This week in therapeutics

Indication	Target/marker/ pathway	Summary	Licensing status	Publication and contact information
Infectious disease				
Bacterial infection	Preprotein translocase subunit SecE (secE); modulator for HflB protease specific for phage λ -cII repressor (hflK; hflC; hflKC)	<i>In vitro</i> studies suggest that molecules targeting bacterial membrane proteins secE and hflKC could improve the therapeutic index of aminoglycoside antibiotics. Gene expression, phenotypic and biochemical studies of antibiotic-treated <i>Escherichia coli</i> revealed pathways and genes functionally linked to aminoglycoside-induced oxidative stress and lethality, including secE and hflKC. In cultured <i>E. coli</i> , knockout of the secE or hflKC genes enhanced the killing potency of three different aminoglycoside antibiotics. Further studies are necessary to develop adjuvant compounds to activate bacterial cell death mechanisms or to identify small molecules that interfere with bacterial mechanisms for avoiding cell death.	Patent applications filed covering the common oxidative stress cellular death pathway and related pathways induced by antibiotics for improving compound efficacy; available for licensing	Kohanski, M. <i>et al. Cell</i> ; published online Nov. 13, 2008; doi:10.1016/j.cell.2008.09.038 Contact: James J. Collins, Boston University, Boston, Mass. e-mail: jcollins@bu.edu
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