



ASX and Media Release
5 September 2018

Opthea Receives Positive Interim Review from Independent Safety Committee in Phase 2b Wet AMD Clinical Trial

Melbourne, Australia; September 5 2018 – Opthea Limited (ASX:OPT), a late stage biopharmaceutical company developing novel biologic therapies to treat back-of-the eye diseases, today announced that the independent Data and Safety Monitoring Board (DSMB) for the Company’s ongoing Phase 2b study of OPT-302 in wet age-related macular degeneration (wet AMD) patients has completed the first, pre-planned safety review and has unanimously recommended that the trial continue without modification.

“We are encouraged by the outcomes of this safety review by the independent DSMB who did not identify any safety concerns in wet AMD patients administered OPT-302 in combination with Lucentis[®],” commented Dr Megan Baldwin, CEO and Managing Director of Opthea. “The outcomes of this first DSMB interim review of the ongoing Phase 2b study are consistent with the favourable safety and tolerability profile observed in our Phase 1/2a clinical trial with OPT-302 in 51 wet AMD patients.”

A DSMB is a committee of independent clinical research experts who review patient safety data in ongoing clinical trials. Following the completion of the first interim DSMB meeting for the study, the committee plans to meet every six months until all study participants have completed the trial.

Opthea’s double-masked Phase 2b clinical study is designed to investigate whether addition of OPT-302 to Lucentis[®] (ranibizumab) therapy over a 6-month period improves clinical outcomes, including visual acuity, in wet AMD patients. All patients enrolled in the study are newly diagnosed, treatment-naïve patients who have not received prior therapy for wet AMD.

“Patient enrolment into the Phase 2b clinical trial is ongoing in the US, Europe and Israel. We continue to be very pleased with the rate of patient participation in this important study which reflects the need for new combination therapies to improve clinical outcomes for patients, many of whom experience sub-optimal gains in visual acuity despite ongoing and regular treatment with standard-of-care VEGF-A inhibitors,” concluded Dr Baldwin.

The Company remains on-track to report primary data from the study in early 2020.

Additional information on Opthea’s technology and clinical trials in wet AMD and diabetic macular edema (DME) can be found at www.opthea.com and ClinicalTrials.gov (ID#: NCT03345082 and ID#: NCT03397264, respectively).

About OPT-302

OPT-302 is a soluble form of vascular endothelial growth factor receptor 3 (VEGFR-3) or ‘Trap’ molecule that blocks the activity of two proteins (VEGF-C and VEGF-D) that cause blood vessels to grow and leak, processes which contribute to the pathophysiology of retinal diseases. Opthea is developing OPT-302 for use in combination with inhibitors of VEGF-A (eg. Lucentis[®]/Eylea[®]). Combination therapy of OPT-302 and a VEGF-A inhibitor achieves more complete blockade of members of the VEGF family, blocks mechanisms contributing to sub-optimal response to selective

VEGF-A inhibitors and has the potential to improve vision outcomes by more completely inhibiting the pathways involved in disease progression.

Opthea has completed a Phase 1/2a clinical trial in the US investigating OPT-302 wet AMD patients as a monotherapy and in combination with Lucentis®. The trial was conducted under an FDA approved IND at 14 US clinical sites. The purpose of the trial was to evaluate the safety, pharmacokinetics (PK) and pharmacodynamics of OPT-302 administered as monthly intravitreal injections for 3 months with and without Lucentis® in patients with wet age related macular degeneration (AMD). Of the 51 patients enrolled, 25 were treatment naïve and 26 had received prior intravitreal anti-VEGF-A therapy.

Further details on the Phase 1/2a trial can be found at: www.clinicaltrials.gov, Clinical trial identifier: NCT02543229. Details on the outcomes of the study can be found on the Opthea website: www.opthea.com

About Wet AMD

Wet (neovascular) age-related macular degeneration, or wet AMD, is a disease characterised by the loss of vision of the middle of the visual field caused by degeneration of the central portion of the retina (the macula). Abnormal growth of blood vessels below the retina, and the leakage of fluid and protein from the vessels, causes retinal degeneration and leads to severe and rapid loss of vision.

Wet AMD is the leading cause of blindness in the developed world in individuals aged 50 years or older. The prevalence of AMD is increasing annually as the population ages. Without treatment, wet AMD patients often experience a chronic, rapid decline in visual acuity and increase in retinal fluid. Sales of the drug Lucentis® (Roche/Novartis), which targets VEGF-A but not VEGF-C or VEGF-D, were over \$US3.4BN in 2017. Sales of EYLEA® (Regeneron/Bayer), which also targets VEGF-A but not VEGF-C/-D first marketed in November 2011 for the treatment of wet AMD, were over \$US5.9BN in 2017. Approximately half of the people receiving Lucentis®/EYLEA® are classified as non-responders or 'poor' responders and do not experience a significant gain in vision and/or have persistent retinal vascular leakage. There is great opportunity to improve patient responses by targeting more than one factor involved in disease progression. Existing therapies, such as Lucentis® and EYLEA®, target VEGF-A that promotes blood vessel growth and leakage through its receptor VEGFR-2. VEGF-C can also induce angiogenesis and vessel leakage through the same receptor as well as through an independent pathway. Combined inhibition of VEGF-A and VEGF-C/-D, has the potential to improve patient response by more effective inhibition of the pathways involved in disease progression.

About Opthea Limited

Opthea (ASX:OPT) is a biologics drug developer focusing on ophthalmic disease therapies. It controls exclusive worldwide rights to a significant intellectual property portfolio around Vascular Endothelial Growth Factor (VEGF)-C, VEGF-D and VEGFR-3. Opthea's intellectual property is held within its wholly-owned subsidiary Vegenics Pty Ltd. The applications for the VEGF technology, which functions in regulating blood and lymphatic vessel growth, are substantial and broad. Opthea's product development programs are focused on developing OPT-302 (formerly VGX-300, soluble VEGFR-3) for 'back of the eye' disease such as wet age-related macular degeneration (wet AMD) and diabetic macular edema (DME).

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 Opthea 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. Opthea strongly recommends that professional investment advice be sought prior to such investments.

Forward-looking statements

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 endeavour of building a business around such products and services. Opthea 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.

Company & Media Enquiries:

Megan Baldwin, PhD
CEO & Managing Director
Opthea Limited
Tel: +61 (0) 447 788 674
megan.baldwin@opthea.com

Join our email database to receive program updates:

Tel: +61 (0) 3 9826 0399
info@opthea.com
www.opthea.com

Australia:

Rudi Michelson
Monsoon Communications
Tel: +61 (0) 3 9620 3333

U.S.A. & International:

Jason Wong
Blueprint Life Science Group
Tel: +1 415 375 3340, Ext 4
Jwong@bplifescience.com