



Module 2 Resource List: Directing the Differentiation of hPSCs Toward Neuronal Identities

The resources below were selected by Martin Kampmann, faculty from Module 1 of Stem Cells and Reprogramming Methods for Neuroscience: An SfN Training Series. These resources supplement their presentation, “Functional Genomics in iPSC-Derived Neurons and Glia.”

[CRISPR-based Platform for Multimodal Genetic Screens in Human iPSC-derived Neurons](#)

Tian et al describe three types of CRISPR-based genetic screens in iPSCs and iPSC-derived neurons: based on survival, single-cell RNA sequencing, and longitudinal imaging.

[A CRISPR Approach to Neurodegenerative Diseases](#)

Kampmann describes the potential of using of CRISPR-based functional genomics in human iPSC-derived neurons to uncover mechanisms and therapeutic targets relevant to neurodegenerative diseases.

[CRISPRi and CRISPRa Screens in Mammalian Cells for Precision Biology and Medicine](#)

Kampmann reviews CRISPRi and CRISPRa screening approaches in mammalian cells.

[MAGeCK-iNC](#)

A bioinformatics pipeline for the analysis of pooled genetic screens.