

Department of Energy
Washington, DC 20585
February 25, 2019

Dear Colleague:

On behalf of the Biological Systems Science Division (BSSD) welcome to the 2019 Genomic Science Annual PI Meeting! It has been another very productive year and I'd like to thank you all for your continued interest in our programs and for your scientific accomplishments that keep this program at the forefront of genomic science. We have planned a full agenda highlighting the exceptional research results produced within the program over the past year. We hope that these presentations will spark fruitful discussions that can be carried into the poster sessions later today and tomorrow.

The Bioenergy Research Center program is in its 12th year and we will hear from the center directors about each BRC's research vision for the future. These Centers continue to be extremely productive and play a central role in BER's bioenergy research but our basic research goals are broader than the BRCs. We continue to solicit research in a variety of topics. Over the past year we've had an opportunity to bring in a cohort of new projects within the Systems Biology for Bioenergy portfolio and the Plant Feedstocks portfolio. These small-team and single-PI projects complement and expand research on microbial and plant species for bioenergy research beyond what we currently have under study in our larger BRCs. As a program we continue to support a broad portfolio of basic research in a variety of sizes and configurations because we've found this combination to be incredibly fruitful within the program. Nowhere is this most evident than at this annual meeting where PIs from all sizes of projects across the portfolio are able to interact, learn from and build on each other's successes.

We are continuing to reconfigure our computational biology and bioinformatics systems within JGI and KBase to create a more open access and online system for use within the program. Having a common online framework to access, analyze and share analyses of large complex omics/genomic datasets in a reproducible manner is crucial to accelerating research within our programs. These efforts will be further aided as we stand up a new National Microbiome Data Collaborative (NMDC). The NMDC will add to these existing systems and build out a computational infrastructure needed to support and enable a broad microbiome science community.

At this meeting there will be plenary and poster presentations of a variety of enabling capabilities supported within the Office of Biological and Environmental Research (BER) including the DOE Joint Genome Institute (JGI), the Environmental Molecular Science Laboratory (EMSL), the DOE Synchrotron Light and Neutron Sources and, the DOE Systems Biology Knowledgebase (KBase). Investigators from the Bioimaging research portfolio will also be in attendance beginning on Tuesday evening and will participate in the Bioimaging Research annual PI meeting immediately following this meeting. I would urge you to visit with representatives of these facilities/projects to learn more about new and/or upcoming capabilities.

To complement ongoing research we are continuing to pursue new enabling capabilities within the portfolio. This past year we have positioned instrumentation and operations support to facilitate broader access to major cryo-EM centers at SLAC (funded by NIH) and Brookhaven National Lab (funded by NY State). We've also initiated a pilot activity at ORNL to pursue neutron science applications in biology. These are exciting new capabilities that will be available to researchers and we think will present new opportunities for scientific discovery. We will keep you informed on their progress. We will also hear brief-outs from two BSSD sponsored workshops on new topics for future research.

We are extremely pleased to welcome Dr. Jonathan Schilling from the University of Minnesota as our keynote speaker for this meeting. Dr. Schilling will speak about his research on fungal metabolism. If you are familiar with Dr. Schilling's research then you know we are in for a treat. Dr. Schilling has been a leader in understanding the mechanisms of biomass breakdown by fungi and this talk is quite timely and highly relevant to this meeting.

We will also hear the latest updates on new applications being developed within KBase later today and a Hands-On training session on Tuesday. Programmatically we enabled a subset of the DOE National Laboratory programs to build out applications in KBase that will not only enable their own research but will be available to KBase users as well. We've also planned a more forward-looking breakout session on new computational approaches for modelling and data analysis being developed within the portfolio.

Finally, we are proud to once again host a plenary session featuring some of the most recent recipients of the Office of Science (SC) Early Career program awards. The Early Career program is consistently one of the most competitive programs within SC and award recipients are part of an exclusive group. We are pleased to have four awardees present at this year's meeting.

Finally, I would ask that you treat this meeting as an opportunity to view your research in the context of the larger portfolio. All funded principal investigator projects from our University portfolio and the DOE National Laboratory portfolio are present at this meeting. Please take full advantage of this opportunity to meet with your colleagues and to meet with your DOE program staff, representatives from elsewhere within the Department of Energy, and colleagues from other Federal Agencies.

Thank you again for making the program the success that it is. We look forward to another excellent meeting!

Sincerely,

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