

## Researchers from China constructed the first mammalian cell map

With the support by the National Natural Science Foundation of China, researchers from Zhejiang University School of Medicine created the mouse cell atlas using a new high throughput single cell analysis platform. The related article “Mapping the Mouse Cell Atlas by Microwell-seq” was published in *Cell* on February 22<sup>nd</sup>, 2018.

Since the discovery of the cell as the fundamental unit of life, investigators have tried hard to characterize and classify different cell types. In recent years, the single cell analysis technology has enabled researchers to analyze cell differentiation, regeneration, aging and pathological changes more accurately from the level of individual cells.

The team led by Professor Guo GuoJi (郭国骥) at Zhejiang University has independently developed a Microwell-seq high-throughput single cell sequencing platform, which improves the accuracy of existing single cell technology, and reduces the cost of single cell sequencing library generation. Using the platform, the team performed a systematic single cell transcriptome analysis of more than 400,000 cells from nearly 50 mouse tissues, and constructed the first mammalian cell map.

The study covered all the major cell types in mammals, including tissue, stromal, endothelial and immune cell subtypes in each organ. The research team has also constructed a mouse single cell database and the mouse cell atlas web site (<http://bis.zju.edu.cn/MCA/>). The site provides a powerful mapping system that can define cell types accurately using single cell expression data.

The new technology and the cell map resource will exert long term impact in the areas of cell biology, developmental biology, neurobiology, hematology and regenerative medicine. The study also helps to advance precision medicine by offering a platform for single-cell diagnostics.

