at the Colorado School of Mines.

His main research interest is in materials genomics, employing theoretical/simulation approaches in conjunction with novel synthesis and characterization techniques to guide the design of nanomaterials while developing a fundamental understanding of observed phenomena and properties at the nanoscale. His research has covered a wide spectrum of catalytic and storage applications, including bioenergy, hydrogen storage, fuel cells, and batteries. Since 2009, Jeremy has authored more than a dozen peer reviewed manuscripts and internal reports as well as presented more than 20 conference talks on the chemistry of materials: design, synthesis, characterization, and their practical applications.

Elliot Levine

Technology Manager, Bioenergy Technologies Office
U.S. Department of Energy

Since 2009, Elliott Levine has served as technology manager within the Department of Energy's (DOE) Bioenergy Technologies Office, where he presently provides strategic direction for biofuels and bioproduct demonstration projects in addition to biomass heat and power and cookstoves development activities (a developing world initiative). Elliott also serves as the designated federal official for the Biomass Research and Development (R&D) Technical Advisory Commission, which informs the Biomass R&D Board on strategic R&D needs.

At DOE, Mr. Levine has held a range of positions focused on the development, commercialization, and deployment of applied energy technologies for several energy-intensive industries, including glass and forest products. His efforts have led to the commercialization and market entry of several energy-saving technologies with significant energy- and environmental-saving impacts.

He previously was a DOE grants manager, providing federal support for energy-related inventions. Elliott previously directed Argonne National Laboratory's state-funded Technology Commercialization Center, where he assisted startup and early-stage companies with the skillful use of Argonne's technical resources.

Elliott began his career as an air quality analyst for Carolina Power & Light Co., where he managed and established air pollution modeling and monitoring programs for existing and new fossil-fueled power plants for the purpose of forecasting air pollution impacts and interpreting these plants' operational impact on federal and state air quality regulations.

Mr. Levine is experienced in technology development pathways, commercialization practices, new venture finance, program planning, and partnership development. Mr. Levine actively participates in technology transfer events. He is vice president of the board of the Technology Transfer Society's Washington, D.C., chapter.

Mr. Levine holds a Bachelor of Science in chemistry, a Master of Science in Public Health in environmental science and engineering, and a Master of Business Administration in finance.

Ike Levine

Professor, University of Southern Maine

Chief Executive Officer, Algal Aquaculture Professionals

Dr. Ira “Ike” Levine is a Fulbright Distinguished Chair and tenured professor of natural and applied science at the University of Southern Maine and the CEO of Algal Aquaculture Professionals LLC. Dr. Levine combines over 25 years of experience in applied algal farming, cultivar enhancement, and new product development. He is also the president and board chair of the Algae Foundation, which engages and funds educational outreach, research, and development in algae biomass cultivation and commercialization. Dr. Levine is engaged in education and exposure to the world of algae, efforts to raise the algal literacy awareness rate, and outreach and extension training of the next generation of algal scientists, farmers, aquaculturists, and marketers.

Alicia Lindauer

Sustainability Technology Manager

U.S. Department of Energy's Bioenergy Technologies Office

Alicia Lindauer is an analysis and sustainability technology manager with the U.S. Department of Energy's (DOE's) Bioenergy Technologies Office, where she manages strategic analysis and bioenergy sustainability activities. Alicia also serves as the Biomass Research and Development Board and Operations Committee liaison. In that role, she facilitates Board Operations Committee's communication, tasks, and meetings. Alicia joined the Bioenergy Technologies Office in 2008 as a Presidential Management Fellow. Since that time, she has contributed to the development and management of the biofuels distribution infrastructure and end-use platform and has managed thermochemical conversion activities. In the spring of 2010, she completed a four-month detail at the International Energy Agency in Paris, France, where she contributed to the development of a Biofuels Technology Roadmap. She served on DOE's Office of Energy Efficiency and Renewable Energy's Assistant Management Board from 2011–2012.

Alicia received a bachelor's degree in biology from Boston University and a master's degree in natural resources and environment from the University of Michigan. Her graduate thesis work involved the development of a mathematical model to assess economic and environmental implications of incorporating carbon storage into forest management objectives.

Eric McAfee

Chairman and Chief Executive Officer

Aemetis Inc.

Eric McAfee, chairman and CEO of Aemetis Inc., is an entrepreneur and venture capitalist with a lifelong commitment to agriculture and renewable energy. He has been a founding shareholder in several publicly-held energy companies, including the $800-million revenues company Pacific Ethanol, as well as Evolution Petroleum, Pacific Asia Petroleum, Particle Drilling Technologies, World Waste Technologies, and Solargen Energy. He has funded more than 25 companies as principal investor and has founded seven public companies with a combined high market value of $4 billion.

