

This week in therapeutics

Indication	Target/marker/pathway	Summary	Licensing status	Publication and contact information
Cancer				
Acute promyelocytic leukemia (APL)	Retinoic acid receptor- α (RARA); promyelocytic leukemia (PML); histone deacetylase (HDAC)	<p>Cell culture studies suggest hybrid retinoic acid-HDAC inhibitors could be useful for treating APL. More than 95% of APLs are driven by PML-RARA fusions, and although retinoic acid or HDAC inhibitors elicit apoptosis in APL cells, nonspecific gene expression changes are known to limit their utility. In cell culture assays, low micromolar concentrations of a hybrid compound consisting of all-trans retinoic acid and an HDAC class I inhibitor maintained partial retinoid activity and induced acetylation at only a subset of PML-RARA target genes. In cell culture, the hybrid compound induced proapoptotic genes and increased caspase-8 (CASP8; FLICE)- and reactive oxygen species-dependent cell death compared with an HDAC inhibitor alone. Next steps include further investigating the hybrid compound's mechanism of action.</p> <p>SciBX 7(13); doi:10.1038/scibx.2014.365 Published online April 3, 2014</p>	Unpatented; licensing status not applicable	<p>De Bellis, F. <i>et al. Cancer Res.</i>; published online Feb. 24, 2014; doi:10.1158/0008-5472.CAN-13-2568 Contact: Lucia Altucci, Second University of Naples, Naples, Italy e-mail: lucia.altucci@unina2.it</p>