This week in therapeutics

Indication	Target/marker/ pathway	Summary	Licensing status	Publication and contact information
Cancer				
Acute myelogenous leukemia (AML)	Glioma-associated oncogene homolog 1 zinc finger protein (GLI1); smoothened (SMO); UDP glucuronosyltransferase 1 family polypeptide A1 (UGT1A1)	Cell culture studies suggest inhibiting SMO or UGT1A1 could prevent drug resistance in AML. Chemotherapy-resistant AML cells had higher UGT1A1 and GLI1 levels than nonresistant cells. In cultured, chemotherapy-resistant AML cells, the SMO inhibitor Erivedge vismodegib, which acts upstream of GLI1, decreased UGT1A1 levels and increased the efficacy of nucleoside chemotherapeutics compared with no treatment. Next steps include identifying UGT1A1 inhibitors and evaluating chemotherapy in combination with SMO inhibitors in an investigator-led clinical trial. Roche's Genentech Inc. unit markets Erivedge to treat basal cell carcinoma (BCC). The drug is in Phase III or earlier testing to treat AML and various solid tumors. At least five other companies have SMO inhibitors in Phase III testing or earlier to treat various cancers.	Patent pending; available for licensing	Zahreddine, H.A. *et al. Nature*; published online May 28, 2014; doi:10.1038/nature13283 **Contact:** Katherine L.B. Borden, University of Montreal, Montreal, Quebec, Canada e-mail: katherine.borden@umontreal.ca

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