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## Microfluidic System for E.coli Electroporation

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Electroporation is the technique in which external electrical field is applied across cells of interest to create pores on cell membrane when the voltage across the cell membrane is high enough. Electroporation is commonly used to deliver exogenous reagents such as genes, drugs, and nanoparticles for therapeutic purposes. In this work, microfluidic device was fabricated using Printed Circuit board technique. Several planar Indium Tin Oxide (ITO) electrodes shapes were attached on glass slide and microchannel was place between two electrodes in the longitudinal direction. E.coli was used as a cell model in electroporation experiment. The 12-50 AC voltage with 1,000 Hz frequency. Fluorescence dye was used for real time electroporation monitoring.

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