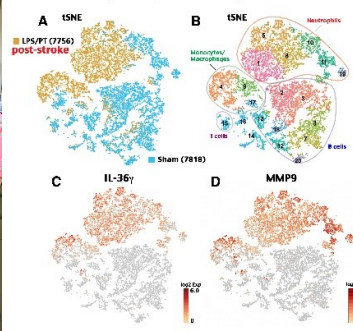


# Genome Analysis and Technology Core



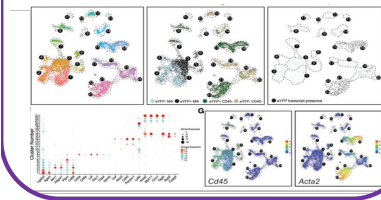
scRNA-Seq of leptomeningeal CD45+ cells



Arteriosclerosis, Thrombosis, and Vascular Biology

## BASIC SCIENCES

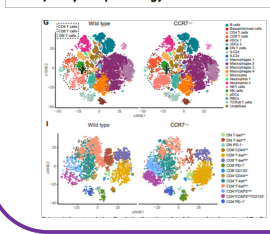
KLF4 (Kruppel-Like Factor 4)-Dependent Perivascular Plasticity Contributes to Adipose Tissue Inflammation



SCIENCE ADVANCES | RESEARCH ARTICLE

## IMMUNOLOGY

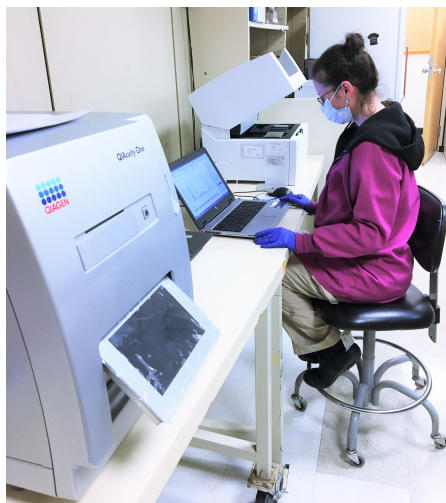
Ageing-associated deficit in CCR7 is linked to worsened glymphatic function, cognition, neuroinflammation, and  $\beta$ -amyloid pathology



## About Us

The mission of the Genome Analysis and Technology Core (GATC) is to serve as a scientific resource and biotechnology hub enhancing the scope and quality of basic and translational research at UVA, and to provide customer satisfaction, collaboration and quality control.

We provide support for project design, data troubleshooting, methods for publication and support for grant application (letter of support, budget preparation).



## Our Services

### Nucleic Acid - QC and Measurement

- Agilent Bioanalyser, Tape Station
- NanoVue and Qubit

### Single Cell Analysis

- 10x Genomics
  - RNA-seq - 3' Library kits
  - VDJ - T or B cell with 5' RNA-seq kit
  - MultiOmics (ATAC-seq and GEX)
  - Cell Plex (liquid based), Feature barcode (antibody based)
  - Fixed RNA single cell (FLEX)
- Parse Bioscience Ever Code
  - WT Mini 12 samples 10,000 cells
  - WT 48 samples 100,000 cells
  - WT Mega 96 samples 1 Million cells

### Bulk RNA/DNA Library Prep for NGS Illumina's NextSeq and miSeq

- RNA-seq gene profiling (RNA-M)
- Whole transcriptome (RNA-R)
- Custom-Amplicon, Crisper screen and 16S-Metagenomic
- Whole Small Genome (DNA-seq)
- Whole Exome Seq

### Quantitative PCR

- Qiagen QiaCuity Digital PCR: GEX, CNV
- Real Time PCR: GEX, Genotyping



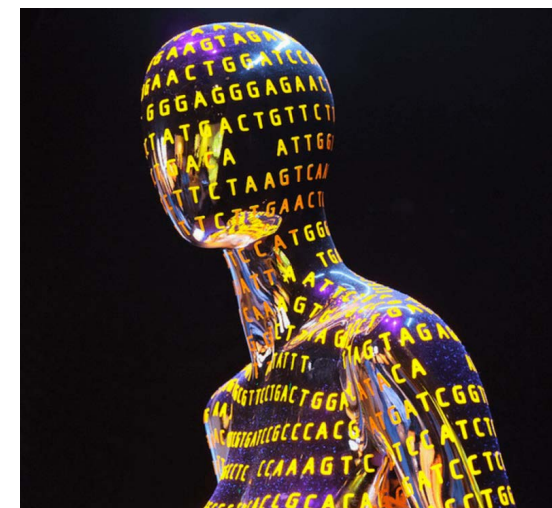
**Enhancing Research,  
Rigor and Reliability**

## Our Team

**Katia Sol-Church, PhD** - Director  
Professor of Pathology

**Yongde Bao, PhD** - Associate Professor

**Alyson Prorock, MS** - Lab Specialist



The goal of GATC staff is to enable

## Next Generation Sequencing

projects for novice and experienced users

## Instrumentation

### Shared Instrumentation

- Agilent Bioanalyzer and Tape Station
- Qubit 3.0 fluorometer
- Qiagen QIAcuity One 5plex
- Nanopore GridION
- QuantStudio 6 Flex Real Time PCR
- NanoVue spectrophotometer
- Platform System FUL-2

### Core Operated Instrumentation

- 10X Genomics Chromium Controller
- Illumina NextSeq 2000 Sequencing System
- Illumina MiSeq Sequencer

## Contact

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GATC Website:  
[med.virginia.edu/gatc](http://med.virginia.edu/gatc)

Request services on:  
[uva.corefacilities.org/account/login](http://uva.corefacilities.org/account/login)

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