

### This week in therapeutics

Indication	Target/marker/ pathway	Summary	Licensing status	Publication and contact information
<b>Infectious disease</b>				
Bacterial infection	$\beta$ -Lactamase	<p><i>In vitro</i> studies suggest that substituted penicillanic acid sulfones could help improve the potency of antibiotics against drug-resistant bacterial infections. <i>In vitro</i>, five lead 6-alkylidene-2'-substituted penicillanic acid sulfones were nanomolar inhibitors of <math>\beta</math>-lactamase, which is found in bacteria resistant to carbapenem antibiotics. In <i>Acinetobacter baumannii</i> culture, the lead compounds reduced the maximum inhibitory concentration of meropenem or imipenem by at least fourfold compared with meropenem or imipenem alone. Next steps could include testing the lead compounds in animal models of bacterial infection.</p> <p>The generic carbapenem antibiotics meropenem and imipenem are marketed to treat a wide range of Gram-positive and Gram-negative infections.</p> <p><b>SciBX 3(37); doi:10.1038/scibx.2010.1121</b>  <b>Published online Sept. 23, 2010</b></p>	Patent and licensing status unavailable	<p>Bou, G. <i>et al.</i> <i>J. Am. Chem. Soc.</i>; published online Sept. 7, 2010;            doi:10.1021/ja104092z  <b>Contact:</b> John D. Buynak, Southern Methodist University, Dallas, Texas            e-mail: <a href="mailto:jbuynak@smu.edu">jbuynak@smu.edu</a>  <b>Contact:</b> Antonio Romero, Spanish National Research Council, Madrid, Spain            e-mail: <a href="mailto:romero@cib.csic.es">romero@cib.csic.es</a>  <b>Contact:</b> Robert A. Bonomo, Louis Stokes Cleveland Department of Veterans Affairs Medical Center, Cleveland, Ohio            e-mail: <a href="mailto:robert.bonomo@med.va.gov">robert.bonomo@med.va.gov</a></p>