



## Generation of induced pluripotent mouse stem cells in an indirect co-culture system

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**ABSTRACT.** Typically, production of induced pluripotent stem cells requires direct contact with feeder cells. However, once the stem cells have reached the appropriate maturation point, it is difficult to separate them from feeder cells, which must be irradiated with  $\gamma$ -rays or treated with the antibiotic mitomycin-C. We used a microporous poly-membrane-based indirect contact co-culture system with mouse embryonic fibroblasts to induce mouse pluripotent stem cells without radiation or antibiotics. We found that induced pluripotent stem cells induced by this co-culture method had a reprogramming efficiency and time similar to those induced using traditional methods. Furthermore,

strongly expressed pluripotent markers showed a normal karyotype and formation and contained all three germ layers in a teratoma.

**Key words:** Induced pluripotent stem cells; Feeder cells; Co-culture; Microporous polymer membrane