At Aemetis, Mr. McAfee has created a company that, with the largest biofuel plant in California and a biodiesel plant serving the rapidly growing Indian market, fully represents his passion for renewable energy and biotechnology. Aemetis is a market leader in renewable fuels and chemicals, producing ethanol, biodiesel, and glycerin for commercial customers in the United States, Europe, and Asia.

Tatie McDonald

Senior Policy Advisor, Holland & Knight

Taite R. McDonald is a senior policy advisor in Holland & Knight's Washington, D.C., office and a member of the firm's Public Policy & Regulation Group. Ms. McDonald works with energy and clean technology companies to develop and execute strategies for access to government grants, loans and contracts across multiple states and federal agencies, including the U.S. Department of Energy (DOE), U.S. Department of Agriculture and U.S. Department of Defense (DOD).

Ms. McDonald provides counsel to companies seeking millions of dollars of funding and hundreds of millions of dollars in low-cost financing. She advises clients on securing multimillion-dollar procurement contracts and plays a pivotal role in assisting clients to overcome gating obstacles by forging key partnerships with federal agencies and other government-facing bodies. Ms. McDonald also helps companies develop strategies for leveraging public and private financing mechanisms to successfully commercialize innovative energy technologies.

Additionally, Ms. McDonald is a frequent speaker on topics related to renewable energy and government finance and has spoken at dozens of conferences and events, including the BIO World Congress, the Advanced Biofuels Leadership Conference, the Association of Defense Communities Advanced Energy Summit, the Power-Gen International Finance Forum and the Cleantech Group's Global Cleantech 100 Summit.

Dr. Paul Miles

Manager, Engine Combustion Department

Sandia National Laboratories

Paul Miles has actively researched in-cylinder flow, mixing, and combustion processes in both spark ignition and compression ignition engines since 1992, and he has led the light-duty diesel engine research program at Sandia as a distinguished member of the technical staff until moving into management in 2014. His particular expertise is in fluid mechanics and advanced optical diagnostics, but he has a broad range of interests encompassing thermodynamics, combustion, and analysis of energy systems.

Paul is the manager of engine combustion research at Sandia National Laboratories and holds an adjunct/guest professor appointment in the Department of Energy Sciences at Lund University in Sweden and the School of Advanced Optical Technologies at Friedrich-Alexander University in Erlangen, Germany. He is a Fellow of the Society of Automotive Engineers (SAE), and is a past recipient of the SAE Horning, Myers, and McFarland awards. He is a past co-chair of the SAE Powertrain, Fuels, and Lubricants activities and serves on the advisory committees of several international conferences. Paul received his bachelor's degree in mechanical engineering from Georgia Tech and his doctorate in mechanical and aerospace engineering from Cornell University.

Dr. Ernest Moniz

Secretary of Energy, United States of America

As secretary of energy, Dr. Ernest Moniz is tasked with implementing critical Department of Energy missions in support of President Obama's goals of growing the economy, enhancing security, and protecting the environment. This encompasses advancing the President's all-of-the-above energy strategy, maintaining the nuclear deterrent and reducing the nuclear danger, promoting American leadership in science and clean energy technology innovation, cleaning up the legacy of the Cold War, and strengthening management and performance.

Prior to his appointment, Dr. Moniz was the Cecil and Ida Green Professor of physics and engineering systems at the Massachusetts Institute of Technology (MIT), where he was a faculty member since 1973. At MIT, he headed the Department of Physics and the Bates Linear Accelerator Center. Most recently, Dr. Moniz served as the founding director of the MIT Energy Initiative and as director of the MIT Laboratory for Energy and the Environment, where he was a leader of multidisciplinary technology and policy studies on the future of nuclear power, coal, nuclear fuel cycles, natural gas, and solar energy in a low-carbon world.

From 1997 until January 2001, Dr. Moniz served as under secretary of the Department of Energy. He was responsible for overseeing the department's science and energy programs, leading a comprehensive review of nuclear weapons stockpile stewardship, and serving as the secretary's special negotiator for the disposition of Russian nuclear materials. From 1995 to 1997, he served as associate director for science in the Office of Science and Technology Policy in the Executive Office of the President.

In addition to his work at MIT, the White House, and the Department of Energy, Dr. Moniz has served on a number of boards of directors and commissions involving science, energy, and security. These include President Obama's Council of Advisors on Science and Technology, the Department of Defense Threat Reduction Advisory Committee, and the Blue Ribbon Commission on America's Nuclear Future.

A member of the Council on Foreign Relations, Dr. Moniz is a fellow of the American Association for the Advancement of Science, the American Academy of Arts and Sciences, the Humboldt Foundation, and the American Physical Society.

