**Simulation of** **electroporation threshold based on the evolution of transmembrane potential and pore density**

**Changes in the electric field inside the cell before and after perforation.**

Figures S1(a)-(d) show the changes in the internal electric field of the cell before and after electroporation occurs after applying a 100 ns pulse and a 100 us pulse, respectively. Figures S1(a)-(b) apply an electric field strength of 4.8 kV, and S1(c)-(d) apply an electric field strength of 1.2 kV.



Figures S1 Changes in the electric field inside the cell. (a) t=0ns. (b) t=100ns. (c) t=0μs. (d) t=100μs.