This week in therapeutics

Indication	Target/marker/ pathway	Summary	Licensing status	Publication and contact information
Cancer				
Acute lymphocytic leukemia (ALL)	Deoxycytidine kinase (DCK)	*In vitro* and mouse studies suggest simultaneously inhibiting two deoxycytidine triphosphate (dCTP) synthesis pathways could help treat ALL. In human T cell ALL lines, thymidine (dT) decreased dCTP synthesis through the *de novo* pathway but promoted dCTP synthesis through the nucleotide salvage pathway. In human T cell ALL lines, the combination of dT plus a DCK inhibitor that blocks the nucleotide salvage pathway resulted in increased apoptosis and replication stress compared with either compound alone. In mice, the combination decreased tumor burden in human T cell ALL xenografts and leukemic burden in systemic B cell ALL xenografts compared with either treatment alone. Next steps include assessing safety and toxicology.	Patent application filed for the DCK inhibitors; unlicensed	Nathanson, D.A. *et al. J. Exp. Med.*; published online Feb. 24, 2014; doi:10.1084/jem.20131738 **Contact:** Caius G. Radu, University of California, Los Angeles, Calif. e-mail: cradu@mednet.ucla.edu

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