

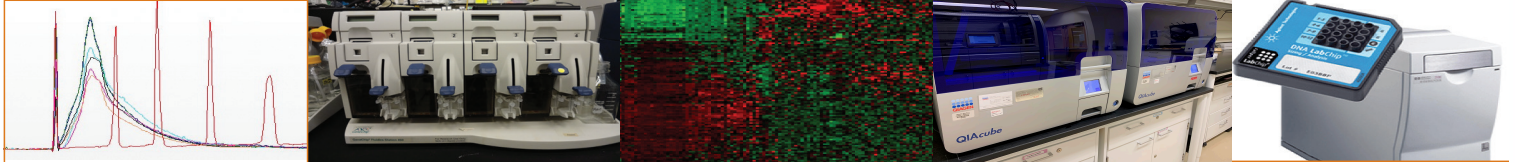
# OHSU Research Cores and Shared Resources

## Gene Profiling

A unit of the Integrated Genomics Laboratory

OHSU's cores are your campus technology partners dedicated to the success of your project. For optimal results, take advantage of the state-of-the-art scientific resources within the OHSU community.

[www.ohsu.edu/cores](http://www.ohsu.edu/cores)



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The Gene Profiling Shared Resource provides services and equipment for RNA expression profiling and DNA variation analysis, including DNA methylation profiling. Technologies include microarray platforms and high throughput qPCR. Equipment and expertise are also available for high-throughput sample processing, RNA and DNA isolation and RNA/DNA quality and size assessment.

### Introduction

The OHSU Gene Profiling Shared Resource (GPSR), is a full-service core facility serving research scientists and clinicians with RNA and DNA isolation and analysis services. Technologies include two microarray platforms (Affymetrix and Illumina), a high-throughput qPCR system (QuantStudio) and automation systems for nucleic acid isolation. Staff is highly experienced with RNA and DNA isolation, quality assessment and processing for genomic analysis and molecular profiling. The core has been in operation since 2001 and has processed thousands of samples, including many challenging samples, such as FFPE specimens, sorted cells, small samples, and whole blood. GPSR staff is available for assisting with experimental design and analysis of core-generated data.

### Equipment and Software

- **Affymetrix GeneChip** system with 5 Fluidics Stations for array hybridization, processing and scanning
- **Illumina BeadArray** system for array hybridization, processing and scanning
- **Life Technologies QuantStudio qPCR** system
- **NanoDrop 1000 and 8000** spectrophotometers
- **Molecular Devices SpectraMax i3x Multi-Mode microplate reader** spec/fluorimeter
- **Agilent 2100 Bioanalyzer** and **2200 TapeStation**
- **QIA Symphony** and **QIAcube Sample Prep Robots**
- **QIAGEN TissueLyser LT** for tissue disruption
- **Eppendorf epMotion 5075** Liquid Handling Robot
- Suite of custom and commercial software for data QA/QC, including the **Affymetrix Transcriptome Analysis Console (TAC)**

### Services

1. **Expression Profiling:** mRNA and microRNA expression profiling on microarrays and qPCR panels (including options for alternative transcript/exon analysis)
2. **DNA Variation Analysis:** Whole genome and targeted SNP genotyping and copy number analysis with microarray and PCR assays, methylation array assays
3. **RNA/DNA Isolation:** Support available for small and large scale RNA/DNA isolation using QIAGEN spin-column kits and other protocols
4. **RNA/DNA Assessment:** Quantification, size and quality assessment of RNA and DNA samples
5. **Instruments available for direct client use:** QuantStudio and QiaCube robots
6. **Consulting:** Experimental Design, Microarray data analysis support; guidance in use of analysis software

For next generation sequencing services please contact the Massively Parallel Sequencing shared resource: Dr. Robert Searles, Director, [searles@ohsu.edu](mailto:searles@ohsu.edu).

### Getting Started

**For pre-project consultation, grant development assistance, letters of support, and sample preparation recommendations,** please contact: Dr. Chris Harrington.

To request services, **please login into OHSU iLab Solutions website at: <https://ohsu.corefacilities.org>** and select the Gene Profiling/RNA and DNA Shared Resource.

**For data and software access and data management information** please contact: Dr. Chris Harrington.



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