Supporting Information

Sustained subconjunctival delivery of cyclosporine A using thermogelling polymers for glaucoma filtration surgery

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1. Image of the silicon GDD

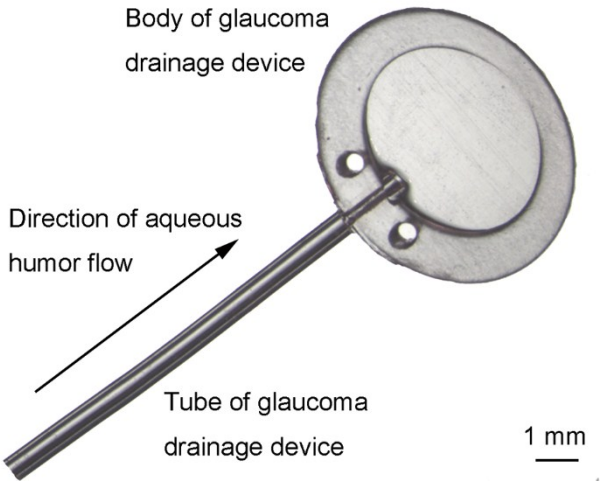

Figure S1. Optical microscope image of the silicon GDD. The GDD body was fixed onto the sclera and the GDD tube was inserted into the anterior chamber. The custom-made silicon GDD body, a scaled-down version of the clinically used GDDs, had an elliptical shape with a major axis of 7.68 mm, a minor axis of 6.24 mm, and a surface cavity with a smaller elliptical shape which was designed for the reserve of injected thermogel. The GDD body was prepared by molding liquid medical-grade silicone elastomer at 100 °C for 8 h using a stainless steel mold manufactured by a computer-controlled metal cutting machine. A medical-grade silicon tube with a diameter of 0.8 mm was inserted into the hole of the GDD body and some liquid silicon was used to stick the silicon tube to the GDD body by another solidifying process.

2. ^{1}H NMR spectrum of copolymer

The signals pertaining to PLGA–PEG–PLGA polymer were found at 5.20 (-C***H***(CH_3)COO- of LA), 1.55 (-CH(C***H***$_3$)COO- of LA), 4.80 (-C***H***$_2$COO- of GA), 3.65 (-C***H***$_2$C***H***$_2$O- of PEG), and 4.20 ppm (C***H***$_2$ of ethylene glycol neighboring to the PLGA

block). The complicated split in these peaks was due to the random copolymerization of LA and GA.

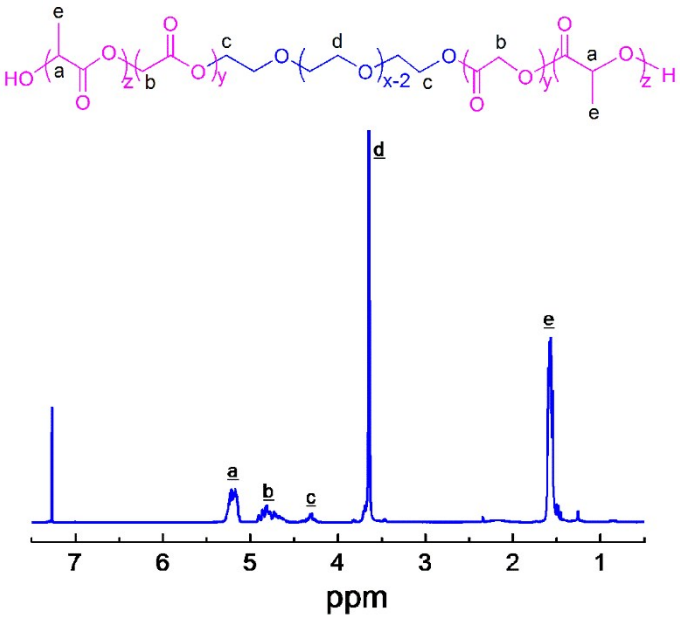

Figure S2. ^{1}H NMR spectrum of PLGA–PEG–PLGA triblock copolymer in $CDCl_3$.

3. GPC curve of copolymer

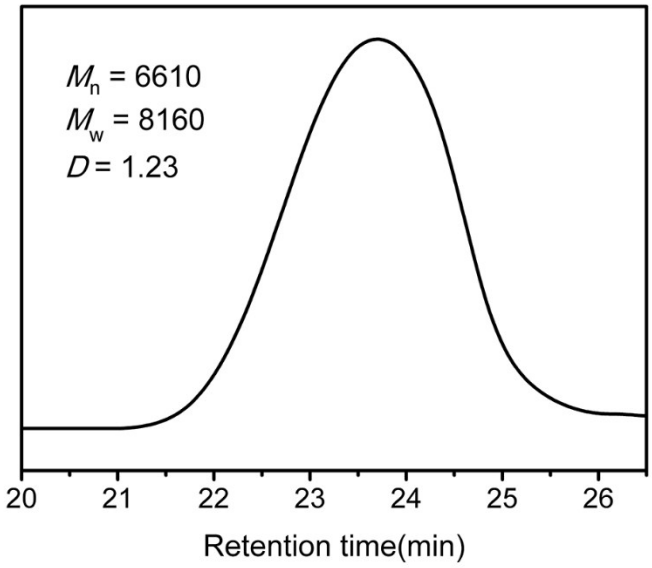

Figure S3 GPC curve of PLGA-PEG-PLGA copolymer

4. TEM image of copolymer micelles

The PLGA–PEG–PLGA copolymer solution (20 μL, 0.5 wt %) was placed on a copper grid coated with a superthin carbon film and dried under an infrared lamp. The microscopic images were obtained by transmission electron microscopy (TEM, JEOL, JEM-2100F, Japan) with an accelerating voltage of 200 kV.

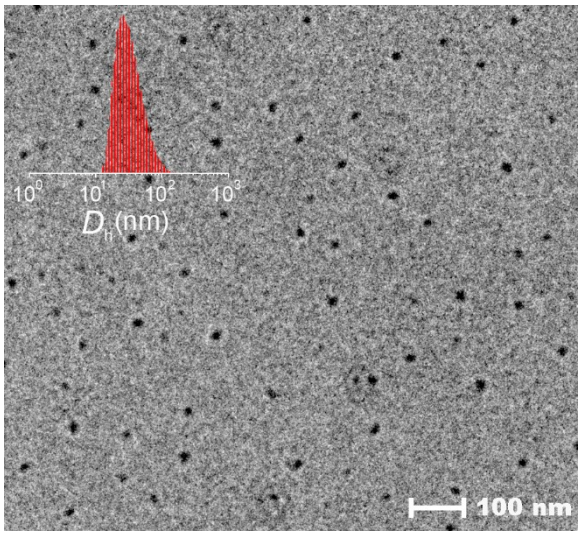

Figure S4. TEM image showing micelles of PLGA–PEG–PLGA copolymers. The concentration was 0.5 wt%. The inset shows the corresponding distribution of micellar size (intensity-weighted) measured by DLS.