学 位 論 文 の 要 旨

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主論文の題名

ASF-4-1 fibroblast-rich culture increases chemoresistance and mTOR expression of pancreatic cancer BxPC-3 cells at the invasive front *in vitro*, and promotes tumor growth and invasion *in vivo*

主論文の要旨

Pancreatic cancer develops dense stromal tissue through the desmoplastic reaction. The aim of this study was to assess the effects of rich-fibroblasts on the malignant potential of pancreatic cancer. Cells from the pancreatic cancer cell line BxPC-3 were mixed at a ratio of 1:3 with cells from the human skin fibroblast line ASF-4-1. In the fibroblast-rich co-culture, tumor budding was observed and BxPC-3 cells were more resistant to gemcitabine than those in fibroblast-poor co-cultures. Immunohistochemistry showed that the expression of mammalian target of rapamycin (mTOR) increased at the invasive front of fibroblast-rich co-cultures. In mouse xenografts of fibroblast-rich co-cultures, tumors were larger, and the Ki-67 (MIB-1) index of the tumors was higher than that in the fibroblast-poor co-cultures. Consistently, fibroblast-rich co-culture promoted the malignant potential of the pancreatic cancer cell line BxPC-3 both *in vitro* and *in vivo*.