

**For Immediate Release**

**ASX/Media Release**

**Dimerix Receptor-HIT data presented by Takeda at British Pharmacological Society Annual meeting**

**MELBOURNE, Australia, 14<sup>th</sup> December 2016:** Dimerix Limited (ASX: DXB), a clinical-stage biotechnology company committed to discovering and developing new therapeutic treatments identified using its proprietary screening assay, today announced that Dr Louise Dickson from Takeda Pharmaceutical Company Limited (Takeda: [www.takeda.com](http://www.takeda.com)) has presented work conducted using the Dimerix Receptor-HIT technology to help define new G Protein-Coupled Receptor (GPCR) functions, which could lead to novel therapies.

The presentation was made at the British Pharmacological Society (BPS) annual meeting in London, *Pharmacology 2016*. As previously announced, Dimerix Chief Scientific Advisor, Associate Professor Kevin Pflieger, will be awarded the BPS Novartis Prize at this meeting.

Work conducted by Dimerix on behalf of Takeda resulted in the identification of an interaction between S1P1 receptor and an orphan receptor (a GPCR for which no endogenous ligand has been discovered). Following this identification, Takeda developed and utilised the Receptor-HIT technology in a high throughput screening format and enabled discovery of new molecules active on the orphan receptor complex. The approach confirmed the potential to identify new therapeutic agents and tool compounds active against orphan GPCR targets. As there are currently about 150 such orphan receptors, there is considerable potential for Receptor-HIT to open up entire new avenues of drug discovery.

Chairman Dr James Williams said, "This program highlights the broad utility of the Receptor-HIT technology for drug discovery and development. While Dimerix has used the technology in its internal programs to identify new clinical uses for known compounds, this work highlights one example whereby our proprietary discovery technology has been used by the broader pharmaceutical industry in their quest to discover new therapies."

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**Dimerix Bioscience Pty Ltd**

Dimerix Limited's wholly owned subsidiary Dimerix Bioscience Pty Ltd is a clinical-stage pharmaceutical company committed to discovering and developing new therapeutic models identified using its proprietary assay, termed Receptor-Heteromer Investigation Technology (Receptor-HIT). This assay enables the identification of pairs of receptors that function in a joint manner (interact) when ligands, small molecule drugs, peptides or antibodies, bind to them. The Receptor-HIT technology was used to identify DMX-200 in an internal drug development program, initially for the treatment of a subset of patients with chronic kidney disease. In addition to its own therapeutic programs, the company also earns revenue by providing this technology to global pharmaceutical companies. For more information see [www.dimerix.com](http://www.dimerix.com)

## **DMX 200**

DMX-200 is being developed as an adjunct therapy, adding propagermanium to a stable dose of irbesartan. Irbesartan is an off-patent angiotensin II type I receptor blocker indicated for the treatment of hypertension and nephropathy in Type II diabetic patients. Propagermanium (PPG) is a chemokine receptor (CCR2) blocker, which has been used for the treatment of Hepatitis B in Japan and is available in the USA for its anti-inflammatory properties. DMX-200 has been shown to improve the outcome of chronic kidney disease by reducing proteinuria by more than 50 per cent in animal models (1).

### **The DMX-200 Phase II Trial**

The trial is a single arm, open label study in adult patients with chronic kidney disease (with proteinuria). The primary end points are the incidence and severity of adverse events and the clinically significant changes in the safety profile of participants. The secondary end points are obtained from statistical analysis of biomarker data at each time point including change from baseline, and the proportion of responders defined as those participants achieving normalisation of proteinuria (proteinuria within normal limits) or those participants achieving a 50 per cent reduction in proteinuria.

The trial has two parts. Part A is a dose escalation trial recruiting up to 30 patients and completed enrolment at the end of November 2016. All patients recruited to the trial will be on stable irbesartan therapy, and will be treated with propagermanium dosed orally three times per day. Each patient will commence on 30mg PPG/day and the dose increased each 28 days to a maximum of 240mg/day, or until proteinuria is absent or reduced to a level the clinician considers acceptable. The Company expects to complete Part A in mid-2017.

Part B is an expansion study, in which up to 30 patients will be given the optimal dose identified from Part A.

### **Chronic Kidney Disease**

Chronic kidney disease can result from diabetes, high blood pressure and diseases that cause inflammation specifically in the kidneys. Proteinuria is the most common manifestation of the disease. As the disease progresses it can lead to end-stage renal disease (ESRD) where the kidneys fail. The only treatment for ESRD is a kidney transplant or regular blood-cleansing treatments called dialysis. More than 26 million people suffer from the disease in the United States.

(1) Functional interaction between angiotensin II receptor type 1 and chemokine (C-C motif) receptor 2 with implications for chronic kidney disease. Ayoub MA, Zhang Y, Kelly RS, See HB, Johnstone EK, McCall EA, Williams JH, Kelly DJ, Pflieger KD. PLoS One. 2015 Mar 25;10(3):e0119803. doi: 10.1371/journal.pone.0119803.