Tiny protein offers major insight into foot-and-mouth virus

October 3 2017

Scientists have identified that a tiny protein, which plays a major role in the replication of foot-and-mouth disease virus, demonstrates a greater level of genetic economy than previously reported.

Lead researcher Professor Nicola Stonehouse, from the University of Leeds' Faculty of Biological Sciences, said: "Sometimes it's the little things that can make the big differences. By understanding the role of this tiny viral protein in the replication of foot-and-mouth disease virus, we're hoping to find more effective vaccines that fight the disease."

Researchers from the University of Leeds and The Pirbright Institute identified a new role for a small viral protein - called 3B3 - revealing how these viruses can copy themselves efficiently. Foot-and-mouth disease is of great economic importance and their findings could lead to the development of more effective vaccines against the disease in the future.

More information: Morgan R. Herod et al, Genetic economy in picornaviruses: Foot-and-mouth disease virus replication exploits alternative precursor cleavage pathways, *PLOS Pathogens* (2017). DOI: 10.1371/journal.ppat.1006666

Provided by University of Leeds