The Genome Portal of the Department of Energy Joint Genome Institute

Henrik Nordberg*, Michael Cantor, Serge Dusheyko, Susan Hua, Alexander Poliakov, Tatyana Smirnova, Inna Dubchak

Department of Energy Joint Genome Institute, 2800 Mitchell Drive, Walnut Creek, CA, 94598, USA;

*****Presenting author: hnordberg@lbl.gov Henrik Nordberg

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The JGI Genome Portal (http://genome.jgi.doe.gov) provides unified access to all JGI genomic databases and analytical tools. A user can search, download and explore multiple data sets available for all DOE JGI sequencing projects including their status, assemblies and annotations of sequenced genomes. Genome Portal in the past 2 years was significantly updated, with a specific emphasis on efficient handling of the rapidly growing amount of diverse genomic data accumulated in JGI.

A critical aspect of handling big data in genomics is the development of visualization and analysis tools that allow scientists to derive meaning from what are otherwise terrabases of inert sequence. An interactive visualization tool developed in the group allows us to explore contigs resulting from a single metagenome assembly. Implemented with modern web technologies that take advantage of the power of the computer's graphical processing unit (gpu), the tool allows the user to easily navigate over a 100,000 data points in multiple dimensions, among many biologically meaningful parameters of a dataset such as relative abundance, contig length, and G+C content.