1. Record Nr. UNINA9910729736403321 Autore Konieczny Leszek **Titolo** Systems Biology [[electronic resource]]: Functional Strategies of Living Organisms / / by Leszek Konieczny, Irena Roterman-Konieczna, Pawe Spólnik Cham:,: Springer International Publishing:,: Imprint: Springer,, Pubbl/distr/stampa 2023 ISBN 3-031-31557-X Edizione [2nd ed. 2023.] Descrizione fisica 1 online resource (XVII, 257 p. 1 illus.) Disciplina 570.285 570.113 **Bioinformatics** Soggetti Cytology Medicine - Research Biology - Research Computational and Systems Biology Cell Biology Biomedical Research Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Nota di contenuto Chapter 1: The Structure And Function Of Living Organisms -- Chapter 2: Energy In Biology – Demand And Use -- Chapter 3: Information – Its Role And Meaning In Organism -- Chapter 4: Regulation In Biological Systems -- Chapter 5: Interrelationship In Organized Biological Systems... This open-access textbook is an excellent introduction to systems Sommario/riassunto biology, which has developed rapidly in recent years. It discusses the processes in living organisms in an integrated way, enabling the reader to understand the fundamental principles and cause-effect relationships in biology and biochemistry. The authors have chosen an original but at the same time clear way of presenting the topics,

repeatedly drawing comparisons and models from the macroscopic world and making the reader aware of the unity of the laws of physics, chemistry and biology. The fully updated 2nd edition also contains

information that has only become available as a result of the increase in knowledge in recent years. This includes information on tumorigenesis, where significant progress has been made due to the explosive development of genetic knowledge as well as bioengineering with a highly effective technique adopted from the solutions of the bacterial world, such as CRISPR/CAS. This richly illustrated book is essential for postgraduate students and scientists of the following disciplines: biology, biotechnology, medicine, bioinformatics, robotics and automation, biocybernetics, and biomedical engineering. It is also an exciting read for anyone interested in biology.