Founded in 1868, the Wayne State University School of Medicine is the largest single-campus medical school in the nation with more than 1,000 medical students. In addition to undergraduate medical education, the school offers master’s degree, Ph.D. and M.D.-Ph.D. programs in 14 areas of basic science to about 400 students annually. As the only medical school in Detroit, WSU has a stated mission to improve the overall health of the community. As part of this mission, the School has established, with the help of a $6 million NIH grant, the Center for Urban & African-American Health to seek new ways to redress health disparities by identifying preventive strategies and therapeutic approaches to chronic diseases that plague this population, namely obesity, cardiovascular disease and cancer. Perhaps the most significant contribution the School provides to the community is care to area residents who are under- or uninsured. Along with the Detroit Medical Center, WSU faculty physicians provide an average of $150 million in uncompensated care annually.

Dr. Susan J. Land, Ph.D.  
Laboratory Director

DNA Services
- Isolation
  - Whole blood
  - Blood clots
  - Dried blood spots
  - Buffy coats
- Quantification
  - UV/VIS spectrophotometry-based methods
  - 5 nuclease/TaqMan® probe-based method
- Genotyping
  - SNP & copy number analysis using Applied Biosystems TaqMan® 5’ Nuclease Chemistry
  - Digital PCR using the QuantStudio™ 12K Flex Real-Time PCR System
  - SNP analysis using Illumina GoldenGate® Assay Technology
  - SNP analysis using Illumina Infinium® Assay Technology
  - Comparative genomic hybridization (CGH) using the Agilent Microarray Platform
  - Insertion-Deletion & SNP analysis using the Quagen PyroMark® Platform
  - SNP analysis using the Sequenom MassARRAY® Genetic Analysis System
- Fragment analysis using the 3730 DNA Analyzer
- DNA Methylation
  - DNA methylation profiling using Illumina Infinium® Assay Technology
  - DNA methylation profiling using the Quagen PyroMark® Platform
  - DNA methylation profiling using the Sequenom MassARRAY® Genetic Analysis System
- Sanger Sequencing
  - Applied Biosystems BigDye® Terminator v3.1 Cycle Sequencing Kit
  - Next-Generation Sequencing
    - Genomic DNA resequencing and De novo sequencing
    - ChIP seq
    - Methylation analysis
- cultured Human Cell Line Authentication
  - Promega Cell ID™ System
- Whole Genome Amplification

RNA Services
- Isolation
  - Cultured cells
  - Blood
  - harvested tissue
- Quality Assessment
  - RNA 6000 Nano Assay
  - R8K ScreenTape
- Gene Expression
  - Affymetrix GeneChip® microarray platform
  - Illumina BeadChip® microarray platform
  - Agilent Microarray platform
  - Applied Biosystems TaqMan® Gene Expression Assays
  - Sequenom MassARRAY® Quantitative Gene Expression Assay
- Next-Generation Sequencing
  - mRNA seq
  - Small RNA discovery & analysis

Bioinformatics Services
- Differential Gene Expression/Methylation
  - R/Bioconductor
  - ChipStack
  - ChipInspector
  - GenomeStudio
- Pathway/Gene Ontology Enrichment
  - Genomatix

CONTACT INFORMATION

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