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Relevance of AI in microbased drug delivery system

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Abstract

Recently, advanced and complex artificial intelligence methods have been employed to atomize and optimize drug delivery procedures. Conventional methods such as multiple linear regression and multilayer perceptron have been replaced with newer and more accurate methods like deep artificial neural networks and Bayesian regularized artificial neural networks. Before explaining in depth on the examples of such applications, the chapter begins with the fundamentals of artificial neural network and how it compares with its biological counterpart. The chapter is then followed by a comprehensive discussion on various examples of the artificial neural network's roles in research concerning microspheres, lipid-based carriers, liquid crystals, and solid dispersion. In all research, the finding is that the adoption of newer artificial intelligence methods leads to a faster and economical drug development process. © 2023 Elsevier Inc. All rights reserved.

Author Keywords

Artificial intelligence; Drug delivery; Microbased formulation

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