

www.azte.com



Inventors

QSOX1 as an anti-neoplastic drug target AzTE Case # M11-003

Douglas Lake

Associate Professor Center for Metabolic Biology School of Life Sciences Arizona State University

Benjamin Katchman

Graduate Research Assistant School of Life Sciences Arizona State University

Invention Description

Despite advances in treatment, cancer continues to be the leading cause of death. Worldwide, cancer accounted for 7.4 million deaths in 2004; this number is projected to rise to 12 million by 2030 (WHO). A significant need continues to exist for therapeutics to decrease cancer cell viability, invasion, and metastasis.

Researchers at Arizona State University have discovered that the sulfhydryl oxidase QSOX1 is over-expressed in tumors but not in normal tissue. Short hairpin RNA was developed that inhibits QSOX1 expression, leading to a decrease in tumor cell growth and more importantly, diminished invasion through a basement membrane. *In vitro* studies showed that treating BxPC3 pancreatic cancer cells with this shRNA resulted in a 70% decrease in cellular invasion.

Development of anti-neoplastic drugs targeting QSOX1 could lead to new treatments to inhibit tumors from metastasizing. Such drugs may additionally sensitize tumor cells to other anti-neoplastic agents.

Potential Applications

- Cancer treatment to suppress metastasis
- Cancer treatment to diminish tumor cell viability
- Cancer treatment in conjunction with other anti-neoplastic agents

Benefits and Advantages

- 70% decrease in cellular invasion (in vitro data), leading to diminished metastasis
- Lessened cancer cell viability

Intellectual Property Status: Patent Pending

Contact

Jack Geltosky, PhD

Senior Vice President Business Development, Life Sciences

Arizona Technology Enterprises, LLC (AzTE)

P: 480.884.1989

F: 480.884.1984

JGELTOSKY@AZTE.COM HEALTHSCIENCES@AZTE.COM