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Company Announcements Office
Australian Securities Exchange

BMC Biotechnology Publishes Paper on Accugen's Technology

Australian drug development company, Vectus Biosystems Limited (ASX:VBS) (Vectus or the Company) is pleased to announce the acceptance and publication of a scientific paper entitled, "A simple, accurate and universal method for quantification of PCR" in the peer-reviewed journal BMC Biotechnology by its wholly-owned subsidiary, Accugen Pty Limited (Accugen). The publication of this paper, after independent scientific review, clearly demonstrates acceptance by the scientific community of the validity of Accugen's disruptive technology.

The acceptance of this scientific publication provides a strong foundation for the commercialisation of the Accugen qPCR system. The pivotal insight of the Accugen technology providing more accurate, reproducible, and higher throughput results comes at a time where the usage of qPCR (quantitation of DNA amplification) is driving more key activity across the full spectrum of molecular biology. This opens the path for Accugen's broad adoption across scientific, academic and commercial laboratories internationally whilst remaining compatible with all existing equipment.

Research using gene expression has allowed scientists to decipher many of the complex regulatory networks that control fundamental biological processes. qPCR (quantitative-polymerase chain reaction) has been proven to be a powerful and ubiquitous method for interrogation of gene expression, but its application has been limited by inaccuracy or complexity and cost of current quantification technologies. The published study has demonstrated that the method is accurate and easy to use, and proposed that this new method would supersede traditional methods of qPCR product quantification.

Accugen's technology is compatible with currently used qPCR instrumentation, and may be used in both dye- and probe-based assays. It has a wide, dynamic range ($\geq 10^5$) and provides absolute quantification for all genes of interest (GOI). The study evaluated the performance of Accugen's product in a variety of dye-based master mixes on a number of real-time qPCR platforms by eight independent research groups. Each laboratory amplified their GOI and known input amounts of phage lambda DNA under a variety of conditions typical for those laboratories. The results demonstrated that AccuCal-D provided accurate, absolute quantification of known concentrations of lambda DNA in these varied and independent tests. When compared collectively across all platforms, the mean determined quantification correlated perfectly with the theoretical number of copies in each PCR. Further, some researchers were able to accurately quantify their GOI for the first time.

These published results, independently validated, show that Accugen's method is both accurate and easy to use. It is an established fact that reference genes can be unreliable, and standard curves are expensive, time-consuming and only valid for a single gene of interest. The Company's technology addresses all of these issues. Accugen's proprietary technology successfully addresses key shortcomings of conventional calibration and reference standards, and provides customers globally the ability to enhance their workflow, cut costs and generate more reliable data.

Vectus Biosystems Limited

Karen Duggan
Chief Executive Officer and Executive Director

About Vectus Biosystems Limited

Vectus Biosystems Limited (Vectus or the Company) is developing a treatment for fibrosis and high blood pressure, which includes the treatment for three of the largest diseases in the fibrotic market, namely heart, kidney and liver disease. Vectus successfully completed its Initial Public Offering (IPO) on the Australian Securities Exchange (ASX) and commenced trading on ASX on 23 February 2016, after raising A$5.1 million. Funds from the IPO are being used to develop the Company's lead compound VB0004, which aims to treat the hardening of functional tissue and high blood pressure. Vectus has conducted a range of successful pre-clinical trials, which have shown that VB0004 slows down the advances of fibrosis, potentially repairs damaged cell tissue and reduces high blood pressure. VB0004 is now progressing towards a number of important milestones, including pharmaceutical scale-up and additional toxicity studies. Successful results will provide the Company with a clear path to Human Phase 1 and 2a Clinical Trials. Vectus' strategy is to develop and perform early validation of its drug candidates to the point where they may become commercially attractive to potential pharmaceutical partners.

The Company has also developed technology aimed at improving the speed and accuracy of measuring the amount of DNA and RNA in samples tested in laboratories. The technology, called Accugen, is owned by Vectus' wholly-owned subsidiary Accugen Pty Limited. The technology potentially offers a time, cost and accuracy benefit compared to currently-available systems. The Company's next stage of investment in Accugen will focus on an Alpha-phase test program during 2016 before moving to a commercialisation program that may include direct sales, distribution partnerships and licencing opportunities.