TopiVert Publication Highlights the Potential of Narrow Spectrum Kinase Inhibitors in Dry Eye Disease and Supports Successful Clinical Proof-Of-Concept Study with TOP1630

London, UK, 22 March 2018: TopiVert Pharma Ltd ("TopiVert" or the "Company"), a clinical-stage biotechnology company developing Narrow Spectrum Kinase Inhibitors (NSKIs) as novel, locally-acting medicines for the treatment of chronic inflammatory ocular and gastrointestinal diseases, today announces the publication of "Narrow Spectrum Kinase Inhibitors Demonstrate Promise for the Treatment of Dry Eye Disease and Other Ocular Inflammatory Disorders" in Investigative Ophthalmology & Visual Science (IOVS, March 2018, Vol. 59, 1443–1453), a peer-reviewed journal for the dissemination of results from laboratory and clinical ophthalmic and vision research.

The publication presents the results of a collaboration with the group of Dr Suzanne Hagan, Lecturer in Vision Sciences at Glasgow Caledonian University, which demonstrated upregulated expression of NSKI targets, pivotal enzymes in inflammatory signalling cascades, in DED patients along with key inflammatory cytokines and matrix metalloproteinase-9 (MMP-9). TOP1362, an NSKI specifically designed to inhibit these target kinases, potently reduced cytokine release in cellular models of innate and adaptive immunities. These reductions in inflammatory cytokine release also translated into an *in vivo* setting, where TOP1362 attenuated the increase in inflammatory cell infiltration and ocular cytokine levels in a preclinical inflammatory eye model with efficacy comparable to that of high potency steroid dexamethasone.

Inflammation is a core driver of DED. TopiVert believes that breaking the inflammatory cycle with NSKIs will provide efficacy superior to that of existing DED therapies with good tolerability. In this regard, in November 2017, TopiVert announced compelling results with TOP1630, an NSKI obtained following optimisation of TOP1362, in a Phase 1/2a proof-of-concept (POC) study in DED. TOP1630 delivered statistically significant improvements compared to placebo across multiple sign and symptom endpoints starting at day 15, the first study assessment point. Importantly, this NSKI provided excellent safety and placebo-like tolerability and comfort profiles, in contrast to currently marketed products, including steroids.

Dr Victor Perez, Professor of Ophthalmology at Duke University, said: "Further to the exciting TOP1630 clinical POC study results announced last year, the IOVS article by Hagan and co-workers highlights the novel NSKI mechanism of action as being one with the potential to provide compelling, steroid-like, efficacy in DED and also reveals biomarker targets for possible evaluation in the Phase 2b/3 study planned for later this year. The ability to block a narrow range of multiple kinases safely with a single compound is very attractive and offers much potential in treating inflammatory and non-inflammatory diseases of the eye."

Steve Webber, TopiVert's Chief Scientific Officer, added: "We have previously shown that targeted multi-kinase inhibition provides broad efficacy in both the innate and adaptive immune responses, giving rise to significant advantages over "single" kinase approaches. The IOVS article highlights the potential utility of NSKIs for treating DED. We are pleased to have translated the preclinical research described in the article into the convincing efficacy seen in the TOP1630 clinical POC study and look forward to commencing late-stage development of this exciting agent in an area of significant unmet medical need."

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About TopiVert

TopiVert is a clinical-stage biotechnology company developing NSKIs as novel, locally-acting medicines for the treatment of chronic inflammatory ocular and gastrointestinal (GI) diseases. The Company's lead ophthalmology programme, TOP1630 for DED, has also reported compelling results in a Phase 1/2a POC study in the US. The Company's lead GI programme, TOP1288 for the treatment of ulcerative colitis, has recently demonstrated strong safety, PK and PD data in a Phase 1 study with an oral formulation. Current therapies for these debilitating inflammatory diseases provide inadequate long-term control in a high proportion of patients and considerable unmet medical need remains. The Company commenced operations in early 2012 and its investors include SV Health Investors, Touchstone Innovations, NeoMed and Johnson & Johnson Innovation – JJDC, Inc.

About Narrow Spectrum Kinase Inhibitors (NSKIs)

NSKIs are novel small molecules characterised by broad, potent anti-inflammatory activity and minimal systemic exposure. Specifically, NSKIs are potent inhibitors of a select range of pivotal kinases involved in inflammatory cascades of both innate and adaptive immunities. Simultaneous targeting of multiple inflammatory components leads to a synergistic activity profile with broad anti-inflammatory effects. NSKIs are designed to have low systemic bioavailability so that their exposure to the body's healthy tissues is reduced, thereby providing enhanced safety and tolerability. Together, these attributes make NSKIs ideal treatment candidates for chronic inflammatory diseases where long term therapy demands a sustained effect accompanied by excellent safety and tolerability.

About Dry Eye Disease

Dry eye disease (DED), also known as dry eye syndrome, keratoconjunctivitis sicca (KCS) or keratitis sicca, is an inflammatory eye disease characterised by dryness on the surface of the eye. It is usually a chronic problem and it can be debilitating in severe cases. It is also one of the most common eye

diseases, with almost 19 million sufferers in the US alone and over 300 million worldwide[1]. DED becomes more common with age, with a third of elderly people suffering from this ailment.

[1] Market Scope®, 2013 Report on the Global Market for Dry Eye Products