

## **OKYO Pharma Limited**

("OKYO" or the "Company")

### **OKYO Pharma Announces Potent Anti-inflammatory Effects of OK-113, a Novel Agonist of Chemerin G-Protein Coupled Receptor, in a Mouse Model of Dry Eye Disease**

OKYO Pharma Limited (LSE: OKYO) August 28, 2019, a biotechnology company focusing on the G Protein Coupled Receptors (GPCR) targeted drugs for treatment of dry eye disease (DED) and non-opioid analgesic for management of chronic pain, is pleased to announce potent anti-inflammatory activity of OK-113, an in-house discovered proprietary agonist of Chemerin GPCR, in an experimental model of DED in mice. These preclinical efficacy data, identifying a lead drug candidate, will facilitate initiation of clinical studies for DED treatment in 2020.

Targeting GPCR, a 'Nobel Prize' winning scientific concept, is proven to be an innovative approach for treatment of a wide range of inflammatory diseases, cancers and non-opioid analgesics for management of chronic pain. More than 40% of the drugs available in the global market target GPCR.

Topical treatment, as eye drops, with OK-113 showed potent anti-inflammatory effects to reduce corneal permeability and other symptoms of dry eye in a mouse model of DED. In these studies, OK-113 was as potent as cyclosporine, an immunosuppressive drug which is the active ingredient of Restasis® (Allergan). These results are consistent with our earlier report, which was featured in a 'Late Breaking Poster Presentation' at the 14<sup>th</sup> Congress on Ocular Pharmacology and Therapeutics<sup>1</sup>. The demonstration of potent anti-inflammatory activity in the mouse model of DED and the results exhibiting absence of local irritation in a rabbit model are important basis for initiation of the upcoming IND-enabling studies, and subsequently to IND submission for DED treatment.

"We are excited with these 'proof-of-concept' studies demonstrating potential of our core GPCR-based technology for treatment of inflammatory diseases and non-opioid analgesics for management of chronic pain" said Willy Simon, Executive Chairman of OKYO Pharma Limited.

"Dry Eye is a chronic inflammatory disease that affects millions of people globally and currently it has limited treatment options. We are pleased with these positive results identifying our in-house discovered lead drug candidate for DED treatment" said Dr. Raj Patil, Senior Director R&D, OKYO Pharma Limited

#### **Cited Reference**

1. R. Patil, B. Harwood, A. Kopin, and K. Shailubhai (2019) OKYO-0101, an agonist of G-protein coupled receptor (GPCR), ameliorates inflammation in an experimental model of dry eye disease in mice. 14<sup>th</sup> Congress on Ocular Pharmacology and Therapeutics, New Orleans, LA

#### **About GPCR**

GPCR is the largest family of membrane proteins involved in several biological processes. GPCR signaling field has garnered worldwide attention from drug developers since a Nobel prize in Chemistry was awarded in 2012 for research in this area. Several big pharmaceutical companies such as Novartis, Pfizer, Astra Zeneca etc. are heavily investing in modulation of GPCR signaling. Large market potential and growth exists for GPCR targeted drugs for treating a wide variety of indications such as inflammation, oncology, cardiovascular diseases and inflammatory eye diseases including dry eye, uveitis and allergic conjunctivitis.

#### **About dry eye disease (DED)**

Dry eye is a multifactorial disease caused by a chronic lack of sufficient lubrication and moisture on the surface of the eye and is reaching epidemic proportions. Symptoms of dry eye include constant discomfort and irritation accompanied by inflammation of ocular surface, visual impairment, and

potential damage to ocular surface. Estimated prevalence of dry eye, which is frequently underrecognized, ranges from about 5% to 35% in different age groups, the most common being in adults over the age of 50. Thus, dry eye disease is seen as a major economic burden in public healthcare.

### **About OK-113**

OK-113 is an agonist of Chemerin, which belongs to GPCR family of receptors, that inhibits underlying inflammation causing dry eye, uveitis and allergic conjunctivitis. Anti-inflammatory action of OK-113 follows a novel mechanism, which inhibits the generation of proinflammatory mediators. OK-113 is a proprietary first-in-class topically administered GPCR agonist for dry eye.

### **About non-opioid analgesics**

Opioid therapy is the most common therapy in the management of acute and chronic pain. However, opioid medications carry a risk of abuse and addiction by either the patient or health professional. Drug overdoses have become a leading cause of death in Americans under 50, with a majority of those deaths from opioids use. Therefore, consideration of non-opioid strategies for pain management is highly beneficial to patients. Despite their disadvantages, opioids are still the most prescribed drug for chronic pain management. The use of non-opioid analgesics may cut down the use of opioid.

### **About OKYO**

OKYO Pharma Limited (LSE: OKYO) is a life sciences and biotechnology company admitted to listing on the standard segment of the Official List of the UK Financial Conduct Authority and to trading on the Main Market for listed securities of the London Stock Exchange plc. OKYO is focusing on the discovery and development of novel molecules to treat inflammatory dry eye diseases and chronic pain.

Website: [www.okyopharma.com](http://www.okyopharma.com)