

Tentative Outline

Special Thematic Issue for the journal "*Current Pharmaceutical Design*"

Title of the Thematic Issue: Novel and Practical Approaches to Treat and/or Prevent Diet-induced Metabolic Disorders

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- **Scope of the Thematic Issue:**

Epidemiological and biochemical studies have suggested that poor dietary habits and sedentary lifestyle are the principle contributors for developing the metabolic syndrome (MetS) or metabolic disorders. MetS is a cluster of risk factors, represented by central obesity, hyperglycemia, insulin resistance, dyslipidemia, pro-inflammatory state, and hypertension. MetS and associated comorbidities (diabetes, cardiovascular diseases etc.) are considered to be one of the major threats to human health in the 21st century. Practical dietary strategies, including meal frequency, glycemic index, dietary fiber content, total antioxidant capacity and nutritional bioactive compounds are claimed to be effective to treat some of the comorbidities. Although lifestyle modifications (diet and physical activity) are said to be efficient, successful management of MetS comorbidities is still a major concern. Since hyperglycemia, inflammation and redox imbalance are intrinsically involved in the progression of the comorbidities, finding of effective strategies that precisely targets these cellular impairments is highly warranted. In this context, pharmacological and non-pharmacological approaches with novel dietary patterns, phytochemicals and exercise interventions could be practical approaches to combat most of the MetS risk factors. Yet there is a big challenge in designing and prescribing of optimal nutritional patterns and exercise regimens to achieve the maximum beneficial effects of interventions,

This thematic issue is focused on the studies which address the issues and provide easy-to-follow strategies to overcome the MetS in the modern world. Along with high-quality research articles, we also welcome well organized reviews and meta-analyses that provide a clear direction to treat and prevent this global burden.

Keywords: Dietary patterns, obesity, exercise intervention, inflammation, oxidative stress, phytochemicals, drug delivery system

Sub-topics:

This thematic issue mainly focused on the following sub-topics, but not limited to.

- Pharmacological and non-pharmacological approaches to treat MetS or associated comorbidities
- Anti-inflammatory substances and role of NF-κB pathway in metabolic disorders
- Nrf2-mediated antioxidant status and Nrf2 response to dietary supplements or bioactive compounds
- Molecular evidence of plant-derived hypoglycemic and hypolipidemic agents
- Importance and practical application of drug delivery system to treat metabolic syndrome
- Nanotechnology and nano-formulations on selective impairments in MetS
- Personalized dietary patterns and/or exercise regimens to individuals with MetS
- Implications of ketogenic diet or low-carbohydrate diet for metabolic disorders
- Consequences of high-carbohydrate or high-fat diet and proposed strategies to overcome the global malady

Schedule:

- ✧ Thematic issue submission deadline: 28 February 2020
- ✧ Peer Review Due: 30 March 2020
- ✧ Final decision by Guest Editors: 20 April 2020

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