

ASX and Media release

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## **Circadian provides PerkinElmer with worldwide rights to market research products**

Circadian Technologies Limited (ASX:CIR) announces that its wholly owned subsidiary, Vegenix Limited, has entered into an agreement with US company PerkinElmer Inc (NYSE:PKI) providing it with a worldwide licence to market research products to life science researchers, incorporating Circadian's VEGF technology.

The financial aspects of the deal are confidential and as such are not disclosed.

Circadian owns extensive intellectual property rights for the use of VEGF-C and VEGF-D for diverse therapeutic applications and diagnosis. Circadian's internal product programs are focused on the development of novel therapeutics for cancer.

Robert Klupacs, CEO of Circadian commented, "We are committed to maximising the potential of our intellectual property through collaborative relationships with leaders in their field. Although the financial benefit to Circadian may not be significant, we expect this agreement could lead to greater benefits for our current or future product development from further research findings implicating the important role of VEGF-C and VEGF-D in cancer and other diseases."

"It is also another example of the diverse range of commercial opportunities and value of our VEGF intellectual property."

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## **About Circadian Technologies Limited**

Circadian (ASX:CIR) is a biologics drug developer utilising the significant intellectual property portfolio around Vascular Endothelial Growth Factor (VEGF) C and D that it has accumulated in its unlisted wholly owned subsidiary Vegenics. The applications for the VEGF technology, which functions in regulating blood supply, 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 UK company Ark Therapeutics Group plc (LSE: AKT) and ImClone Systems (a wholly owned subsidiary of Eli Lilly & Company - NYSE: LLY). Ark is developing Trinam®, a treatment for vascular grafts associated with renal dialysis based upon Circadian intellectual property which has commenced Phase 3 clinical trials. ImClone Systems is currently developing an antibody-based drug targeting VEGFR-3 for the treatment of solid tumours.

The VEGF patent portfolio developed by LICR and Licentia has been assigned to Vegenics. Vegenics also has rights to CoGenesys Inc/Human Genome Sciences Inc's VEGF-C intellectual property.

## **About VEGF Technology and angiogenesis**

### **In 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, and Hoffman-La Roche, had U.S. sales in 2008 of US\$2.7 billion and worldwide sales in excess of US\$7.5 billion.

VEGF-C and VEGF-D inhibitors, key therapeutics in the portfolio of Circadian's unlisted subsidiary Vegenics, blocks the alternative ligands for VEGFR-2. As such, they have 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 and VEGF-D also bind and activate VEGFR-3 which drives lymphatic vessel and tumour-associated blood vessel growth. Inhibitors of VEGF-C, VEGF-D and VEGFR-3 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.

### **Other Disease Applications**

VEGF Technology also has applications in other diseases, where shutting down angiogenesis and/or lymphatic vessel growth is important, such as eye diseases including age related macular degeneration and diabetic retinopathy.