INTRODUCTION

The analysis of small molecular weight human metabolites has a long history in medicine, from the simple urine wheel to the connection of the excretion of homogentisic acid in normal and alkaptonuric members of families with an alternative course of human metabolism [1], up to today’s technologies for studying human metabolic pathways in health and disease with increasing molecular understanding. The gap between the known number of human metabolites and the number of compounds with synthesis references illustrates the need for developing the analytical and synthetic tools for the preparation of useful diagnostic metabolites [2].

NEW STANDARDS

The systemic developments of both the analytical and synthetic frameworks for the metabolic enzymes and central metabolites have enabled advances in metabolic analysis. New stable central metabolites and selective analyses establish the fundamentals for finding new functions/pathways in healthy biological cells and new disease-specific metabolites open exciting perspectives as potential biomarkers for human diseases.

REFERENCES