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Genus plc ('Genus')

GENUS SIGNS EXCLUSIVE LICENCE FOR TECHNOLOGY TO COMBAT BOVINE RESPIRATORY DISEASE

Genus plc (LSE: GNS), a global pioneer in animal genetics, announces it has signed an exclusive, worldwide licence with Washington State University ('WSU') for patents and know how targeting Bovine Respiratory Disease ('BRD'), using gene editing technology.

BRD is a complex, bacterial and viral infection that causes lung disease in cattle (particularly calves) and is often fatal. In the US beef industry, BRD continues to be a primary cause of mortality and the disease also contributes to losses in animal performance, quality and well-being. In the US dairy industry, BRD is also a major disease, causing mortality in weaned calves and reduced dairy performance later in life. Overall economic losses are extensive and include losses due to animal death, decreased weight gain and additional labour and treatment costs.

The licence covers edits to a target, CD18, which was shown in cell based assays to havethe potential to significantly improve the health of animals exposed to BRD. In this work, gene editing was used to make a single change in the CD18 gene that resulted in the encoded protein being unable to bind a destructive haemotoxin produced by a bacterium, which causes significant pathology in the lungs of BRD affected animals. Resistance to this haemotoxin is expected to improve the resilience of animals to BRD. This early stage research project will likely take several more years to demonstrate proof of concept. If the research is successful, the gene edited animals will be resilient to BRD, reducing the mortality associated with this devastating disease.

Speaking about the licensing agreement, Dr Jonathan Lightner, Chief Scientific Officer and Head of R&D of Genus, said:

"This is another step in Genus's strategy to harness the power of gene editing technology and will put Genus at the forefront of developing a solution to combat BRD. Genus is dedicated to the responsible exploration of new innovations that benefit the well-being of animals, farmers, and ultimately consumers."

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About Genus:
Genus creates advances to animal breeding and genetic improvement by applying biotechnology and sells added value products for livestock farming and food producers. Its technology is applicable across all livestock species and is currently commercialised by Genus in the dairy, beef and pork food production sectors.

Genus's worldwide sales are made in seventy countries under the trademarks "ABS" (dairy and beef cattle) and "PIC" (pigs) and comprise semen and breeding animals with superior genetics to those animals currently in production. Genus's customers' animals produce offspring with greater production efficiency, and quality, and use these to supply the global dairy and meat supply chain.

The Group's competitive edge has been created from the ownership and control of proprietary lines of breeding animals, the biotechnology used to improve them and its global supply chain, technical service and sales and distribution network.

With headquarters in Basingstoke, United Kingdom, Genus companies operate in thirty countries on six continents, with research laboratories located in Madison, Wisconsin, USA. For more information visit www.genusplc.com.

About Bovine Respiratory Disease:
BRD, commonly known as "shipping fever", is a leading cause of morbidity and mortality in housed cattle worldwide. BRD is caused by a combination of stress and disease causing agents, including bacteria and viruses and primarily affects young cattle, with calves aged 1 - 4 months being the most susceptible.

Mannheimia haemolytica is the most important bacterial component of BRD and under conditions of impaired pulmonary defences, the bacteria migrates to the lungs, where it multiplies rapidly causing a

fibrinonecroticpleuropneumonia, largely through the action of a secreted leukotoxin. Losses attributed to BRD are estimated at about $1 billion annually to the North American cattle industry.

This information is provided by RNS
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