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

Special Issue

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Message from the Editor-in-Chief

Animals is an on-line open access journal that was first published in 2011. *Animals* adheres to rigorous peerreview and editorial processes and publishes only high quality manuscripts that address important issues in the many varied disciplines that involve animals, with a focus on animal science, animal welfare and animal ethics. *Animals* is covered in the Science Citation Index Expanded (SCIE) in Web of Science, with the latest Impact Factor: 2.7 (2023, ranks 10/80 (Q1) in 'Agriculture, Dairy & Animal Science'; 16/167 (Q1) in 'Veterinary Sciences'), 5-Year Impact Factor: 3.0.

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