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**The
Menopause
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Leading the Conversation

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Researchers Explore a Potential Role for NKR Antagonists in Breast Cancer Biology

Laboratory and tissue-based studies suggest neurokinin receptor antagonists may affect molecular pathways involved in breast cancer growth and invasiveness, warranting further investigation.

CLEVELAND, Ohio (October 20, 2026) – Neurokinin receptor (NKR) antagonists are already widely used for treating menopausal hot flashes, representing a highly effective nonhormone treatment. A new study suggests they may also help breast cancer patients by limiting the spread of cancer cells and helping to prevent a recurring cancer diagnosis. Results of the study will be presented at the 2026 Annual Meeting of The Menopause Society in San Diego October 20-24, 2026.

During menopause, declining estrogen levels disrupt the brain's thermostat located in the hypothalamus. This estrogen drop causes a specific group of brain cells, known as KNDy neurons, to become hyperactive and overproduce a peptide called neurokinin B (NKB). Overactive NKB signaling tricks the body into feeling overheated, triggering sudden sweating and flushing. Neurokinin receptor antagonists work by blocking these receptors, calming the overstimulated pathway and stabilizing body temperature regulation without using hormones.

Researchers recently asked where else, other than the hypothalamus, are NKB receptors expressed and this question led to an exploration of a plausible role of NKB receptor signaling in the breast and if NKR antagonists may also have a role in modulating breast cancer risk. What they discovered through in-silico analyses is that downregulation of NKR signaling (as occurs with the use of NKR antagonists) suppresses molecular pathways that promote invasiveness and metastatic spread. These data suggest that NKR antagonists may hold a potential of modifying breast cancer cell behavior towards reducing invasiveness and spread.

The investigators next examined expression of NKB receptors in human breast tissue. Immunohistochemical analyses showed a linear increase in the tissue expression of NKRs from normal to hyperplastic to cancerous breast tissue. They found that these receptors are over-expressed in cancerous breast tissue, and these findings suggest a relevance of NKR signaling in cancer progression. In vitro treatment of various human breast cancer cells with NKR antagonists resulted in reduced cancer cell viability and downregulated oncogenic pathways that are relevant to cancer progression and resistance to therapeutics.

Based on the findings, the researchers are hypothesizing that the benefits of NKR antagonists may extend well beyond the recognized effectiveness of this class of drugs against issues of hot flashes and sleep.

“These findings are indeed intriguing and suggest that long-term use of NKR antagonist drugs may hold a therapeutic potential for harnessing breast cancer progression, and even for preventing breast cancer recurrence. But, of course, these hypothesized effects must first be substantiated in appropriately designed studies. We are working towards gaining this clarity, so do stay tuned,” says Dr. Lubna Pal, lead author from Yale University in Connecticut.

Details of the study will be discussed as part of the presentation titled “Exploring the promise of NKR antagonists - beyond the flashes, the sweats, and sleep.”

“Neurokinin receptor antagonists have already transformed the treatment landscape for women seeking nonhormone therapy for vasomotor symptoms,” says Dr. Stephanie Faubion, medical director for The Menopause Society. “These early findings raise intriguing questions about whether this class of medications may have biologic effects beyond symptom management. Although the results are preliminary and derived from laboratory and tissue-based studies, they provide a foundation for future research exploring the potential role of neurokinin signaling in breast health and breast cancer.”

For more information about menopause and healthy aging, visit www.menopause.org.

The Menopause Society is dedicated to empowering healthcare professionals and providing them with the tools and resources to improve the health of women during the menopause transition and beyond. As the leading authority on menopause since 1989, the nonprofit, multidisciplinary organization serves as the independent, evidence-based resource for healthcare professionals, researchers, the media, and the public and leads the conversation about improving women’s health and healthcare experiences. To learn more, visit menopause.org.