

Louping Ill Vaccine Development



Louping Ill is an acute tick transmitted viral disease affecting the central nervous system, to which sheep and red grouse are highly susceptible. Surveillance data for sheep show that mortality rates in flocks due to LIV are 5-10%. Around 50% of infected sheep showing symptoms of the virus die, but surviving sheep gain strong immunity, which suggested vaccination as a feasible method of disease control.

Moredun first developed a highly effective vaccine against LIV in the 1930s, which was successfully used in hill sheep flocks in areas of high LIV risk. An improved and safer vaccine was later developed in the 1970s, which continued to be used until its manufacture was discontinued in 2017.

Moredun, in partnership with the Game and Wildlife Conservation Trust, is currently undertaking research to develop a new generation LIV vaccine, generously funded by Scottish Estate Owners. This approach uses DNA technology (or some other phrase) to generate a synthetic form of key viral proteins that are important for immunity to LIV. These proteins are non-infectious and therefore safer to produce than previous vaccines.



Recent pilot studies at Moredun have shown that lambs mount a strong anti-LIV immune response when vaccinated with the prototype vaccine, which is highly promising. Further vaccination and challenge trials have now commenced to investigate if this response to vaccination protects lambs against Louping Ill disease. Results from this trial will be available early in 2022 and if successful, we will be seeking both commercial and industry partners to take the vaccine forward to commercialisation.

To facilitate the commercialisation process, we are currently preparing a Vaccine Development Plan with Knoell, partnered by GWCT and funded by UK Estate Owners. This plan will ensure all regulatory and compliance processes are in place for successful commercialisation.

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