



ASX / Media Release

Circadian's partner ImClone Systems commences first Phase 1 clinical trial of VEGFR-3 antibody IMC-3C5

Melbourne, Australia April 6, 2011– Circadian Technologies (ASX.CIR) announced today that its licensee ImClone Systems, a wholly-owned subsidiary of Eli Lilly and Company, has advised that it has commenced the first Phase 1 clinical trial of its fully-human monoclonal antibody IMC-3C5.

IMC-3C5 is a fully-human IgG1 monoclonal antibody being developed by ImClone as a treatment for cancer. ImClone has exclusive rights from Circadian's 100%-owned subsidiary Vegenics to develop the VEGFR-3 antibody in return for annual license fees and royalties on potential future product sales.

The Phase 1 study will examine the safety and tolerability of escalating doses of IMC-3C5 in patients with advanced solid tumours that are refractory to standard therapy or for which no standard therapy is available.

Scientists from ImClone together with Vegenics' collaborator scientists have discovered that VEGFR-3 plays a role in directing the formation of blood supply to tumours as well as to the neonatal retina (i.e., it has a role in mediating the signals that control blood vessel 'sprouting', an event crucial to angiogenesis). These findings were published in the prestigious scientific journal *Nature*¹ in July 2008.

The research team found that using antibodies to block both receptors VEGFR-2 and VEGFR-3 resulted in an additive anti-angiogenic effect, which inhibited tumour growth in animals by effectively starving the cancer cells.

Mr Robert Klupacs, CEO of Circadian Technologies, said: "ImClone is one of the most experienced developers of monoclonal antibodies designed to treat cancer in the world today. We are delighted that they have been able to bring IMC-3C5 to this very important milestone and look forward to the ongoing clinical development of this molecule for the treatment of cancer."

"This is an important step forward for Circadian as we advance our strategy to become an international biologics drug development company based on our VEGF technology."

Circadian's wholly owned subsidiary, Vegenics, owns worldwide rights to an extensive intellectual property portfolio covering angiogenesis targets VEGF-D, VEGF-C and the receptor protein VEGFR-3.

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¹ ¹ Nature 2008 Jul 31; 454 (7204); 656-60 Epub 2008 June 25.



About Circadian Technologies Limited

Circadian (ASX:CIR) is a biologics drug developer focusing on cancer therapies. It controls exclusive worldwide rights to a significant intellectual property portfolio around Vascular Endothelial Growth Factor (VEGF) C and D. The applications for the VEGF technology, which functions in regulating blood and lymphatic vessel growth, are substantial and broad. Circadian's internal product development programs are focussed on novel anti-cancer therapeutics for large unmet needs. Circadian has also licensed rights to some parts of its intellectual property portfolio for the development of other products to ImClone Systems, a wholly-owned subsidiary of Eli Lilly and Company, including the antibody-based drug IMC-3C5 targeting VEGFR-3.

About Circadian's pipeline of treatments for cancer

The clinical and outstanding commercial success of Avastin, an antibody that blocks the activity of VEGF-A, clinically validated anti-angiogenic drugs as an effective means of inhibiting solid tumour growth. By blocking the interaction of VEGF-A with its receptors, primarily VEGFR-2, the multi-billion dollar cancer therapeutic slows tumour growth by inhibiting blood vessel recruitment into the tumour, effectively starving tumours of essential nutrients and oxygen required for growth. Avastin, which is sold by Genentech, now part of Roche, had U.S. sales in 2009 of US\$5.7 billion and worldwide sales in excess of US\$8.6 billion. Avastin is approved by the US FDA in the following indications: metastatic colorectal cancer, non-squamous-cell lung cancer, metastatic breast cancer, glioblastoma, metastatic renal cell carcinoma.

The VEGF-C inhibitor, VGX-100, a key therapeutic in Circadian's portfolio, block this alternative stimulator for VEGFR-2. As such, it has the potential to block blood vessel growth in tumours resistant to anti-VEGF-A therapy and, when used in combination with drugs like Avastin, may completely shut down angiogenesis (the growth of blood vessels) mediated by VEGFR-2, resulting in greater clinical efficacy.

VEGF-C along with the molecule VEGF-D. are also the only known proteins to bind and activate VEGFR-3 which drives lymphatic vessel and tumour-associated blood vessel growth. Inhibitors of VEGF-C thus have therapeutic potential to inhibit not only primary tumour growth through their anti-angiogenic activities, but to also inhibit tumour spread or metastasis via the lymphatic vessels - a mechanism of tumour dissemination that is often the deadliest aspect of many tumour types and a mechanism that is not effectively blocked by anti-VEGF-A or anti-VEGFR-2 therapeutics.

Inherent risks of Investment in Biotechnology Companies

There are a number of inherent risks associated with the development of pharmaceutical products to a marketable stage. The lengthy clinical trial process is designed to assess the safety and efficacy of a drug prior to commercialisation and a significant proportion of drugs fail one or both of these criteria. Other risks include uncertainty of patent protection and proprietary rights, whether patent applications and issued patents will offer adequate protection to enable product development, the obtaining of necessary drug regulatory authority approvals and difficulties caused by the rapid advancements in technology. Companies such as Circadian are dependent on the success of their research and development projects and on the ability to attract funding to support these activities. Investment in research and development projects cannot be assessed on the same fundamentals as trading and manufacturing enterprises. Thus investment in companies specialising in drug development must be regarded as highly speculative. Circadian strongly recommends that professional investment advice be sought prior to such investments.

Forward-looking statement

Certain statements in this ASX announcement may contain forward-looking statements regarding Company business and the therapeutic and commercial potential of its technologies and products in development. Any statement describing Company goals, expectations, intentions or beliefs is a forward-looking statement and should be considered an at-risk statement. Such statements are subject to certain risks and uncertainties, particularly those risks or uncertainties inherent in the process of developing technology and in the process of discovering, developing and commercialising drugs that can be proven to be safe and effective for use as human therapeutics, and in the endeavor of building a business around such products and services. Circadian undertakes no obligation to publicly update any forward-looking statement, whether as a result of new information, future events, or otherwise. Actual results could differ materially from those discussed in this ASX announcement.