

Significance of chiral in pharmaceutical companies essay sample

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Significance of chiral in pharmaceutical company

Chiral technology plays a prominent role in the pharmaceuticals industry.

Most of the drugs on demand today are enantiometrically pure drugs. There are projections that, by the year 2020, more than 95 % of the drugs would be chiral. As a result, in order to increase their competitive edge, pharmaceutical companies need to integrate chiral technology in the design of their drugs.

Research has proved that single enantiomers of drugs have better therapeutic effects and lesser side effects. This has prompted increased demand for drugs with a higher degree of complexity and greater selectivity of action. Chiral technology offers the best chance to develop receptor-based or enzyme binding drugs with a high degree of selectivity. Drugs require many steps for synthesis from basic organic chemicals. In order to make drugs that manipulate those chemical syntheses and portray the quality of existing in many isomers requires the use of chiral technology.

Pharmaceutical companies are using chiral technology to produce drugs that would add to their lists of the most successful drugs. Technologies that exist today, like chiral separation techniques, have contributed immensely to the production of enantiometrically pure drugs. It is widely recognized that enantiometrically pure drugs, produced using chiral technology, have a crucial role to play in the pharmaceutical markets. Majority of therapeutics and natural products exist in single enantiometric form, but there is still demand for single-enantiomers that have a wide application in the pharmaceutical industry.

The last couple of years have seen growth of research and development in

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chiral technology. Most companies understand that chiral technology will strongly influence the design of drugs. Tight regulation has also made the demand for chiral materials, their intermediates and active ingredients to grow tremendously.

Ahuja, S. (2010). *Chiral Separation Methods for Pharmaceutical and Biotechnological Products*. Hoboken, NJ: John Wiley & Sons.