Capturing rare events in iPSC reprogramming using live content imaging

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CellPlayer™ Stem Cell Application Overview

Validate Pluripotency Using Fluorescent Imaging

Monitor Cytotoxicity and Transduction Efficiency

Track Colony Emergence and Morphology

Summary & Impact

Reprogramming somatic cell types into induced pluripotent stem cells is a rare event. Utilizing current protocols, reprogramming efficiencies vary from 0.0001 to 1%. Potentially pluripotent colonies emerge anywhere in the well or dish, making inspection of the whole vessel necessary. Using IncuCyte™ ZOOM, whole wells of were inspected daily, protocols were standardized and information was shared through images and movies.

Find a colony for positive selection or one overcome with differentiation that needs removal. Place digital marks around the colonies in the software. Put the IncuCyte™ Marking Tool in place of the objective, select “print” and physical marks are made on the vessel.

Add the Dimension of Time
Move forward and backward in time to monitor colony evolution and morphology changes

Monitor Rare Events in HD
Capture HD-phase images at the edge of well within your incubator

Standardize Protocols
Optimize transduction and reprogramming efficiencies

Streamline Workflow
Monitor reprogramming daily – from your desktop

Automated Processing & Movie Making Tools
Collaborate with quantitative data, movies, and images

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