



## Articles of Significant Interest Selected from This Issue by the Editor

### **A *Coxiella burnetii* Effector Targets Mitochondria during Infection**

*Coxiella burnetii*, the causative agent of Q fever, replicates within a unique vacuolar compartment. During infection, *Coxiella* transports an estimated 130 effector proteins into the host cell via an essential type IV secretion system. The function and importance of most of these effectors remain uncharacterized. Fielden et al. (e01046-16) examine the effector MceA (CBU0077) and demonstrate that it is modified by the host and specifically localizes to mitochondria during infection. MceA forms a stable complex at the mitochondrial outer membrane, consisting of multiple MceA monomers. This research highlights the importance of studying molecular host-pathogen interactions in the context of infection and highlights the mitochondria as a genuine target during *Coxiella* infection.

### **SpxA1 Is a Redox-Responsive Transcription Factor Essential for Aerobic Growth of *Listeria monocytogenes***

*Listeria monocytogenes* lives a dual lifestyle as both a saprophyte in the environment and a deadly foodborne pathogen. Growth in either niche requires adaptation to a variety of stressors, including oxidative stress. In this report, Whiteley et al. (e00978-16) investigate the Spx family of redox-responsive transcription regulators in *L. monocytogenes* pathogenesis. They demonstrate that *spxA1* is essential for aerobic growth *in vitro*. Surprisingly, the  $\Delta$ *spxA1* mutant was able to replicate intracellularly and colonize the spleen, but not the liver, of infected animals. These results suggest that intracellular pathogens experience and adapt to organ-specific variations in redox stress and oxygen concentration.