



Special Issue on **Drosophila, a Wicket for New Concepts and Implications in Basic and Translational Neural Plasticity**

CALL FOR PAPERS

Recently, the use of *Drosophila* has made tremendous contributions for increasing our understanding in basic biomedical science to translational research. For example, *Drosophila* is used as a model for studying the *in vivo* functions of genes at the subcellular and cellular tissue and whole animal level. Furthermore, this model has been used to screen pharmacological agents and identify methods for treating various human neurological diseases. Also, this model animal is being used to investigate the basic molecular and cellular etiologies underlying human neurological disorders.

Most human neurological diseases are complex diseases thought to be caused by combination of several genetic defects together with various risk factors such as aging and environmental stressors. The risk factors alter neural circuits, pathways, and plasticity in nervous systems resulting in onset and progression of diseases. However, we still do not completely understand the components and basic mechanisms in complex neural circuits and plasticity in order to treat many of the inflicted diseases.

The major goal of this special issue is to introduce recent high quality contributions from *Drosophila* to improve our understanding of complex traits and which may serve as models of neurological disorders in humans. Thus, improvement in the basic understanding of neural circuits, synaptic plasticity, neurotransmission, neuromodulation, and signal transduction in models of human neurological disease is a focus of this special issue.

Potential topics include, but are not limited to:

- ▶ Basic biomedical research investigating plasticity, physiology, and transmission in the *Drosophila* motor controls and behaviors
 - ▶ Neural plasticity in *Drosophila* motor control
 - ▶ Neurotransmission in *Drosophila* neural circuits
 - ▶ Molecular mechanisms of synaptic plasticity
- ▶ Translational research studying various human neurological disorders in *Drosophila*
 - ▶ Molecular and cellular etiologies underlying human neurological disorders
 - ▶ Pharmacogenetic and pharmacophysiological studies
 - ▶ Transcriptome, proteome, and genome-wide association studies
 - ▶ Neurodegeneration and aging

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