**Research Articles**

**Harker, J.A., D.C.P. Lee, Y. Yamaguchi, et al.** 2010. Delivery of cytokines by recombinant virus in early life alters the immune response to adult lung infection. *J. Virol.* **84:**5294–5302. (doi:10.1128/JVI.02503-09)

(Coexpression of cytokines in live vaccines appears to alter infant immune responses and neonatal deficiency in IFN-γ activity leads to exacerbated disease pathogenesis during secondary infection.)

**Ndao, M., T.W. Spithill, R. Caffrey, et al.** 2010. Identification of novel diagnostic serum biomarkers for Chagas’ Disease in asymptomatic subjects by mass spectrometric profiling. *J. Clin. Microbiol.* **48:**1139–1149. (doi:10.1128/JCM.02207-09)

(Development of a screening technique for unique proteins in infected individuals may lead to advances in blood bank screening and patient diagnosis.)

**Mathiason, C.K., J. Hayes-Klug, S.A. Hays, et al.** 2010. B cells and platelets harbor prion infectivity in the blood of deer infected with chronic wasting disease. *J. Virol.* **84:**5097–5107. (doi:10.1128/JVI.01472-09)

(The identification of cellular reservoirs of infectious prions in CWD may lead to the development of more sensitive blood-based diagnostic assays for this and other related TSEs.)

**Gaupp, R., S. Schlag, M. Liebeke, M. Lalk, and F. Götz.** 2010. Advantage of upregulation of succinate dehydrogenase in *Staphylococcus aureus* biofilms. *J. Bacteriol.* **192:**2385–2394. (doi:10.1128/JB.01472-09)

(Within a biofilm, enhanced TCA cycle activity is advantageous for it permits adequate acetate and amino acid catabolism under typically limiting environmental conditions.)

**Heinhorst, S., and G.C. Cannon.** 2010. Addressing microbial organelles: A short peptide directs enzymes to the interior. *PNAS* **107:**7627–7628. (doi: 10.1073/pnas.1003433107)

(A review of recent studies providing information regarding the self-assembly processes that have led to the formation of BMCs [bacterial microcompartments] within the cytoplasm of bacterial cells.)

**Chin, J.P, J. Megaw, C.L. Magill, et al.** 2010. Solutes determine the temperature windows for microbial survival and growth. *PNAS* **107:**7835–7840. (doi: 10.1073/pnas.100557107)

(Naturally occurring solutes can extend temperature as well as pressure ranges allowing for growth of some microorganisms, which could provide useful information for the study of cold ecosystems and manmade biomes.)

**Pedagogy Articles**

**Maxmen, A.** 2010. Video games and the second life of science class. *Cell* **141:**201–203. (doi:10.1016/j.cell.2010.03.045)

(One person’s look at whether gaming and computer simulations can bring new life to science education in the US.)

**Zewail, A.H.** 2010. Science in diplomacy. *Cell* **141:**204–207. (doi:10.1016/j.cell.2010.04.002)

(Although science has been a major player in economic development throughout history, its role in diplomacy and world affairs may be just developing. This may be an interesting piece to lead a further class discussion on this issue.)

**Halverson, K.L.** 2010. Using pipe cleaners to bring the Tree of Life to life. *Am. Biol. Teacher* **72:**223–224.

(An inexpensive classroom model to reinforce the understanding as well as the analysis of phylogenetic trees in a hands-on manner.)

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