Supplemental Figure 1: Comparison of Schlemm's canal lumen of mouse eyes by two methods. Shown on left is a methylene blue-stained paraffin section of the anterior angle structures of an enucleated mouse eye visualized by light microscopy. On the right is an intensity averaged SD-OCT image of a living mouse eye at a similar anatomical location. Asterisks mark SC lumen; CB= ciliary body.
Supplemental Figure 2. Examination of effects that sequential IOP steps have on SC lumen dimensions in mice, in the absence (CON) or presence of pilocarpine (PILO). Shown are contrast enhanced SD-OCT images of iridio-corneo angle tissues containing SC lumen. Left column of images display effect of sequential IOP steps on SC lumen, marked by asterisk, from the same sagittal section. Note that due to image averaging, tissue with moving scatters (e.g. blood in vessels and SC) appear blurry. The hash mark indicates the location of a scleral vessel that does not change dimensions during imaging session. The effects of pilocarpine on SC lumen dimensions from the same sagittal section of the same mouse at sequential IOPs are shown in right column of images alongside untreated. Shown are representative data from one mouse of 5 total mice that were examined. CB: ciliary body.

Supplemental Figure 3. Morphological changes of irideo-corneo angle tissues in mice induced by pilocarpine. Iridio-corneo angle tissues of anesthetized and iridotomized CD1 mice were imaged by SD-OCT (control, CON) and compared to images taken of same eye 10 minutes after application of one drop of 1% pilocarpine (PILO). The figures are representative of four individual experiments.
Supplmental Figure 4. Standard histology of anterior angle tissues of mouse eye after OCT imaging session. Arrowhead points to red blood cells in Schlemm’s canal (SC), while arrows mark red cells in scleral vessels. CB: ciliary body.