TRANSLATIONAL GENOMICS LABORATORY

CIBR: Center for Innovative Biomedical Resources

CORE INSTRUMENTATION

- Applied Biosystems 3730XL (Sanger sequencing)
- Affymetrix GeneChip system 3000 7G (chip-based arrays, e.g. CytoScan HD, DMET)
- Applied Biosystems 9700 thermocycler (PCR amplification)
- Nanodrop single-channel and 8-channel spectrophotometers
- ThermoFisher QuantStudio 5 (genotyping by Taqman©-based methods)
- Ion Chef System and Ion S5 Sequencer (next generation sequencing panels, e.g. Comprehensive Cancer Panel, and Custom AmpliSeq panels)

CORE SERVICES (CLINICAL)

- 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
- Next Gen Sequencing (NGS) Myeloid Malignancy Targeted Panel

CORE SERVICES (BASIC RESEARCH)

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

MISSION

The mission of the Translational Genomics Laboratory is to provide a critical bridge to help accelerate translation from discovery into precision health care, by providing DNA sequencing, genotyping and array-based technologies in both a basic research and clinically-regulated environment.

ABOUT

The Translational Genomics Laboratory (TGL) is the result of 35 years of core facility evolution, starting with peptide and oligonucleotide synthesis, to the current CAP (College of American Pathologists) accredited and CLIA (Clinical Laboratory Improvement Amendments) compliant laboratory, capable of providing support to clinical and translational genetic/genomics studies (CAP# 8017554; CLIA# 21D2027356). TGL is part of the University of Maryland School of Medicine's Marlene and Stewart Greenebaum Comprehensive Cancer Center (UMGCC), the Program for Personalized and Genomic Medicine (PPGM), and the Center for Innovative Biomedical Resources (CIBR).

The services offered by the TGL support basic research. The clinical assays offered are similar to those offered to support basic research, except that these assays are validated under CLIA, enabling them to be used in the clinical decision-making process in research protocols and for routine patient care.

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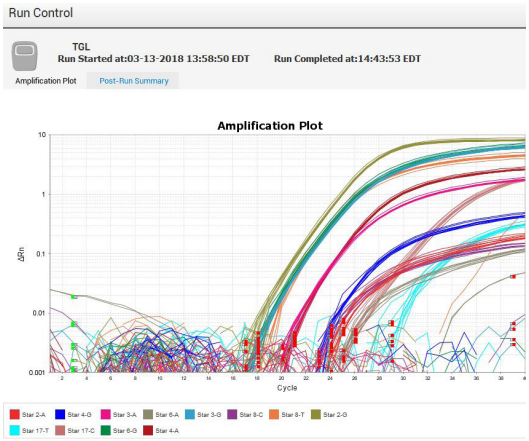
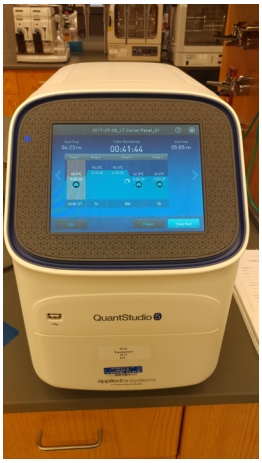
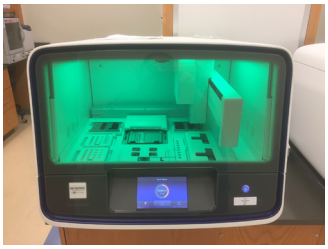


Quant Studio 5 Amplication Plot



Quant Studio 5 Experiment



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Genomics Core (Research Services)