This week in therapeutics

Indication	Target/marker/ pathway	Summary	Licensing status	Publication and contact information
Cancer				
Cancer	Cathepsin B; cathepsin S; IL-4	A study in mice suggests that inhibiting IL-4 or cathepsins B and S on tumor-associated macrophages could help treat cancer. In a mouse model of pancreatic cancer, transplantation of cathepsin B– or cathepsin S–deficient macrophages led to less tumor growth, invasiveness and vascularization than transplantation of wild-type macrophages. IL-4-deficient mice had fewer numbers of cathepsin-active macrophages than wild-type mice, suggesting that IL-4 induces cathepsin activity in macrophages. Next steps could include delivering cathepsin inhibitors to tumor-activated macrophages. PRX321, a fusion protein of IL-4 and *Pseudomonas* exotoxin from Protox Therapeutics Inc. and Dompe Farmaceutici S.p.A., is in Phase II testing to treat brain cancer. APG201, an IL-4 receptor antagonist from Apogenix GmbH, is in preclinical development to treat cancer.	Patent and licensing status unavailable	Gocheva, V. *et al. Genes Dev.*; published online Jan. 15, 2010; doi:10.1101/gad.1874010 **Contact:** Johanna A. Joyce, Memorial Sloan-Kettering Cancer Center, New York, N.Y. e-mail: joycej@mskcc.org

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