

ASX ANNOUNCEMENT

CELLMID COLLABORATION TO TREAT BRAIN CANCER

- Cellmid glioblastoma collaboration with world leading research group at Complutense University, Madrid, Spain
- Midkine (MK) promotes cancer stem cell growth and drug resistance in brain tumours
- Cellmid's anti-MK antibodies highly effective at killing brain cancer cells to be further tested in vivo using state-of-the-art disease models

SYDNEY, 23 June 2015: Cellmid Limited (ASX: CDY) has entered into a research collaboration to test its humanised and murine anti-MK antibodies using sophisticated *in vivo* disease models of glioblastoma (GBM) with the Cannabinoid Signalling in Cancer Cells research group within the Department of Biochemistry and Molecular Biology at Complutense University and Instituto de Investigación Sanitaria San Carlos (IdISSC), Madrid, Spain (http://www.idissc.org/investigacion-oncologia.php).

This research group, headed by Associate Professor Guillermo Velsaco, are world leaders in the study of the molecular mechanisms that regulate brain cancer cell death, particularly via cannabinoid receptor signalling. Previous work by Dr Velasco and his team identified MK as the key signalling molecule driving drug resistance in gliomas including its most deadly variant, glioblastoma multiforme (GBM). Dr Velasco's group also found that higher levels of MK in glioma and GBM patients were significantly correlated with more lethal disease variants. (http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&dopt=Citation&list_uids=21233844).

Based on these discoveries, Cellmid and Dr Velasco's group collaborated to investigate whether Cellmid's murine anti-MK antibodies can prevent glioma/GBM cell growth *in vitro*. A number of MK antibodies were effective against these cells, including candidates with very high apparent potency.

"There is now strong scientific evidence to show that MK plays a key role in promoting the growth and proliferation of the most drug-resistant and refractory versions of these deadly brain tumours", said Dr Velasco. "The next logical step is to try to blockade MK using Cellmid's anti-MK antibodies, and this is what we will now do using orthotopic xenotransplantation disease models" he added.

Cellmid and Complutense University are now expanding their collaboration to a full pre-clinical validation program. Cellmid will provide a number of its anti-MK antibodies to Complutense University for testing, including already humanised antibody CAB102, with the aim of selecting a lead molecule to advance specifically in a glioma/GBM clinical program.



"Each antibody in this program has different features to the others," said Darren Jones, Cellmid's Head of Product Development. "The collaboration will determine which antibody gives us our strongest shot at clinical efficacy. Preliminary experiments by Dr Velasco's group have already given us some insights, but performance in these state-of-the-art disease models will be the definitive test."

Glioma, and its most deadly variant GBM, are the most common types of malignant brain tumours, making up approximately 40% of all primary brain tumours and around 70% of all primary malignant brain tumours.

Glioblastoma is the most lethal form of any cancer. Prognosis is extremely poor; median survival for GBM patients is approximately 14 months, with 70% of patients dead within 2 years of diagnosis, and over 90% dead within 5 years. Currently gliomas and GBM are incurable; the standard treatment is maximal safe resection (surgery) where possible, followed by concurrent radiation and chemotherapy with temolozomide (TMZ). However, the rate of recurrence is almost 100%.

"There remains an urgent need for new treatments to improve patients' prospects in glioma and GBM", said Cellmid CEO Maria Halasz. "We are cautiously optimistic that anti-MK therapy might help to address this need, not only because of MK's promotion of drug resistance, but also because MK is a key driver of cancer stem cell replenishment. In addition, gliomas are the most highly vascularised tumours. Recent clinical strategies in gliomas include targeting blood vessel growth with anti-angiogenic agents. Our anti-MK antibodies have shown strong anti-angiogenic activity in early studies so our drug may also work in glioma/GBM by attacking this avenue of tumour survival" she added.

Studies subject to the collaboration with Complutense University/IdISSC are expected to commence early in FY2016.

End Contact: Maria Halasz, CEO T +612 9221 6830 @mariahalasz



Cellmid Limited (ASX: CDY)

Cellmid is a revenue stage Australian biotechnology company with a strong product pipeline. The Company generates revenue through its consumer health business and is also developing innovative novel therapies and diagnostic tests for a number of cancer inflammatory indications. Cellmid holds the largest and most comprehensive portfolio of intellectual property related to the novel target midkine and midkine antagonists globally. The Company's most advanced development programmes involve using its anti-midkine antibodies in addition to commercialising midkine as a biomarker for the early diagnosis and prognosis of cancer. For further information please see <u>www.cellmid.com.au</u>.

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 present 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.