

Molecular Biology Core

Location: BloodCenter of Wisconsin Blood Research Institute

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[Learn more about the BloodCenter of Wisconsin's Molecular Biology Core](#)

Overview

The Molecular Biology Core Laboratory offers automated DNA sequencing services. In addition, the Core houses and maintains two real-time PCR detection systems, a 3130xl Sanger Sequencer, an Illumina NextSeq 500, and an Agilent 2200 TapeStation. **ABI 3130x1 Genetic Analyzer**

Automated sequencing is performed on an ABI 3130x1 Genetic Analyzer. This capillary-based platform allows for processing of up to 96 samples in 18 hours. Samples are run within 1 to 2 days and yield a high-quality read length of up to 600+ base pairs.

Applied Biosystems 7500 and QuantStudio 6 Real-Time PCR Systems

Bio-Plex Array Reader and Microplate Platform

The flow-based, dual-laser array reader classifies each bead and its associated assay, and quantitates the amount of analyte captured. The microplate platform permits automated processing of samples from 96-well microplates in approximately 30 minutes. Using as little as 12 µl of serum or other biological sample per multiplex assay, this bioassay system allows for simultaneous detection and quantitation of up to 100 different analytes in a single well.

DNA Sequencing Services

Generally, users perform their own cycle sequencing reactions using ABI's Big Dye Terminator chemistry (BRI internal users can purchase their sequencing reagents from the Core). The turnaround time is typically 1 to 2 working days after sample submission. For a nominal fee, users may request complete sample sequencing reaction preparation. Templates and primers are submitted separately in water. Users who opt for this service should contact the Core prior to sample submission to ensure proper processing of samples.

Equipment/Software	Accessibility
Applied Biosystems 7500 Real-Time PCR System	Available for open use
ABI 3100x1 Genetic Analyzer	Facility technicians use on behalf of investigators

Bio-Plex Array Reader and Microplate Platform	Available for open use
QuantStudio 6 Real-Time PCR System	Available for open use
Aglient 2200 TapeStation	Contact facility technicians prior to use
Illumina NextSeq 500	Contact facility technicians prior to use

Hours: Monday - Friday 8:00 am-9:00 pm

Common users of the facility: We service MCW users from a variety of departments as well as BRI investigators.

Rates: Sanger Sequencing costs \$5.00 per sample. If the Core performs the PCR reactions, the cost is \$15.00 per sample. Please contact the Core regarding the cost of NextSeq runs.