Category: **Health and Medical Sciences**

**Cancer Therapy**

Cancer Therapy Using Oncostatin M (OSM) Antagonist

**Problem Statement**

Current cancer therapies often rely on radiation treatment or chemotherapy, and both are fraught with side-effects such damage to healthy collateral cells, weakened immune function, nausea, hair-loss. These therapies are also challenged by issues such as drug resistance, limited effectiveness, poor patient quality and life, and more.

**Technology Overview**

This technology presents a new form and method of cancer therapy through the administering of at least one Oncostatin M (OSM) Antagonist.

Administration of an OSM antagonist such as a small molecule pharmaceutical is provided as well as an anti-OSM antibody, an anti-OSM aptamer, and an OSM mRNA antagonist. The OSM antagonists were found to inhibit or prevent tumor cell detachment, invasion, and metastasis in several cancer types.

The disclosed compositions can be administered to a subject in need thereof to treat, alleviate, or reduce one or more symptoms associated with cancer invasion and metastasis, and to possibly prevent metastasis. The compositions can be administered locally or systemically to inhibit tumor cell detachment, invasion and/or metastasis.

**Applications:**

The types of cancer that can be treated with the provided compositions and methods include, but are not limited to, the following: bladder, brain, breast, cervical, colorectal, esophageal, kidney, liver, lung, nasopharyngeal, pancreatic, prostate, skin, stomach, uterine, ovarian, and testicular. In a preferred embodiment the cancer is prostate, ovarian, or breast cancer.

Administration is not limited to the treatment of an existing tumor but can also be used to prevent or lower the risk of developing such diseases in an individual, i.e. for prophylactic use.

**Benefits:**

* Effective at slowing the progression and proliferation of cancers and reducing metastasis.



Contact us about this technology:

Office of Technology Transfer

techtransfer@boisestate.edu

(208) 426-5765

Matter# BSU121

IP Status:

Patents Issued

[9,550,828](https://patents.google.com/patent/US9550828B2/en?oq=9%2c550%2c828)

[10,286,070](https://patents.google.com/patent/US10286070B2/en?oq=10%2c286%2c070)

[11,633,457](https://patents.google.com/patent/US11633457B2/en?oq=11%2c633%2c457)

Phase of Development

TRL:3-4

Working Prototype

Inventors

[Cheryl Jorcyk, PhD](https://www.boisestate.edu/biology/faculty-and-staff/faculty/cheryl-jorcyk/)

[Don Warner, PhD](https://www.boisestate.edu/chemistry/donlwarner-2/)

[Lisa Warner, PhD](https://www.boisestate.edu/chemistry/lisawarner/)

[Matthew D. King](https://www.boisestate.edu/research-gutt-c/home/team-members/)