

# New molecular therapy candidates for pancreatic cancer

19 April 2010

A research team from Japan investigated expression of insulin-like growth factor-I receptor (IGF-IR) in pancreatic cancer cell lines. All the cell lines examined expressed IGF-IR under culture conditions without IGF-I in the medium. They suggest that IGF-IR and phosphatidylinositol 3 kinase are good candidates for molecular therapy of pancreatic cancer.

Insulin-like growth factor-I (IGF-I) is upregulated in human pancreatic cancer tissues but is not expressed in surrounding non-cancerous tissues. Serum level of IGF-I is elevated in pancreatic cancer patients. Histological analysis has shown that IGF-I receptor (IGF-IR) is positive in the membrane of pancreatic cancer tissues. These facts suggest that IGF-I acts as a growth factor for pancreatic cancer and inhibition of its action might be a good candidate for molecular therapy of pancreatic cancer. A possible problem is that not all pancreatic cancers produce IGF-I, which might be a reason for ineffective results of its clinical application.

A research team from [Japan](#) have proved that inhibition of IGF-IR activity results in a decrease in proliferation and motility of pancreatic cancer cell lines. Their study will be published on April 21, 2010 in the *World Journal of Gastroenterology*.

Their study indicated that IGF-IR was expressed and played a role in [proliferation](#) and motility of pancreatic cancer cell lines. Further analysis of this phenomenon could unveil a new role for a growth factor receptor and its downstream pathway in cancer. One possible mechanism would be that the downstream pathway stimulates its upstream receptor via some unknown molecule, like a retrograde flow.

**More information:** Tomizawa M, Shinozaki F, Sugiyama T, Yamamoto S, Sueishi M, Yoshida T. Insulin-like growth factor-I receptor in proliferation and motility of pancreatic cancer. *World J*

*Gastroenterol* 2010; 16(15): 1854-1858.

[www.wjnet.com/1007-9327/full/v16/i15/1854.htm](http://www.wjnet.com/1007-9327/full/v16/i15/1854.htm)

Provided by World Journal of Gastroenterology

APA citation: New molecular therapy candidates for pancreatic cancer (2010, April 19) retrieved 2 May 2021 from <https://medicalxpress.com/news/2010-04-molecular-therapy-candidates-pancreatic-cancer.html>

*This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.*