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Announcement

# BDM-I antimicrobial – mechanism of action investigation

Melbourne, 30 April 2014: Australian infectious disease therapy and vaccine development company BioDiem Ltd today announced a collaboration with the University of Western Sydney's Antibiotic Resistance and Mobile Elements Group (ARMEG) led by Dr. Slade Jensen to investigate the mechanism of action of BioDiem's BDM-I. The research will focus on BDM-I's activity against hospital pathogens such as MRSA (methicillin-resistant *Staphylococcus aureus* or "Golden Staph").

Strains of MRSA are not only a major cause of healthcare-associated infections around the world, but are an emerging cause of infections in the wider community. In Australia, MRSA accounts for approximately 24% of *S. aureus* bloodstream infections and is associated with increased health-care costs, morbidity and mortality. Despite the entry of a small number of new therapies for MRSA, the old antibiotic, vancomycin, is considered the mainstay of therapy for invasive MRSA infections i.e. infections that spread in the body. However, intermediate vancomycin resistance has emerged, which can be associated with treatment failure, and there are concerns about the toxicity and effectiveness of alternative antimicrobial treatments.

BDM-I is a novel compound that is currently in development by BioDiem for serious human infections. It demonstrates activity against a broad range of microorganisms, including important Gram-positive hospital pathogens, such as VRE (vancomycin-resistant enterococci) and MRSA. At present, the BDM-I mechanism of action (MOA) is unknown but previous experiments indicate that its cellular target is novel and therefore represents a next-generation anti-infective.

The proposed UWS investigations are at the cutting edge of bacterial genomics research into bacterial evolution and mechanisms of antibiotic resistance. Due to the lack of available options for the treatment of infections caused by MRSA (and other bacterial pathogens), development of new antimicrobial drugs such as BDM-I are urgently needed in order to combat the ever-growing threat that antimicrobial resistance represents. It is therefore important to elucidate the MOA of this next-generation anti-infective, in order to facilitate its future development.

BioDiem is seeking potential sublicencees and formulation partners for BDM-I to accelerate its development as an antimicrobial therapy for serious human infections.

## About UWS/AMREG

The ARMEG was founded by the Microbiology and Infectious Diseases Unit, UWS School of Medicine and its laboratory is located within the Ingham Institute for Applied Medical Research, which is a new purpose-built institute that serves as the centre of medical research in South West Sydney. The group's core research projects are centred on the evolution of antibiotic resistance in ESKAPE pathogens, particularly MRSA and VRE, but also has projects that examine the role of biofilms in hospital-acquired infections and the clinical utility of whole genome sequencing in an infectious disease context. Key members of the group are Dr. Slade Jensen, Dr. Björn Espedido, Dr. Sebastiaan van Hal and Prof. Iain Gosbell.

## About BioDiem Ltd

BioDiem is an Australian biopharmaceutical company developing vaccines and antimicrobials targeting treatment and prevention of infectious diseases and related cancers. BioDiem's business model is to generate income from partnerships including with other vaccine development companies through existing and new licences to its LAIV vaccine and other technologies while pursuing development of its own vaccines. Income comes from licence fees and royalties on sales.

The lead technology is the LAIV (Live Attenuated Influenza Virus) vaccine used for seasonal and pandemic influenza vaccines and is given intranasally. BDM-L, a liver disease-targeting technology platform is underway at the University of Canberra. BioDiem's antimicrobial, BDM-I, is in development for the treatment of serious infections. BioDiem's retinal product candidate, BDM-E, being developed for retinitis pigmentosa is available for outlicence. For additional information, please visit www.biodiem.com

## Further information

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