AHVLA News Release

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AHVLA awarded significant funding for research into pathogens with pandemic potential

The Animal Health and Veterinary Laboratories Agency (AHVLA) has been awarded substantial funding to participate in a European Commission (EC) programme of work aimed at reinforcing Europe's capacity in tackling pathogens, especially the risk from *E. coli* strains currently circulating within the continent.

These pathogens have the potential to be transmitted between animals and humans and pose a global pandemic threat capable of causing an epidemic over a wide geographic area and affecting a large proportion of the population. Examples include viruses such as influenza virus, Nipah virus, SARS-coronaviruses, and West Nile fever virus, and bacteria such as *Escherichia coli (E. coli)* O104*, Borrelia burgdorferi* and *Anaplasma phagocytophilum*. Researchers at AHVLA will primarily focus on obtaining a full scientific picture of new strains of *E.Coli*.

For any virus or bacterium to emerge from its original animal host and develop into a pathogen with human pandemic potential, it must successfully cross various consecutive and interdependent barriers. We describe this interlinked sequence of events is known as the 'Chain of Emergence'.

The EC's research project ANTIGONE (Anticipating the Global Onset of Novel Epidemics) will investigate the 'Chain of Emergence' with a focus on determining epidemiology in host species, assessing the risk of transmission routes and looking at factors that influence the establishment of the pathogen in animal reservoirs, which can ultimately result in human disease.

ANTIGONE involves scientists working in AHVLA's Departments of Virology and Bacteriology and its Centre for Epidemiology & Risk Analysis. The project is funded for five years with AHVLA expected to receive over €1.4 million during this period.

Professor Anthony Fooks (Head of Wildlife Zoonoses & Vector-Borne Diseases Research Group at AHVLA and Co-ordinator of ANTIGONE) said:

"ANTIGONE adds to AHVLA's successful track record of being awarded large EC-consortium grants to study infectious disease. The award recognises the diversity of scientific skills and the international reputation of the Agency. "

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Professor Ian Brown (Head of Avian Virology at AHVLA and Co-ordinator of ANTIGONE) said:

"ANTIGONE provides further opportunity for AHVLA to maintain its position as a leading European organisation working on pathogens that affect both veterinary and public health. The project consortium will form part of a key capability to the EU in dealing with global emergencies as new threats from pathogens emerge."

ENDS

NOTES

1. The Animal Health and Veterinary Laboratories Agency is an executive agency of the Department for Environment, Food and Rural Affairs (Defra), working across Great Britain on behalf of Defra, Scottish Government, Welsh Government and other public bodies.

   AHVLA's purpose is to help safeguard animal health and welfare and public health, protect the economy and enhance food security through research, surveillance and inspection. It works on farm, at ports and elsewhere to reduce risks to animal health and welfare and public health, and provides a wide range of research on livestock diseases and surveillance of new and emerging disease threats.

   Services provided include applied research, specialised testing, epidemiology and risk assessment to support policy-making. The Agency also maintains an emergency response capability to mange outbreaks of serious animal disease and protects endangered wildlife species through registration and licensing activities.

2. ANTIGONE is currently scheduled to involve 14 partners from seven countries. The project will gather specific expertise on a broad range of viruses and bacteria. Co-ordination of ANTIGONE will be led by members of Erasmus Medical Center Rotterdam in the Netherlands.

   The programme will gather the resources to build the knowledge base to help identify, study, prevent and counteract unexpected new epidemic threats. In particular, the project aims to identify the factors that make viral and bacterial pathogens from animals prone to cross the species barrier and be transmitted among people.

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When new and unknown diseases emerge, ANTIGONE will be able to perform and coordinate analysis of the bacteria or viruses involved and of the epidemiology of the disease concerned and the way it is transmitted. The project will also try to identify possible ways of eradicating disease and draw lessons that may help prevent threats in the future.

3. For further information, see http://www.neurope.eu/article/antigone-save-europe

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