

FACILITIES & OTHER RESOURCES

Updated 18 April 2023

Fields Relevant for the Emory Integrated Genomics Core (EIGC)

Other:

EMORY INTEGRATED GENOMICS CORE (EIGC)

The **Emory Integrated Genomics Core (EIGC)**, one of the **Emory Integrated Core Facilities (EICF)**, consists of three service categories which provide unique services to Emory clinical and basic researchers. The central mission of the EIGC is to provide a top-tier genomics resource that is widely available to the Emory research community and that integrates cutting-edge genomics technologies with downstream analyses. The EIGC's **Clinical Laboratory Improvement Amendments (CLIA) Services** (CLIA: 11D1086150) provide nucleic acid isolation and QC services and cell line validation. The CLIA services provide support for clinical trials research using genomics technologies that need to be conducted in a CLIA certified environment with CLIA validated protocols. Aliquots of human samples isolated in the EIGC can also be transferred to other CLIA/CAP certified testing facilities for clinical diagnostic testing. The EIGC's **Genomics Research Services** provide a wide variety of genomics services which include genotyping assays like the Infinium Methylation EPIC array and TaqMan Genotyping assays; library preparation for 16S rDNA microbiome, targeted sequencing (Fluidigm Access Array), single cell sequencing (10X Genomics), RNAseq, ATACseq, and reduced representation bisulfite sequencing; Illumina-based Next-Generation sequencing using the Illumina MiSeq and NextSeq platforms; transcriptome analysis (Nanostring nCounter); spatial profiling services using Visum (10X Genomics) and GeoMx (Nanostring) platforms; and genome editing validation. The EIGC has adopted an innovative business model whereby large-scale next-generation sequencing is outsourced to other academic and commercial entities, with the ultimate goal of obtaining the lowest cost, highest quality, and fastest turn-around for our customers. The EIGC's **Genome Engineering Services** offer custom cloning services for Emory investigators in support of functional genomics applications.



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Emory Integrated Genomics Core

Emory Integrated Core Facilities

The EIGC staff include four PhD-level scientists, providing expertise on genomics platforms, epigenetics services, cancer biology, CLIA protocol, custom cloning, genome editing, and other support. The lab is supported by 7 additional staff. The Core Director (Dr. Lyra Griffiths) and Scientific Director (Dr. Christopher Scharer) provide project planning and grant application support. Dr. Thomas Schneider is the EIGC CLIA director. EIGC works closely with the Emory Integrated Computational Core (EICC) and the Biostatistics Shared Resource at Winship Cancer Institute in order to support our investigators with computational support.

The EIGC is located in a CLIA certified laboratory located on the 7th floor of the Woodruff Memorial Research Building, with 2400 square feet of dedicated wet-lab space. The EIGC's laboratory areas include dedicated pre- and post-PCR spaces. Two chemical fume hoods and a biological safety cabinet are also located within the space. The EIGC is located adjacent to the EICC and common public meeting room space on the 7th floor of the Woodruff Memorial Research Building, allowing for project planning meetings that span both cores and weekly EIGC team meetings. A secondary location is on the 4th floor of the Health Sciences Research Building, with 770 square feet of wet-lab space and contains a biological safety cabinet. This secondary location is adjacent to the Emory Flow Cytometry Core, providing the possibility to streamline collaborative projects.