The InterBRC Knowledgebase Data Registry

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Project Goals: The InterBRC Knowledgebase project will provide a mechanism for the integration of data obtained by the DOE Bioenergy Research Centers (BRCs) with the DOE Systems Biology Knowledgebase (KBase).

The DOE Systems Biology Knowledgebase (KBase) is building a system that allows predictive modeling of Microbes, Microbial Communities, and Plant Systems Biology for the scientific community. The DOE Bioenergy Research Centers (BRCs) are large producers of systems biology data in all three areas, generating genome sequence, expression, proteomic, metabolomic, metabolic flux, growth, and phenotype data for microbes; metagenome, metatranscriptome, and metaproteome data for microbial communities; and genome, protein interaction, protein localization, allelic variation, and mutant phenotype data for plants. These data are rich sources for modeling via the KBase, but are currently either not easily accessible, or housed in a wide range of data repositories and thus challenging to bring together for comparative analysis. The InterBRC Knowledgebase will serve as the bridge between BRC data stored in dedicated systems and the common infrastructure of the KBase. Data will be indexed and searchable via the InterBRC Knowledgebase Data Registry, which will additionally provide the location and access protocol for retrieving data sets of interest from the dedicated services. These will be incorporated in turn into the KBase infrastructure and be available for comparative analysis and systems biology modeling by BRC researchers and the greater community.

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