

# 3D Cell Culture Technologies Patent Landscape



*IP landscape for 3D cell culture technologies offers an important space to big entities as well as for small companies*

## REPORT OUTLINE

- 3D Cell Culture Technologies
- Patent Landscape
- September 2016
- PDF & Excel file
- €5,990 (corporate license)

## KEY FEATURES OF THE REPORT

The report provides **essential patent data** for 3D cell culture technologies including:

- Time evolution of patent publications and countries of patent filings
- Current legal status of patents
- Ranking of main patent applicants
- Joint developments and IP collaboration network of main patent applicants
- Key patents
- Granted patents near expiration.
- Relative strength of main companies IP portfolio
- 3D cell culture IP profiles of 10+ major companies with key patents, partnerships, and IP strength and strategy

The report also provides an extensive **Excel database** with all patents analyzed in the study

## OBJECTIVE OF THE REPORT

- Understand the IP landscape for 3D cell culture technologies
- Identify key patents
- Understand trends in for 3D cell culture IP
- Classify the major players in for 3D cell culture IP and the relative strength of their patent portfolio
- Identify new players in for 3D cell culture technologies IP
- Identify IP collaboration networks between key players

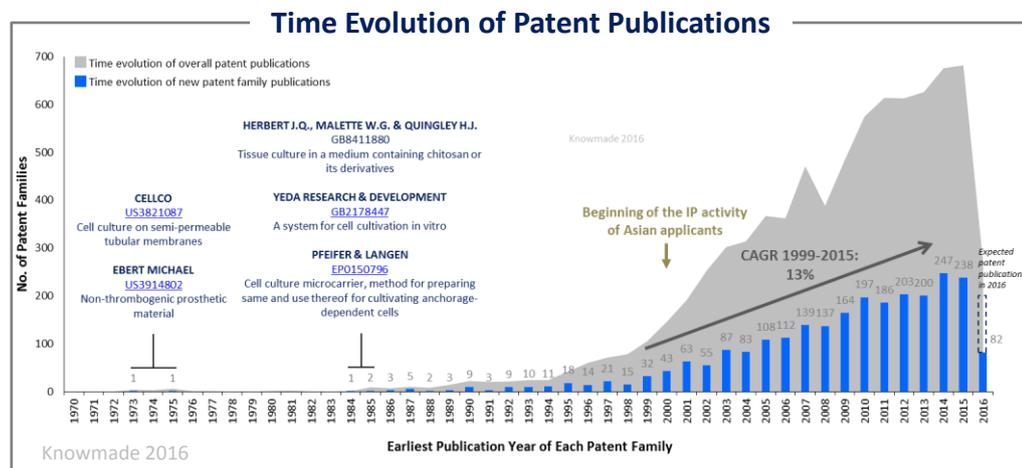
## 3D CELL CULTURE :

### REPRODUCING AN IN VIVO-LIKE ENVIRONMENT IN VITRO

The patent landscape related to 3D cell technologies is very open, involving important academic applicants as well as small companies. It includes over 2,500 patent families and involves over 1,000 patent applicants.

Cell culture in two dimensions is widely used for various applications, from fundamental research to biomedical applications. However, this type of culture doesn't reproduce the natural physiological microenvironment of a cell or an organ. Going from two to three dimensions allows the culture conditions to get closer to the true *in vivo* environment of the cells and 3D cell culture models are becoming more and more popular. In 2015, the 3D cell culture market was valued at \$725 million and is estimated to grow at a CAGR of 30.6% between 2015 and 2020 (source : Meticulous Research, May 2016).

Surprisingly, while many companies provide products dedicated to 3D cell culture on the market, these companies don't appear among the main patent applicants in the IP side of the domain. In fact, the Top-10 of the main assignees owns less than 10% of the whole patent families and no patent assignee is taking over the 3D cell culture domain. This finding indicates that the IP landscape and market for 3D cell culture are currently structuring and should both evolve in the coming years.



The IP landscape related to 3D cell culture is dominated by American and Asian applicants. As a consequence, the USA, China and Japan as well as Korea to a lesser extent represent the main countries of filings. However, Europe seems to represent a new interest for patent assignees and patent publication level in Europe is close to the publication level observed in China.



**ASSIGNEES CITED IN THE REPORT (NON-EXHAUSTIVE)**

A\*STAR, Columbia University, Corning, DICP, KIMM, MIT, NASA, Osaka University, Pluristem, Seoul National University R&DB Foundation, Third Military Medical University, University of California, University of Michigan, Zhejiang University

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