Dr. Moniz received a Bachelor of Science degree, summa cum laude, in physics from Boston College, a doctorate in theoretical physics from Stanford University, and honorary degrees from the University of Athens, Boston University, University of Erlangen-Nuremberg, Iowa State University, University of Massachusetts-Dartmouth, Michigan State University, and Universidad Pontificia de Comillas.

Joel Murdock

Managing Director

FedEx

Joel Murdock is managing director of strategic projects, leading an engineering team that investigates and develops new, innovative technologies to seek breakthrough advancements that will benefit FedEx Express' transportation system by capitalizing upon principle improvements in areas of cost, quality, speed, efficiency, customer service, and customer satisfaction. The types of projects vary from alternative fuels to safety-related projects—such as a fire suppression system, counter-man portable air defense system, and head-up display/enhanced flight vision system—to airspace capacity and efficiency improvement programs—such as a local area augmentation system; communication, navigation, surveillance/air traffic management; and stage IV noise and emissions—to projects not directly related to the aviation side of the business. Joel's department is actively involved with ASTM in helping to establish alternative fuel certification standards, and through the Commercial Aviation Alternative Fuel Initiative, the department is working to develop fuel off-take agreements to enable emerging alternative fuel companies to transition from the laboratory to production. Joel is also working with the U.S. Department of Agriculture and is co-chair of the Southern Region with an objective of fostering alternative fuel development within the region. Joel earned a Bachelor of Science in electrical engineering at Christian Brothers University, a Master of Science in electrical engineering at the Georgia Institute of Technology, and a Master of Engineering Management at the University of Missouri-Rolla.

Prakash Nepal

Research Assistant Professor

North Carolina State University

Dr. Nepal received his undergraduate degree in forestry from Nepal, a master's degree in forest management from Germany, and a doctorate in forest resources from the Department of Forestry at Mississippi State University. Dr. Nepal is currently working at the Department of Forestry and Environmental Resources at North Carolina State University as a research assistant professor. Dr. Nepal maintains the United State Forest Products Module developed at the U.S. Department of Agriculture Forest Service, Forest Products Laboratory, which is widely used in assessing U.S. forest products market implications for various scenarios. His current research focuses on long-term projection of the forest products market and the forest products market impacts of forest-based carbon mitigation and wood energy use.

Franklin Orr

Under Secretary for Science and Energy
U.S. Department of Energy

Dr. Franklin (Lynn) M. Orr was sworn in as the under secretary for science and energy on December 17, 2014.

As the under secretary, Dr. Orr is the principal advisor to the secretary and deputy secretary on clean energy technologies and science and energy research initiatives. Dr. Orr is the inaugural under secretary for the office, which was created by Secretary of Energy Ernest Moniz to closely integrate the U.S. Department of Energy's (DOE's) basic science, applied research, technology development, and deployment efforts. As under secretary, he oversees DOE's offices of Electricity Delivery and Energy Reliability, Energy Efficiency and Renewable Energy, Fossil Energy, Indian Energy Policy and Programs, Nuclear Energy, and Science. In total, these programs steward the majority of DOE's national laboratories (13 of 17).

Prior to joining DOE, Dr. Orr was the Keleen and Carlton Beal Professor Emeritus in the Department of Energy Resources Engineering at Stanford University. He joined Stanford in 1985. He served as the founding director of the Precourt Institute for Energy at Stanford University from 2009 to 2013. He was the founding director of the Stanford Global Climate and Energy Project from 2002 to 2008, and he served as dean of the School of Earth Sciences at Stanford from 1994 to 2002. He was head of the miscible flooding section at the New Mexico Institute of Mining and Technology's New Mexico Petroleum Recovery Research Center from 1978 to 1985, a research engineer at the Shell Development Company Bellaire Research Center from 1976 to 1978, and assistant to the director at the U.S. Environmental Protection Agency's Office of Federal Activities from 1970 to 1972. He holds a doctorate from the University of Minnesota and a Bachelor of Science from Stanford University, both in chemical engineering.

Dr. Orr is also a member of the National Academy of Engineering. He served as a member of the board of directors of the Monterey Bay Aquarium Research Institute from 1987 to 2014, and was a member of the board of trustees of the David and Lucile Packard Foundation from 1999 to 2008, for which he has also chaired the Science Advisory Panel for the Packard Fellowships in Science and Engineering from 1988 to 2014. He served as a member of the 2008–2009 National Research Council Committee on America's Energy Future.

