

Research and development of intellectual property for epigenomic drug discovery that dually targets cancer stem cells and cancer immunity

Principal Investigator

Department of Medical Data Science, Graduate School of Medicine, Osaka University

Professor Hideshi ISHII

Project Outline

■ Target Disease: refractory gastrointestinal cancers (pancreatic cancer, metastatic colorectal cancer)

■ Concept:

Simultaneous targeting of cancer stem cells and surrounding immune cells.

Cancer stem cells are buried within tumors, where they show resistance to conventional anti-cancer drugs and radiation therapy, which is the root cause of their refractory nature.

Surrounding immune cells produce an environment of tumor immunity, and, in a number of cancers, it can appear that immune checkpoint inhibitor therapy is already effective.

This is an academia-born project, being developed primarily at Osaka University, and is patented.

■ Market Trends:

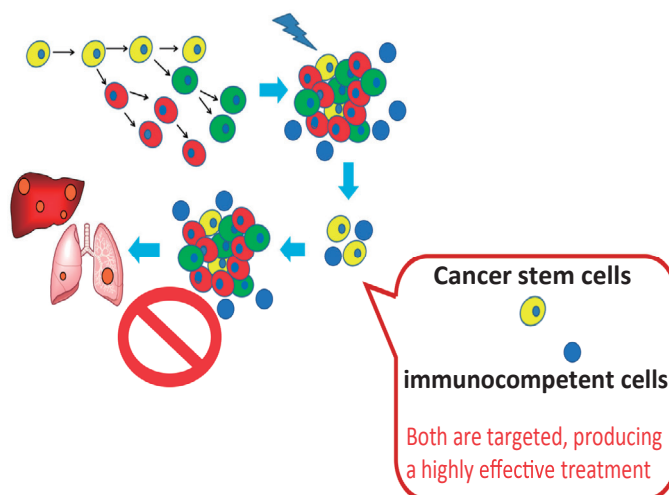
The global market for cancer treatments in 2020 is projected to reach 500 billion dollars.

"Personalized strategies" are a KSF (Key Success Factor) in drug development for areas like refractory cancer, which require precision medicine.

■ Current Status:

At Osaka University we aim to develop new solutions to help conquer hard-to-treat cancers.

We are already patenting this technology, ramping up preclinical trials, and advancing physician-led clinical trials, and we are now in a phase that requires cooperation from drug manufacturers and venture companies.



Basic patent pending.

We are continuing development jointly, sharing information under contract.

We are proceeding with preclinical trials and physician-led clinical trials through a PMDA consultant.