The Concept of Ideal Drug & its Realization Opportunity using Nanopharmaceutical Research Scenario

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ABSTRACT

New drug research is considered as a very important research area and probably found more investments of resources and time during the last few centuries. Drug research also contributed to the progress of medical sciences substantially and improving characteristics of drugs in terms of various predicted properties is continued as a challenge and agenda of these researches. Though the objective of drug research is continuous improvements of existing drugs in terms of their curing ability and to discover new drugs which have substantial improved abilities to cure many existing and new diseases, the final goal of drug research is directed to identifying one drug which has the ability to cure all diseases. Such drug system which can cure any diseases instantaneously is called ideal drug or ideal medicine. Based on the exact property expectations from a drug system as a medicine to cure all diseases is still unknown and a systematic study on the goal of ideal drug discovery is yet to be established. In this paper, we have made an attempt to identify the characteristics of an ideal drug which can cure all diseases in the universe. Further, we discussed the challenges and opportunities to realize such an ideal drug which can cure all the diseases. We also analysed the possibility of using nanotechnology which is emerging as universal technology to realize the possibility of developing ideal drug in practice. The advantages, benefits, constraints, and disadvantages of using nanotechnology in drug research with the goal of improving them towards an ideal drug system are also listed. Finally, the comparison is made between conventional drugs and nanotechnology based drugs in terms of Ideal System Characteristics. This paper is on futuristic research along with new knowledge creation and analysis based new interpretation of nanotechnology in medicinal drugs.

Keywords: Drug, Ideal Drug, Ideal Drug characteristics, Pharmaceutical Sciences, Nanotechnology, Nanomedicine.

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