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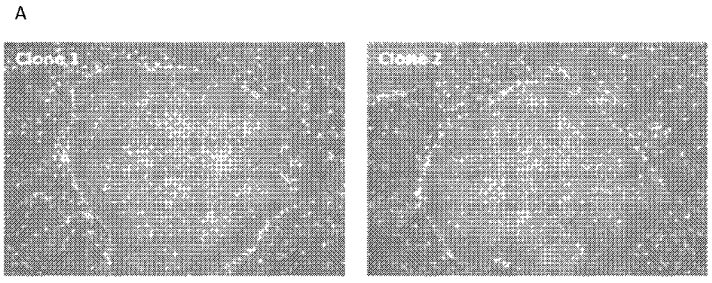


FIG. 1

(57) Abstract: The present disclosure relates generally to novel methods and compositions for using engineered reprogramming factor(s) for the creation of induced pluripotent stem cells (iPSCs) through a kinetically controlled process. Specifically, this disclosure relates to establishing combinations of reprogramming factors, including fusions between conventional reprogramming factors with transactivation domains, optimized for reprogramming various types of cells. More specifically, the exemplary methods disclosed herein can be used for creating induced pluripotent stem cells from various mammalian cell types, including human fibroblasts. Exemplary methods of feeder- free derivation of human induced pluripotent stem cells using synthetic messenger RNA are also disclosed.

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