This week in therapeutics

Indication	Target/marker/pathway	Summary	Licensing status	Publication and contact information
Cancer				
Acute myelogenous leukemia (AML); acute lymphoblastic leukemia (ALL)	Core-binding factor β -subunit (CBFB; CBF β); runt-related transcription factor 1 (RUNX1)	<i>In vitro</i> and mouse studies suggest inhibiting the interaction between RUNX1 and CBF β could help treat core-binding factor leukemias, which have mutations that affect <i>RUNX1</i> or <i>CBFβ</i> and account for about 24% of adult AML and 25% of pediatric ALL cases. In an assay that measures the level of interaction between RUNX1 and CBF β , a screen of 243,398 compounds identified a benzodiazepine compound that blocked the interaction. In human leukemia cells with CBF β fusion proteins, the benzodiazepine induced greater cell death than that seen in leukemia cells lacking CBF β fusion proteins. In mice transplanted with the leukemia cells, chemotherapy plus the compound increased survival and decreased leukemic burden compared with chemotherapy alone. Next steps include developing a more potent analog.	Patent application filed; available for licensing	Cunningham, L. <i>et al. Proc. Natl. Acad. Sci. USA</i> ; published online Aug. 21, 2012; doi:10.1073/pnas.1200037109 Contact: Paul Liu, National Institutes of Health, Bethesda, Md. e-mail: pliu@mail.nih.gov Contact: Wei Zheng, same affiliation as above e-mail: wzheng@mail.nih.gov
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