Novel Drug Design

S. D. Sonawane, S. K. Bais, Suyash Kamble
Fabtech College of Pharmacy, Sangola, Solapur, Maharashtra, India

Abstract: *One of the key forces influencing the advancement of the pharmaceutical, biotech, and pharmacology fields is the drug industry. Drug discovery is the method used to find and create new medications. The goal of the method is to locate a substance that can be used therapeutically to prevent and treat disease. The selection of candidates, synthesis, characterisation, screening, and therapeutic efficacy assays are all steps in the drug discovery process. A molecule will start the medication development process before clinical trials once it has proven useful in these testing. A new drug's development is a time-consuming and expensive process, and despite hopeful discoveries and multibillion-dollar investments, the industry is currently experiencing a crisis. Currently, only 400 different pharmacological targets are successfully targeted by all available therapies. According to estimates, Finding a therapeutically effective molecule for the treatment and cure of disease is the goal of drug discovery. The selection of candidates, synthesis, characterisation, validation, optimization, screening, and tests for therapeutic efficacy are all parts of this process. A molecule will start the medication development process prior to clinical trials once it has demonstrated its importance in these studies. A new drug must go through a number of stages of development in order to be produced that is both safe and efficient and meets all regulatory standards. One overarching theme of our article is that the procedure is sufficiently drawn out, expensive, and complex that numerous biological targets must be taken into account for every new drug that is eventually approved for clinical use. Additionally, new research tools may be required to examine each target.. From the time of discovery until the treatment is licenced, it takes roughly 12 to 15 years and costs about US $1 billion. A million molecules are typically tested, but only one is examined in advanced clinical trials and ultimately made available to patients. An overview of the procedures for discovering and developing novel drugs is given in this article.*

Keywords: Drug

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