

Technology Opportunity Bulletin

SW-01: Novel Anti-Cancer Compound

Tech ID: 2006-086

Description:

Researchers at Queen's University have identified a genericized drug compound, SW-01, specific for inhibiting the RET receptor tyrosine kinase. SW-01 has powerful anti-cancer properties and is effective in reducing pancreatic cancer tumours in a number of *in vivo* preclinical models. This compound has the potential for treating a number of cancer types involving RET.

RET is well established as an important cancer-causing molecule in human thyroid cancer. Recent findings have demonstrated that RET has broader roles in other human tumours. RET is highly expressed in neuroblastoma, lung tumours, estrogen receptor-positive breast cancer, and pancreatic tumours. Thus, RET provides an attractive target for novel treatments in broadly diverse tumours, proven difficult to manage with existing therapeutic strategies. Our investigators have identified a new use for a generic drug for treating RET-based cancers. They have demonstrated that this compound is highly specific for RET, unlike other small-molecule kinase inhibitors that affect a number of kinases. SW-01 has a well defined safety-profile and lacks toxicities associated with other kinase inhibitors such as cardiotoxicity (Nexavar, Sutent) and hepatotoxicity (Tarceva). Furthermore, due to the location of its RET-binding site, SW-01 inhibits more mutant forms of RET than other inhibitors under development and will be able to treat a broader thyroid cancer population.

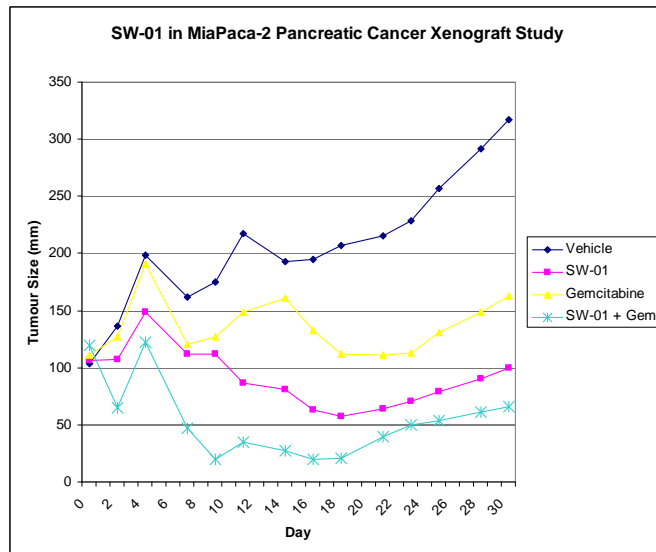
Applications and Benefits:

- Proven safety profile.
- Amenable to first-line combination therapy for pancreatic cancer.
- Broad efficacy in thyroid cancer.
- Indication expansion into breast, lung, and potentially other cancers.

Status of Development:

In vitro inhibition studies have shown SW-01 to be a RET-kinase specific inhibitor in both RET-purified systems and RET-containing cell lines. SW-01 has potent anti-proliferative and cytotoxic effects against thyroid (TT), pancreatic (MiaPaca-2, BXPC-3) lung (NCI-H69), and breast (MCF-7) cancer cell lines. Furthermore, it is synergistic with gemcitabine

in inhibiting pancreatic cancer cell proliferation. In Xenograft pancreatic cancer models, MiaPaca-2 (See graph above) and BXPC-3 cell lines, SW-01 caused tumour regression even from short-term dosing (50 mg/kg, every three days for two weeks).



Status of Commercialization:

PARTEQ Innovations, the technology transfer office of Queen's University, is seeking industrial partners willing to support ongoing development of the product and/or who are interested in licensing the intellectual property. Patents are pending in Canada, U.S., and Europe.

Contact:

Mike Wells, Ph.D., MBA

Manager, Commercial Development, Life Sciences

PARTEQ Innovations, Phone: 613. 533. 2342, Fax: 613. 533. 6853, Email: mwells@parteqinnovations.com