Researchers establish link between Nanog, FAK proteins

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Vita Golubovskaya, PhD, and five colleagues from Roswell Park Cancer Institute (RPCI) have published basic research in the *Journal of Biological Chemistry* (*JBC*) about two proteins that are overexpressed, or produced in excessive amounts, in tumor cells.

Led by Golubovskaya, senior author and Principal Investigator, the researchers found a direct link between Nanog, a transcription factor that plays an important role in the differentiation and proliferation of stem cells, and focal adhesion kinase (FAK), as outlined in a JBC paper published this month, "Nanog increases focal adhesion kinase (FAK) promoter activity and expression and directly binds to FAK protein to be phosphorylated."

"Both Nanog and FAK are overexpressed in tumors, and we learned that Nanog regulates FAK expression and that both proteins interact in cancer cells," notes Dr. Golubovskaya, Associate Professor of Oncology in the Department of Surgical Oncology at RPCI. "We'll further study this from here, because understanding this connection between these proteins may provide new approaches to controlling tumor growth and spread."

The paper is available for download at www.jbc.org/content/early/2012 … 322883.full.pdf+html , and is also article 22493428 on PubMed. An abstract is available at www.jbc.org/content/early/2012 … M111.322883.abstract .

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