



Alternative Methods in Biological Assays

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Message from the Guest Editor

Experimental animal data are the cornerstone in pharmacology, toxicology, and risk assessment; however, promoting good animal welfare is a contentious issue in drug research. The need to reduce the pain and distress experienced by animals during scientific experiments highlights the importance of the principles of replacing, reducing, and refining (3Rs) animal use in the study of biomolecules. Several alternative models, such as *Tigriopus* spp., *Daphnia* spp., *Artemia salina*, *Caenorhabditis elegans*, *Pimephales promelas*, *Danio rerio*, and *Oncorhynchus mykiss* have been developed and proven to be successful. Some of these models could be extended in many other biomedical research fields, in order to capitalize on their potential to model human diseases. Lower vertebrates are an attractive option. This Special Issue highlights the development of alternative assays and testing strategies to model human responses. This Special Issue aims to bring together multi- and interdisciplinary approaches driven by the concept of the 3Rs in drug development. Of special interest is research on the use of alternative species or methods for complex pharmacology





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Message from the Editor-in-Chief

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