

VARI findings could help diagnose and treat liver cancer

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In collaboration with the National Cancer Centre, Singapore, Van Andel Research Institute (VARI) researchers have identified an enzyme that could help diagnose and treat cholangiocarcinoma, a form of liver cancer that strikes up to 3,000 new patients each year in the United States.

Cholangiocarcinoma is the second most common type of cancer that affects the hepatobiliary system, which includes the liver, gall bladder, and bile ducts. The disease is most commonly diagnosed in patients in their 60's and 70's, and prognosis is generally poor with a 5-year survival rate of less than 5%. The only current curative treatment of the disease is surgery to remove all tumor tissue, but most patients' cancer is too advanced upon diagnosis to operate.

Southeast Asia is particularly affected by cholangiocarcinoma, but incidence of the disease is rising in the United States, United Kingdom, and Australia.

"An advance in the diagnosis and treatment of this disease could have a profound impact," said Professor Khee Chee Soo, Director of the National Cancer Centre, Singapore. "Cholangiocarcinoma is especially prevalent in Southeast Asia where, because of chronic infections by liver flukes and other factors, it kills thousands each year."

Cholangiocarcinoma and hepatocellularcarcinoma (HCC) are the two main forms of malignant [liver cancer](#) and require different treatments. Researchers found that the enzyme p38delta mitogen-activated [protein](#)

[kinase](#) (MAPK13) is found in higher levels in cholangiocarcinomas than in HCC or normal tissue, and that it plays a role in the ability of [tumor cells](#) to move and invade normal tissue.

MAPK13 could be used as a complement to current biomarkers in diagnosing cholangiocarcinoma and distinguishing it from HCC, and it could serve as a drug target to help treat [cholangiocarcinoma](#).

"Cholangiocarcinomas are notoriously challenging to diagnose and treat," said VARI Distinguished Scientific Investigator Bin Tean Teh, M.D., Ph.D., whose laboratory published its findings in the May 15 issue of the *International Journal of Cancer*. "Discoveries that lead to earlier detection and diagnosis will improve the long-term survival rate of patients."

Provided by Van Andel Research Institute

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