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New antibody for effective blood cancer treatment using two-pronged approach

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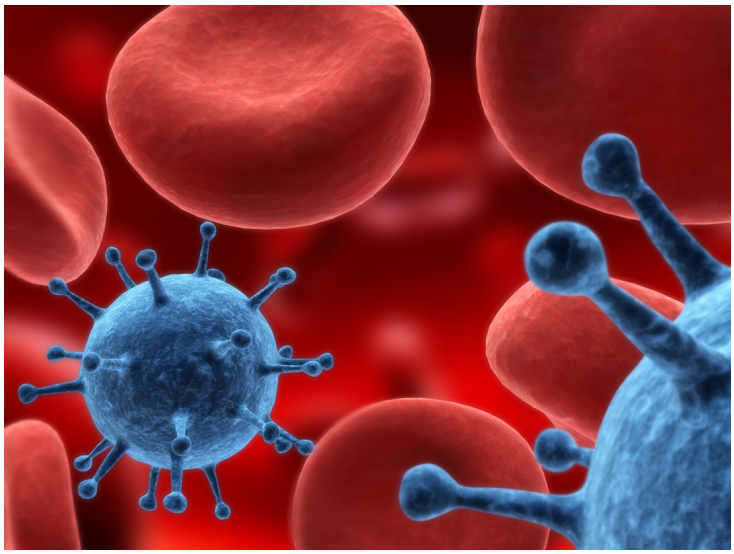

Singapore- Researchers have developed a two-pronged approach to blood cancer treatment: 1) attacking cancer cells directly and/or 2) driving them from the nurturing bone marrow environment into the peripheral blood streams, where they are more vulnerable (for example, to chemotherapy).

The findings of multiple in vivo preclinical studies published online in Blood Advances, a Journal of the American Society of Hematology (ASH), indicate that this therapy could potentially treat multiple cancers, including non-Hodgkin lymphoma (NHL), multiple myeloma (MM), and acute myeloid leukemia (AML).

"One of the major limitations we see in treating blood cancers is the failure to clear cancer cells from the bone marrow," said Flavia Pernasetti, PhD, of Pfizer Oncology Research and Development. "Because the bone marrow allows the cancer cells to flourish, removing these cells is an essential step in treating these malignancies effectively. Not only does our approach have the potential to get these cells out of the marrow, making them more susceptible to standards of care, it is designed to also directly attacks the cancer cells."

The bone marrow serves as a protective home for cancer cells, providing nourishment that allows them to multiply. Recognizing the relationship between bone marrow and cancer resilience, Dr. Pernasetti and her team focused their approach on mechanisms that would drive the cancer from the marrow. To do so, the team looked to the mechanisms that control the movement of cells into the bone marrow in the first place — CXCR4, a chemokine receptor, and its ligand, CXCL12.