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## ASX ANNOUNCEMENT

## BDM-I progress in NIH Research Program as Fungal Infection Treatment

**Melbourne**, **10 May 2013**: Australian infectious disease therapy and vaccine development company BioDiem Ltd (ASX: BDM) has announced its novel antimicrobial BDM-I has progressed to preclinical animal studies to assess its potential as a treatment for the fungal disease, pneumocystosis.

Two new studies will be conducted under the U.S. National Institute of Allergy and Infectious Diseases' (NIAID's) preclinical services program, which had earlier assessed BDM-I's effectiveness *in vitro*<sup>1</sup> against 70 different strains of opportunistic or hospital-acquired fungi with significant medical need for better treatments.

This earlier data was encouraging and, in particular, showed BDM-I to have significant activity against infection caused by the organism, Pneumocystis spp. This is a difficult-to-treat opportunistic parasitic fungus which can cause a serious pneumonia infection in the aged and infants, and those who are ill or have a weakened immune system, for example those who have had cancer treatment or organ transplants.

The new study will involve NIAID's Animal Models of Infectious Disease Program<sup>2</sup>, where a NIAID-funded contractor will conduct studies in a mouse model of pneumocystis infection to assess both optimal dose and overall effectiveness of BDM-I as a novel treatment.

"The move to studies in an animal model of pneumocystis infection is another important step in BDM-I's development pathway towards use in difficult-to-treat infections. This is where new treatments are urgently needed," said BioDiem Chief Executive Julie Phillips. "We are grateful to NIAID, staff and contractors for their service and ongoing support".

Pneumocystis is a yeast-like fungus that many healthy people carry without symptoms. However in patients with a suppressed or compromised immune system such as cancer patients and particularly HIV patients, it is very problematic causing pneumonia which is a major cause of death in such patients who do not have preventative treatment.

According to the Centers for Disease Control and Prevention (CDC), Atlanta, in the U.S., the incidence of pneumocystis pneumonia (PCP) is estimated to be 9% among hospitalised HIV/AIDS patients and 1% among solid organ transplant recipients. In immunocompromised patients, the mortality rate ranges from 5% to 40% in those who receive treatment. The mortality rate approaches 100% without therapy.

In August 2012, BioDiem renewed its Non-Clinical Evaluation Agreement with NIAID, part of the U.S. National Institutes of Health (NIH), under which the research has progressed.

\*NIAID Contract Number HHSN2722010000029I HHSN27200002

<sup>1. (&</sup>lt;u>http://www.niaid.nih.gov/LabsAndResources/resources/dmid/invitro/Pages/invitro.aspx</u>)

<sup>&</sup>lt;sup>2</sup>. (<u>http://www.niaid.nih.gov/labsandresources/resources/dmid/animalmodels/Pages/default.aspx</u>)

## About BioDiem Ltd

BioDiem (ASX: BDM) is an ASX-listed biopharmaceutical company based developing vaccines and antimicrobials targeting treatment and prevention of infectious diseases and related cancers. The lead technology is the LAIV (Live Attenuated Influenza Virus) used for seasonal and pandemic influenza vaccines and is given intranasally. A therapeutic hepatitis vaccine project targeting hepatitis D and B is underway at the University of Canberra. BioDiem's antimicrobial, BDM-I, is in preclinical development for fungal and bacterial diseases, also schistosomiasis and tuberculosis. BDM-I has also shown activity against some protozoa. The SAVINE (scrambled antigen) technology is in development for tuberculosis and also EBV-related disease including nasopharyngeal cancer. BioDiem's retinal product, BDM-E, in development for retinitis pigmentosa is available for outlicence.

## About BDM-I

BDM-I is a synthetic compound targeting the treatment of serious human infections. BDM-I is in the preclinical stage with outlicensing as the intended outcome. BDM-I is active against a range of pathogenic micro-organisms including gram-positive and gram-negative bacteria, fungi and protozoa. Key patents have been granted in Europe, Japan and the US around BDM-I's antimicrobial activity, including activity against *Plasmodium falciparum*, responsible for causing the most commonly severe form of malaria, and *Trichomonas vaginalis*, the protozoan responsible for causing a common sexually transmitted disease named trichomoniasis.

BioDiem's research is ongoing in partnerships with internationally recognised laboratories and commercial groups.

For additional information, please visit www.biodiem.com

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