# Modeling lipid alteration during cell electropermeabilization

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**Résumé**

We present a model of in vitro cell electropermeabilization in which conducting and permeable states of the membrane are differentiated.This model is derived from experimental observations, using a top-down approach. We will focus in particular on the diffusion on the membrane surface of the lipids that were altered during the application of the electric field. Methods to solve the partial differential equations are presented, and simulation results confronted to the experiments. We show that taking into account lipid diffusion is in accordance with the observations of the desensitization of cells when using high frequency pulses.

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