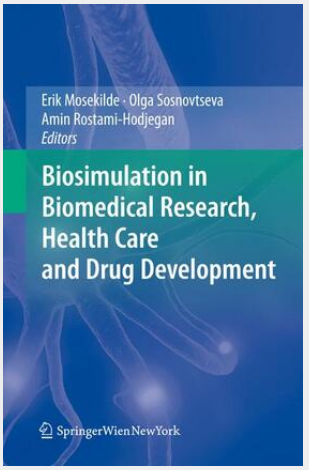
Mosekilde / Rostami-Hodjegan / Sosnovtseva

Biosimulation in Biomedical Research, Health Care and Drug Development



Biosimulation is an approach to biomedical research and the treatment of patients in which computer modeling goes hand in hand with experimental and clinical work. Constructed models are used to interpret experimental results and to accumulate information from experiment to experiment. This book explains the concepts used in the modeling of biological phenomena and goes on to present a series of well-documented models of the regulation of various genetic, cellular and physiological processes. The way how the use of computer models allows optimization of cancer treatment for individual patients is discussed and models of interacting nerve cells that can be used to design new treatments for patients with Parkinson's disease are explained. Furthermore this volume provides an overview on the use of models in industry, and presents the view of regulatory agencies on the topic.

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