

This week in therapeutics

Indication	Target/marker/pathway	Summary	Licensing status	Publication and contact information
Cancer				
Brain cancer	<i>Mitogen-activated protein kinase kinase 4 (MAP2K4; MKK4)</i>	Cell culture and mouse studies suggest small molecules that induce vacuolization could be used to treat glioblastoma multiforme (GBM). Phenotypic screening of a compound library followed by cell-based and zebrafish assays and <i>in silico</i> analyses identified the quinine derivative vacquinol-1, which induced vacuolization and cell rupture in human glioma cells. An shRNA screen identified <i>MKK4</i> as a gene required for vacquinol-1-induced vacuolization. In mice with established human GBM, oral dosing of vacquinol-1 attenuated tumor growth and enhanced survival. Next steps include determining a dosing regimen, performing toxicity studies and setting up clinical trials with vacquinol-1 or optimized structural analogs.	Patent application filed; available for licensing from Karolinska Institute Innovations AB Contact: Edwin Johnson, Karolinska Institute Innovations AB, Solna, Sweden e-mail: edwin.johnson@kiinnovations.se	Kitambi, S.S. <i>et al. Cell</i> ; published online March 18, 2014; doi:10.1016/j.cell.2014.02.021 Contact: Patrik Ernfors, Karolinska Institute, Stockholm, Sweden e-mail: patrik.ernfors@ki.se
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