This week in therapeutics

Indication	Target/marker/ pathway	Summary	Licensing status	Publication and contact information
Cancer				
Cancer	BRAF; solute carrier family 31 copper transporters member 1 (SLC31A1; CTR1)	Cell culture and mouse studies suggest copper chelation could help treat cancers with oncogenic BRAF mutations. In mouse embryonic fibroblasts or melanoma cells expressing BRAF V600E, *Ctr1*$^{-/-}$ cells had less growth than *Ctr1*$^{+/+}$ cells. In mouse models of BRAF-mutant lung cancer, Ctrl1 knockout or the copper chelator tetrathiomolybdate (TTM) decreased tumorigenesis and increased survival compared with no alteration or with vehicle. Ongoing studies include a Phase I clinical trial assessing the efficacy of the copper chelator trientine with the BRAF inhibitor vemurafenib. Roche, Daiichi Sankyo Co. Ltd. and Chugai Pharmaceutical Co. Ltd. market Zelboraf vemurafenib to treat melanoma. Valeant Pharmaceuticals International Inc. and Kadmon Corp. LLC market Syprine trientine hydrochloride to treat Wilson's disease.	Provisional patent application filed; unlicensed	Brady, D.C. *et al. Nature*; published online April 9, 2014; doi:10.1038/nature13180 **Contact:** Chris M. Counter, Duke University School of Medicine, Durham, N.C. e-mail: chris.counter@duke.edu

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