Mario Portela

Managing Director

TPG Alternative & Renewable Technologies

Mario Portela is an investor and managing director of TPG Alternative & Renewable Technologies (TPG ART). Prior to joining TPG in 2009, Mario held several senior management positions at Lyondell, where he was last an officer and vice president for strategy and corporate development. Mario has a Bachelor of Science in engineering from IMPE, Lisbon, and has studied finance and marketing throughout his academic career at ESADE, INSEAD, IMD, and the Wharton School of the University of Pennsylvania. Mario currently serves on the boards of directors of Advantek Waste Management Services LLC, Anuvia Nutrients LLC, ChemEor Inc., and EBES S.A.

Matthew Posewitz

Professor, Department of Chemistry

Colorado School of Mines

Professor Posewitz received his doctorate in biochemistry from Dartmouth College. Following postdoctoral research at the National Renewable Energy Laboratory, he joined the Department of Chemistry at the Colorado School of Mines in 2003. His research team studies photosynthesis, metabolic networks, carbon partitioning, and cell wall biosynthesis in photosynthetic microorganisms. These efforts inform applied research projects aimed at engineering improved strains of algae and cyanobacteria for the synthesis of renewable biofuels and other bioproducts.

Anna Rath

Chief Executive Officer

Nexsteppe

Anna Rath is a pioneer in the development of the dedicated energy crop industry. She founded NexSteppe in 2010 to develop and commercialize optimized crops for the biofuels, biopower, biogas, and biobased product industries. Today, NexSteppe has established operations in the United States, Brazil, Europe, and Asia and has successfully brought to market and sold its first products in Brazil and the United States. Commercial partners are trialing its products in more than 20 countries on five continents.

Rath was formerly vice president of commercial development for Ceres, where she built and launched their energy crop business. Prior to Ceres, she was a consultant with McKinsey focused on corporate strategy, assessment of new business initiatives, and business building in various technology sectors. She holds a Juris Doctor from Yale Law School, a Master of Science in genetics from the University of Michigan, and a Bachelor of Arts in Biology from Macalester College. She also serves on the Biotech Industry Organization's Industrial and Environmental Section Governing Board.

Valerie Reed

Senior Advisor, Bioenergy and Natural Resources
U.S. Department of Agriculture

Valerie Reed is the current senior advisor for bioenergy and natural resources within the Office of the Chief Scientist at the U.S. Department of Agriculture (USDA). She is also the deputy director of the Bioenergy Technologies Office within the Office of Energy Efficiency and Renewable Energy at the Department of Energy (DOE), splitting her time between the two agencies.

Valerie has lead efforts on utilization of biomass for fuels and chemicals for over 22 years, resulting in significant cost reductions in the cost of cellulosic ethanol from approximately $9/gallon to current projected cost of $2.15/gallon. She has helped initiate research pathways that now include technologies that are projected to reduce the cost of diesel and jet fuel to <$3/gallon by 2017, and is actively working to demonstrate these technologies at commercial scale through the partnerships the Bioenergy Program supports. Valerie has been recognized for four consecutive years by *Biofuels Digest*'s "Top 100 People in Bioenergy" for her roles to date.

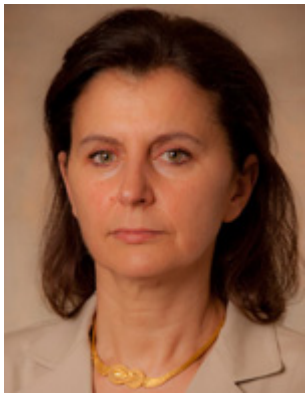
In this split activity, Valerie is working on developing a close collaborative effort at USDA and DOE to develop a bioeconomy model that will enable maximum benefits from the nation's robust biomass resources, providing for a sustainable biomass industry that can meet the needs of the nation and the world for food, feed, fiber, and energy.

Valerie holds a doctorate in biochemistry from Georgetown University. In addition to her programmatic activities, Valerie is a founding member of the Metabolic Engineering Working Group, which is an interagency effort to advance metabolic engineering technologies for industrial, agricultural, and human needs; she has also co-chaired the Interagency Working Group on Conversion Technologies established through the Biomass Research and Development Board to coordinate the federal effort on bioenergy.

Dr. Theodora Retsina

Chief Executive Officer

American Process Inc.



Dr. Theodora Retsina is the CEO of American Process. She received a bachelor's degree and doctorate in chemical engineering from Imperial College, University of London, and is a licensed professional engineer in the United States. She is the author of 25 issued patents; in addition, she has 200 patents pending and is a professional engineer.

Her career began at Parsons & Whittemore, where she held positions as project engineer, project manager, and process manager in various international construction projects. In 1995, she founded American Process, a company that focuses on value enhancement of the forest products industries through process integration and biorefinery technology applications. American Process also provides engineering, procurement, and construction management and process integration consulting services. This unique blend of experience enables the company to develop technically and financially viable biorefineries. Since 2005, the company has been developing technologies for the conversion of biomass into cellulosic sugars to be used in the production of biofuels and biobased chemicals. American Process owns two patented cellulosic technologies, Green Power+® and AVAP®. The company has built two demonstration-scale biorefineries to showcase its integrated cellulosic technologies and create templates for the commercial-scale plants that will follow.

