

DISSECTING CELLULAR HETEROGENEITY USING SINGLE-CELL RNA-SEQ

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Abstract

Cell-to-cell variability in gene expression exists even in a homogeneous population of cells. Dissecting such cellular heterogeneity within a biological system is a prerequisite for understanding how a biological system is developed, homeostatically regulated, and responds to external perturbations. Single-cell RNA sequencing (scRNA-seq) allows the quantitative and unbiased characterization of cellular heterogeneity by providing genome-wide molecular profiles from tens of thousands of individual cells. In this talk, I present an overview of scRNA-seq, and apply this approach to dissect cellular heterogeneity in stomach and adipose tissues.

Keywords

Single-cell RNA-seq, Cellular heterogeneity, Cellular plasticity, Adult stem cells