Synstatin “SSTN<sub>HER2</sub>” Fights Cancer

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The Wisconsin Alumni Research Foundation (WARF) is seeking commercial partners interested in developing a peptide that can kill tumors by blocking a key receptor interaction.

**OVERVIEW**

Overexpression of a protein called HER2 (Human Epidermal Growth Factor Receptor 2) is implicated in about 30 percent of breast cancers, including certain aggressive forms. This protein (known more specifically as a receptor tyrosine kinase) also is strongly associated with ovarian, stomach and aggressive uterine cancers.

It is known that HER2 couples with another type of receptor, α6β4 integrin, found on cell surfaces. The two receptors form an assembly that signals tumor growth, invasion and survival. How they interact and start this process has remained mysterious until now. The answer may lead to groundbreaking new cancer treatments.

**THE INVENTION**

A UW–Madison researcher has discovered that the HER2/α6β4 assembly is brokered by the syndecan family of matrix receptors. In particular, syndecan-1 (Sdc1) links the two receptors together and helps tumor cells survive.

To obstruct this process, the researcher has created a recombinant peptide that competes with Sdc1 for binding partners. The new peptide mimics Sdc1 but is harmless. It is called SSTN<sub>HER2</sub>. It can be administered as a drug and combined with cancer patients’ other therapies.

**APPLICATIONS**

- Treating carcinoma, myeloma, melanoma, schwannoma, malignant endothelial cells or glioma
- May help scarring and other pathological wound healing
KEY BENEFITS

• Targets growth, survival and invasion of tumor cells
• May target tumor angiogenesis
• Does not hurt normal cells

ADDITIONAL INFORMATION

Publications


Tech Fields

Pharmaceuticals & Vitamin D - Oncology & hematology

CONTACT INFORMATION

For current licensing status, please contact Andy DeTienne at adetienne@warf.org or 608-960-9857.