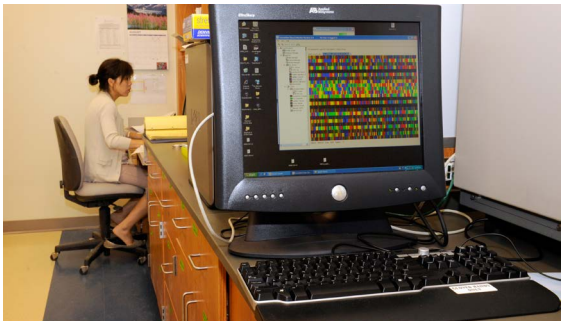
GENOMICS SHARED SERVICES

CIBR: Center for Innovative Biomedical Resources

CORE INSTRUMENTATION

- Affymetrix GeneChip 3000 systems
- Agilent Bioanalyzer Model 2100
- Applied Biosystems Model 3730XL DNA Sequencer
- Applied Biosystems Model 7900 rtPCR System
- Ion Torrent Personal Genome Machine (PGM) Sequencer
- Ion Chef System
- Ion S5 Sequencer
- Nanodrop single-channel and 8-channel spectrophotometers
- ThermoFisher QuantStudio



MISSION

The mission of the Genomics Laboratory is to provide the expertise, state-of-the-art resources and training necessary to promote cutting edge basic, translational and clinical genomic research, as well as clinical molecular testing under Clinical Laboratory Improvement Amendments (CLIA) and College of American Pathologists (CAP).

ABOUT

The Genomics Laboratory is committed to maintaining technologically advanced methodologies and instrumentation. We also provide an educational environment to instruct faculty, staff, fellows and students on the latest technologies and how they can positively impact on their research. Our staff are available to share their extensive knowledge and expertise in order to successfully support the research being conducted within the institution. Two separate laboratories make up the Genomics Shared Services: RGL and TGL.

RESEARCH GENOMICS LABORATORY SERVICES (RGL)

- Cytogenomic Arrays
- Extraction of Nucleic Acid
  - DNA
  - RNA
- Gene Expression Arrays
  - Global Expression Profiling
  - miRNA Expression Profiling
  - Transcriptome Analysis
- Genotyping
  - Taqman Assays
  - SNP Arrays (targeted or GWAS studies)
- Next Generation Sequencing (NGS) Gene Panels
- Sanger DNA Sequencing

TRANSLATIONAL GENOMICS LABORATORY SERVICES (TGL)

- *BTD* Sequencing
- Confirmation of a Research Finding
- *CYP2C19* Genotyping
- *CYP2C19* Sequencing
- Cytogenomic Microarray
- Extract and Hold
- *FLT3* ITD and TKD Analysis
- *IDH1* R132_*IDH2* R140 and R172
- Site-specific Familial variant analysis

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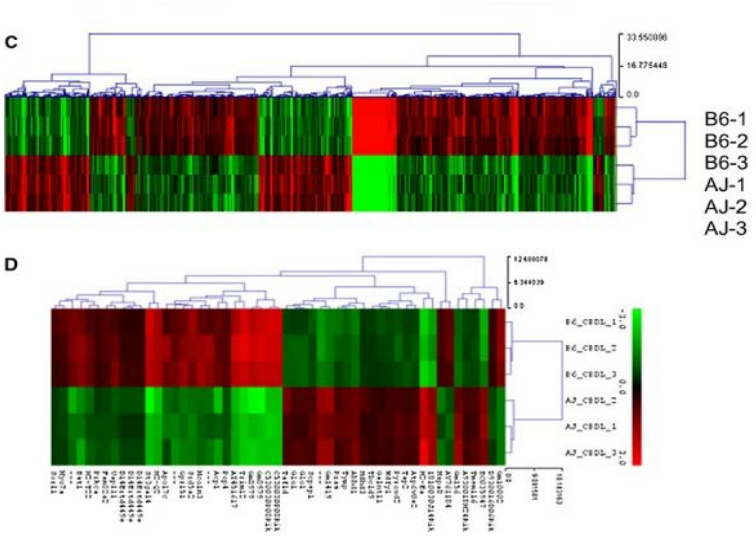
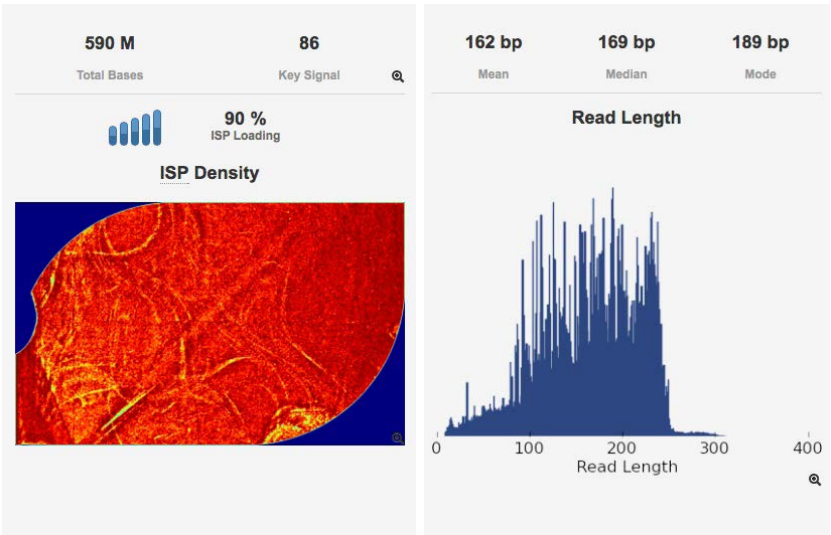


Alaish, SM, Timmons, J, Smith, A, Buzza, MS, Murphy, E, Zhao, A, Sun, Y, Turner, DJ, Shea-Donahue, T, Antalis, TM, Cross, A, Dorsey, SG. 2013. Candidate genes for limiting cholestatic intestinal injury identified by gene expression profiling. Physiol. Rep. 1(4):doi: 10.1002/phy2.73.



Ion Torrent Chip Loading Metrics

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Web Addresses

http://medschool.umaryland.edu/cibr/Genomics Core

http://medschool.umaryland.edu/cibr/TGL