

This week in therapeutics

Indication	Target/marker/pathway	Summary	Licensing status	Publication and contact information
Cancer				
Chronic lymphocytic leukemia (CLL)	miR-15a; miR-16-1	A study of a leukemia cell line and primary samples from CLL patients identified a coexpressed gene signature that could be useful for diagnosing CLL. The two microRNAs, miR-15a and miR-16-1, are tumor suppressors that are absent or downregulated in CLL. A microarray analysis of gene expression in MEG-01 leukemia cells transfected with the two miRNAs revealed a signature of multiple genes that were differentially expressed compared with tumor cells that received empty vector. Many of these genes coded for proteins involved in cell cycle and antiapoptotic pathways. A subsequent analysis of primary CLLs that expressed the two miRNAs revealed a gene signature that also included downregulated antiapoptotic proteins. The researchers are testing the efficacy of i.v. administration of miR-15a and miR-16-1 in mouse models of CLL.	International patent issued covering cancer-related uses of miR-15 and miR-16 and related miRNAs; international patent application filed describing <i>BCL2</i> as a direct target of these miRNAs; both exclusively licensed to CroGen Pharmaceuticals LP	Calin, G. <i>et al. Proc. Natl. Acad. Sci. USA</i> ; published online March 24, 2008; doi:10.1073/pnas.0800121105 Contact: Carlo M. Croce, Human Cancer Genetics Program, Department of Molecular Virology, Immunology, and Medical Genetics, Ohio State University, Columbus, Ohio e-mail: carlo.croce@osumc.edu