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## **JGI Launches Community Sequencing Program DOE to support DNA sequencing for edgy science**

The Department of Energy's Joint Genome Institute (JGI) is poised for a resounding response to the age-old question, "If we build it, will they come?" Already, collaborators are queuing up to take advantage of one of the world's most powerful DNA sequencing facilities for the debut of DOE's Community Sequencing Program (CSP).

"The primary goal of the CSP is to provide a world-class sequencing resource for the expanding the diversity of disciplines—geology, oceanography, and ecology, among others—that can benefit from the application of genomics," says JGI Director Eddy Rubin, M.D., Ph.D.

### *A "non-traditional" user facility*

The model put forward by the CSP will attract a new audience of researchers not traditionally served by sequencing centers that focus on biomedical applications, says Rubin. "Just as physicists and climatologists submit proposals to get time on accelerators and supercomputers to address fundamental questions, we are inviting investigators to bring to the JGI important scientific challenges that can be informed with at least 10 million basepairs of sequence. The CSP will, in effect, cover the biosphere of possibilities."

The DOE, under the auspices of the Office of Biological and Environmental Research within its Office of Science, will allocate roughly 12 billion bases of sequencing capacity per year through the CSP--roughly four times the size of the human genome. This constitutes more than half of the JGI's yearly production total. Starting in February, the JGI will consider CSP applications from researchers geared toward generating informative DNA sequence from whole organisms or communities of organisms. Successful proposals, says Rubin, will be driven by meritorious science that will advance our understanding of the natural world.

Proposals submitted to the CSP will be evaluated by a group of experts from the scientific community. Once approved, DOE will cover the costs associated with the sequencing effort at the JGI. Data generated under CSP-supported projects will be made freely available to the entire scientific community in accordance with the JGI's data release policy.

Founded in 1997, JGI was initially tasked with unraveling and interpreting a large complement of the human genome chromosomes 5, 16, 19 comprising nearly 11 percent of the 3-billion-letter human genetic code. Now in its 7<sup>th</sup> year, the JGI has assembled considerable expertise and instrumentation at its Production Genomics Facility (PGF) in Walnut Creek. JGI has grown to over 61,000 square feet of laboratory and office space and is home to over 150 researchers and support staff—all UC employees from Lawrence Berkeley, Lawrence Livermore and Los Alamos National Laboratories.

Beyond tackling human sequencing, the JGI has gone on to elucidate the genomes of such diverse organisms as the puffer fish (*Fugu rubripes*), a sea squirt (*Ciona intestinalis*), portions of the mouse genome, as well as dozens of other organisms including those responsible for fermentation, photosynthesis in the ocean, Sudden Oak Death, Pierce's Disease (affecting the vitality of the grape growing and wine industries) and acid mine run-off. Among those organisms currently under investigation are a species of frog (*Xenopus tropicalis*), the alder tree (*Populus trichocarpa*), and the green alga (*Chlamydomonas reinhardtii*).

The first deadline for proposals is February 20. For additional information on the CSP and for those interested in submitting sequencing proposals see:

[http://www.jgi.doe.gov/CSP/user\\_guide/index.html](http://www.jgi.doe.gov/CSP/user_guide/index.html)

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