Record Nr. UNINA9910298323003321 Autore Armitage Emily G Titolo Correlation-based network analysis of cancer metabolism [[electronic resource]]: A new systems biology approach in metabolomics //by Emily G. Armitage, Helen L. Kotze, Kaye J. Williams New York, NY:,: Springer New York:,: Imprint: Springer,, 2014 Pubbl/distr/stampa **ISBN** 1-4939-0615-1 Edizione [1st ed. 2014.] Descrizione fisica 1 online resource (67 p.) Collana SpringerBriefs in Systems Biology, , 2193-4746 Disciplina 616.994 Soggetti Systems biology Metabolism Cancer research Systems Biology Metabolomics Cancer Research Lingua di pubblicazione Inglese **Formato** Materiale a stampa Monografia Livello bibliografico Description based upon print version of record. Note generali Nota di bibliografia Includes bibliographical references. Nota di contenuto An overview of Cancer metabolism -- Cancer hypoxia and the tumour microenvironment as effectors of cancer metabolism -- Metabolic fingerprinting of in vitro cancer cell samples -- Network-based correlation analysis of metabolic fingerprinting data -- Case study: Systems biology of HIF metabolism in cancer -- Case study: Systems biology of chemotherapy resistance in hypoxic cancer -- Index. Sommario/riassunto With the rise of systems biology as an approach in biochemistry research, using high throughput techniques such as mass spectrometry to generate metabolic profiles of cancer metabolism is becoming increasingly popular. There are examples of cancer metabolic profiling studies in the academic literature; however they are often only in journals specific to the metabolomics community. This book will be particularly useful for post-graduate students and post-doctoral researchers using this pioneering technique of network-based correlation analysis. The approach can be adapted to the analysis of any large scale metabolic profiling experiment to answer a range of

biological questions in a range of species or for a range of diseases.