This week in therapeutics

Indication	Target/marker/ pathway	Summary	Licensing status	Publication and contact information
Infectious disease				
Bacterial infection; fungal infection	Not applicable	<i>In vitro</i> studies suggest that analogs of gramicidin S could treat a range of systemic bacterial and fungal infections. The antibiotic gramicidin S, a cyclic 10-residue peptide with activity against many Gram-positive and Gram-negative bacteria, cannot be used systemically because of toxic hemolytic side effects. A series of synthetic gramicidin analogs with ring sizes of 10–16 residues showed significant <i>in vitro</i> activity against 15 species of bacteria and 2 species of fungi. Two lead analogs had potencies similar to gramicidin but were 5–10 times less toxic to human blood cells than gramicidin. Ongoing work includes lead optimization and the rational design of additional cyclic peptide antibiotics, including those that could target antibiotic-resistant microbes.	Unpatented; unlicensed	Jelokhani-Niaraki, M. <i>et al. J. Med. Chem.</i> ; published online March 12, 2009; doi:10.1021/jm801648n Contact: Masoud Jelokhani-Niaraki, Wilfrid Laurier University, Waterloo, Ontario, Canada e-mail: mjelokhani@wlu.ca
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