This week in therapeutics

Indication	Target/marker/ pathway	Summary	Licensing status	Publication and contact information
Cancer				
Cancer	*Bromodomain containing 4* (*Brd4*); *signal-induced proliferation-associated gene 1* (*Sipa1*)	Studies *in vitro* and in mice suggest that Brd4 could be a useful biomarker for predicting breast cancer metastasis. Ectopic expression of Brd4 in a metastatic mouse mammary tumor cell line decreased cell invasiveness and migration compared with what was seen in tumor lines expressing a control protein. Brd4 interacts with and modulates the enzymatic activity of Sipa1, a metastasis efficiency modifier. In mice implanted with the same tumor cell line, Brd4 expression significantly lowered tumor weight and pulmonary surface metastasis compared with weight and metastasis in tumors expressing control protein ($p<0.001$ for both). Microarray analysis showed that Brd4 modulates expression of extracellular matrix genes, suggesting that its activation signature could potentially predict breast cancer progression and survival. Further studies are necessary to confirm that assays detecting Brd4 and its effect on gene expression have added benefits over current diagnostics.	Patent application filed; available for licensing	Crawford, N. *et al. Proc. Natl. Acad. Sci. USA*; published online April 21, 2008; doi:10.1073/pnas.0710331105 **Contact:** Kent W. Hunter, National Institutes of Health, Bethesda, Md. e-mail: hunterk@mail.nih.gov