

# Drug Chemistry 2020 – Global Drug Discovery Market Analysis

Anshoo Agarwal

Dubai, UAE

## Market Analysis

Medicinal chemistry is a stimulating field as it links many scientific disciplines and allows for collaboration with other scientists in researching and developing new drugs. Medicinal chemists apply their chemistry training to the process of synthesizing new pharmaceuticals. They also improve the processes by which existing pharmaceuticals are made. Medicinal chemists are focused on drug discovery and development and are concerned with the isolation of medicinal agents found in plants, as well as the creation of new synthetic drug compounds. Most chemists work with a team of scientists from different disciplines, including biologists, toxicologists, pharmacologists, theoretical chemists, microbiologists, and biopharmacists. Together, this team uses sophisticated analytical techniques to synthesize and test new drug products and to develop the most cost-effective and environmentally friendly means of production.

### Global Drug Discovery Market:

The global drug discovery market is expected to register a CAGR of approximately 8.0% during the forecast period, of 2018-2023. Due to the favorable regulatory framework by the governments in the region, North America dominates the market.

### Rise in Technology Advancements and Innovations

In the recent past, drug discovery has evolved significantly with emerging technologies, helping the process to become more refined, accurate, and less time consuming. Due to automation, multi-detector readers, imaging hardware and software, high-throughput screening is one of the most widely used [drug discovery technologies](#). There are several other evolving technologies, such as mass spectroscopy, protein and nucleic acid isolation, proteomics, RNAi, nanotechnology, and others, which contribute to advancements and innovations in drug discovery. The pharmaceutical and biotech companies are increasing their collaboration with contract development and manufacturing organizations, thus playing a crucial role in the development and innovation of new drugs and [drug delivery devices](#).

Other factors contributing to the growth of this market are - rising prevalence of a wide range of diseases (such as cardiovascular and CNS-related disorders), rising healthcare expenditure, and upcoming patent expiration of blockbuster drugs.

Medicinal/Pharmaceutical chemistry deals with the discovery, design, development and both pharmacological and analytical characterisation of drug substances. Medicinal chemists are indispensable in the preclinical stages of drug development, and again as pharmaceutical chemists in drug quality control. The chapter describes stages of drug development (hit to lead to preclinical candidate to drug substance), followed by a summary of the phases of drug activity relating to a drug's formulation, [pharmacokinetics and pharmacodynamics](#). Finally, classification systems for marketed drug substances are presented, with an emphasis on the classification by molecular target.

[Chemistry](#) plays an essential role in the field of medicine. Most of the drugs used for treatment or prevention of a disease are made of some chemical. ... Thus chemistry helps to give proper medical support to the patients without any errors. Let us see the role of chemistry in the medical field in few points. Chemistry is important because everything you do is chemistry! Even your body is made of chemicals. Chemical reactions occur when you breathe, eat, or just sit there reading. All matter is made of chemicals, so the importance of chemistry is that it's the study of everything.

### Geographical Representation:

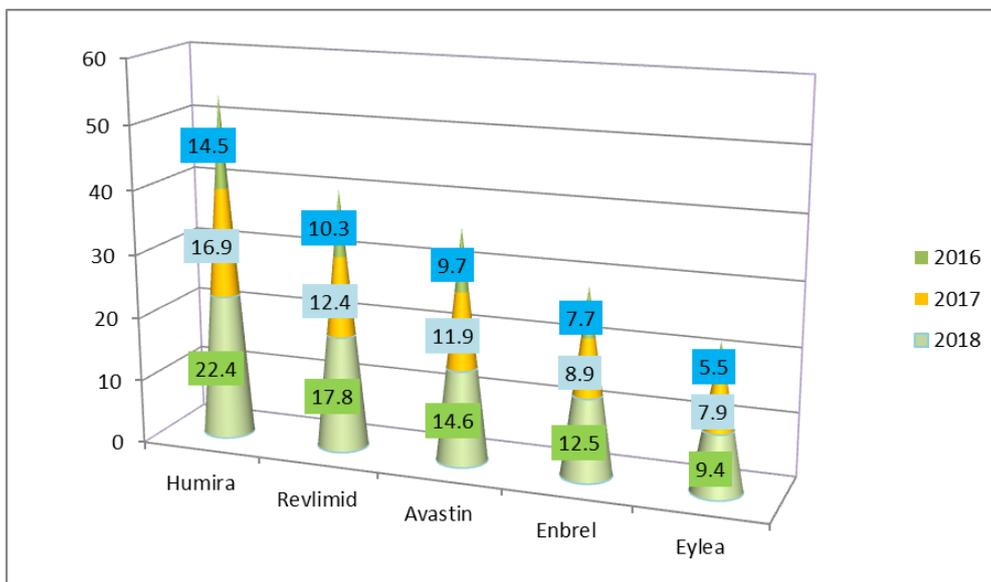
The global drug discovery market has been segmented by drug type, technology, service, end user, and geography. By geography, the market has been segmented into North America, Europe, Asia-Pacific, Middle East & Africa, and South America.

Geographically, North America is the most lucrative region in the market, due to the presence of a high number of top pharmaceutical and biotech companies in this region. The favorable regulatory framework and encouraging regulatory policies for investors to research and develop new drugs augment the growth of this market. Other factors, such as high-income population and healthy returns on investments for innovative technologies, are integral to the above factors. Asia-Pacific is expected to register a healthy growth rate, due to rising disposable incomes, economic growth, and increasing investment by the regional pharmaceutical and [biotechnology industry](#).

Expanding R&D speculations, expanding center on the item quality & security, control is imperative drivers of the development of the advertising. Expanding R&D speculations is one of the basic maintainability techniques. Within the later a long time, the R&D cost is expanding and expected to proceed to extend over the figure period. The pharmaceuticals industry is ruled by the U.S., which holds around 45% of the worldwide showcase share since it is driven by the administrative situation and the nearness of

the well-established outsourcing framework. Driving industry players designate around 20% of their turnover to R&D to preserve a competitive edge. Increase in complexity and number of benchmarks, which a single item may comply with, is driving significant development within the pharmaceutical expository testing administrations outsourcers inclusive is for musculoskeletal drugs. These are medications for infections such as rheumatoid- and osteo- joint pain, osteoporosis, carpal burrow disorder, tendonitis, rotator sleeve tear, strong dystrophy, myasthenia gravis, lupus erythematosus, and others. Major drugs in this section incorporate Piroxicam Glaxo, Dolonex, Felden, and Piroxicam Pfizer. The fragment accounted for 14% of the worldwide add up to in 2018. Cardiovascular, oncology and anti-infective drugs are the moments third and fourth biggest market.

Sale Analysis of top drugs from last 3 years



Global Pharmaceutical Market in the past 3 years

