Horse antibodies against the bird flu virus H5N1 are effective as treatment in mice

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Antibodies against the bird flu virus H5N1, derived from horses, prevent mice infected with H5N1 from dying from the virus. A study published today in the open access journal *Respiratory Research* reveals that a dose of 100 μg of horse anti-serum effectively protects infected mice.

These results suggest that anti-H5N1 antibodies developed in horses could potentially be used to prevent death from H5N1 influenza, or as early treatment for the disease, in humans.

Jiahai Lu from Sun Yat-Sen University in Guangzhou, China and colleagues from other institutions in China infected dog kidney cells in vitro with a lethal dose of H5N1 and simultaneously exposed the cells to horse antibodies against H5N1. Lu et al.'s results show that horse antibodies to H5N1 protected cells against H5N1 in vitro – the cells simultaneously infected with H5N1 and exposed to horse antibodies did not die.

Lu et al. then injected horse antibodies into 40 mice that had been infected with a lethal dose of H5N1 24 hours earlier. The authors also injected horse serum without H5N1 antibodies into a group of mice that acted as controls.

The authors found that 50μg of antibody protected 70% of the mice against death by H5N1 and 100 μg of antibody protected 100% of the mice. The mice in the control group died nine hours after receiving the normal horse serum.

Link to *Respiratory Research*: respiratory-research.com

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