**Extensive experience in large-scale single-cell analysis**

We have extensive experience in processing large-scale single-cell data. As the lead analysis group in pioneering consortia (e.g., ENCODE, PsychENCODE, and SCORCH), we have processed large scale single-cell data from over 400 brain samples, as recently published in Science. We have already built the BrainSCOPE{pmid:38781369} resource and released the official PsychENCODE cell-type-specific CREs, which were validated by STARR-seq. We conducted s-LDSC to identify relevant cell types for brain disorders.

**Prior experience on building GRNs and assigning TF-to-gene regulatory relationships.**

Our investigator team has been collaborating for years to build the official ENCODE and PsychENCODE annotation resources for GRN constructions{pmid:38781369}. By integrating multiple data modalities, including scQTLs {pmid:38781369}, snATAC-seq, TFbinding sites, and gene co-expression, we constructed GRNs for PFC cell types.