

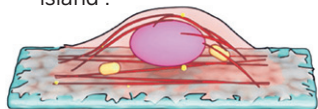
Physically rewiring mature cells into stem cells

Conventionally, scientists use chemicals to turn mature cells into induced pluripotent stem cells (iPSCs) - cells that have the potential to become any cell type of the body. However, in new research, mature cells can be physically rewired into stem cells without exposure to biochemicals, simply by confining them to a tight space.

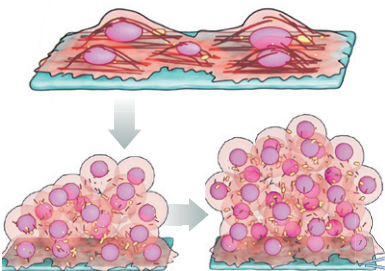
- 1** A rectangular "island", specially coated with biological molecules, for mature cells to adhere to and grow on.



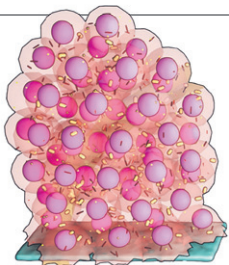
- 2** A single fibroblast (connective tissue) cell attaches to the "island".



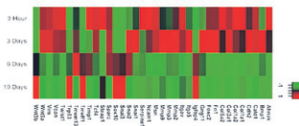
- 3** Over the next few days, the cell multiplies, forming a spherical cluster of cells.



- 4** On the 10th day, fibroblast cells lose their original identities and become more stem cell-like



- 5** Genetic analysis confirms the cells have turned into stem cells.



- 6** The stem cells are turned into other cells types.

