

EPIGENOMICS SHARED FACILITY (ESF)-EXPANDING ANNOVATIVE CAPABILITIES

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The Epigenomics Shared Facility (ESF) is a part of Einstein's Center for Epigenomics and an Illumina CPro (certified service provider) laboratory. The high-throughput molecular technological resources in the ESF include massively parallel sequencing (MPS) platforms: the Oxford Nanopore MinION, Illumina NEXTSeq2000, Illumina NEXTSeq500, Illumina HiSeq2500 and Illumina MiSeq; supported by TECAN freedom Evo® 200 Robotics.

The ESF supports diverse assays for MPS analysis and strives to bring cutting-edge technologies to benefit the programs of Einstein researchers. We encourage novel research in a number of human diseases, with early emphases on cancer, neuroepigenomics, the epigenomics of infectious disease, aging research, diabetes and renal disorders

SERVICES:

A.Support and services for long read sequencing utilizing Oxford Nanopore's MinION platform.

B.Support for diverse assays for short read sequencing to study the epigenome include:

- Epigenomic profiling of open chromatin (ATAC-Seq)
- Cleavage Under Targets and Release using Nuclease (CUT&RUN-Seq)
- Massively-parallel sequencing-based (ChIP-Seq)
- Enzymatic Methyl-seq (EM-Seq)
- Targeted bisulfite sequencing (SeqCap Epi -Roche - Human/Mouse)
- Directional RNA-Seq, Targeted RNA-Seq, Ultra-Low RNA-Seq, Small RNAseq
- Single Cell DNA/RNA-Seq
- Single Cell ATAC-Seq
- Exome Capture Enrichment Sequencing (Human/Mouse) and Targeted Resequencing

The services include library preparation and sequenc