

This week in techniques

Approach	Summary	Licensing status	Publication and contact information
Disease models			
Oncogenic, human knock-in cell lines for drug profiling	Human knock-in cell lines expressing oncogenic alleles may improve drug profiling in cancer. Adeno-associated viral vectors were used to introduce oncogenic mutations into normal human somatic cells. In these X-MAN cell lines, knock-in cells carrying a mutated <i>EGFR</i> , <i>KRAS</i> , <i>BRAF</i> or <i>PIK3CA</i> allele displayed drug sensitivity or resistance profiles that resembled those of naturally occurring tumor cells. Double <i>EGFR</i> and <i>PIK3CA</i> mutant allele knock-in cells also reproduced an epidermal growth factor receptor (EGFR) tyrosine kinase inhibitor-resistant phenotype in brain tumor cells with similar mutations. Next steps include validating the drug response results in additional X-MAN cell lines.	Patent application filed covering generation and use of X-MAN cell lines for compound screening; available for licensing from Horizon Discovery Ltd.	Di Nicolantonio, F. <i>et al. Proc. Natl. Acad. Sci. USA</i> ; published online Dec. 8, 2008; doi:10.1073/pnas.0808757105 Contact: Alberto Bardelli, University of Turin Medical School, Turin, Italy e-mail: a.bardelli@unito.it
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