

Special Issue

Molecular Mechanisms Underlying Stress Response and Resilience

Message from the Guest Editors

A variety of stressors induce various physiological responses by stimulating sympathetic, neuroendocrine, and behavioral systems. While stress activates the hypothalamic-pituitary-adrenal (HPA) axis, it suppresses the hypothalamic-pituitary-gonadal axis. Stress also modulates the immune system. Corticotropin-releasing factor (CRF) in the hypothalamus plays a central role in regulating the stress response. CRF stimulates the release of adrenocorticotrophic hormone (ACTH) from the anterior pituitary. ACTH stimulates the secretion of glucocorticoids from the adrenal glands. The activated HPA axis is suppressed by the negative feedback effect of glucocorticoids. Glucocorticoids are essential for stress coping, stress resilience, and homeostasis. The stressed state may be relieved or reduced by an action, medicine, or therapy. The molecular mechanisms underlying stress response and resilience, however, are not fully understood. This Special Issue is focused on stress response and resilience, and will include original research articles and reviews on aspects related to their molecular mechanisms.

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The International Journal of Molecular Sciences (*IJMS*, ISSN 1422-0067) is an open access journal, which was established in 2000. The journal aims to provide a forum for scholarly research on a range of topics, including biochemistry, molecular and cell biology, molecular biophysics, molecular medicine, and all aspects of molecular research in chemistry. *IJMS* publishes both original research and review articles, and regularly publishes special issues to highlight advances at the cutting edge of research. We invite you to read recent articles published in *IJMS* and consider publishing your next paper with us.

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