Verification of the antitumor effect of aromatic amine derivatives and acquisition of preclinical POC

Principal Investigator

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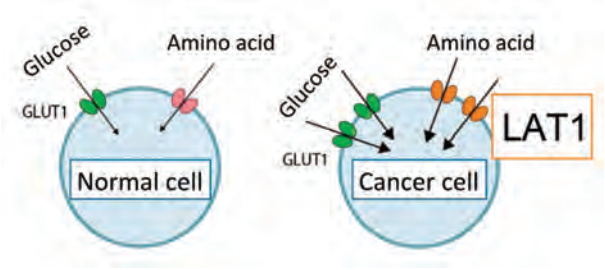
Project Outline

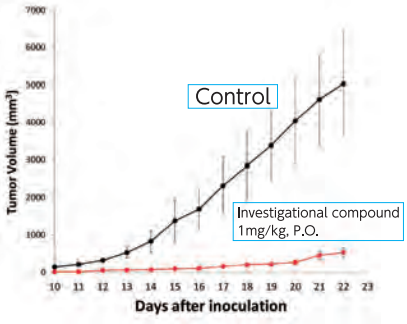
Low-molecular-weight anticancer agent with novel mechanisms of action



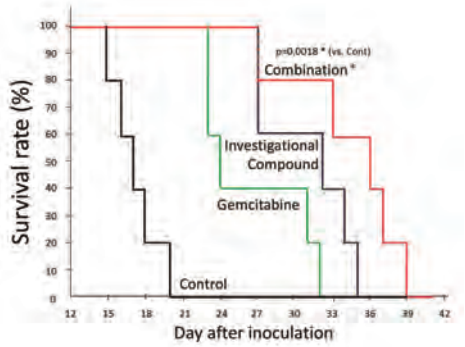
Projected product profiles of the commercialized drug

- The compounds are molecular targeted drugs with novel mechanisms of action, and are the "first-in-class" anticancer agents whose mechanisms of action differ from those of the existing drugs.
- The compounds can be used for treatment of refractory cancer patients who have not responded to the existing anticancer agents.
- Synergistic effects in combination with other anticancer drugs can be expected.
- Once-daily oral doses.
- The compounds are effective with small oral doses and have very minor side effects.
- The compounds can be used as companion diagnostics. PET diagnostic imaging targeting the same molecule enables selection of patients who are expected to respond well to the therapy, which leads to an improvement in the overall response rate.

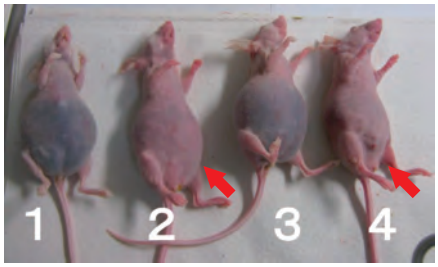
Inhibition of human pancreatic carcinoma cell (MIAPaCa-2) growth in nude mice following oral dose (1mg/kg) of the compounds. (Similar results were obtained with other pancreatic or lung cancer cells)



The investigational compounds are selective, non-competitive inhibitors of LAT1, a transporter protein that supplies amino acids to cancer cells.
These compounds are believed to represent a revolutionary improvement in the cure and survival rates of patients with refractory cancers such as pancreatic cancer, for which very few effective treatment options are available.
Several GLP toxicity studies have been completed.



The survival benefit of the investigational compound and the synergistic effect in combination with gemcitabine in peritoneal dissemination models of human pancreatic cancer cells



1. Control
2. Investigational compound
3. Gemcitabine 4. Combination

Condition: Refractory cancers such as pancreatic cancer, Patients with refractory cancers of which about half of terminal-cancer patients have a 5-year survival rate of less than 50%
Patent information : Application submitted
Collaboration corporate : J-Pharma Co., Ltd.
Manufacturing of the investigational compounds : Drug Substance production completed on GMP by KNC Laboratories Co., Ltd. Investigational Products have been completed.
Investigator Initiated Trial : Approved by Osaka Univ. IRB, and we conducted clinical study.