

Special Workshop for the Great Lakes Bioenergy Research Center and the Departments of Bacteriology and Medical Microbiology and Immunology

Microbial Cell Phenotyping using Biolog Phenotype MicroArray Technology April 17-20, 2018.

The Biolog Phenotype MicroArray (PM) technology allows a biologist to test thousands of phenotypes of a cell line in a single experiment, to gain a comprehensive overview of the metabolism, physiology, and pathway activities. It provides phenomic and metabolomic information that is complementary to genomic or proteomic analysis and often more easy to interpret and more useful. The PM technology platform is applicable to a wide range of microbes and enables metabolic analysis in the context of genotype-phenotype studies, including (1) analyzing cells with mutations to determine the metabolic and physiologic effects of genetic differences, (2) studying and defining cell metabolism and metabolic regulation, (3) understanding the interplay of environment and environmental signals on cell metabolism and physiology, (4) optimizing cell culture conditions, and (5) looking at the effects of drugs and other chemicals on cellular pathways. At this workshop, Biolog will provide hands-on training on how to set up microbial experiments, phenotype with the OmniLog reader, and perform data analysis.

There will be 3 groups of 5-6 trainees for this personal workshop. Please RSVP by emailing Trey Sato (tkrato@glbrc.wisc.edu) by March 21. This workshop will first be limited to one representative per lab, and then opened up to two representatives (offered on a first-come, first-served basis) until we reach maximum capacity. Some allowances may be made to allow you to analyze your own strains in this workshop. Please contact Trey before March 21 if you are interested in this possibility.

Preliminary schedule

Tuesday, April 17

10AM-11:30AM: Lecture in Room 175, Biochemistry Laboratories, 433 Babcock Dr. (open to anyone but required for workshop participants)

1PM-4PM: Hands-on labwork in Room 4135, Wisconsin Energy Institute, 1552 University Ave. (Group #1)

Wednesday, April 18

9AM-Noon: Hands-on labwork in Room 4135, Wisconsin Energy Institute (Group #2)

1PM-4PM: Data analysis in Room 4135, Wisconsin Energy Institute (Group #1)

Thursday, April 19

9AM-Noon: Hands-on labwork in Room 4135, Wisconsin Energy Institute (Group #3)

1PM-4PM: Data analysis in Room 4135, Wisconsin Energy Institute (Group #2)

Friday, April 20

9AM-Noon: Data analysis in the Wisconsin Energy Institute, Room 4135 (Group #3)