

2019 DOE Genomic Sciences Program Annual Principal Investigator (PI) Meeting

- Gerald Tuskan (ORNL) presented – selected insights in deep data analytics of biomass feedstocks, surprising microbial ligninolytic biology and hybrid CBP at the Bioenergy Research Centers Plenary session.
- Dan Jacobson (ORNL) presented – Exascale Biology: Supercomputing as an engine for discovery in systems biology at the Biological Data and Computation – Challenges and Opportunities session.
- Dan Jacobson (ORNL) (for PI Posy Busby, Oregon State University) presented Identifying Plant Genes Associated with Pathogen Antagonism in *Populus trichocarpa* at the USDA-DOE Plant Feedstock Genomics for Bioenergy session.
- Janet Westpheling (UGA) presented - Development of emerging model microorganisms: *Megasphaera elsdenii* for biomass and organic acid upgrading to fuels and chemicals at the Systems Biology of Bioenergy-relevant microbes FOA rapid fire project presentations session.
- Daniel Amador-Noguez (UWM) presented - In vivo thermodynamic analysis of metabolic networks at the 2018 DOE Early Career Research Awards session.
- Cong Trinh (UT) presented - Understanding and harnessing the robustness of undomesticated *Yarrowia lipolytica* strains for biosynthesis of designer bioesters at the Systems Biology of Bioenergy-relevant microbes FOA rapid fire project presentations session.

The following posters were presented:

2019 Genome Science Meeting Poster Presenters		
Person	Organization	Topic
Fang Chen	UNT	Lignin valorization: biosynthesis and bioengineering of an ideal lignin
Davinia Salvachua	NREL	Unraveling new mechanisms for lignin catabolism in nature
David Kainer	ORNL	Pan genome and PanGWAS
Adam Guss	ORNL	Development of genetic tools for engineering non-standard organisms
Jacob Fenster	UC-Boulder	Development and adaptation of CRISPR-enabled genome editing tools for gene-to-trait discovery and engineering of <i>Pseudomonas putida</i> KT2440
CJ Tsai	UGA	CRISPR genome editing in <i>Populus tremula</i> x <i>alba</i>
Christian Alcaraz	UCR	CELf delignification controls the kinetics of biomass deconstruction by consolidated bioprocessing kinetics more than xylan removal
Sanchari Ghosh	Dartmouth	Effectiveness of cotreatment during fermentation on various feedstocks, impact on different microbes, and changes in biomass physical properties
Jay Chen	ORNL	Expression quantitative trait nucleotide (eQTN) mapping reveals transcriptional regulatory networks in <i>Populus trichocarpa</i>
David Macaya-Sanz	WVU	<i>Populus</i> field trials: Facilitating scaling from genes to phenotypes
Robert Amos	UGA	A two-phase model for the non-processive biosynthesis of homogalacturonan polysaccharides by the GAUT1:GAUT7 complex
Brandon Knott	NREL	Glycosylation is vital for industrial performance of hyper-active cellulases
Jessy Labbe	ORNL	Investigating the role of beneficial microbes reducing the rust infection severity in <i>Populus</i>
Prasun Ray	Noble	Development of consortia of beneficial microbes for switchgrass and consequences of their deployment on native soil microbiome
Udaya Kalluri	ORNL	Aboveground effects of beneficial microbe co-culture with <i>Populus</i> cell wall chemistry variants
Ali Missaoui	UGA	Manipulation of seasonal dormancy as a strategy to improve switchgrass biomass yield
Reggie Millwood	UT	Development and optimization of unmanned aerial vehicle high-throughput phenotyping of field-grown switchgrass
Jared Streich	ORNL	Time-series GWAS to detect natural climate adaptations in <i>Populus trichocarpa</i> across a whole year
Carrie Eckert	UC-Boulder	Engineering CRISPR/Cas systems for genome editing in <i>Clostridium thermocellum</i>
Travis Korosh	UW-Madison	Quantitative network analysis in <i>C. thermocellum</i> using ¹³ C and ² H-tracers