

This week in therapeutics

Indication	Target/marker/pathway	Summary	Licensing status	Publication and contact information
Cancer				
Cancer	O ⁶ -methylguanine DNA methyltransferase (MGMT)	<p>A cell culture study suggests that meta aminomethyl-substituted O⁶-benzylguanine (BG) may be useful for overcoming the resistance of tumors to alkylating chemotherapeutics. BG compounds inhibit MGMT, an enzyme that reverses the effect of alkylating chemotherapeutics on DNA. The meta aminomethylated BG compound showed 20-fold improvement in inactivating MGMT <i>in vitro</i> and was 1,000 times more soluble at physiological pH than the parent BG compound. In human colon adenocarcinoma cells, the meta analog also inhibited alkyltransferase activity more potently than the parent compound. Adenocarcinoma cells co-treated with the meta analog and the alkylating chemotherapeutic carmustine showed less cell survival than cells treated with the parent compound and carmustine. Next steps could include evaluating the pharmacokinetics and efficacy of the meta aminomethyl-substituted BG in <i>in vivo</i> cancer models.</p> <p>SciBX 1(44); doi:10.1038/scibx.2008.1068 Published online Dec. 11, 2008</p>	Patent application filed for use in cancer therapy; licensing status undisclosed	<p>Pauly, G.T. <i>et al. J. Med. Chem.</i>; published online Oct. 31, 2008; doi:10.1021/jm800675p</p> <p>Contact: Anthony E. Pegg, The Pennsylvania State University College of Medicine, Hershey, Pa. e-mail: aep1@psu.edu</p>