In the news

ONE FLU OVER? ESCHEW THE REST!

Last year we had a vaccine surplus (*Nature Rev. Immunol.*, Feb 2010), this year there isn't enough (*The Telegraph*, 13 Jan 2011): is there ever any good news when it comes to our struggle with influenza virus?

Amid all the media reports of death and despair, a group of scientists provided a glimmer of hope by showing that humans who recover from infection with swine flu (the 2009 H1N1 pandemic strain of influenza virus) may have increased resistance to all other strains of influenza virus (*J. Exp. Med.*, 10 Jan 2010).

The researchers, led by Patrick Wilson (University of Chicago) and Rafi Ahmed (Emory University, Atlanta), identified five antibodies from patients infected with swine flu in 2009 that could recognize all H1N1 strains from the last decade, as well as the 1918 'Spanish flu' and deadly H5N1 'bird flu' strains (*BBC News*, 11 Jan 2011). Strikingly, these antibodies protected mice from otherwise lethal doses of influenza virus. The study has important implications for vaccine development. "It says a universal influenza vaccine is really possible," said Wilson (*Reuters*, 10 Jan 2011).

The antibodies seem to protect against multiple strains of influenza virus because of their unusual tendency to bind the stalk region of viral haemagglutinin. Unlike other regions of haemagglutinin, the stalk region shows little variation between different influenza virus strains and is, according to Ahmed, "the Achilles' heel" of the virus (*Fox News*, 10 Jan 2011).

One word of warning: being overweight may reduce your chances of developing these 'super' antibodies. Researchers from the California Department of Public Health found that obese individuals have an up to 300% increased risk of death following infection with swine flu (*Tehran Times*, 13 Jan 2010). The mechanisms may be unclear, but these findings offer yet another fascinating link between host metabolism and immunity.

Yvonne Bordon