

Artificial Lung Devices-Pipeline Insight and Competitive Landscape, 2022

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Report description:

DelveInsight's, "Artificial Lung Devices-Pipeline Insight and 2022," report provides comprehensive insights about 20+ companies and 23+ pipeline devices in artificial lung devices pipeline landscape. Globally, number of cases related to respiratory failure and cardiopulmonary collapse has grown rapidly. This has resulted in increasing demand for artificial lung that acts as an external support system providing oxygenation of blood and removal of carbon dioxide from the blood. Researcher and scientists are also making persistent efforts in developing and improving artificial lung, with which it can be used at larger scale and with greater ease. Therefore, due to an increase in demand and more and more players investing in research and development activities there is an extensive pipeline of artificial lung devices.

DeleveInsight latest report has all the emerging artificial lung devices along with competitive landscape to help better understand the market scenario.

Artificial Lung Devices Overview

Artificial Lung Devices: Understanding

Artificial lung device is a prosthetic device works as an alternative to the biological lung. It provides oxygenation of blood and removal of carbon dioxide from the blood. Artificial lung devices are made of synthetic material that are connected to blood vessels through tubes and cannulas of silicone.

Who needs Artificial Lungs?

- Chronic obstructive pulmonary diseases (COPD) patients
- Idiopathic interstitial pneumonia (IIPs)
- Cystic Fibrosis (CF)
- Pulmonary Arterial Hypertension

Artificial Lungs Devices: Competitive Assessment

This segment of the artificial lung devices report encloses its detailed analysis of various pipeline devices which include product description, licensing and collaboration details and other developmental activities including latest news and press releases. The report also provides list of major players involved in the pipeline product development.

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- Product Type

Artificial lung devices for decades have been used in newborns and children with lung failure, pneumonia, meconium aspiration syndrome and other conditions. However, recently they have also been employed to be used in adults. Hence the segmentation of the report categories device products based on pediatric, adult, both.

- Product Technology

Artificial lung devices can be used in two different ways - venovenous (VV) and venoarterial (VA), both the ways are covered in the report.

- Approval

The assessment has been carried out on the basis of artificial lung device approval- FDA, CE Mark or both.

- Stage

The competitive assessment of the pipeline devices has been given pertaining to their stage, whether they are in the clinical or the pre-clinical stage.

- Major Players in Artificial Lung Devices

There are approx. 20+ key companies which are developing the products for artificial lung devices.

- Hemolung RAS: ALung Technologies, Inc

Hemolung RAS provides ultra-low-flow, veno-venous extracorporeal carbon dioxide removal (ECCO2R) using a single, 15.5 French dual lumen catheter inserted percutaneously in the femoral or jugular vein. Low-flow ECCO2R with the Hemolung RAS provides partial lung support independently of the lungs. The Hemolung RAS removes 25% - 50% of basal metabolic CO2 production at circuit blood flows of 350-550 mL/min. The Hemolung RAS is designed to minimize the complication risks associated with extracorporeal gas exchange therapy.

- OXY-1: Breethe, Inc

Breethe's system, called the OXY-1 System, is designed to remove carbon dioxide and add oxygen to a patient's blood, much like a working human lung would. The tech eliminates the need for bulky oxygen tanks, and allows patients in need of ECMO therapy to move around more easily. Breethe has filed for clearance from the U.S. Food and Drug Administration for the OXY-1 System, but has not yet received it.

- Xenolungs: Lung Biotechnology

Lung Biotechnology is actively progressing towards the research and development of xenolungs. They have been constantly trying to develop new technologies and products to alleviate access and improve outcomes in patients that are suffering from Pulmonary Arterial Hypertension (PAH) and other fatal diseases. Xenolungs are human-compatible lungs that are developed in genetically engineered pigs. The patients receiving lung transplants have an improved quality of life and higher chances of survival.

Further product details are provided in the report??.

Artificial Lung Devices - Competitive Assessment

This segment of the report provides a brief competitive analysis of Artificial Lung Devices, to help understand the competition in the market. It gives a comparative understanding of the Artificial Lung Devices based on parameters such patient type.

Artificial Lung Devices: Competitive Benchmarking

This segment of the reports provides analysis of the pipeline report to give a clear understanding of the comparative analysis.

The analysis is based on

- Brand Positioning of Leading companies

- Industry Collaborations

Artificial Lung Devices: Commercialization Activity

This segment of the report provides a detailed list of any commercial activity in the field of artificial lung devices ranging from collaboration, mergers and acquisition, recent breakthrough among others.

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Development Activities

- In April, 2015, Breethe, Inc. announced to obtained exclusive rights to University of Maryland, Baltimore (UMB) intellectual property (IP) for the development of a wearable, portable blood pump oxygenator that will function as an artificial lung system for patients suffering from respiratory failure and cardiopulmonary collapse.

- On February 08, 2017, Miromatrix Medical received an innovative technology contract from Vizient Inc. for their Miromesh and Miroderm products. Vizient, Inc. is the largest member-owned healthcare company that is devoted to providing healthcare innovations (MIROMATRIX MEDICAL Inc, 2017).

- In December 2020, Abiomed announced that it has treated two patients in the world with the AbiomedBreethe OXY-1 System, a compact cardiopulmonary bypass system. It is an advanced ECMO technology along with pumps and oxygenator that removes carbon dioxide from the blood for patients whose lungs can no longer provide sufficient organ (ABIOMED, Inc., 2020). Further commercial activities are provided in the report??..

Artificial Lung Devices: Reimbursement

- US

In 2018, Centers for Medicare and Medicaid Services (CMS) implemented a series of coding categories and qualifiers for extracorporeal membrane oxygenation (ECMO) care, also known as artificial lungs. Among them, exclusion of veno-venous (VV) ECMO from DRG 003 heralds significant reimbursement reductions that may threaten fiscal viability of ECMO programs. This case series analysis evaluates merits and pitfalls of altering ECMO reimbursement.

Further information is provided in the report??..

Report Highlights

- Extensive coverage of the artificial lung devices under development
- The report reviews details of major pipeline products which includes, product description, licensing and collaboration details and other developmental activities
- The report reviews the major players involved in the development of artificial lung devices and list all their pipeline projects
- The coverage of pipeline products based on various stages of development ranging from Early Development to Approved / Issued stage
- The report provides key clinical trial data of ongoing trials specific to pipeline products
- Recent developments in the segment / industry
- The report consists of in depth analysis of pipeline products based on various parameters

Artificial Lung Devices Report Insights

- Artificial Lung Devices - Pipeline Analysis
- Artificial Lung Devices - Unmet Need
- Artificial Lung Devices - Market Dynamics
- Artificial Lung Devices - Future Perspectives and Conclusion
- Artificial Lung Devices- Analyst Views

Key Questions

- What are significant companies in this segment, their information, analysis, and insights to improve R&D strategies?
- How to identify emerging players with potentially strong product portfolio and create effective counter-strategies to gain competitive advantage?
- What are important and diverse types of artificial lung devices under development?

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- What are market-entry and market expansion strategies in artificial lung devices?
- What are some of the mergers and acquisitions and to identify major players with the most promising pipeline?
- What is in-depth analysis of the product's current stage of development, territory and estimated launch date?

Key Players

- Lung Biotechnology
- Miromatrix
- Charles Stark Draper Laboratory Inc
- United Therapeutics Corporation
- XVIVO Perfusion
- Medtronic
- Getinge
- Xenios AG
- ALung Technologies Inc.
- MC3 Cardiopulmonary
- Abiomed

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