DESCRIPTION

Leading experts illustrate how sophisticated computational data mining techniques can impact contemporary drug discovery and development.

In the era of post-genomic drug development, extracting and applying knowledge from chemical, biological, and clinical data is one of the greatest challenges facing the pharmaceutical industry. Pharmaceutical Data Mining brings together contributions from leading academic and industrial scientists, who address both the implementation of new data mining technologies and application issues in the industry. This accessible, comprehensive collection discusses important theoretical and practical aspects of pharmaceutical data mining, focusing on diverse approaches for drug discovery—including chemogenomics, toxicogenomics, and individual drug response prediction. The five main sections of this volume cover:

• A general overview of the discipline, from its foundations to contemporary industrial applications

• Chemoinformatics-based applications

• Bioinformatics-based applications

• Data mining methods in clinical development

• Data mining algorithms, technologies, and software tools, with emphasis on advanced algorithms and software that are currently used in the industry or represent promising approaches
In one concentrated reference, Pharmaceutical Data Mining reveals the role and possibilities of these sophisticated techniques in contemporary drug discovery and development. It is ideal for graduate-level courses covering pharmaceutical science, computational chemistry, and bioinformatics. In addition, it provides insight to pharmaceutical scientists, principal investigators, principal scientists, research directors, and all scientists working in the field of drug discovery and development and associated industries.

ABOUT THE AUTHOR

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