

Integrated Genomics Laboratory (IGL) Newsletter

Gene Profiling Shared Resource/Massively Parallel Sequencing Shared Resource/DNA Services Core - December - 2018



Included Topics:

- IGL Holiday Schedule
- IGL Staff Announcements
- Service Center Updates
 - ✓ Gene Profiling Shared Resource ([GPSR](#))
 - ✓ Massively Parallel Sequencing Shared Resource ([MPSSR](#))
 - ✓ DNA Services ([DSC](#)) – Important changes to Sanger seq services!
- Genomics Advisory Committee
- Shared Resource Acknowledgement

IGL Holiday Schedule

The Integrated Genomics Lab will be open on regular schedule through Friday, Dec 21, closed on Monday, Dec 24, and on reduced staffing from Dec 26 until Jan 2. If you wish to drop off or pick up samples between Dec 26 and Jan 2, please contact core ahead of time to make sure someone is available to work with you. The cores will be closed on OHSU holidays of Tuesday, December 25th, and Tuesday, January 1st.

IGL Staff Announcements

Please join us in welcoming a new member of the IGL team! Britt Daughtry, recent OHSU PhD graduate, is joining the Gene Profiling Shared Resource as Research Associate. Britt studied with Dr. Shawn Chavez and received her degree in the Dept of Cell, Developmental, and Cancer Biology. We are excited to have Britt bring her skills and experience to the GPSR. She will be starting her new position on December 11th.

As part of the IGL staffing transitions, Kristina Vartanian will now be supporting both the MPSSR and the GPSR.

Service Center Updates

New sample pickup and delivery service at KCRB, So Waterfront campus, coming in February, 2019.

Gene Profiling Shared Resource (GPSR) –

Expression array and RT-qPCR assays

Expression profiling services on the GPSR Affymetrix/ThermoFisher array platform and the Life Technologies QuantStudio qPCR System (more info on [GPSR homepage](#))

Genotyping, cytogenetic, and methylation array assays

Array assays available using Illumina Infinium system and Affymetrix GeneChip Cytogenetic arrays.

Read about recent collaboration with Dr. Matthew Wood using Infinium EPIC arrays: Classification of central nervous system primitive neuroectodermal tumors by DNA methylation profiling ([Click here for more info on this collaboration](#))

Nucleic acid services

Support for RNA and DNA extraction from cells, tissues, FFPE, biofluids and more ([Click here for GPSR Nucleic Acid Isolation services](#))

Massively Parallel Sequencing Shared Resource (MPSSR) –

Library preparation protocols available from the MPSSR

RNA-seq protocols for greater than 100 ng of total RNA per sample include non-strand specific with poly(A)+ isolation and strand specific with poly(A)+ isolation or ribosomal reduction.

RNA-seq protocols for less than 100 ng of total RNA per sample include Nugen Ovation and Smart-Seqv4.

RNA recovered from FFPE tissue can be processed using TruSeq RNA Exome (aka RNA Access).

Single cell RNA-seq is available using the 10x Genomics Chromium system.

DNA-seq library preparation is available for both genomic DNA and post-IP ChIP-Seq. For ChIP-seq including the IP step, contact Dr. Lucia Carbone in the Epigenetics Consortium.

Whole exome libraries starting with intact genomic DNA can be prepared using the Nextera protocol. Whole exome libraries starting with fragmented DNA can be prepared using the Nimblegen protocol.

Instrumentation Update – 10X Genomics Chromium System Downtime

The 10x Genomics Chromium Controller is being sent to the vendor to replace a recalled LED display and to update the system for single cell ATAC-seq. The instrument will not be available from December 19th through at least January 2nd.

DNA Services –

Cell line authentication

Confirm human cell line identities using STR profiling service ([Click here for CLA services](#))

Oligo synthesis services

Support for purchase of custom DNA and RNA oligos available at discount pricing ([Click here for oligo synthesis services](#))

Genomics Advisory Committee

The IGL cores are advised by an OHSU faculty committee that meets twice per year to review technologies and services available through the cores and assist the core directors in identifying new technology application needs of OHSU researchers. Please reach out to committee members with your requests and feedback.

Committee Members: Jeff Tyner (Chair), Chris Corless, Paul Spellman, Andrew Adey, Lucia Carbone, Brian O’Roak, Beth Wilmot, Soren Impey

Shared Resource Acknowledgement

Please remember to **acknowledge use of the GPSR, MPSSR, and DNA Services Core** in talks, posters, and publications which include data generated in the core lab. The use of data generated in an OHSU core facility in a grant application, progress report or publication contains the implicit understanding that the PI or authors will acknowledge the use of the OHSU core facility.

Suggested acknowledgement text:

MPSSR: *Illumina sequencing assays were performed by the OHSU Massively Parallel Sequencing Shared Resource.*

GPSR: *(Insert appropriate service or platform) were performed in the OHSU Gene Profiling Shared Resource.*

Services/Platforms: *Microarray or qPCR assays, DNA or RNA isolation services, DNA or RNA quality assessments*

DNA Services Core:

"STR profiling for human cell line authentication was performed in the OHSU DNA Services Core; this work utilized a 3730xl DNA Analyzer purchased with funding from NIH SIG grant S10 OD010609"

Knight Cancer Institute Members:

Please add the following to any IGL Shared Resource acknowledgment:

"This core is supported by the OHSU Knight Cancer Institute NCI Cancer Center Support Grant P30CA069533."

To request core services and initiate new projects, please login to the OHSU [iLab](#) system.

For more information on IGL cores, please contact [Chris Harrington](#) or [Bob Searles](#).