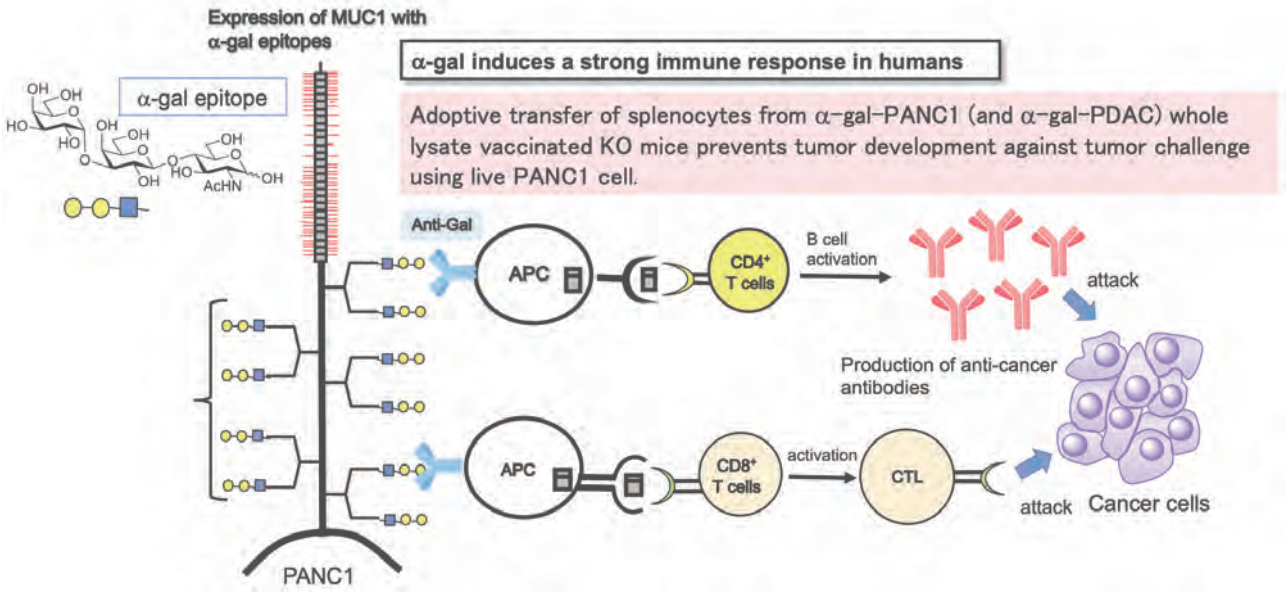
Development of synthetic vaccines against pancreatic cancer

Principal Investigator	Graduate School of Sciense, Osaka University
	Professor Koichi FUKASE

Project Outline

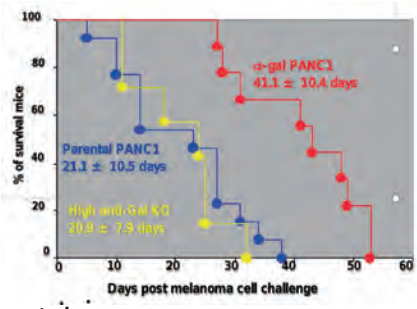
Pancreatic cancer: Incidence and mortality rates have tripled in the past 25 years
More than 20,000 people in Japan die from pancreatic cancer every year.

Pancreatic cancer vaccine possessing α-gal epitope



In vitro
Potent induction of specific antibodies against pancreatic cancer antigens and cancer cells
Induction of CD8+ T cells specific for pancreatic cancer antigens

In vivo
Strongly inhibited tumor growth of pancreatic cancer
Prolonged survival time
No significant side effects were observed



Development of chemically synthesized vaccines
- large scale synthesis of α-gal epitope
- conjugation of α-gal epitopes and cancer antigens into carrier proteins
- induction of potent immune responses

Development of synthetic cancer vaccines for pancreatic cancer, various cancer antigens can be used, conjugation with ligands of innate immune receptors is possible, easy quality control, high safety