



NEWS RELEASE

1 May 2025

Cross-party group: UK-based gene editing research could avert another Covid-style pandemic

A cross-party group of MPs and Peers has called on the UK Government as a matter of urgency to bring forward implementing rules under the Genetic Technology (Precision Breeding) Act 2023 to allow the use of gene editing in farmed animals to help mitigate the risk of bird flu spiralling out of control and causing another zoonotic pandemic in the human population.

Veterinarian Lord Trees, a vice-chair of the All-Party Parliamentary Group on Science and Technology in Agriculture (APPGSTA), issued the call after leading virologists at the Global Virus Network (GVN) [urged governments worldwide](#) to address the rising threat of H5N1 avian influenza and make preparations for potential human-to-human transmission.

In a scientific paper published this week in the journal *The Lancet Regional Health – Americas*, GVN experts warn that “*the recent emergence of highly pathogenic H5N1 avian influenza virus infections in dairy cows and humans in the U.S. has raised alarms regarding the potential for a pandemic.*”

The paper notes that more than 995 dairy cow herds and at least 70 humans have been affected, including cases of severe disease and the first reported H5N1-related human death in the U.S.

“Sporadic human infections with no known contact with infected animals highlight the possibility of viral adaptation for efficient human-to-human transmission,” the authors warn.

In the UK, transmission of bird flu to mammals has also been [documented](#) in seals, dolphins, red fox, otters, sheep and dogs, and the UK Health Security Agency (UKHSA) [confirmed](#) Britain’s first human case of bird flu in January this year.

Lord Trees said the virologists’ warnings must be heeded and acted upon to avoid a potential Covid-style pandemic in the human population.

He pointed to UK research led by scientists at Imperial College in London and the Roslin Institute in Edinburgh as a potential solution to breaking the cycle of H5N1 transmission, which originates in wild bird populations.

The scientists involved are using gene editing techniques to develop bird flu resistant chickens. Eighteen months ago, the team [reported promising results](#) for breeding birds with effective resistance to H5N1. The researchers estimate that within two years this breakthrough could pave the way to their ultimate goal of developing gene edited chickens which are fully immune and which do not pass on the virus.

Lord Trees noted that this UK-based research is recognised as being way ahead of other efforts around the world to breed genetic resistance or to develop effective vaccines against bird flu, adding:

“Publicly-funded research in the UK is ahead of the curve and may hold the key to stemming H5N1 transmission from wild birds to farmed poultry on a global basis. To enable research such as this to reach the market, and in the face of urgent warnings from the world’s leading virologists, I urge the Government to act without delay to bring forward the secondary legislation needed to implement the Precision Breeding Act for farmed animals, as it has for plants. It is more than two years since the Act received Royal Assent.”

Lord Trees also welcomed news this week that British genetics firm Genus plc has received approval from the US Food & Drug Administration (FDA) for its gene edited PRRS resistant pig, which was co-developed with UK researchers at the Roslin Institute. Porcine Reproductive and Respiratory Syndrome (PRRS) is one of the most devastating global pig diseases, which causes suffering and premature death in pigs.

“As a Group we have strongly argued that there is a moral imperative to free up access to these new genetic technologies where they can be used to improve health and welfare in farmed animals. Healthier animals are also more productive, which makes good economic sense. Shares in Genus reportedly jumped by 22% on news of the FDA approval. Given the UK Government’s pro-growth agenda, surely this is a positive sign that we should be capitalising on our scientific leadership in these technologies?” he said.

ENDS

Notes

The All-Party Parliamentary Group on Science and Technology in Agriculture exists to promote debate among politicians and other stakeholders on the value and role of scientific innovation in UK agriculture. The Group works to ensure that the Government’s support for agri-science is maintained and strengthened, that the regulatory environment is evidence-based and enabling, and that the contribution of modern agriculture to our society, economy and environment is valued and understood as widely as possible.

For further information contact:

Daniel Pearsall, Group Co-ordinator, APPG Science & Technology in Agriculture

E-mail: press@appg-agscience.org.uk

Tel: 07770 875455

www.appg-agscience.org.uk