
Preface

Metabolomics is a rapidly expanding field that provides a link between functional biology (phenotypes) and the inner workings of cells in tissues or whole organisms. The technologies of metabolomics are being taken up by academic researchers, increasingly in the medical field, and especially by the biotech and pharmaceutical companies.

The goal of the handbook is to provide readers with the current state of metabolomic development and the integration of metabolomics with transcriptomics and proteomics. These aspects are illustrated by research efforts related to toxicology and pharmacology.

The 14 contributions deal with a critical discussion of topics ranging from sample preparation and considerations (both laboratory and clinical), analytical methodologies for metabolite and isotopomer profiling, to metabolic flux modeling, database construction, and integration of “omics” for systems biochemical understanding. The handbook includes extensive bibliographies and resources.

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