BioMed Research International

Special Issue on
Toxicoproteomics: New Trends in Toxicology Research

CALL FOR PAPERS

Humans are often exposed to a variety of pollutants that contribute to an individual's risk for diseases including cancer. Animal, cell cultures, and epidemiological lines of evidence demonstrate that exposure to various environmental pollutants including pesticides is associated with increasing frequency of cancers. In parallel, recent advances in new technology such as combinatorial chemistry and high throughput toxicological assay require improved screening procedures on safety evaluation in early stage of drug discovery. In this context, the use of tools in a molecular scale is usually requested.

Proteomics can be applied to many aspects of disease understanding and drug development, with the three main areas being development of protein biomarkers, identification of drug targets, and understanding of the molecular mechanism of drug action. Currently, major drive for proteomics research is target to biomarker discovery for early detection and diagnosis in cancer's new drugs discovery. However, progressive accumulation of biochemical and physiological knowledge at both the organism and cellular levels has allowed the toxicologists to decipher many mechanisms of toxicity by using this technical approach.

We invite investigators to contribute with original research articles as well as review articles that will stimulate the continuing efforts to understand and identify critical pathways in biological systems that are affected by and respond to adverse chemical and environmental exposures using standard proteins expression technologies such as classical immunohistochemistry and immunoassays technologies and high performance mass spectrometry. In addition, we are interested in articles describing the toxicoproteomics as a new field involving a relationship with toxicologic pathology and toxicogenomics. Additionally, categorized toxicoproteomics within scope broad enough are applied in different areas such as risk assessment, drug development process, and degenerative disease as cancers, environmental risk, immunology, parasitology, and microbiology.

Potential topics include, but are not limited to:

- Toxicity biomarker discovery
- Proteomics for the understanding of xenobiotic/pollutants toxicity mechanisms, using in vivo or in vitro model systems
- Quantitative proteomics technologies for clinical evaluation
- Identification of drug targets, protein modifications, and molecular pathways
- Exposome: technological advances, mechanisms, and disease
- Immunotoxicology

Authors can submit their manuscripts via the Manuscript Tracking System at http://mts.hindawi.com/submit/journals/bmri/toxicology/toxico/.

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