

Special Issue

Molecular Mechanisms of Toxic and Activated Effects of Exogenous Compounds

Message from the Guest Editor

Responses of organisms to the exposures to exogenous compounds are complex, being functions from organismal peculiarities and characteristics of the exogenous compounds. Low-concentration exposures can initiate a 'compensative' response that is considered a result of the organism streaming to the equilibrium, with possible 'overcompensation' and activation of organismal physiological functions. The activation is usually discussed in terms of the 'hormesis' phenomenon. Higher concentrations of exogenous compounds and/or their chemical reactivity result in inhibition of physiological functions, i.e., they initiate a 'toxic' effect. Knowledge on the molecular mechanisms of both toxic and activated effects of exogenous compounds is highly important as it (1) provides information on the prediction of the bioeffects of exogenous compounds, (2) helps in overcoming negative consequences, and (3) allows the application of positive results. We welcome studies of the bioeffects of different compounds with special attention paid to physicochemical processes and molecular conversions in biochemical and cellular systems.

Guest Editor

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