



## Lipid Emulsion in Toxicology

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### Message from the Guest Editor

Lipid emulsion has been widely used for the treatment of local anesthetic systemic toxicity. Although lipid emulsion is used to treat intractable cardiovascular collapse induced by toxicity of nonlocal anesthetic drugs with high lipid solubility, many physicians have a tendency to consider only the lipid sink as the underlying mechanism, in which the lipid emulsion absorbs highly lipid soluble drugs from vital organs, leading to a reduction in the offending drug content in vital organs such as the heart. However, many mechanisms other than the lipid sink have been demonstrated to be involved experimentally, including lipid shuttle (enhanced redistribution), inotropic effects, inhibition of nitric oxide production, fatty acid supply, attenuation of mitochondrial dysfunction, and glycogen synthase kinase-3 $\beta$  phosphorylation. For this Special Issue, we welcome all research papers associated with lipid emulsion treatment of systemic toxicity induced by local anesthetics or nonlocal anesthetic drugs, including antidepressants, antipsychotics, calcium channel blockers.





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