

Methods of Disease Modeling

Tech ID: 24762 / UC Case 2015-040-0

BACKGROUND

Identification and evaluation of new therapeutic agents and the identification of suspected disease targets (which typically employ animal models) are expensive, time consuming, etc. *In vitro* alternatives have relied on the use of conventional cell culture systems which are limited in that they do not allow the three-dimensional interactions that occur between cells and their surrounding tissue. Additionally, cells not only sense and respond to chemical cues, they also respond to the physical environments.

TECHNOLOGY DESCRIPTION

A UCSD researcher has developed methods to create hydrogels on a chip that mimic normal and pathological properties of tissues dynamically by manipulating the physical environment in which the cells are cultured. *In vitro* induction of cells into environments with properties that switch from normal to that of a myocardial infarction or breast cancer have been demonstrated.

APPLICATIONS

IN VITRO DISEASE MODELING, DRUG SCREENING.

INTELLECTUAL PROPERTY INFO

Available for development into commercial applications.

PATENT STATUS

Country	Type	Number	Dated	Case
United States Of America	Published Application	20170328889	11/16/2017	2015-040

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OTHER INFORMATION

KEYWORDS

disease modeling, drug screening

CATEGORIZED AS

- ▶ **Medical**
 - ▶ Diagnostics
 - ▶ Other
 - ▶ Research Tools

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