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Bill & Melinda Gates Foundation funds development of Pirbright's Livestock Antibody Hub supporting animal and human health

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Researchers from The Pirbright Institute have been awarded US \$5.5 million by the Bill & Melinda Gates Foundation of to establish a Livestock Antibody Hub aimed at improving animal and human health globally. The ambitious programme of work will see extensive collaboration between multiple UK research organisations in order to utilise research outcomes in livestock disease and immunology to support human health as part of the 'One Health' agenda.

Six leading scientists from Pirbright will be involved in the project, including Professor John Hammond, Professor Venugopal Nair, Dr Simon Graham, Dr Elma Tchilian, Professor Munir Iqbal and Dr Erica Bickerton. Their combined expert knowledge will drive the study of cattle, pig and poultry antibody responses at high resolution to expand our understanding of protective immunity in species that can also be used as models for a range of human infectious diseases.

The aim is to use Pirbright's expertise in livestock viral diseases, cutting-edge technology and unique high-

containment facilities to bring antibody discovery, manipulation and testing up to the benchmark already seen in the immunological field for rodents and humans. "New tools have given us the opportunity to utilise these detailed antibody responses to make the next generation of vaccines and therapies" said research lead Professor Hammond.

requirements of the vaccine industry. A number of work programmes will focus on studying B cells and antibodies at multiple scales including gene expression, single cell function and the entire antibody response.

This highly collaborative work will address the needs of the livestock research community whilst bridging the

Findings from this research will be used to drive vaccine selection and design and test antibody therapies, "which will improve animal health and ultimately human health, as well as ensuring the security of our food supply", finished Professor Hammond. Pirbright will ultimately act as a 'Hub' able to provide specific methods, access to animal models and the associated expertise to drive antibody research within the 'One Health' agenda.

"This is the single biggest investment in the immunology of livestock in the UK from an international funder, and the British Society for Immunology will do all we can to support this collaborative initiative and help maximise its impact for the benefit of human and animal health", commented Dr Doug Brown, Chief Executive of the British Society for Immunology **△**.







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Associated Scientists

Prof John Hammond

Group Leader

Prof Venugopal Nair OBE

Group Leader Dr Elma Tchilian

Group Leader

Dr Erica Bickerton **Group Leader**

Prof Munir Iqbal **Group Leader**

Group Leader

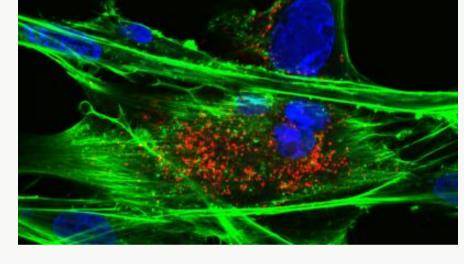
Prof Simon Graham

Associated Group



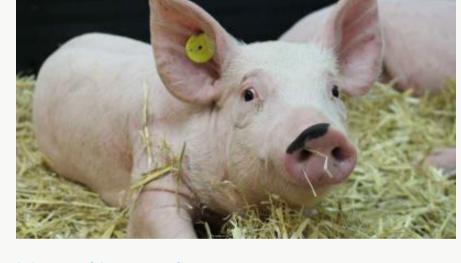
Immunogenetics Group Leader

Prof John Hammond



Viral Oncogenesis Group Leader

Prof Venugopal Nair OBE



Mucosal Immunology **Group Leader**

Dr Elma Tchilian



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