Metabonomics: a holistic way of understanding nutritional biochemistry

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Metabonomics is the branch of science concerned with the quantitative understandings of the metabolite complement of integrated living systems and its dynamic responses to the changes of both endogenous factors (such as physiology and development) and exogenous factors (such as environmental factors and xenobiotics). As a holistic approach, metabonomics detects, quantifies and catalogues the time related metabolic processes of an integrated biological system, ultimately, relates such processes to the trajectories of the physiological and pathophysiological events. Amongst many exogenous factors, nutrients and non-nutrients in food have important effects on the biochemistry of human and associated micro flora. This presentation will deal with the basic aspects of metabonomics including detecting techniques and important factors to be taken into consideration when performing metabonomics studies. Some applications of metabonomics in food related topics will be discussed to illustrate the rapid developments of this extremely exciting new technology and its potentials in food and medicinal sciences.

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