Protein fuels inflammation in pancreatic and breast tumors

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Separate studies published online on February 21 in the *Journal of Experimental Medicine* identify a protein that drives tumor-promoting inflammation in pancreatic and breast tumors.

Inflammatory reactions come in several flavors—Th1 and Th2, for example—each classified according to the proteins, or cytokines, that predominate. Tumors are often infiltrated with cells that produce Th2 cytokines, which some studies suggest drive tumor growth. However, the signals responsible for initiating and maintaining Th2 inflammation in tumors are not fully understood.

Karolina Palucka and colleagues now find that human breast cancer cells release the cytokine thymic stromal lymphopoietin (TSLP) and that TSLP drives Th2 inflammation in human breast tumors. Maria Pia Protti and coworkers report that TSLP derived from fibroblasts—cells that provide support to tumors—fuels Th2 inflammation in human pancreatic tumors.

Although the cellular sources of TSLP differ between the two tumor types examined in these studies, the end result—Th2 inflammation—is the same. Future work is needed to determine if therapies targeting TSLP can help to block tumor growth.

More information: Pedroza-Gonzalez, A., et al. 2011. J. Exp. Med. doi:10.1084/jem.20102131
De Monte, L., et al. 2011. J. Exp. Med. doi:10.1084/jem.20101876

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