Senex Publication Reveals Importance of CDK8/19 Inhibition as Treatment for Triple Negative Breast Cancer

Expression of CDK8/19 Mediator kinase controls transcriptional reprogramming and correlates with relapse-free survival and treatment failure in breast cancer.

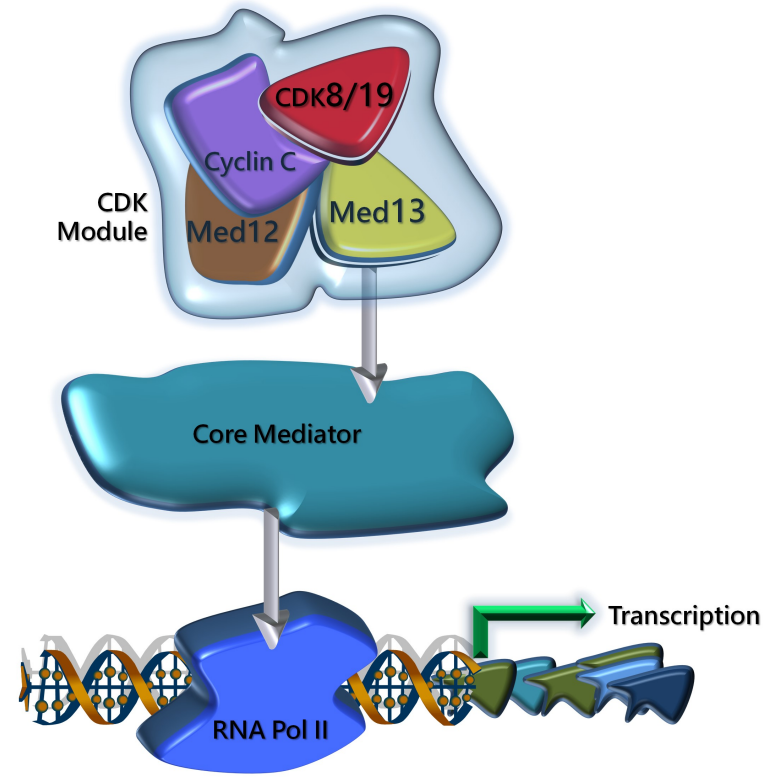

Professor Eugenia Broude

COLUMBIA, SC, UNITED STATES, November 18, 2024 /EINPresswire.com/ -- Senex Biotechnology Publication Reveals the Importance of CDK8/19 Inhibition as Treatment for Triple Negative Breast Cancer

Columbia, SC - (November 18, 2024) – Senex Biotechnology scientists and their colleagues at the University of South Carolina have authored a manuscript recently published in the Proceedings of the National Academy of Sciences (PNAS) discussing the role of Mediator kinases CDK8 and CDK19, in the growth of primary and metastatic tumors and prevention of drug resistance in triple negative breast cancer (TNBC). (Mediator Kinase Inhibitors Suppress Triple-Negative Breast Cancer Growth and Extend Tumor Suppression by mTOR and AKT Inhibitors, PNAS 2024. https://www.pnas.org/doi/10.1073/pnas.2414501121).

Expression of CDK8/19 Mediator kinases that control transcriptional reprogramming correlates with relapse-free survival and treatment failure in breast cancer patients, including TNBC. The research in the PNAS paper investigated how CDK8/19 inhibitors affect the growth of TNBC tumors and their response to mTOR and AKT inhibitors. The data presented in the publication demonstrated that Senex's CDK8/19 inhibitors suppressed the growth of different primary TNBC tumors and their metastases in the lungs and prevented the development of in vivo resistance to an mTORC1 inhibitor everolimus and a pan-AKT inhibitor capivasertib.

“A dear friend of mine suffered from triple-negative breast cancer. She passed away despite her heroic struggle and the tireless efforts of her doctors. With the results that our dedicated team has now obtained and described in this paper, I can only wish that Senex’s drug were available to patients when she was around.” - Eugenia Broude, Ph.D., Professor, Drug Discovery & Biomedical Sciences (DDBS), College of Pharmacy, University of South Carolina.



