

## PRESS RELEASE

## Anti-Ebola MVA Vaccine Produced on ProBioGen's Avian AGE1.CR<sup>®</sup> Cell Line Platform in Clinical Trials

"Production of the first ever batch of MVA for a clinical trial using a cell line"

*Berlin, Germany, June 2, 2015* - Complex biologics development and manufacturing specialist ProBioGen today announced that an investigational vaccine against Ebola virus disease, produced on its proprietary, continuous muscovy duck AGE1.CR.pIX<sup>®</sup> cell line, has proceeded into clinical trials at the Jenner Institute, Oxford University, UK. The vaccine candidate, a modified vaccinia Ankara (MVA) Ebola Zaire vaccine (MVA EBOZ) was produced by Emergent BioSolutions at a 200 liter scale to supply the Phase 1 clinical trial.

Professor Adrian Hill, Director from Oxford's Jenner Institute commented: "Production of the first ever batch of MVA for a clinical trial using a cell line is a milestone in the development of this important vaccine technology. This new process, which will allow very large scale production, will be of value not only for Ebola prevention, but also for a wide range of other disease indications including malaria and tuberculosis vaccination."

Dr Volker Sandig, ProBioGen's Chief Scientific Officer, added: "Our AGE1.CR<sup>®</sup> manufacturing platform offers shorter response times, full industrial bioreactor scalability and therefore much greater flexibility, compared to traditional vaccine production processes depending on embryonated chicken eggs. It is very satisfying to see that our broadly applicable vaccine production platform is instrumental to efficiently supply urgently needed human vaccines available to patients world-wide."

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## About the AGE1.CR<sup>®</sup> Viral Manufacturing Platform

ProBioGen developed the AGE1.CR.pIX<sup>®</sup> duck cell line along with robust industrial vaccine production processes for a wide spectrum of viruses, including MVA. AGE1.CR.pIX<sup>®</sup> cells grow rapidly and fully scalable in true suspension, without microcarriers, in a self-developed, commercially available, chemically defined medium, in various types of bioreactors.

In contrast to the traditionally used cells from embryonated chicken eggs, AGE1.CR.pIX<sup>®</sup>, derived from a muscovy duck, is devoid of adverse retroviral activity. Hence, the complex and costly production processes with chicken eggs can be replaced by a modern safe, fully scalable, and cost-effective production platform which is easily transferrable, requires only a small footprint and standard bioreactor technology.

ProBioGen licenses the cell line non-exclusively to human and animal health care companies.



## About ProBioGen - www.probiogen.de

ProBioGen is a specialist for developing and manufacturing complex therapeutic glyco-proteins and viral vaccines.

Combining both state-of-the-art development platforms together with intelligent product-specific technologies yields biologics with optimized properties.

Rapid and integrated cell line and process development, comprehensive analytical development and following reliable GMP manufacturing is performed by a highly skilled and experienced team.

All services and technologies are embedded in a total quality management system to assure compliance with international ISO and GMP standards (EMA/FDA).

ProBioGen was founded 1994, is privately owned and located in Berlin, Germany.

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