Clemson University researchers have developed a novel approach to targeting breast cancer tumor cells using the body's natural killers.

Professor Yanzhang Wei, in the Department of Biological Sciences, and his team have created a bifunctional protein that can bridge natural killer cells with breast cancer tumor cells. The idea is to use this protein to trigger the natural killer cells to destroy the breast cancer cells.

"The strategy is to use the body's own cells to target cancer," said Wei. "If the two cells are brought close enough together through this receptor, tumor cells are killed."

The team is working on developing this technology into an immunotherapy that could potentially treat breast cancer. The goal is to create a personalized treatment that is specific to each patient's cancer.

Wei's research is part of a broader effort at Clemson to harness the power of biology to fight disease. The university has a strong tradition of interdisciplinary research, with close collaboration between scientists in different fields.

The team is also working on understanding the biological mechanisms behind how the natural killer cells function and how they can be better utilized in the treatment of cancer.

Wei is excited about the potential of this research and its impact on the field of immunotherapy. "This is a new approach to immunotherapy," he said. "It could potentially revolutionize how we treat cancer."

The research is being funded by the National Institutes of Health and the National Science Foundation. It is being conducted in collaboration with researchers at the University of California, San Francisco and the National Cancer Institute.

Wei's team is currently working on developing the technology into a clinical trial and hopes to have it available for patients within the next few years.

For more information, please visit the Department of Biological Sciences at Clemson University. You can also follow them on Twitter, Facebook or Instagram to stay up-to-date on their latest research.