

AI in Drug Discovery Market to hit USD 8.10 billion Globally by 2030 at 25% CAGR: Astute Analytica

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/EINPresswire.com/ -- [Global AI in Drug Discovery Market](https://www.astuteanalytica.com/request-sample/ai-in-drug-discovery-market) is expected to grow with a CAGR of 25% during the forecast period 2023-2030.

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Artificial intelligence is a technical system that combines a number of disciplines, such as knowledge representation, reasoning, solution search, and machine learning, in order to replicate human intelligence. AI can study and learn from the input data to make independent decisions by leveraging the software, system, network, and tools. The market has recently experienced significant growth because of the rising applications of AI in many industries, particularly the pharmaceutical sector. In this technological era, AI is applied in the pharmaceutical industry for drug repurposing, drug discovery, workload reduction, and productivity improvement.



Market Dynamics

From drug development to drug screening, artificial intelligence (AI) for drug discovery can be applied at different stages. As the need to cut the overall cost and length of drug development grows, the industry is expanding quickly. In drug discovery, there is enormous amounts of molecular data and literature. With the help of AI, the necessary data may be quickly screened. This causes the AI business to grow and see increased acceptance. An effective medicine takes around ten years to develop on average, costing US\$ 2.6 billion. This lengthy process is necessary because numerous potential medications are eliminated throughout the preclinical and phase 1 clinical trial. As a result, the majority of those involved in the pharmaceutical sector are keen to utilize artificial intelligence for quick, effective, and affordable drug discovery.

The aforementioned factors, in addition to growing cross-industry relationships and

collaborations between market sellers, lead to enormous market earnings. The strategic collaborations and alliances between the largest AI-based drug discovery pharmaceutical corporations and businesses grew from 4 partnerships in 2015 to 27 in 2020, as per the Clinical Trials Arena data forecasts for 2021.

But some of the biggest obstacles to the adoption of AI in the drug research industry are the lack of necessary data sets and the scarcity of competent staff.

Segmentation Summary

By Offering Segment

Since there is a big supply of software and a growing demand for AI software from the highly tech-savvy biotech and pharmaceutical industries, the software segment now controls a proportionally higher percentage of the market. Licensed models, subscription-based models, and software-as-a-service models—all of which generate recurring income—are frequently used to sell software. The main driver sustaining the huge market share of this category is the rising use of software for AI-based drug discovery to decrease the time and costs paid in the drug discovery process.

By Therapeutic Area Segment

In 2020, the oncology sub-segment dominated the global AI in the drug industry. Since human error is frequent in disease diagnosis, adopting AI systems can aid in the early detection of diseases. AI has gotten better at identifying diseases in recent years. Early detection with the help of AI systems can be advantageous in this circumstance because lung cancer is often found in its later stages when survival rates are already relatively poor.

On the other hand, the infectious diseases segment is likely to rise at a lucrative rate. In order to better understand infectious diseases, their transmission, and infection mechanisms as well as to enhance vaccine development, artificial intelligence, and related platforms, such as the Internet of Things (IoT), are currently being used. These platforms make use of a network of interconnected devices, including smartphones and other medical devices, and the information gathered from these devices can be utilized to investigate diseases by figuring out lifestyle trends and abnormalities.

By Application Segment

In 2020, the drug optimization and repurposing segment dominated the global AI in the drugs industry. The efficacy of the drug as a whole and its adverse pharmacological effect can be studied using cutting-edge AI systems like Deep Learning (DL) and drug modeling. The development of AI technology has also made it simpler to study, compare, and repurpose pharmaceuticals into more effective forms, reducing side effects and increasing overall efficacy.

The pharmaceutical industry is using these strategies to enhance its current medications while also utilizing them for new indications that lower the cost of development.

By End-User Segment

In 2020, the pharmaceuticals and biotechnology companies segment led the global AI in the drugs industry. However, the research centers and academic and government institutions segment will grow rapidly in the coming years. Due to the popularity of AI-based arrangements, which lengthen the pharmaceutical disclosure process and require more money, this end-client segment is expanding.

Regional Insights

Due to its early adoption of artificial intelligence (AI), North America currently dominates the market. This is attributable to the region's significant investment in research and development as well as the region's well-known pharmaceutical industry. In addition, the US is home to the corporate offices of many well-known manufacturers of AI technology, including Google, Microsoft, IBM, and many others. Additionally, big tech companies in the US have partnered with esteemed institutions to accelerate drug discovery, design, and repurposing. Furthermore, they are adopting AI to analyze disorders and draw pertinent findings that can improve disease management.

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Prominent Competitors

The well-established popular competitors in the global AI in drugs market are:

Envisagenics

IBM Corporation

Bioage

Microsoft Corporation

Exscientia

Google

Insilico Medicine

NVIDIA Corporation

Atomwise, Inc.

Cloud Pharmaceuticals, Inc.

Deep Genomics

Indivumed GmbH

Other Prominent Players

Segmentation Outline

The global AI in drugs market segmentation focuses on Offering, Technology, Application,

Therapeutic Area, End-User, and Region.

By Offering

Software

Service

By Technology

Machine Learning

- o Deep Learning

- o Supervised Learning

- o Reinforcement Learning

- o Unsupervised Learning

- o Other Machine Learning Technologies

Others Technologies

By Application

Drug optimization and repurposing

Preclinical testing

Others

By Therapeutic Area

Cardiovascular Disease

Infectious Disease

Metabolic Diseases

Neurodegenerative Diseases

Oncology

Others

By End-User

Contract Research Organizations

Pharmaceutical & Biotechnology Companies

Research Centres and Academic & Government Institutes

By Region

North America

The U.S.

Canada

Mexico

Europe

Western Europe

The UK

Germany

France

Italy
Spain
Rest of Western Europe
Eastern Europe
Poland
Russia
Rest of Eastern Europe

Asia Pacific
China
India
Japan
Australia & New Zealand
South Korea
ASEAN
Rest of Asia Pacific

Middle East & Africa
UAE
Saudi Arabia
South Africa
Rest of MEA

South America
Argentina
Brazil
Rest of South America

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team of professionals comprising business analysts, economists, consultants, and technology experts. In our list of priorities, you-our patron-come at the top. You can be sure of best cost-effective, value-added package from us, should you decide to engage with us.

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