



## Molecular Mechanisms of Estrogen Signaling Pathways

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### Message from the Guest Editors

The steroid hormone estrogen plays a critical role in numerous target tissues including the reproductive tract, the nervous, vascular and skeletal systems. Estrogen signaling is highly complex as besides its classical genomic action, a non genomic pathway involving protein kinases also takes place. Moreover, interference with growth factors signaling participates in the integration of various external signals.

In addition, estrogen receptors signaling involves the recruitment of a large number of coregulators, which participates in the diversity and the specificity of biological responses. These receptors are also highly modified by post translational modifications (PTMs), such as phosphorylation, methylation and acetylation involved in the fine tuning of their activities. The complexity of ER regulation is a rapidly growing issue as new coregulators and PTMs are continuously identified. Moreover, ER is also able to interact with other members of the steroid hormone receptors family as with the progesterone receptor (PR) or the glucocorticoid receptor (GR) modulating estrogen signaling.

