This week in therapeutics

Indication	Target/marker/pathway	Summary	Licensing status	Publication and contact information
Infectious disease				
Pneumococcus; pneumonia	Endothelial cell nitric oxide synthase 3 (NOS3; eNOS)	Mouse studies suggest agonizing NOS3 could help treat bacterial pneumonia. In humans and mice, females show greater resistance to pneumococcal infection than males. In female mice and estrogen-treated male mice, estrogen caused upregulation of Nos3 in alveolar macrophages, which led to greater bacterial clearance from the lungs following sublethal pneumococcal challenge than that seen in *Nos3*-knockout females and untreated male mice. In mouse models of primary pneumococcal pneumonia and bacterial pneumonia secondary to influenza infection, a selective NOS3 agonist increased survival and bacterial clearance compared with vehicle or no treatment. Next steps could include evaluating the safety of the agonist in mice.	Patent application filed; licensing status not applicable	Yang, Z. *et al. eLife*; published online Oct. 15, 2014; doi:10.7554/eLife.03711 **Contact:** Lester Kobzik, Harvard School of Public Health, Boston, Mass. e-mail: lkobzik@hsph.harvard.edu

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