For more information about Theodora and American Process, please visit the company's website at www.americanprocess.com.

Jonathan Rogers

Energy Consultant

Energetics Incorporated

Jonathan Rogers is an energy consultant with the Science and Technology Division of Energetics Incorporated. He leads technical and strategic analysis teams to advise government renewable energy research, development, demonstration, and deployment programs. Jonathan is one of the authors of Chapter 2, Current Biomass Uses, of the *2016 Billion-Ton Report.* He has also developed several analyses on behalf of the Biomass Research and Development Board and Interagency Working Group to support the Bioeconomy Vision. This work evaluates the products and economic and environmental impacts that may result from the current use and the future potential use of ~1 billion tons of biomass resources. Jonathan holds his bachelor's and master's degrees in chemical and biomolecular engineering from Johns Hopkins University.

Ian Rowe

Technology Manager, Bioenergy Technologies Office
U.S. Department of Energy

Ian Rowe is a technology manager for the Bioenergy Technologies Office (BETO) within the Office of Energy Efficiency and Renewable Energy at the Department of Energy. After receiving his bachelor's degree from Millersville University, he earned his doctorate in biochemistry from the University of Maryland where he studied the bacterial osmotic shock response and membrane channel proteins. In the lab, his work has covered a wide variety of techniques related to molecular biology, biophysics, electrophysiology, and genetics. Since joining BETO in 2015, his focus has been on the biochemical aspects of biomass conversion to biofuels and bioproducts.

Martin Sabrasky

CEO, Cellana LLC

Mr. Sabarsky has served as CEO of Cellana since 2011. Prior to this, he had been CFO and COO of Cellana from 2008 to 2010. Prior to joining Cellana, he led the corporate development function at Diversa Corp. as vice president of corporate development. Before Diversa, Mr. Sabarsky worked as an investment banker with Bear Stearns, where he focused on financings and mergers and acquisitions within the life sciences industry. Prior to joining Bear Stearns, he worked as a transactional attorney with Latham & Watkins. Mr. Sabarsky has a bachelor's degree in biology and political science from Brown University, a Juris Doctor from Harvard Law School, and a Master of Business Administration from the Rady School of Management at the University of California, San Diego. He is currently the chairman of the board of directors of the Algae Biomass Organization.

Dr. Erin Searcy

Bioenergy Technologies Department Manager

Idaho National Laboratory

Dr. Erin Searcy is current the Bioenergy Technologies Department manager at the Idaho National Laboratory (INL). Dr. Searcy has had several roles at INL since joining in 2008, including bioenergy platform analysis lead, principle investigator on several biomass feedstock logistics and sustainability projects, and techno-economic analyst. Dr. Searcy spent almost three years supporting the Bioenergy Technologies Office in Washington, D.C., as a management and operations person employed by INL.

After completing her bachelor's and master's degrees in engineering, Dr. Searcy worked as an environmental engineering consultant. She holds a doctorate in mechanical engineering and acted as a sessional instructor in the Department of Mechanical Engineering at the University of Alberta.

Karl Seck

President and Chief Executive Officer

Mercurius Biorefining Inc.

Karl currently serves as the president and CEO of Mercurius Biorefining, a producer of drop-in biofuels from nonfood biomass feedstocks, including waste from municipalities, forestry, and agriculture. Karl previously served as director of technology development at Whole Energy Fuels, where he planned, implemented, and evaluated research programs for second-generation biofuels technologies. Karl has spent most of his career in the petroleum refining field as a process engineer. He has held design, technical services, optimization, and operations management positions with three oil companies—ConocoPhillips, Sunoco, and Clark Refining and Marketing. Karl started his own process and optimization consulting service for the petroleum industry in 2001. He has been leading Mercurius since 2009. Karl holds a Bachelor of Science in chemical engineering from the University of Kansas.

Bryan Sherbacow

Founder, President, and Chief Operating Officer

AltAir Fuels

Bryan Sherbacow serves as AltAir Fuels' president, COO, and founder. AltAir Fuels is a refiner of environmentally sustainable feedstock or the production of jet and diesel fuels. AltAir's agreement in 2014 with United Airlines was the first multiyear fuel supply contract with a commercial carrier. Before Bryan founded AltAir, he served as the COO of Ethanex Energy Inc., and he currently serves as the director of the Armistead Group LLC.

