This week in therapeutics

Indication	Target/marker/pathway	Summary	Licensing status	Publication and contact information
Cancer				
Acute lymphoblastic leukemia (ALL)	Cyclin dependent kinase 7 (CDK7)	*In vitro* and mouse studies have identified allosteric, covalent inhibitors of CDK7 that could help treat cancers including ALL. Cell-based screening and kinase selectivity profiling led to the identification of THZ1, a phenylaminopyrimidine that inhibited CDK7 at nanomolar concentrations. In ALL cell lines and xenograft mice, THZ1 decreased cell proliferation compared with an inactive control compound. In ALL cells, concentrations of THZ1 that did not affect global transcription were able to downregulate expression of runt-related transcription factor 1 (RUNX1), a driver of leukemia. Next steps at Syros Pharmaceuticals Inc. include testing CDK7 inhibitors in additional cancer models. *SciBX* 7(27); doi:10.1038/scibx.2014.787 **Published online July 17, 2014**	Patent application filed; exclusively licensed to Syros Pharmaceuticals	Kwiatkowski, N. *et al. Nature*; published online June 22, 2014; doi:10.1038/nature13393 **Contact:** Nathanael S. Gray, Dana-Farber Cancer Institute, Boston, Mass. e-mail: nathanael_gray@dfci.harvard.edu **Contact:** Richard A. Young, Whitehead Institute for Biomedical Research, Cambridge, Mass. e-mail: young@wi.mit.edu