

Genomic Sciences Program - List of Awards			
SYSTEMS BIOLOGY OF BIOENERGY-RELEVANT MICROBES TO ENABLE PRODUCTION OF NEXT-GENERATION BIOFUELS AND BIOPRODUCTS: DE-FOA-00002448			
Title	Lead PI	Institution	Location
Energy and Carbon Optimized Conversion of Lignocellulose to Biobased Chemicals by Extreme Thermophiles	Adams, Michael	The University of Georgia Research Foundation, Inc.	Athens, GA
Converting methoxy groups on lignin-derived aromatics from a toxic hurdle to a useful resource: a systems-driven approach	Marx, Christopher	Regents of the University of Idaho	Moscow, ID
Cell-free systems biology of an atypical glycolytic pathway	Olson, Daniel	Trustees of Dartmouth College	Hanover, NH
Cell-free systems biology of an atypical glycolytic pathway	Bomble, Yannick	Collaborating Lab: National Renewable Energy Laboratory (NREL)	Golden, CO
Engineering Synthetic Anaerobic Consortia Inspired by the Rumen for Biomass Breakdown and Conversion	O'Malley, Michelle	Regents of the University of California, Santa Barbara	Santa Barbara, CA
Engineering Synthetic Anaerobic Consortia Inspired by the Rumen for Biomass Breakdown and Conversion	Baker, Scott	Collaborating Lab: Pacific Northwest National Laboratory (PNNL)	Richland, WA
A gene-editing system for large-scale fungal phenotyping in a model wood decomposer	Zhang, Jiwei	Regents of the University of Minnesota	Minneapolis, MN
A gene-editing system for large-scale fungal phenotyping in a model wood decomposer	Thompson, Allison	Collaborating Lab: Pacific Northwest National Laboratory (PNNL)	Richland, WA
A gene-editing system for large-scale fungal phenotyping in a model wood decomposer	Grigoriev, Igor	Collaborating Lab: Lawrence Berkeley National Laboratory (LBNL)	Berkeley, CA
Developing, understanding, and harnessing modular carbon/nitrogen-fixing tripartite microbial consortia for versatile production of biofuel and platform chemicals	Lin, Nina	Regents of the University of Michigan	Ann Arbor, MI
Metabolic modeling and genetic engineering of enhanced anaerobic microbial ethylene synthesis	North, Justin	The Ohio State University	Columbus, OH
Metabolic modeling and genetic engineering of enhanced anaerobic microbial ethylene synthesis	Cannon, William	Collaborating Lab: Pacific Northwest National Laboratory (PNNL)	Richland, WA
Quantitative Analysis of Metabolic Segregation of Lignin Deconstruction and Catabolism in Outer Membrane Vesicles of Soil Pseudomonas species	Aristilde, Ludmilla	Northwestern University	Chicago, IL
Quantitative Analysis of Metabolic Segregation of Lignin Deconstruction and Catabolism in Outer Membrane Vesicles of Soil Pseudomonas species	Beckham, Gregg	Collaborating Lab: National Renewable Energy Laboratory (NREL)	Golden, CO
Optogenetic control of microbial consortia for biofuel and chemical production	Avalos, Jose	The Trustees of Princeton University	Princeton, NJ
Systems biology to enable modular metabolic engineering of fatty acid production in cyanobacteria	Young, Jamey	Vanderbilt University	Nashville, TN
Novel Systems Approach for Rational Engineering of Robust Microbial Metabolic Pathways	Jarboe, Laura	Iowa State University of Science and Technology	Ames, IA
Novel Systems Approach for Rational Engineering of Robust Microbial Metabolic Pathways	St. John, Peter	Collaborating Lab: National Renewable Energy Laboratory (NREL)	Golden, CO
Synthetic metabolic pathways and biosensors to expand lignin-based bioconversion	Neidle, Ellen	The University of Georgia Research Foundation, Inc.	Athens, GA
Synthetic metabolic pathways and biosensors to expand lignin-based bioconversion	Jha, Ramesh	Collaborating Lab: Los Alamos National Library (LANL)	Los Alamos, NM
The whole is greater than the sum of its parts - multi-scale modeling and engineering of microbial communities for next-generation bioproduction	Zengler, Karsten	The Regents of the University of California - UCSD	La Jolla, CA
The whole is greater than the sum of its parts - multi-scale modeling and engineering of microbial communities for next-generation bioproduction	Guarnieri, Michael	Collaborating Lab: National Renewable Energy Laboratory (NREL)	Golden, CO
Harnessing the Robust Metabolism of Bacillus coagulans for Efficient Conversion of Lignocellulosic Biomass Hydrolysates to Designer Bioesters	Trinh, Cong	The University of Tennessee	Knoxville, TN
Harnessing the Robust Metabolism of Bacillus coagulans for Efficient Conversion of Lignocellulosic Biomass Hydrolysates to Designer Bioesters	Giannone, Richard	Collaborating Lab: Oak Ridge National Laboratory (ORNL)	Oak Ridge, TN
Harnessing the Robust Metabolism of Bacillus coagulans for Efficient Conversion of Lignocellulosic Biomass Hydrolysates to Designer Bioesters	Dien, Bruce	Collaborating Agency: USDA Agricultural Research Service	Peoria, IL
Improving bioprocess robustness by cellular noise engineering	Stephanopoulos, Gregory	Massachusetts Institute of Technology	Cambridge, MA
Engineering bacterial microcompartments in Clostridium autoethanogenum to overcome bottlenecks in sustainable production of synthetic rubber	Tullman-Ercek, Danielle	Northwestern University	Chicago, IL
Optimizing enzymes for plastic upcycling using machine learning design and high throughput experiments	Gauthier, Nicholas	Dana-Farber Cancer Institute, Inc.	Boston, MA
Optimizing enzymes for plastic upcycling using machine learning design and high throughput experiments	Beckham, Gregg	Collaborating Lab: National Renewable Energy Laboratory (NREL)	Golden, CO
Novel Enzymes and Synthetic Metabolic Pathways for Complete Degradation and Upcycling of Recalcitrant Polyamides	Zanghellini, Alexandre	Arzeda Corp.	Seattle, WA
Discovery of distributed pathways for plastic conversion in the yellow mealworm microbiome	Solomon, Kevin	University Of Delaware	Newark, DE
Discovery of distributed pathways for plastic conversion in the yellow mealworm microbiome	Wright, Aaron	Collaborating Lab: Pacific Northwest National Laboratory (PNNL)	Richland, WA
Developing a consolidated biological process to upcycle plastics	Moon, Tae Seok	Washington University	St. Louis, MO
SynThetic BioOgy Driven Approach to Repurpose PolyAmides (STORM)	Kucharzyk, Kate	Battelle Memorial Institute	Columbus, OH
SynThetic BioOgy Driven Approach to Repurpose PolyAmides (STORM)	Bardhan, Jaydeep	Collaborating Lab: Pacific Northwest National Laboratory (PNNL)	Richland, WA