Blake Simmons

Division Director, Biological Systems and Engineering

Lawrence Berkeley National Laboratory

Dr. Simmons attended the University of Washington and obtained a Bachelor of Science in chemical engineering in 1997. He then attended graduate school at Tulane University after receiving a Louisiana Board of Regents fellowship. He graduated with a doctorate in chemical engineering from Tulane in 2001. Dr. Simmons joined Sandia National Laboratories (Livermore, California) in 2001 as a senior member of the technical staff, serving as a member of the Materials Chemistry Department. He was promoted to manager of the Energy Systems Department in 2006. The primary focus of the department was the development of novel materials-based solutions to meet the nation's growing energy demands. He also served as the senior manager of the Advanced Biomanufacturing Group at Sandia and as the laboratory relationship manager for the Bioenergy Technologies Office.

In 2007, he was one of the principal co-investigators of the Joint BioEnergy Institute (JBEI, www.jbei.org), a ten year, $259 million project funded by the U.S. Department of Energy and tasked with the development and realization of next-generation biofuels produced from nonfood crops. He is currently serving as the chief science and technology officer and the vice president of the Deconstruction Division at JBEI, where he leads a team of 45 researchers working on advanced methods of liberating fermentable sugars from lignocellulosic biomass. In 2016, he left Sandia and joined Lawrence Berkeley National Laboratory as the division director of Biological Systems and Engineering. He has over 300 publications, book chapters, and patents. His work has been featured in the *New York Times*, BBC, the *Wall Street Journal*, the *San Francisco Chronicle*, *Fast Company*, and the KQED televised science program *Quest*.

Jeff Skeer

Senior Programme Officer – Technology Cooperation

International Renewable Energy Agency

Jeff Skeer is senior programme officer for technology cooperation at the International Renewable Energy Agency, where he is working to assess sustainable bioenergy potential and technologies and strategies to realize that potential. Previously, he was actively engaged in the launch of the U.S.-EU Energy Council, served as the U.S. Department of Energy's (DOE's) delegate to the Energy Working Group of the Asia-Pacific Economic Cooperation (APEC) and chaired the APEC Biofuels Task Force. At the Asia Pacific Energy Research Centre in Tokyo from 2002 to 2004, Jeff led studies on natural gas market reform and the regional benefits of electric power grids. From 1996 to 2002, he served as a U.S. delegate to the Standing Group on Long-Term Cooperation of the International Energy Agency (IEA). From 1989 to 1996, he worked at IEA in Paris, catalyzing multilateral agreements on electric demand-side management, hybrid vehicles, hydropower and the environment, and photovoltaic power systems. He began his career at DOE's Office of Electricity Policy, where he worked from 1980 to 1989. He holds a bachelor's degree in public administration from the Woodrow Wilson School of Public and International Affairs at Princeton University (1978) and a master's degree in public policy from the Kennedy School of Government at Harvard (1980).

Dan Smolen

Managing Director

The Green Suits LLC

Dan Smolen is an “empowerer” of professional talent in green business and social good. He is founder and managing director of the talent recruitment and career development resource, The Green Suits LLC.

As a nationally recognized executive recruiter, serial entrepreneur, marketer, environmental public policy activist, thought leader, and author of *Tailoring the Green Suit: Empowering Yourself for an Executive Career in the New Green Economy*, Smolen brings a unique perspective to career development and workforce issues in several sectors, including: sustainability, cleantech, and bioenergy.

He is a graduate of the Roy H. Park School of Communications at Ithaca College in Ithaca, New York.

Bryce Stokes

Senior Advisor

CAS-Navarro Joint Venture (CNJV)

Dr. Stokes has over 36 years of experience in R&D and program management. His research has focused on forest harvesting machine and system design and management; biomass recovery and utilization; environmental impacts reduction; carbon accounting; carbon sequestration management; climate change issues; forest productivity and genomics; short rotation woody crops; life cycle analysis; and sustainability criteria and indicators. His experiences include as a Forest Engineer for Weyerhaeuser Company, and a Research Engineer, Project Leader, and National Program Leader for the USDA Forest Service. Since his federal retirement, he has been providing technical and analytical support to the Bioenergy Technologies Office as a Senior Advisor with AST. He has held leadership positions in several departmental and interagency bioenergy and climate change working groups. He served as a Congressional Fellow in 2002. Dr. Stokes has had national leadership positions in the Council on Forest Engineering, Forest Products Society, and the American Society of Agricultural and Biological Engineers. He served as a U.S. representative or as Task Lead or Associate Task Lead for several International Energy Agency Tasks for about 20 years. He has over 140 scientific and technical publications. He co-led the update of the Billion Ton Report. He received his B.S. and M.S. from Mississippi State University in engineering and Ph.D. from Auburn University in forestry.

