

scRNA-seq Overview

Historical Development

From Tang et al. 2009 to modern high-throughput platforms

Technology Comparison

Droplet vs plate-based methods

Throughput vs Depth

10X: 10K cells/run, Smart-seq: 100-1000 genes more

Cost per Cell

\$0.05-1.00 depending on platform and scale

Applications

Cell atlases, development, disease, drug screening

💡 Revolution in understanding cellular heterogeneity