

This week in techniques

Approach	Summary	Licensing status	Publication and contact information
Assays & screens			
MicroRNA detection with hairpin-mediated quadratic enzymatic amplification (HQEA)	HQEA for miRNAs could enable sensitive detection of disease-associated miRNAs in clinical samples. The method involves hybridizing a molecular beacon probe with the targeted miRNA and then synthesizing an inactive DNA duplex of the probe that is activated by an endonuclease to emit the fluorescent signal. In a proof-of-concept study, a detection assay using HQEA detected miRNA-21 (miR-21) in a 15 microliter sample with a detection limit of 10 femtomolar at 37 °C and 1 attomolar at 4 °C. In cell lysates from patient breast cancer samples or human breast and prostate cancer cell lines, the assay detected miR-21 and miR-221. Next steps include developing gene chips that use HQEA for detecting disease-associated miRNAs.	Patented; unavailable for licensing	Duan, R. <i>et al.</i> <i>J. Am. Chem. Soc.</i> ; published online Feb. 27, 2013; doi:10.1021/ja3111313b Contact: Fan Xia, Huazhong University of Science & Technology, Wuhan, China e-mail: xiafan@hust.edu.cn
	SciBX 6(10); doi:10.1038/scibx.2013.246 Published online March 14, 2013		