David Sudolsky

President and Chief Executive Officer

Anellotech

David Sudolsky is the president & CEO of Anellotech. Under his leadership, Anellotech has entered into joint research and development partnerships with Johnson Matthey, IFPEN, Axens, and secured investments from world-class, strategic industry partners including the Japanese beverage giant Suntory, helping fund the development of Anellotech's thermal catalytic biomass conversion technology. The company's pioneering process economically produces biobased aromatics, including paraxylene and benzene, from nonfood biomass.

Prior to joining Anellotech, David was a leader in several biotechnology, specialty pharmaceutical, and bioprocessing start-ups, including the vice president of business development for Dura Pharmaceuticals, which was sold for $1.8 billion. David has hands-on chemical engineering experience in process design and refinery plant start-ups with Union Carbide and did business management consulting with Booz, Allen, & Hamilton.

David attended Columbia University and earned a Master of Business Administration in marketing and finance from the university's Business School, as well as a Bachelor of Science in chemical engineering.

Suresh Sureshwaran

Director, Division of Community and Education

U.S. Department of Agriculture – National Institute of Food and Agriculture

Dr. Sureshwaran is currently the director of the Division of Community and Education (DOCE) at the U.S. Department of Agriculture's (USDA's) National Institute of Food and Agriculture. He provides leadership for a staff of 16 who collectively administer 20 grant programs with annual appropriation of about $200 million. The grant programs support training in STEM disciplines related to the USDA mission (i.e., on food, agriculture, natural resources, and human sciences) and community development through programs at minority-serving institutions. Suresh also provides leadership for the agency's Workforce Plan and the Human Capital Planning Committee.

Before becoming the director of DOCE in 2013, Dr. Sureshwaran administered several research, education, extension, and outreach grant programs in the areas of rural and community development; agricultural marketing and international trade; agribusiness development; sustainability of small- and medium-sized farms; small business development; and scholarships and fellowships for training the next generation of scientists. Suresh has a doctorate in agricultural economics and nearly 15 years of teaching, research, and outreach experience with small farmers and businesses in South Carolina. Suresh joined USDA in 2001.

Daniela Thran

Head of Department of Bioenergy and Bioenergy Systems, Helmholtz Centre for Environmental Research, Germany and Deutsches Biomasseforschungszentrum

Prof. Daniela Thrän studied environmental engineering at the Technical University of Berlin. After completion, she obtained her PhD at the University of Weimar, Germany. Daniela Thrän is an accomplished researcher, having held positions at both the University of Potsdam and Stuttgart. In 2003, she became the Department Head of "Bioenergy Systems" at DBFZ - Deutsches Biomasseforschungszentrum gGmbH. In 2011 she also took the lead of the newly established department „Bioenergy" at the Helmholtz Centre for Environmental Research GmbH (UFZ). Professor Thrän is currently leading a multidisciplinary team of about 50 scientists, investigating different national and international research projects focusing on areas of; biomass potentials, bioenergy pathways and their assessment, bioeconomy material flows and sustainability assessment. Since the end of 2011 Daniela Thrän holds the chair „Bioenergy Systems" at the University of Leipzig. Prof. Thrän is a member of the German Bioeconomy Council of Germany and of the European bioeconomy stakeholder panel. As well she participates in various working groups, both national, such as the German Sustainable Development solution Network (SDSN), Institute for Standardization (DIN) and international, such as, the International Organization for Standardization (ISO), of the International Energy Agency (IEA Bioenergy Task 40) and European Biofuels Technology Platform (EBTP).

Chris Tindal

Director for Operational Energy
Office of the Deputy Assistant Secretary of the Navy for Energy

Chris Tindal is currently the director for operational energy at the U.S. Department of the Navy. As director, he works as the Navy leader of the U.S. Department of Agriculture/Department of Energy/Department of the Navy Alternative Fuels Initiative, which is developing programs to launch the advanced biofuels industry. Chris leads the Great Green Fleet effort, which strives to have 50% of the Department of Navy's energy originate from alternative sources by 2020.

Bryan Tracy

Chief Executive Officer

White Dog Labs Inc.

Bryan Tracy, Ph.D., is the CEO and cofounder of White Dog Labs Inc. (WDL). Previously, he was CEO and cofounder of Elcriton, which was acquired in 2014. WDL is inventing and commercializing biochemical technologies to produce renewable chemicals and fuels through novel technologies that simultaneously consume carbohydrate and gaseous feedstocks in fermentation. WDL is particularly focused on bio-acetone, -isopropanol, and -ethanol production. Bryan is an expert in genetic engineering of bacteria and fermentation process development. He is also a supplemental faculty member at the University of Delaware, a technology to market consultant for the Advanced Research Projects Agency-Energy, founding member of the ACS Green Chemistry Institute Biochemical Technology Leadership Roundtable, and board chair of the Delaware Sustainable Chemistry Alliance. Bryan is also passionate about public service and youth development, whereby he serves as board chair of the Forum for the Advancement of Minorities in Engineering, is an inaugural mentor in the Delaware Youth Leadership Network, and is a Leadership Delaware Fellow. Bryan received a Bachelor of Science in chemical and biomolecular engineering from North Carolina State University—during which time he worked for Novozymes N/A—and a doctorate from Northwestern.

