

## **DIVA Services: PCR, Full DNA Construction, and MiSeq Validation**

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<https://diva.jbei.org>

### **Project Goals:**

DNA construction is vital to a broad range of biological research, yet it is predominantly an inefficient diversion from researchers' core research goals and expertise. We have developed a Design, Implementation, and Validation Automation (DIVA) platform to liberate researchers from building and validating DNA, enabling them to instead focus on designing and carrying out their experiments of interest. The DIVA web interface enables users to track the progress of the construction and validation of their DNA designs online. As part of DIVA, a PCR service has been established, wherein researchers specify their designs using design tools in DIVA, and the DIVA team provides researchers gel purified, DpnI-digested PCR products that are ready for DNA assembly and transformation. Recently, DIVA services have been extended to full DNA construction (including DNA assembly, transformation, cloning, and sequence validation steps). A MiSeq Validation service has also been recently added to DIVA, providing full plasmid sequencing coverage at a fraction of the per sample price of single-read Sanger sequencing.

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