Kisspeptin/KISS1R System in Breast Cancer

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Abstract:

Kisspeptins (KP), peptide products of the kisspeptin-1 (KISS1) gene are the endogenous ligands for a G protein-coupled receptor (GPCR) - KP receptor (KISS1R). KISS1R couples to the G<sub>q/11</sub> signaling pathway. KISS1 is a metastasis suppressor gene and the KP/KISS1R signaling has anti-metastatic and tumor-suppressant effects in numerous human cancers. On the other hand, recent studies indicate that KP/KISS1R pathway plays detrimental roles in breast cancer. In this review, we summarize recent developments in the understanding of the mechanisms regulating KP/KISS1R signaling in breast cancer metastasis.

Key Word:
Kisspeptin, KISS1R, breast cancer, metastasis, invasion, G protein-coupled receptor