

NDSU assistant professor publishes paper on pancreatic tumor regulator

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Erxi Wu, assistant professor of pharmaceutical sciences, co-wrote the review article, “The paracrine Sonic Hedgehog signaling derived from tumor epithelial cells: A key regulator in the pancreatic tumor microenvironment,” which has been accepted by *Critical Reviews in Eukaryotic Gene Expression*.

According to the authors, activation of the Hedgehog signaling pathway is involved in embryo development and tumorigenesis. While normal pancreatic tissue exhibits little [Hedgehog pathway](#) activity, patients with pancreatic adenocarcinoma have high levels of Hedgehog pathway signaling in both the [tumor](#) epithelia and the surrounding stromal tissue. Hedgehog ligands expressed by pancreatic cancers promote tumor growth indirectly by activating Hedgehog signaling in the surrounding stroma. This paracrine activation of Hedgehog signaling in the tumor microenvironment provides a more favorable environment for tumor cellular proliferation, metastasis and resistance to therapy. Taken together, these findings are of valuable implications for the use of Hedgehog pathway inhibitors currently in development and inhibition of the Hedgehog pathway paracrine loop in [pancreatic cancer](#).

“In this review article, we comprehensively describe that the ability of tumor cell-derived Sonic Hedgehog to act in a paracrine role on the surrounding stroma cells provides a rational explanation to the daunting results of the past studies. Due to the rapid advancement of our understanding of this paracrine phenomenon, future novel therapeutic strategies will be developed and proven to be effective in the treatment

of pancreatic cancer,” Wu said. The paper was co-written with Qingyong Ma lab at Xi’an Jiaotong University, China. “We have established a productive collaboration with the Ma lab in finding cancer therapeutics and elucidating the mechanisms of the targeted therapy for pancreatic cancer, one of the most lethal malignancies,” Wu said.

The journal *Critical Reviews in Eukaryotic Gene Expression* presents timely concepts and experimental approaches that are contributing to rapid advances in our mechanistic understanding of gene regulation, organization and structure within the contexts of biological control and the diagnosis/treatment of disease. The journal provides critical reviews, on well-defined topics of immediate interest, written by recognized specialists in the field.

(www.begellhouse.com/journals/6dbf508d3b17c437).

Provided by North Dakota State University

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