

Evolution of neurons and nervous systems - a cell type perspective

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Center Building, Level-B
Seminar Room B250**

New comparative studies based on whole-body single-cell sequencing allow tracing the evolutionary diversification of cell types and the concomitant rise of complexity - from unicellular ancestors to the urbilaterian. I will present recent single-cell transcriptomics data from sponges and annelids that allow us to molecularly characterize cell types and cell type families across the animal kingdom. We have identified cellular modules encoded by effector genes specific for cell types and cell type families, termed apomeres, and candidate transcription factors that regulate these modules, to begin the reconstruction of the metazoan cell type tree. The new data has started to yield new insight into the evolutionary origin of neurons nervous systems, suggesting that the diversification of neural cell types predates the evolutionary origin of proper neurons.

All Welcome

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