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Nota di contenuto	Part-I: Preliminaries -- Chapter 1. The Scope and Applications of Nature-Inspired Computing in Bioinformatics -- Chapter 2. Leveraging Healthcare System with Nature-Inspired Computing Techniques: An Overview and Future Perspective -- Part-II: Nature-Inspired Computing in Cancer Research -- Chapter 3. Nature-Inspired Computing in Breast Cancer Research: Overview, Perspective and Challenges of the State-of-the-art Techniques -- Chapter 4. Advances in Genomic Profiling of Colorectal Cancer using Nature[1]Inspired Computing Techniques -- Chapter 5. Potential Role of the Nature-Inspired Algorithms for Classification of High-dimensional and Complex Gene Expression Data -- Chapter 6. Optimized Nature-Inspired Computing Algorithms for Lung Disorder Detection -- Chapter 7. Overview and Classification of

Swarm Intelligence-based Nature[1]Inspired Computing Algorithms and their Applications in Cancer Detection and Diagnosis -- Chapter 8. Nature-Inspired Computing: Scope and applications of Artificial Immune Systems towards Analysis and Diagnosis of Complex Problems -- Chapter 9. Nature-Inspired Computing: Bat echolocation to BAT algorithm -- Chapter 10. Social, Emotional and Ethical (SEE) Attributes, Which Configures Our Bioinformatics Systems to Activate the Hidden Forces to Shape Human Decisions -- Part III: Nature-Inspired Computing in Drug Design, Development, and Therapeutics -- Chapter 11. Applications of Nature-Inspired Computing and Artificial Intelligence Algorithms in Solving Personalized Therapy Complications -- Chapter 12. Role of Nature-Inspired Intelligence in Genomic Diagnosis of Antimicrobial Resistance -- Chapter 13. Consequential Innovations in Nature-Inspired Intelligent Computing Techniques for Biomarkers and Potential Therapeutics Identification -- Chapter 14. Nature-Inspired Computing Techniques in Drug Design, Development, and Therapeutics -- Chapter 15. Illustrious Implications of Nature-Inspired Computing Methods in Therapeutics and Computer-Aided Drug Design -- Chapter16. Nature-based Computing Bioinformatics Approaches in Drug Discovery against Promising Molecular Targets Carbonic Anhydrases and Se[1]rine/Threonine Kinases for Cancer Treatment.

Sommario/riassunto

This book encapsulates and occupies recent advances and state-of-the-art applications of nature-inspired computing (NIC) techniques in the field of bioinformatics and computational biology, which would aid medical sciences in various clinical applications. This edited volume covers fundamental applications, scope, and future perspectives of NIC techniques in bioinformatics including genomic profiling, gene expression data classification, DNA computation, systems and network biology, solving personalized therapy complications, antimicrobial resistance in bacterial pathogens, and computer-aided drug design, discovery, and therapeutics. It also covers the role of NIC techniques in various diseases and disorders, including cancer detection and diagnosis, breast cancer, lung disorder detection, disease biomarkers, and potential therapeutics identifications.