Goutham Vemuri

Researcher, Denmark Technical University, Sasya Bio

Goutham is a chemical engineer by training with a focus on microbial biotechnology. He received his master's degree and Ph.D. from the University of Georgia, Athens, and has proven track record of taking projects from concept to commercialization. He has a broad and deep technical competence in process optimization and techno-economic analysis.

Gale Wichmann

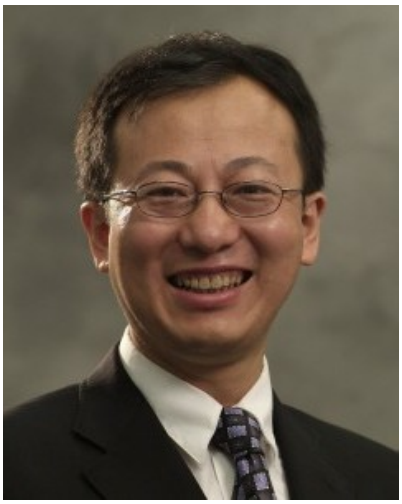
Senior Scientist, Amyris

Dr. Gale Wichmann is a project leader in the Biology Department at Amyris, where she is currently running an external collaboration to produce new molecules from yeast for the food/nutrition sector. Previously, she was the principal investigator for the Amyris effort within the U.S. Department of Energy–funded National Advanced Biofuels Consortium (NABC). Within the NABC (2010–2013), Amyris developed the technology to produce renewable molecules, including its biodiesel and biojet fuel, from cellulosic feedstocks. Since the end of the NABC, she has led the effort to continue to develop Amyris's ability to produce molecules from cellulosic feedstocks. Prior to joining Amyris in 2006, she was a postdoctoral fellow in the Department of Plant and Microbial Biology at the University of California, Berkeley. She received her doctorate in genetics from the University of Chicago and her Bachelor of Arts in molecular and cellular biology from Northwestern University.

Joshua S. Yuan

Biological and Chemical Design of Lignin Conversion for Integrated Biorefinery

Texas A&M Univeristy and Cleamol LLC



Dr. Joshua S. Yuan is an associate professor in the Department of Plant Pathology and Microbiology at Texas A&M University. He also serves as the director for the Synthetic and Systems Biology Innovation Hub, a university-funded initiative to promote interdisciplinary engineering, biological, and chemical design of organisms and processes. Dr. Yuan has developed a rigorous program in sustainable production of fuels and chemicals. His research focused on two areas including redesign of photosynthesis for producing terpene hydrocarbons as well as biological and chemical design of lignin and biomass conversion toward integrated biorefinery. Besides fundamental research, Dr. Yuan is actively involved in technology commercialization and serves as the chief scientific advisor for Cleamol LLC and SynShark LLC. Dr. Yuan received his doctorate with a focus on functional genomics (major) and statistics (minor) from the University of Tennessee (2007). He also holds a Master of Science in plant sciences from the University of Arizona (2001) and a Bachelor of Science in biology (major) and international economics (minor) from Fudan University (1997). Most recently, Dr. Yuan was the director of University of Tennessee Institute of Agriculture Genomics Hub from 2004 to 2007, and the microarray core manager at the Gallo Center of the University of California, San Francisco from 2001 to 2004.

Luca Zollo

Founder

VerdeNero LLC

Luca Zullo is the founder of VerdeNero LLC, a service and consulting firm to the alternative resources industry. In this role, among others, Zullo has focused on the commercial development of technology to upgrade bio-ethanol into higher value chemicals and the diversion of waste materials from landfills as an alternative feedstock. His principal professional interest is supporting the transition of emerging technologies into the marketplace identifying long-term economically and technically viable strategies. He started his career at Shell Research in the Netherlands, where he was involved in the modeling and design of novel oil and petrochemical processes. At Cargill, he focused on biofuel and bioenergy in plant operation with a particular emphasis on waste-to-energy and second-generation biofuels. He also led a group that developed both domestic and international projects to produce renewable energy and reduce carbon footprint in the agricultural and agricultural commodities processing sectors. He holds a degree in chemical engineering from the University of Padova, Italy, and a doctorate in chemical engineering from Imperial College of Science, Technology and Medicine of London, United Kingdom.