

ASX ANNOUNCEMENT

CELLMID RECEIVES AUSTRALIAN GOVERNMENT GRANT FOR MIDKINE PROGRAMME

- **Cellmid to receive Innovation Connections Grant from the Australian Government to support collaboration with leading kidney research group at Westmead Institute**
- **Collaborations will test efficacy of midkine antibodies as treatment for chronic kidney disease and associated cardiovascular complications**

SYDNEY: Wednesday, 18 JANUARY 2017, Cellmid Limited (ASX: CDY) is pleased to advise that it will receive two Innovation Connections Grants from the Australian Government, totalling \$100,000. Innovation Connections is one of the four elements offered under the Government's Entrepreneurs' Programme.

The two grants received by Cellmid will support a collaboration with kidney specialists and University of Sydney research scientists at the Westmead Institute. The research supported by the grants will test the efficacy of midkine (MK) antibodies for the treatment of chronic kidney disease (CKD) and cardiovascular (CV) complications of CKD in preclinical rodent models.

The experiments will use therapeutic antibodies being developed by Cellmid's wholly owned subsidiary Lynamid, and will provide vital proof of concept that blocking MK will protect the kidney from injury in CKD patients.

In previous studies it has been shown that Cellmid's MK antibodies preserve renal structure and function (see below for more details). The current studies are planned to confirm efficacy and also assess whether MK antibodies prevent further renal deterioration and the need for dialysis or transplantation.

In addition, the midkine antibodies will be evaluated for their ability to reduce vascular calcification and stiffening that contribute to the prevalence of CV mortality associated with CKD. These studies will enable direct comparison of Lynamid's MK antibodies to guide selection of the lead candidate to progress into clinical trials.

The Australian Government funding provides a major boost to Lynamid's CKD program and will consolidate collaborations with key clinicians and academic researchers. The group at the Westmead Institute will not only provide expertise in performing complex experiments to study CKD and associated CV complications, but also contribute clinical and physiological insights into the disease processes involved.

"We are excited to receive the funding which enables us to engage with some of the leading renal clinicians and researchers in the field of CKD globally" said Cellmid's CEO Maria Halasz.

"Engagement with leading experts through the Innovation Connections Grant will allow us to rapidly advance Lynamid's exciting new science towards clinical

development in one of the most complex therapeutic areas" said Cellmid's Head of R&D, Dr Graham Robertson. "I want to thank the Australian Government for recognising the potential of Lynamid's science through this funding" he added.

Background and details of the proposed study and collaboration

Previous studies using a variety of strategies to block midkine have minimized kidney injury and preserved renal function in a number of experimental models of acute and chronic kidney disease. Therefore inhibiting midkine appears to be a viable approach to treat CKD patients. CKD is a worldwide health crisis that is estimated to affect 14% of adults in the developed world.

Lynamid has developed a number of anti-midkine antibodies that are effective for different conditions including cancer, inflammatory disorders and kidney disease. For example in mice with kidney damage resembling human focal segmental glomerulosclerosis (FSGS), the midkine antibody IP14 prevented kidney injury ($p < 0.01$) glomerular scarring ($p < 0.001$), and repressed inflammatory cell infiltration (T-cells – $p < 0.001$; macrophages – $p < 0.0001$) into the kidney, resulting in preserved renal function ($p < 0.05$). The pilot study carried out by the Westmead group can now be extended by renal physician Dr Vincent Lee to identify the most effective Lynamid antibody for treating FSGS and other kidney disorders.

Defective mineral handling due to declining kidney function leads to loss of calcium in bone alongside aberrant deposition of calcium in blood vessels and heart valves in a condition known as CKD-mineral bone disorder (CKD-MBD). The vascular and cardiac valve calcification can lead to severe CV events with increased risk of death in advanced CKD patients. Lynamid has developed a therapeutic strategy to not only use midkine antibodies to treat kidney disease but also prevent the CV complications of CKD.

The Government funding will enable Cellmid to support our collaborators Dr Lee and his team in their aim to determine whether Lynamid's midkine antibodies have the potential to be truly disease-modifying therapies for treatment of not only the underlying kidney condition, but also the CV mortality resulting from CKD.

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Cellmid Limited (ASX: CDY)

Cellmid is an Australian life sciences company with lead programs in multiple disease indications. The Company, through its wholly owned subsidiaries, Lynamid, Kinera and Advangen, develops and markets innovative novel therapies and diagnostic tests for fibrotic diseases, cancer, ischemic diseases of the heart and hair loss. Cellmid holds the largest and most comprehensive portfolio of intellectual property relating to the novel targets midkine (MK) and FGF5 globally. Intellectual property pertaining to this novel target is being exploited through wholly owned subsidiaries Lynamid and Kinera. Advangen, Cellmid's consumer health business, sells its FGF5 inhibitor hair growth products in Australia and Japan, and currently expanding distribution in other territories. For further information, please see www.cellmid.com.au and www.evolisproducts.com.au.

Midkine (MK)

Midkine is a growth factor that is highly expressed during embryonic development. Midkine modulates many important biological interactions such as cell growth, cell migration and cellular adherence. These functions are relevant to cancer, inflammation, autoimmunity, ischemia, nerve growth/repair and wound healing. Midkine is barely detectable in healthy adults and only occurs as a consequence of the pathogenesis of a number of different disorders. Midkine expression is often evident very early in disease onset, even before any apparent physical symptoms. Accordingly, midkine is an important early marker for diagnosing cancers and autoimmune diseases. Finally, midkine is only evident in a disease context, and targeting midkine is not expected to harm normal healthy tissues.

Investment in life sciences companies

There are a number of inherent risks associated with the research, development and commercialisation of pharmaceutical products. Investment in companies specialising in these activities carry specific risks which are different to those associated with trading and manufacturing businesses. As such, these companies should be regarded as highly speculative. Cellmid recommends that investors seek professional advice before making an investment in its shares.