

**Human Organoids Market by Product (Liver, Kidney, Pancreatic Models (2D, 3D)), Disease Area (Oncology, GI, Neurological Disorders), Application (Drug Toxicity, Personalized Medicine), End User (Pharma & Biotech Companies, CROs) - Global Forecast to 2029**

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**Report description:**

The value of the human organoids market will increase from an estimated USD 1.19 billion in 2024 to USD 2.33 billion in 2029, at a CAGR of 14.4% through the forecast period.

Advancement in funding for research in human organoids directly promotes the growth of the market for organoids with significant improvement in research capabilities and increases the scope of applications. Financial support brings scientists to explore organoids in various fields, such as cancer, neurodegenerative diseases, and drug development, which attracts pharmaceutical and biotech companies. A more commercialized version of the organoid technologies along with a clear regulatory framework will even further ease access to the market. This, in turn, is fuelling the growth of the global human organoids market. Although the growing interest in human organoids provides a major market potential, there is a dearth of skilled labor. With such increasing demand in innovative organoid technology, the shortage of qualified personnel who are able to develop and use such complex models has become a challenge to the continued research and commercialization effort.

"Developmental biology segment is expected to have the fastest growth rate in the human organoids market, by application, during the forecast period."

The human organoids market is segmented into developmental biology, drug toxicity & efficacy testing, disease pathology, personalized medicine, regenerative medicine, and other applications, based on application. Human organoids represent an essentially much more ethically compliant and efficient alternative to studying human-specific developmental biology and the processes leading to disease. It is therefore increasingly being applied, especially in academic and research centers specializing in developmental biology.

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"Pharmaceutical & biotechnology companies segment accounted for the highest growth rate in the human organoids market, by end user, during the forecast period."

Based on end user, the human organoids market is bifurcated into pharmaceutical & biotechnology companies, contract research organizations, academic & research institutes, and other end users. The pharmaceutical and biotechnology companies segment is expected to grow at the highest CAGR in the market of human organoids mainly due to their intense research and development activities, where they use organoids in drug discovery, disease modeling, and personalized medicine. These companies employ organoids in developing new drugs and testing them for the efficacy and toxicity of the drug, besides gaining insights into the complexities of a disease at a cellular level.

"Asia Pacific: The fastest-growing region in human organoids market."

The worldwide market for human organoids is categorized into North America, Europe, Asia Pacific, Latin America, the Middle East & Africa, and GCC Countries. Notably, the Asia-Pacific region marks the highest CAGR in the human organoids market, due to increasing investments into healthcare infrastructure and research that advance the capabilities of medical facilities. In addition to this, the number of rapidly aging patients strongly demands effective treatments for diseases related to age. Consequently, human organoids act as great models for the study of such conditions. The growing medical tourism activities in the APAC region also happen to be of great influence for the market, given the rapid increase of patients seeking advanced treatments and high-class healthcare services. These factors, collectively, have put the APAC region on a growth trajectory for human organoids markets.

The break-up of the profile of primary participants in the human organoids market:

-□By Company Type: Tier 1 - 40%, Tier 2 - 30%, and Tier 3 - 30%

-□By Designation: C-level - 27%, D-level - 18%, and Others - 55%

-□By Region: North America - 51%, Europe - 21%, Asia Pacific - 18%, Latin America - 6%, and Middle East & Africa - 4%

The key players in this market are Thermo Fisher Scientific Inc. (US), Corning Incorporated (US), Merck KGaA (Germany), BioIVT (US), HUB Organoids BV (Netherlands), BICO (Sweden), BeCytes Biotechnologies SL (Spain), InSphero (Switzerland), GBA Group (Germany), Kirkstall Ltd. (UK), MIMETAS BV (Netherlands), Neuromics (US), PRIMACYT Cell Culture Technology GmbH (Germany), STEMCELL Technologies (Canada), ACROBiosystems (China), Biopredic International (France), CN Bio Innovations Ltd. (UK), CYPRIO (France), Emulate, Inc. (US), Kerafast, Inc. (US), Pandorum Technologies Pvt. Ltd (India), CYFUSE BIOMEDICAL K.K. (Japan), NeyroblastGX LLC (US), 3Dnatics Inc. (US), and DefiniGEN Limited (UK).

Research Coverage:

This research report categorizes the human organoids market by product (Liver models, kidney models, pancreatic models, colorectal models, heart models, lung models, other products), by source (adult stem cells, induced pluripotent stem cells, embryonic stem cells, other sources), by type (ready-to-use products, customizable products), by culture method (air-liquid interface culture, suspension culture, matrigel matrix culture, 3d bioprinting culture, and other culture methods), by disease area (oncology, liver diseases, gastrointestinal diseases, cardiovascular diseases, infectious diseases, neurological disorders, and other disease areas), by application (developmental biology, drug toxicity & efficacy testing, disease pathology, personalized medicine, regenerative medicine, and other applications), by end user (pharmaceutical & biotechnology companies, contract research organizations, academic & research institutes, and other end users), and region (North America, Europe, Asia Pacific, Latin America, the Middle East & Africa, and GCC countries). The scope of the report covers detailed information regarding the major factors, such as drivers, restraints, opportunities, and challenges influencing the growth of the human organoids market. A detailed analysis of the key industry players has been done to provide insights into their business overview, solutions, key strategies, acquisitions, and agreements. New product & service launches, and recent developments associated with the human organoids market. Competitive analysis of upcoming startups in the human organoids market ecosystem is covered in this report.

Reasons to buy this report:

The report will help the market leaders/new entrants in this market with information on the closest approximations of the revenue numbers for the overall human organoids market and the subsegments. This report will help stakeholders understand the competitive landscape and gain more insights to position their businesses better and plan suitable go-to-market strategies. The report also helps stakeholders understand the pulse of the market and provides them with information on key market drivers, restraints, opportunities, and challenges.

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The report provides insights on the following pointers:

- Analysis of key drivers (Growing focus on developing alternatives to animal testing, rising R&D funding and venture capital investments, increasing research on organoids, increasing prevalence of non-alcoholic fatty liver disease , and need for early detection of drug toxicity to minimize financial losses caused by late-stage drug failure), opportunities (Increasing focus on drug discovery activities, rising demand for organ transplantation, and growth opportunities in emerging economies), restraints (Issues related to incorporating organoids into existing workflows), and challenges (Dearth of skilled professionals) influencing the growth of the human organoids market.
- Product Development/Innovation: Detailed insights on upcoming technologies, research & development activities, and new product launches in the human organoids market.
- Market Development: Comprehensive information about lucrative markets - the report analyses the human organoids market across varied regions.
- Market Diversification: Exhaustive information about new products, untapped geographies, recent developments, and investments in the human organoids market.
- Competitive Assessment: In-depth assessment of market shares, growth strategies, product offerings of leading players like Thermo Fisher Scientific Inc. (US), Corning Incorporated (US), Merck KGaA (Germany), BioIVT (US), and HUB Organoids BV (Netherlands).

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