

# Modeling and numerical simulations in cardiac electrophysiology

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We will present numerical simulations of the evolution of the electrical potential in the heart. Our model based on the bidomain equations and a phenomenological ionic model is validated through the reproduction of realistic electrocardiograms. We will also show recent simulations of the electrical propagation in a Multielectrode array, a device which is commonly used by pharmacologists to assay the influence of some pharmacological molecules on the cardiac cells.