

Organ-on-chip Market: Global Industry Trends, Share, Size, Growth, Opportunity and Forecast 2023-2028

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Abstracts

Market Overview:

The global organ-on-chip market size reached US\$ 47.0 Million in 2022. Looking forward, IMARC Group expects the market to reach US\$ 266.0 Million by 2028, exhibiting a growth rate (CAGR) of 31.1% during 2023-2028.

Organ-on-chip refers to a microfluidic cell culture device utilized in effective drug discovery of precision medicine and a fast-track prospect of tissue engineering. It helps develop a narrow channel for the blood and airflow in organs, such as the lung, gut, liver, and heart. It enables the creation of a specific human model with functional responses at the organ or tissue level to avoid the usage of animal models. Apart from this, it offers several advantages, such as efficient fluid flow, relevant mechanical cues, an organ-level tissue-tissue interface, and separate access to parenchymal and vascular compartments.

Organ-on-chip Market Trends:

There is a currently rise in the demand for organ-on-chips in drug screening to reduce employee healthcare costs; improve employee morale, productivity and performance; and decrease absenteeism, accidents, downtime, turnover, and theft. This, along with the growing demand for lung and kidney-based organ culture devices, represents one of the key factors driving the market. Moreover, there is an increase in the availability of laboratory-engineered functional organs across the globe. This, coupled with the escalating demand for an alternative to animal testing through research activities on organ-on-chip devices for new drug development, is propelling the growth of the market. In addition, the rising adoption of organ-on-chips technology due to advancements in cell biology, microfabrication, and microfluidics is offering lucrative growth opportunities

to industry investors. Besides this, the increasing application of organ-on-chips devices in the healthcare industry for real-time imaging, in vitro analysis of biochemical, and genetic and metabolic activities of living cells in a functional tissue are positively influencing the market. Apart from this, key market players are extensively investing in research and development (R&D) activities to develop new solutions and treat pulmonary diseases, which is catalyzing the demand for organ-on-chips technology.

Key Market Segmentation:

IMARC Group provides an analysis of the key trends in each sub-segment of the global organ-on-chip market report, along with forecasts at the global, regional and country level from 2023-2028. Our report has categorized the market based on offering, type, application and end use.

Breakup by Offering:

Products

Services

Breakup by Type:

Liver

Heart

Lung

Kidney

Others

Breakup by Application:

Physiological Model Development

Drug Discovery

Toxicology Research

Breakup by End Use:

Pharmaceutical and Biotechnology Companies

Academic and Research Institutes

Cosmetics Industry

Others

Breakup by Region:

North America

United States

Canada

Asia-Pacific

China

Japan

India

South Korea

Australia

Indonesia

Others

Europe

Germany

France

United Kingdom

Italy

Spain

Russia

Others

Latin America

Brazil

Mexico

Others

Middle East and Africa

Competitive Landscape:

The competitive landscape of the industry has also been examined along with the profiles of the key players being Allevi Inc., Altis Biosystems, AxoSim, BiomimX S.r.l., Elveflow, Emulate Inc., InSphero, MIMETAS, Nortis Inc., TARA Biosystems Inc. and TissUse GmbH.

Key Questions Answered in This Report

1. What was the size of the global organ-on-chip market in 2022?
2. What is the expected growth rate of the global organ-on-chip market during 2023-2028?
3. What are the key factors driving the global organ-on-chip market?

4. What has been the impact of COVID-19 on the global organ-on-chip market?
5. What is the breakup of the global organ-on-chip market based on the type?
6. What is the breakup of the global organ-on-chip market based on the application?
7. What is the breakup of the global organ-on-chip market based on the end use?
8. What are the key regions in the global organ-on-chip market?
9. Who are the key players/companies in the global organ-on-chip market?

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