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## Highlights

Core Promoter Variation in Triple-negative Breast Cancer

Targeting RAS-RAF-MEK-ERK Axis in Cancer Therapies

Paradoxical Relationship between Inflammation and Cancer



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RNA polymerase II (Pol II) core promoter usually locates around the transcriptional start site with multiple highly conserved cis-elements. Core promoter sequences can be bound by Pol II and basal transcriptional factors (TFs) (i.e., TFIIA, TFIIB, TFIIC, TFIID, TFIIIE and TFIIF), which form the pre-initiation complex (PIC) and then initiate the downstream genes expression. Abnormal gene expression plays a key role in cancer development. Huang et al reported the core promoter sequences are highly mutable in cancer. The mutated core promoter sequences can interfere with their interactions with transcriptional factors, resulting in altered transcriptional initiation and abnormal gene expression in triple-negative breast cancer (TNBC). Fortunately, some drugs targeting such core promoter variations have been found and may have potential clinical applications. As inspired by the legendary Chinese female fighter "Hua Mulan", who excelled in battlefields even more bravely than men. To protect her from being knocked over by an adversary (i.e., core promoter variation and abnormal gene expression in TNBC), precision targeting with spurred armors (i.e., targeted therapies of TNBC) is highly warranted (Illustration credit: Huijie Zhang, PhD, and Zijian Qu).

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