

## Tentative Outline

### Special Thematic Issue for Current Neuropharmacology

Title of thematic issue: Effect of Neuropeptides on neuropsychiatric disorders

Guest Editor: Dr Bingjin Li

#### Aims & Scope:

Neuropeptides (NPs) are a group of peptides produced by neurons and neuroendocrine cells of the central nervous system (CNS). In the last decades, numerous NPs were constantly discovered and arouse numerous neuroscientists' interests. Several studies have shown that NPs were involved in extensive brain functions, including feeding behaviors, reward, behavioral stress response and learning and memory. Like traditional neurotransmitters, NPs can bind to specific surface receptors and subsequently regulate neuronal activities. Significantly, NPs can behave like traditional neurotransmitters due to high binding affinity and potency for target receptors. Besides, NPs also have blood-brain barrier permeability and are smaller than common proteins. Therefore, NPs and their receptors have been identified as potential drug targets for neuropsychiatric disorders.

Recently, amounts of NPs and their physiological effect were widely reported. Such as Orexin and neuropeptide Y (NPY), they were found to be highly expressed in the hypothalamus and were established regulators of appetite and feeding behavior. Substance P, somatostatin and enkephalin were highly expressed in mood-related brain regions, including the hippocampus and the prefrontal cortex, and were reported to have a significant modulatory effect on depression and anxiety. Also, it was found that NPY, galanin, oxytocin, and somatostatin have potential anticonvulsant actions. These results indicate that NPs regulation might be implicated in neurophysiological and neuropathological mechanisms of different neuropsychiatric disorders. In addition, clinical studies have shown that the secretion and expression of NPs are significantly altered in different pathological conditions, indicating that serum NPs might be potential diagnostic biomarkers for neuropsychiatric disorders.

Possible mechanism of NPs' implication in neurological diseases might relate to their interaction with neurotransmitter system. Many NPs are co-released with other traditional small-molecule neurotransmitters and corporately affect postsynaptic neuronal activities, which in turn alter to the transcription and expression of NPs. Besides, vitro and animal studies showed that NPs were implicated in different neurophysiological activities, such as neurogenesis and neuroprotection. However, the molecular mechanisms of NPs in neuropsychiatric disorders might warrant further investigations.

Therefore, in this special issue entitled "Neuropeptides and neuropsychiatric disorders", we will collect articles focusing on recent advances in NPs' physiological modulatory effect in the CNS and highlight the therapeutic potential in different neuropsychiatric disorders. Furthermore, other recent progress reports on neuropsychiatric disorders are also welcome.

**Keywords:**

Neuropeptides; Neuropsychiatric disorders; Neuroendocrine; Neurotransmission system; Neuroprotection; Neurogenesis;

**Subtopics:**

The subtopics to be covered within this issue are listed below:

- ↗ Neuropeptides: potential neuroprotective agents
- ↗ The effect of neuropeptide in neuroimmunomodulation
- ↗ Are neuropeptides sufficient to be biomarkers for diagnosis and treatment of neuropsychiatric disorders?
- ↗ Neurodevelopment and epigenetic modification of neuropeptide in the brain
- ↗ Neuropeptides as neurotrophic factors in neurological and behavioral regulation
- ↗ Metabolism, neuroendocrine and neuropsychiatric disorders
- ↗ Neuropeptides and neuroimmune crosstalk in stress physiology
- ↗ Estrogen and neuropeptides

**Schedule:**

- Manuscript submission deadline: 12-15-2019
- Peer Review Due: 1-10-2019
- Revision Due: 01-30-2020
- Announcement of acceptance by the Guest Editors: 02-15-2020
- Final manuscripts due: March 30, 2020

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