



Stopping Breast Cancer in Its Tracks

The Laurus Project® is proud to announce a new donation to support the Jan Lammerding Lab, Biomedical Engineering, Weill Institute for Cell and Molecular Biology, Cornell University, New York. Dr. Lammerding's research has discovered that when cells squeeze through small openings, such as restricted spaces between other cells, they run the risk of bursting the membrane that surrounds their nucleus, damaging their DNA. This can occur when immune cells search for pathogens throughout the body as well as when cancer cells metastasize and travel to other organs.

Cells with holes in their nuclear membrane or with fractured DNA are able to quickly repair themselves. In fact, an estimated 90% of these damaged cells survive. Dr. Lammerding's work suggests that preventing cells from repairing breaches in the nucleus and DNA is fatal for the cells. Using this knowledge, metastatic cancer cells can be targeted to block nuclear membrane and DNA repair, resulting in cell death.

Dr. Jan Lammerding and his lab are investigating this genomic instability in cancer cells with the potential to improve and expand the use of existing drugs, as well as developing new drugs specifically targeting these newly identified vulnerabilities in breast cancer cells that may prevent metastatic disease.

The goal of the Lammerding lab is to revolutionize treatment regimens with safe and effective interventions.

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