This week in therapeutics

Indication	Target/marker/pathway	Summary	Licensing status	Publication and contact information
Infectious disease				
<i>Clostridium</i>	<i>Clostridium botulinum</i> toxin type A; botulinum neurotoxin type A1 nontoxic-nonhemagglutinin component (ntnH)	<p>Structural and <i>in vitro</i> studies suggest inhibiting binding between <i>C. botulinum</i> toxin and ntnH could prevent botulism. The botulinum toxin-ntnH complex prevents the toxin's degradation by gastric acid, allowing free toxin to be released in the blood. X-ray studies of <i>C. botulinum</i> toxin type A and ntnH cocrystals showed that protonation of Glu982 and Asp1037 is crucial to the complex's stability. Substitution of those residues with Gln and Asn, respectively, decreased the complex's stability. Planned studies include identifying inhibitors of toxin-ntnH binding.</p> <p>Cangene Corp.'s botulism antitoxin heptavalent (BAT), a hyperimmune preparation containing neutralizing antibodies to the seven different botulinum toxin types, is in Phase III testing to treat botulism.</p> <p>rBV A/B, a recombinant botulinum neurotoxin serotypes A and B vaccine from DynPort Vaccine Co. LLC, is in Phase II testing to prevent botulism.</p> <p>Xoma Corp.'s XOMA 3AB, a formulation of three humanized mAbs that binds to distinct regions of <i>C. botulinum</i> toxin type A, is in Phase I testing to prevent and treat botulism.</p> <p>SciBX 5(10); doi:10.1038/scibx.2012.256 Published online March 8, 2012</p>	Patent application filed; available for licensing or partnering	<p>Gu, S. <i>et al. Science</i>; published online Feb. 24, 2012; doi:10.1126/science.1214270</p> <p>Contact: Rongsheng Jin, Sanford-Burnham Medical Research Institute, La Jolla, Calif. e-mail: rjin@sanfordburnham.org</p>