DNA Facility

The DNA Facility at Iowa State University performs DNA sequencing, synthesis, and related services to support research.

**DNA Sequencing**

*Standard Sanger Sequencing*
DNA can be sequenced as plasmid, lambda, cosmid, or BAC DNA, or as PCR products (direct sequencing). Data can be downloaded directly from the facility's server, and a four-color data printout is provided. Custom primers can be used with all types of templates.

*High-Throughput Sanger Sequencing*
Samples can be submitted in a 96-well format. Twelve sets of 96 samples can be processed in a 24-hour period.

*Next-Gen Sequencing*
The facility provides short-read (50-250 bases) Illumina sequencing and offers library preparation service for all applications.

Access to Roche 454 sequencing is made possible through an instrument-sharing agreement between Iowa State University and the University of Iowa.

**DNA Synthesis**
DNA oligomers can be synthesized in two scales, 50-nmol and 200-nmol. The facility can make modified oligomers such as the fluorescent primers used in genotyping applications. Primer design is available for primer walking sequencing projects.

**DNA Template Preparation**
The facility performs plant genomic DNA preparation and also offers a seed grinding service. Plasmid template preparation in 96-well format also is available.

**Quantitative Real-Time PCR**
The DNA Facility has two quantitative, real-time PCR instruments for gene expression studies, validation of microarray data, allelic discrimination, SNP analysis, and screening for GMOs.

**Nucleic Acid Sizing and Quantification**
A Bioanalyzer instrument analyzes and quantifies DNA, RNA, and protein. Each chip can be used to assay from one to twelve samples. Trained users run their own samples.

<table>
<thead>
<tr>
<th>DNA Facility</th>
<th>Gary Polking, Manager</th>
</tr>
</thead>
<tbody>
<tr>
<td>Iowa State University</td>
<td><a href="mailto:polking@iastate.edu">polking@iastate.edu</a></td>
</tr>
<tr>
<td>1184 Molecular Biology Building</td>
<td>515 294-1813 ph</td>
</tr>
<tr>
<td>Ames IA 50011-3260</td>
<td></td>
</tr>
</tbody>
</table>

Iowa State University does not discriminate on the basis of race, color, age, ethnicity, religion, national origin, pregnancy, sexual orientation, gender identity, genetic information, sex, marital status, disability, or status as a U.S. veteran. Inquiries can be directed to the Office of Equal Opportunity, 3350 Beardshear Hall, (515) 294-7612.