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Announcement

Publication of Research in Journal of Virology

Melbourne, 5 December 2013:

BioDiem Ltd is pleased to announce the acceptance of a manuscript for publication in the prestigious peer-reviewed Journal of Virology. The manuscript describes research which is relevant for the development of new vaccines for mosquito-borne diseases such as dengue fever, Murray Valley encephalitis and Japanese encephalitis among others. The manuscript can be found online at jvi.asm.org/.

The causative agent of these diseases is a group of viruses known as flaviviruses. The increasing incidence of mosquito-borne disease is a major health concern worldwide as climate change expands the range of the carrier mosquitoes, exposing larger human populations. According to the World Health Organisation, the incidence of dengue fever has increased 30-fold during the past five decades. Dengue fever affects now between 50 and 100 million people a year, and the incidence is still increasing. Although only a small percentage of cases are fatal, non-fatal cases can be extremely debilitating. Dengue fever currently has no existing vaccine, and control methods include attempts to address mosquito populations with varying effectiveness.

In June 2012, BioDiem announced the acquisition of an exclusive licence from the Australian National University to commercialise a novel vaccine technology based on flaviviruses. The research was conducted at the John Curtin School of Medical Research in liaison with the University of Canberra involving Assistant Prof. Michael Frese, Prof. Ian Ramshaw and Associate Prof. Mario Lobigs, among others. International patents have been lodged which describe this technology.

The manuscript describes the successful creation of a virus which produces interferon-beta, a drug used to limit viruses spreading within the body and stimulate the immune system to assist in dealing with the infection. This finding is significant for the design of safer vaccines. Some vaccines use a live, albeit weakened virus to generate immunity in patients to protect them from diseases caused by that virus. There is always some risk about the disease-causing potential of vaccines based on live viruses.

This work describes the possibility of engineering vaccine viruses to reduce unwanted disease-causing potential of the live vaccine while maintaining or even stimulating desirable immune responses. This discovery could be useful for designing a range of novel vaccines with enhanced safety.

BioDiem is seeking collaborative partners for the development of this technology in different indications including dengue fever.

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About BioDiem Ltd

BioDiem is an unlisted public biopharmaceutical company developing vaccines and antimicrobials targeting treatment and prevention of infectious diseases and related cancers. The lead technology is the LAIV (Live Attenuated Influenza Virus) vaccine used for seasonal and pandemic influenza vaccines and which is given intranasally. BDM-L, a therapeutic hepatitis vaccine project targeting liver diseases is underway at the University of Canberra. BioDiem's antimicrobial, BDM-I, is in preclinical development for fungal and bacterial diseases. The SAVINE (scrambled antigen) technology is in development for tuberculosis and also EBV-related disease including nasopharyngeal cancer. BioDiem's retinal product, BDM-E, being developed for retinitis pigmentosa is available for outlicence.

For additional information, please visit www.biodiem.com

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