

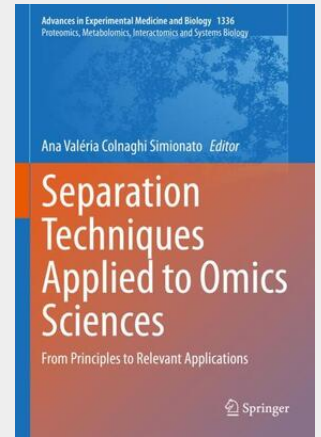
Colnaghi Simionato

Separation Techniques Applied to Omics Sciences

From Principles to Relevant Applications

This book covers liquid chromatography, gas chromatography and capillary electrophoresis, the three main separation techniques lately available, applied to key omic sciences, such as genomics, proteomics, metabolomics and foodomics. The fundamentals of each technique are not covered herein. Instead, the recent advances in such techniques are presented focusing on the application to omics analyses and unique aspects in each case. This volume intends to offer wide ranging options available to researchers on omics sciences, and how to integrate them in order to achieve the comprehension of a biological system as a whole. Omic sciences have been of ultimate importance to comprehend the complex biochemical reactions and related events that occurs upon a biological system. The classical central dogma of molecular biology, which states that genetic information flows unidirectionally from DNA to RNA and then to proteins, has been gradually replaced by the systems biology approach. This book presents a multidisciplinary approach that explains the biological system as a whole, where the entire organism is influenced by a variety of internal events as well as by the environment, showing that each level of the biological information flux may influence the previous or the subsequent one.

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