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(54) Title: MULTI-CHAMBERED ELECTROPORATION CARTRIDGE AND METHODS OF USE

(57) Abstract: The present disclosure provides systems, devices, and methods for electroporating at least one cell in a plurality of cells. A cartridge divided into a plurality of separate chambers is provided, where each chamber of the plurality of separate chambers is configured to hold a media comprising the at least one cell. Each chamber of the plurality of separate chambers is fluidly connected via a fluid exchange path, and are functionally separated by constrictions disposed within the fluid exchange path. Each chamber of the plurality of separate chambers includes electrodes for applying a pulsed electrical field to the at least one cell to achieve electroporation and transfection of the cell with nucleic acids. The constrictions disposed between each chamber prevents electric field interference between adjacent chambers during the electroporation procedures.