



ASX ANNOUNCEMENT

CELLMID SIGNS MK TRIBODY™ COLLABORATION AGREEMENT

- Collaboration signed with Biotechnol for the development of novel multispecific MK antibodies for oncology indications
- Multispecific antibodies are some of the most promising cancer drugs: over USD7.5 billion in deals since 2009¹
- Tribodies™ against novel targets like MK and checkpoint inhibitors represent high value licensing opportunities

SYDNEY, 15 April 2014: Cellmid Limited (ASX:CDY) has signed a collaboration agreement with UK based Biotechnol Ltd for the development of midkine (MK) Tribodies™, which are antibodies targeting MK in addition to additional oncogenic proteins. Biotechnol is one of the pioneers of multispecific antibody engineering with a validated and proprietary technology platform.

Pursuant to the agreement, Biotechnol will be responsible for the development and validation of the novel MK Tribodies™. Cellmid will conduct pre-clinical efficacy studies, while the parties will share further development costs equally. Biotechnol and Cellmid will jointly own the new multispecific drugs. The collaboration agreement is expected to result in one or more novel and proprietary MK Tribodies™. These will target MK in addition to inhibiting other undisclosed oncogenic targets, including immune checkpoints.

Through the collaboration Cellmid is positioned in the 'sweet spot' within the US \$60 billion antibody market, which is growing at the rate of 15% annually². With many 'me too' drugs in development significant improvement in therapeutic outcomes is expected to come from drugs against novel targets, like MK, with the concurrent ability to trigger the patient's immune system to support anti-target activity.

The collaboration adds an exciting component to Cellmid's drug pipeline with new intellectual property in immuno-oncology. Immuno-oncology drugs are expected to reach US \$29 billion in annual sales by 2025, with high expectations for immune checkpoint regulators³. These novel drugs have been the subject of aggressive deal making with US \$5 billion in acquisition and license fees of mostly pre-clinical stage compounds since 2009³.

"Immuno-oncology, the re-engaging of the patient's immune response to kill cancer using antibodies is revolutionising cancer treatment" said CEO of Biotechnol Ltd, Dr Pedro de Noronha Pissarra. "Using MK antibodies and multi-targeting oncogenic proteins including immune checkpoints with the Tribody™ design could become a breakthrough in the way of treating many solid tumours" he added.

"Biotechnol's platform has already been validated and its manufacturability makes it stand out amongst multispecific technologies" said CEO of Cellmid, Maria Halasz. "The collaboration with Biotechnol allows us to join the gold rush for novel targets and immune checkpoint regulators with a leading player in antibody engineering" she added.

Background

Cancers are complex diseases in which a multitude of different molecules often contribute to the overall disease. This is why single agent therapies are rarely effective in cancer treatment and why the simultaneous blockade of multiple targets via 'combination therapy' (typically consisting of chemotherapies, radiation and biologics) has become the standard of care in oncology.

Although effective, the use of combined biologic drugs such as conventional mono-specific antibodies is prohibitively expensive. Multispecific antibodies overcome this problem. In addition, multispecific antibodies often confer novel biological activities which are not present in mere combinations of monospecific agents.

Using Biotechnol's proprietary Tribody™ platform to target MK simultaneously with other known oncogenic proteins will afford Cellmid multiple potential opportunities to engineer highly effective, novel, and patent-protected cancer treatments.

A key difficulty posed by cancer is that tumours frequently shut down the patient's anti-tumour immune response. They evade killing by T-cells and other key immune mediators such as macrophages and natural killer cells. Immuno-oncology is the study of this phenomenon, and recent immuno-oncology breakthroughs have shown that immunotherapy using multispecific antibodies to physically couple tumour cells with agonist or antagonist immune functionality is an effective strategy to overcome immune dysfunction.

Adding to this complexity is the high level of heterogeneity of cancer. Effective treatment requires stratification of the disease so that patients having the best chance of responding will be treated with a particular drug. The clinical relevance of MK in patient stratification has been shown in multiple tumour types already. Patients likely to respond to MK antibody treatment can easily be identified with Cellmid's MK ELISA.

Utilising Biotechnol's Tribody™ platform targeting MK and at the same time having the ability to target check-point regulators for effective tumour killing in these patients presents a rational approach to deliver personalised medicine.

Multispecific antibodies have resulted in some breakthrough therapies and contributed to a significant component of antibody transactions in recent times. The first tri-functional antibody, Removab™, has reached the market in Europe, and other promising molecules are in late stage clinical studies. Multi-specific antibodies represented more than USD7.5 billion in industry deals since 2009¹.

¹Holmes, 2011, *Buy buy bispecific antibodies*, Nature Reviews Drug Discovery 10:798-800. (<http://www.nature.com/nrd/journal/v10/n11/full/nrd3581.html>)

²Transparency Market Research 2012, *Monoclonal antibodies market- global industry size, share, trends analysis and forecast 2012-2018* (<http://www.transparencymarketresearch.com/monoclonal-antibodies.html>)

³Leerink Swann, 2013, *Immuno-oncology: the future of cancer treatment is now*

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Cellmid Limited (ASX: CDY)

Cellmid is an Australian biotechnology company with lead drug candidates in immunology. The Company is developing innovative novel therapies and diagnostic tests for a number of cancer indications, in particular solid tumours. Cellmid holds the largest and most comprehensive portfolio of intellectual property related to the novel oncology 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 www.cellmid.com.au.

Biotechnol Ltd

Biotechnol is a clinical stage biopharmaceutical company based in the UK with a strong track record in antibody drug development. The company has a proprietary Tribody™ platform for the engaging of various immunological effector functions including T-cells and NK-cells. The Company is looking to strengthen this solid asset base by developing candidates with a dual approach involving novel targets and checkpoint regulators. For further information, please see www.biotechnol.com.

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 part 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.