This week in therapeutics

Indication	Target/marker/ pathway	Summary	Licensing status	Publication and contact information
Cancer				
Cancer; sarcoma	Peptidyl arginine deiminase type IV (PADI4)	<i>In vitro</i> and mouse studies suggest PADI4 inhibitors could help treat sarcoma and other cancers. PADI4 is overexpressed in a wide range of human cancers. Chemical synthesis and subsequent testing in a human osteosarcoma cell line identified an amidine analog as a low micromolar inhibitor of PADI4. In mice with xenograft sarcoma tumors, the lead compound decreased tumor growth by >50% compared with vehicle. Also, the lead compound plus Zolanza vorinostat lowered tumor growth more than either agent alone. Ongoing work includes optimizing and testing the lead compound in additional animal models of cancer. Merck & Co. Inc. and Otsuka Pharmaceutical Co. Ltd. market the histone deacetylase (HDAC) inhibitor Zolanza to treat cutaneous T cell lymphoma (CTCL). The compound is in Phase III testing to treat mesothelioma and multiple myeloma (MM) and in Phase I testing to treat brain cancer.	Patented by Pennsylvania State University; available for licensing or partnering	Wang, Y. <i>et al. J. Biol. Chem.</i> ; published online May 17, 2012; doi:10.1074/jbc.M112.375725 Contact: Yanming Wang, Pennsylvania State University, University Park, Pa. e-mail: yuw12@psu.edu Contact: Gong Chen, same affiliation as above e-mail: guc11@psu.edu
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