CDK8/19 Mediator Kinase

"I am very enthusiastic about the potential of CDK8/19 as a target for breast cancer, especially triple-negative breast cancer, a major unmet medical need in women worldwide. Having organized and conducted clinical trials of new targeted drugs for breast cancer, I look forward to implementing clinical testing of Senex's very promising CDK8/19 inhibitor drug candidate." - Prof. John Crown, St. Vincent's Private Hospital, Dublin, Ireland.

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>
> *Eugenia Broude, Ph.D., Professor, Univ. of South Carolina*

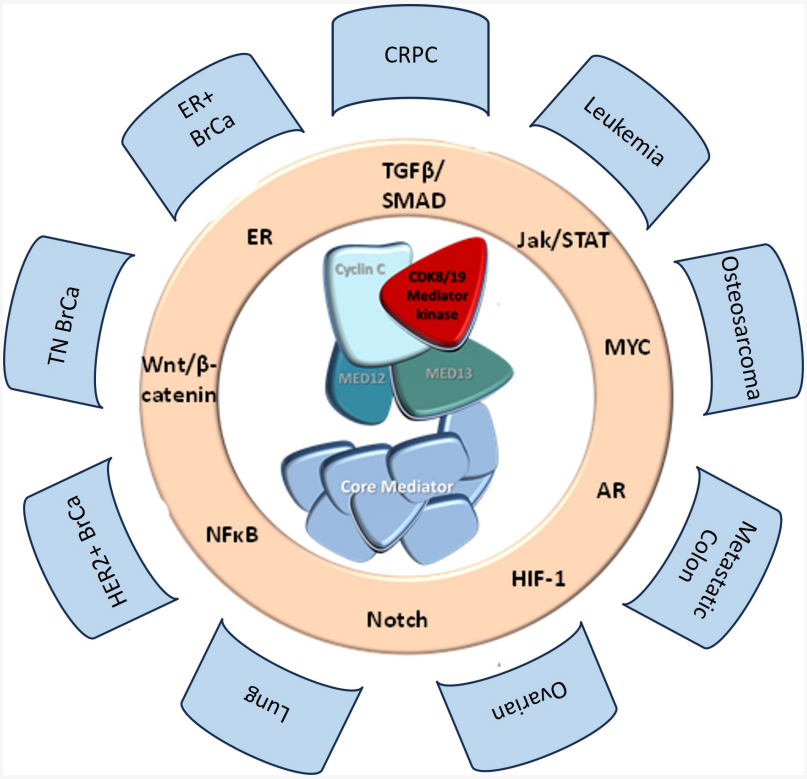
"Cancer drug resistance, its reversal and prevention, have been the central theme of my research over many decades. By combining cancer drugs with CDK8/19 inhibitors, we can now prevent drug resistance from developing in vivo over an exceptionally long period of time.”- Igor B. Roninson, Ph.D., Founder and Chief Science Officer at Senex Biotechnology.

About Senex Biotechnology

Senex Biotechnology is a drug discovery and development company focused on cancer therapeutics. Senex’s lead program targets CDK8/19, a protein that regulates gene expression and is required by cancer cells to adapt to adversarial conditions; such adaptation leads to cancer drug resistance and metastasis. Senex is developing highly selective small-molecule inhibitors of CDK8/19 for the treatment of presently incurable types of prostate cancer, breast cancer, osteosarcoma, ovarian cancer and leukemia. We are also investigating the utility of these inhibitors for different cancers in combination with

other therapeutics, as well as for inflammation, cardiovascular and other diseases. Our latest, highly potent and selective drug candidate is anticipated to enter clinical trials in 2026.

Senex has obtained patents for the use of any CDK8/19 inhibitors for the treatment of breast cancer in the US, and for the composition of matter of SNX631-6 and related compounds and their use for cancer treatment in the US and Europe. Related patent applications are in review in other countries around the world.



CDK8/19 Mediator kinase in multiple cancers

Senex was founded by Dr. Igor Roninson, based on the discovery in his academic laboratory of a novel biological pathway associated with aging (senescence) and involved in cancer and other chronic diseases, as well as the use of functional genomics technologies to identify novel drug targets that are required by tumor cells but not by normal tissues. Senex has won 16 competitive grant awards from the National Institutes of Health, Department of Defense Congressionally Directed Medical Research Programs (DoD CDMRP) and the Alzheimer's Drug Discovery Foundation. The Company's work on breast cancer drug development was supported by grants from the National Cancer Institute.

For further information, visit www.senexbio.com.

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