

## In the news

### FLU 'SUPER-ANTIBODY'

A universal influenza vaccine has been something of a holy grail for vaccinologists, but the recent isolation of a neutralizing antibody that recognizes a conserved portion of the haemagglutinin glycoprotein of all 16 subtypes and neutralizes both group 1 and group 2 influenza A viruses (*Science*, 28 Jul 2011) has taken us a step closer to this possibility.

The study, led by Antonio Lanzavecchia, director of the Institute for Research in Biomedicine in Bellinzona, Switzerland, and John Skehel, at the National Institute for Medical Research in London, UK, isolated and screened 104,000 B cells from 8 individuals exposed to different strains of influenza virus before identifying the 'super-antibody' — termed F16. "We've tried every subtype of influenza A and it [F16] interacts with them all", explained Skehel (*BBC News*, 29 Jul 2011).

Passive transfer of this antibody protected mice and ferrets against a later lethal dose of H1N1 virus. "What we can do now is mass-produce this super-antibody and give it as a therapeutic", according to Lanzavecchia (*Guardian*, 28 Jul 2011). "This could be developed to treat any influenza A infection and prevent any possible new pandemic that will come out. We expect it will block not only the strains that circulate in humans but also those that are present in animals", he continued.

There have been several other studies published recently describing broadly reactive neutralizing antibodies that bind to either group 1 or group 2 influenza A viruses. These studies are a great step forward, but as stated by John Oxford, Professor of Virology at Queen Mary, University of London: "It's pretty good if you've got one against the whole shebang" (*BBC News*).

It is hoped that these breakthroughs will help to direct the development of a universal influenza vaccine.

*Olive Leavy*