This week in therapeutics

Indication	Target/marker/pathway	Summary	Licensing status	Publication and contact information
Cancer				
Ovarian cancer	Neuronal precursor cell expressed developmentally downregulated 8 (NEDD8); cullin 4A (CUL4A)	Cell culture and human tissue studies suggest inhibiting CUL4A could help treat ovarian cancer. In human ovarian cancer tissue, CUL4A expression is greater than that in normal tissue. In human ovarian cancer cell lines, an inhibitor of CUL4A neddylation and activity, MLN4924, or small interfering RNA against CUL4A components inhibited proliferation and increased apoptosis compared with no treatment or control siRNA. Also in cells, depletion of a CUL4A substrate rescued MLN4924-induced apoptosis, indicating that CUL4A substrates are necessary for the activity of MLN4924 in ovarian cancer cells. Next steps could include determining whether CUL4A components are biomarkers for ovarian cancer and testing MLN4924 in <i>in vivo</i> models of ovarian cancer. MLN4924 is a NEDD8 inhibitor from Takeda Pharmaceutical Co. Ltd. that is in Phase I testing to treat various cancers.	Patent and licensing status unavailable	Pan, W.-W. <i>et al. J. Biol. Chem.</i> ; published online Aug. 30, 2013; doi:10.1074/jbc.M113.495069 Contact: Heng-Yu Fan, Zhejiang University, Hangzhou, China e-mail: hyfan@zju.edu.cn Contact: Fang-Zhou Song, Chongqing Medical University, Chongqing, China e-mail: fzsongcq@163.com
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