

Animals now picking up bugs from people, study shows

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Globalisation and industrialisation are causing diseases to spread from humans to animals, a study has shown.

Researchers from The Roslin Institute of the University of Edinburgh have shown that a strain of bacteria has jumped from humans to chickens.

It is believed to be the first clear evidence of bacterial pathogens crossing over from humans to animals and then spreading since animals were first domesticated some 10,000 years ago.

The study identified a form of the bacteria [Staphylococcus aureus](#) - of which MRSA is a subtype - in chickens, and found that the bacteria originally came from humans.

Genetic testing showed that the bacteria crossed over from one species to another around 40 years ago, coinciding with a move towards intensive [poultry](#) farming practices.

In comparison to the corresponding form of *Staphylococcus aureus* in humans, which was isolated to one geographical area, the strain in chickens was spread across different continents.

[Infectious diseases](#) in chicken flocks are a major economic burden on the industry and the spread of bacteria from humans to chickens could have a huge impact on poultry farming. If bacteria are also shown to be

crossing over from humans to other livestock then there could be an impact on food security.

Dr. Ross Fitzgerald, of The Roslin Institute, said: "Half a century ago chickens were reared for their eggs, with meat regarded as a by-product. Now the demand for meat has led to a poultry industry dominated by a few multinational companies which supply a limited number of breeding lines to a global market - thereby promoting the spread of the bacteria around the world."

The [bacteria](#) are a major cause of animal diseases, including bone infections in poultry. Further research will look at analysing other livestock for emerging pathogens and diseases which may have come from humans.

The study is published in the [Proceedings of the National Academy of Sciences](#).

Source: University of Edinburgh

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