The Novel Mnk1/2 Degrader and Apoptosis Inducer VNLG-152 Potently Inhibits TNBC Tumor Growth and Metastasis.

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Abstract: Currently, there are no effective therapies for patients with triple-negative breast cancer (TNBC). TNBC remains a major challenge in cancer therapeutics, and further research is needed to identify new therapeutic strategies. Mnk1/2 is a dual-specificity protein kinase that is upregulated in various malignancies, including TNBC. Therefore, we focused on the development of a novel sebacoyl-containing alkylating agent, VNLG-152, to target Mnk1/2 in TNBC. The results showed that VNLG-152 potently inhibited TNBC tumor growth and metastasis. Furthermore, VNLG-152 induced apoptosis in TNBC cells, and the underlying mechanisms were also studied. We propose that VNLG-152 is a promising candidate for the development of novel strategies for TNBC treatment.

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