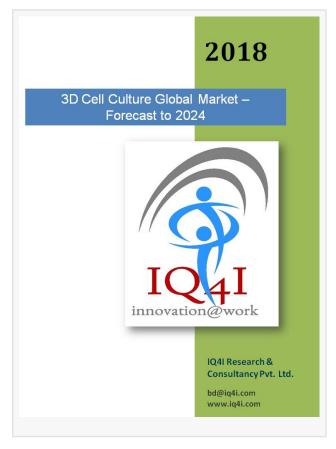


IQ4I Research & Consultancy published a new report on "3D Cell Culture Global Market – Forecast To 2024"

Rise in R & D Investments, need for organ transplantation, Use of 3D cell culture models as an alternative tool for invivo testing are driving the market growth

BOSTON, MASSACHUSETTS, U.S., February 21, 2018 /EINPresswire.com/ -- The first attempt to culture cell artificially dates back to 1907, where Dr. Ross Harrison, an Anatomy Professor, developed hanging drop technique to grow three-dimensional (3D) frog embryonic nerve fragments via a cover slip. Since then, life science researchers have depended on primarily adherent, two-dimensional (2D) cell culture techniques where cells of interest are cultured in plastic or glassware for study of human cells, tissues, and disease models. As intricacies of these techniques are understood advanced 3D models have been developed which greatly influence the in-vitro culturing and driving cell culture market. In contrast to 2D environment, cells grown in three-dimensions display higher degree of intercellular interactions, assume more physiologically relevant morphologies and preserve higher-order tissue processes. Tools, technologies, and protocols are making in-vitro 3D analysis simple, cheap, reproducible



and scalable-enough for adaptation in drug development. As these tools have become more accessible and validated, researchers in both academia and biopharma are shifting their attention from 2D to <u>3D cell culture</u>. As estimated by IQ4I Research, the 3D cell culture global market is expected to grow at a low double digit CAGR to reach \$1,485.1 million by 2024.

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3D Cell Culture Global Market is estimated to be worth \$1,485.1 million by 2024" IQ4I Analyst Rising investments in research and development, increasing need for organ transplantation, use of 3D cell culture models as a tool against animal testing, use of microfluidic technology, and increasing focus on <u>regenerative medicine</u> are some of the factors that are driving the market growth. The entry of new players with novel technologies and introduction of technology driven products are creating an

opportunity in the global 3D cell culture market. Whereas, Lack of experienced and skilled research professionals, lack of consistency in 3D cell culture products and budget restriction for small and medium-sized laboratories are hindering the market growth. Stringent regulatory process controls and ethical concern over animal source usage are the major threat to the market.

The recent progress in microfluidic technology, <u>scaffolds</u>, spheroids and gels-based systems is making lot of difference in the market as they provide micro-scale complex structures and wellcontrolled parameters to mimic the in vivo environment of cells and thereby gives an opportunity for scientists to explore new applications such as tissue engineering, stem cell, drug discovery and regenerative medicine. The rapid advancements in the field of cell culture such as 3D bioprinting, organ-on-chip, and single use bioreactors is advancing day-by-day and has been accepted as the future direction of 3D cell culture market. Now-a-days, ultra low attachment micro-plates (ULA) applications are increasing as researchers are focusing on single spheroid and microtissue production for downstream assay compatibility driving demand for ultra low attachment microplates. For instance, InSphero AG (Switzerland), Corning Incorporated (U.S.), Perkin Elmer (U.S) are some the major companies manufacturing these plates.

Geographically, 3D cell culture market is divided into North America, Europe, Asia-Pacific and Rest of the world. North America dominated the market with largest share in 2017, due to increased government funding, rising incidence of cancer, development of new models for candidate drug screening and cytotoxicity testing, expanding biopharmaceutical industries and high healthcare expenditure. Europe accounts for second largest share followed by Asia-pacific region and it is expected to grow at the highest rate due to increased healthcare awareness, improved economic growth, low operating cost and increased outsourcing. Significant new product launches, collaborations and partnerships joint ventures are some of the industry trends that are playing a major role for the market growth.

Some of the major companies that manufacture 3D cell culture products include, Becton Dickinson & Company (U.S.), ThermoFisher Scientific (U.S.), Corning (U.S.), Lonza (Switzerland), Merck KGaA (Germany), Kuraray Co. Ltd. (Japan), Insphero (Switzerland), Nano 3D Biosciences (U.S.), JSR Corporation (Organogenix Inc.) (Japan), and Organovo Holdings Inc. (U.S.). Emerging players in the 3D cell culture market include, 3D Matrix Co (Japan), AMSBio LLC (U.S.), Ascendance (U.S.), BioCellChallenge (France), Biolamina AB (Sweden), CellecBiotek AG (Switzerland), CelVivo IVS (Denmark), Cytoo (France), Fujifilm (Japan), Hurel Corp (U.S.), Nanopahrma AS (Czech Republic), Prodizen (Korea), etc.

Mr. Satish Biruddukota IQ4I Research & Consultancy Pvt Ltd., +91-80-60500229 email us here

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