

Preface

With the completion of gene sequencing projects, scientific interest is shifting to the investigation of the proteome and metabolome. Broadly speaking, the metabolome can be considered as the dynamic complement of metabolites formed by, or found within, a cell type, tissue, body fluid, or organism; and the study of the metabolome can be viewed as metabonomics or metabolomics, both of which are applications of metabolite profiling. Metabolite profiling is not a new concept, and has been successfully used for the diagnosis of specific diseases for many years. However, with the advent of high-throughput technology, metabolite profiling is now being used extensively in the quest for the discovery of markers for a wide range of diseases.

In this volume, we draw together experts in the fields of metabolite profiling and identification. The main techniques used in metabolite profiling are mass spectrometry and NMR, and an introduction to these techniques is covered. There follow chapters on the current application of metabolite profiling for the diagnosis of disease. Specific classes of metabolites are the subject of further chapters, and these are followed by chapters on plant metabolomics and metabolite data mining. Finally, we conclude with a chapter on global systems biology.