**Establishing of electroporation for parallelized genome-scale functional analysis**

Parallelized high-throughput functional analysis is highly instrumental for detecting regulatory networks in cells and tissues. RNA interference (RNAi) or CRISPR-Cas9 based gene impairment is used for these purposes. However, the delivery of cargo (siRNAs, sgRNA, cDNAs) to cell by lipofection is losing the efficiency with the increasing scale and, consequently, reduction of the transfection reaction. During the project we combined the experience of two groups to test electroporation to show feasibility of electroporation for the efficient and robust deliver of nucleic acids on the whole genome-scale into living mammalian cell. Specifically, during the project mini-electrodes have been built and adapted for the well of 96-well plate to electroporate adherent cells to enable them uptake siRNA. This allowed to start designing of new types of electrodes for parallelized delivery of siRNA molecules into cells located in different wells of 96-well plate.