sequencingcenter

Providence Saint John's Health Center
John Wayne Cancer Institute

The John Wayne Cancer Institute Sequencing Center is equipped with state-of-the-art next generation sequencing technology and offers a variety of innovative assays that support a wide range of research applications. Our mission is to provide research support for cancer and other diseases, develop novel sequencing methodologies, and ultimately drive advances in precision medicine.

contact

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sequencing

Human Exome Sequencing
Captures coding regions encompassing over 20,000 genes from blood, frozen tissue, saliva, cell lines, and FFPE. Standard coverage from ~50-200X depending on specimen type and can be scaled to meet project objectives. Mouse exome sequencing is also available.

RNA-seq
mRNA-focused sequencing from blood, frozen tissue, cell lines, FFPE and other low-quality samples. Standard coverage from ~20-50 million reads and can be scaled to meet project objectives.

Targeted Deep Sequencing
Isolating genomic regions of interest allows for cost-effective, focused detection of germline and somatic mutations with deep coverage. Custom gene panels can be designed to meet project objectives.

miRNA Whole Transcriptome Assay
Extraction-free direct assay of 2,083 miRNA from plasma, serum, FFPE, and cell lines. Low-input requirements make this assay ideal for precious specimens. Standard coverage from ~0.5-2 million reads and can be scaled to meet project objectives.

DNA Methylation Arrays
Quantitatively interrogate DNA methylation level for >850K CpG sites from a variety of specimen sources, including FFPE. We also offer expertise in methylation analysis.

ChIP-seq (Chromatin Immunoprecipitation Sequencing)
Analyze interactions between protein and DNA to identify binding-sites for transcription factors and other proteins. Standard coverage from ~20-50 million reads per cell line and can be scaled to meet project objectives. Expertise in data analysis is also available.

ATAC-seq (Assay for Transposase-Accessible Chromatin Sequencing)
Explore chromatin accessibility and identify open/closed regions of DNA with only 50K cells. Standard coverage from ~20-50 million reads and can be scaled to meet project objectives. Expertise in data analysis is also available.

On the Horizon:
Precision ImmunoOncology Panel ~1,400 genes.
OMNI-ATAC-Improved performance of ATAC-Seq assay.
RRBS- Reduced Representation Bisulfate Sequencing.

Expedited rapid turnaround is available, subject to project size.

The Sequencing Center is certified by the **Illumina Propel Certification for Core and Service Labs**

Please contact us for pricing details, sample submission guidelines, or to schedule a consultation to discuss specific needs for your research project.