Supplementary materials for

Pharmacokinetic and Safety Evaluation of a Transscleral Sustained Unoprostone Release Device in Monkey Eyes

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1. Supplementary figures

Fig S1. Profile of UNO release from the URD without cover (burst-URD) and normal URD\(^1\) during incubation in 1% Tween 20 in water at 37°C. Values are mean ± SD; n = 6 (burst-URD) and n = 4 (normal URD).

Fig S2. The toxic effect of burst-URD on intraocular pressure (IOP) and electroretinogram (ERG). The URDs was inserted between the conjunctiva and sclera and sutured onto the sclera. URDs were placed onto the left eyes. The right eyes remained untreated. IOP in rabbits treated with burst-URD (a) and placebo-URD (b). Average scotopic ERG amplitudes of a- (c, d) and b-wave (e, f) at stimulus intensity of 0.477 log [cd*second/m²] and average photopic ERG amplitudes of a- (g, h) and b-wave (i, j) at stimulus intensity of 1.477 log [cd*second/m²] in rabbits treated with burst-URD (c, e, g, i) and placebo-URD (d, f, h, j). Values are mean ± SD; n = 4.
Fig S3. Concentration of M1 in the plasma during 16 weeks of burst-URD treatment in rabbits. Values are mean ± SD; n = 4. The concentration of M1 was measured by using liquid chromatography-tandem mass spectrometry (LC/MS/MS).²

Fig S4. Photographs of URD-replacement procedures in rabbits. (a) URD for rabbits (the size was 10 mm length × 3.6 mm wide × 0.7 mm thick) were implanted onto the sclera and placed for 4 weeks. (b) Four weeks after implantation, a conjunctival incision was made to remove the URD. (c) The URD was removed. (d) 7-0 silk was sutured onto the sclera. (e) New URD was inserted and fixed with 7-0 silk. (f) The conjunctival incision was closed with 9-0 silk.

2. Supplementary movie

**Movie S1.** Movie of URD-replacement procedures in rabbits.

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