

This week in techniques

Approach	Summary	Licensing status	Publication and contact information
Drug platforms			
X-ray crystal structure of vaccinia thymidylate kinase (TMPK) to assist antiviral therapy development	<p>The X-ray crystal structure of the vaccinia virus TMPK may aid the design of antiviral therapies. Protein crystallography and computational modeling showed that, unlike the human variant, vaccinia TMPK has a pore in its thymidine binding pocket that allowed the protein to accommodate bulkier bases like brivudin monophosphate and deoxyguanosine monophosphate (dGMP). The larger bases are phosphorylated and stabilize viral TMPK more efficiently than human TMPK, suggesting that targeting the pore could avoid side effects potentially associated with blocking the human variant of the enzyme. Next steps include using the structural data on vaccinia TMPK for the rational design of antivirals.</p> <p>SciBX 1(40); doi:10.1038/scibx.2008.987 Published online Nov. 6, 2008</p>	Unpatented; licensing status not applicable	<p>Caillat, C. <i>et al. Proc. Natl. Acad. Sci. USA</i>; published online Oct. 20, 2008; doi:10.1073/pnas.0804525105 Contact: Philippe Meyer, University of Paris, Paris, France e-mail: meyer@lebs.cnrs-gif.fr Contact: Dominique Deville-Bonne, Unité Propre de Recherche, Gif-sur-Yvette, France e-mail: dominique.deville@upmc.fr</p>