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## Method and Device for the cultivation of stem cells

**Key words:** biological cells, stem cells, cultivation, propagation, differentiation, oocyte, egg

In applied and basic research, cells are usually cultivated on two dimensional surfaces of culture dishes in order to propagating and differentiating the cells. This culture conditions are strongly artificial and do not correspond to the native growth conditions of cells in the organism.

### The Invention

The invention relates to a novel method for cultivating, propagating and differentiating biologic cells from any species, especially adult stem cells and non-human pluripotent embryonic stem cells. The method mimics native growth conditions of cells in the embryo/organism and thereby overcomes disadvantages of established culture techniques (i.e. artificial growth conditions). For this purpose, cells or cell aggregates are transferred into a host egg providing a microenvironment allowing for a directed cellular differentiation and the production of differentiated cells, tissues, organs and organisms.

### Market potential

- Tissue engeneering
- Bioassays, Test systems
- Stock breeding

### State of Development

Methods for the production of chicken eggs with surrogate shells have been established. Methods for introducing and tracking cells within these eggs have been established. Methods for transferring cells into fish eggs and for subsequent culture and analyses have been tested.

### Branch

Pharma, Medical technology, reproductive technology

### Patent situation

Patent granted (EP, D, IL)

### Offer

Co-operation, Contract research, License, Sale

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