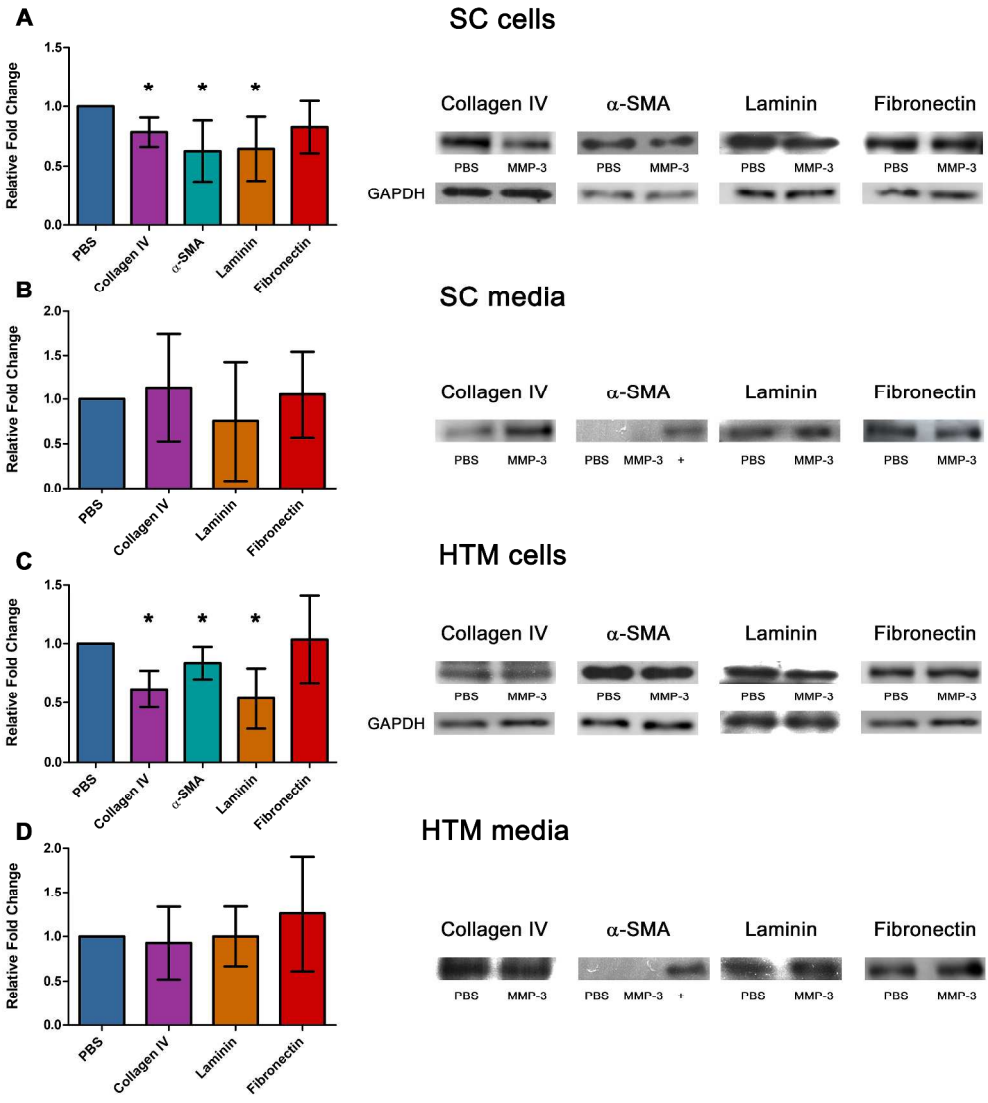

Fig.S1. Quantification of ECM remodelling and degradation. Western blot analysis was performed on PBS and MMP-3 treated samples of (A) SC cells, (B) SC media, (C) HTM cells and (D) HTM media. Significant degradation of collagen IV, α-SMA and laminin is apparent in cell lysates only. No α-SMA was detected in media samples. '+' denotes a positive control lane containing a cell lysate sample. Bars represent mean fold change with 95% confidence intervals.

Fig S1

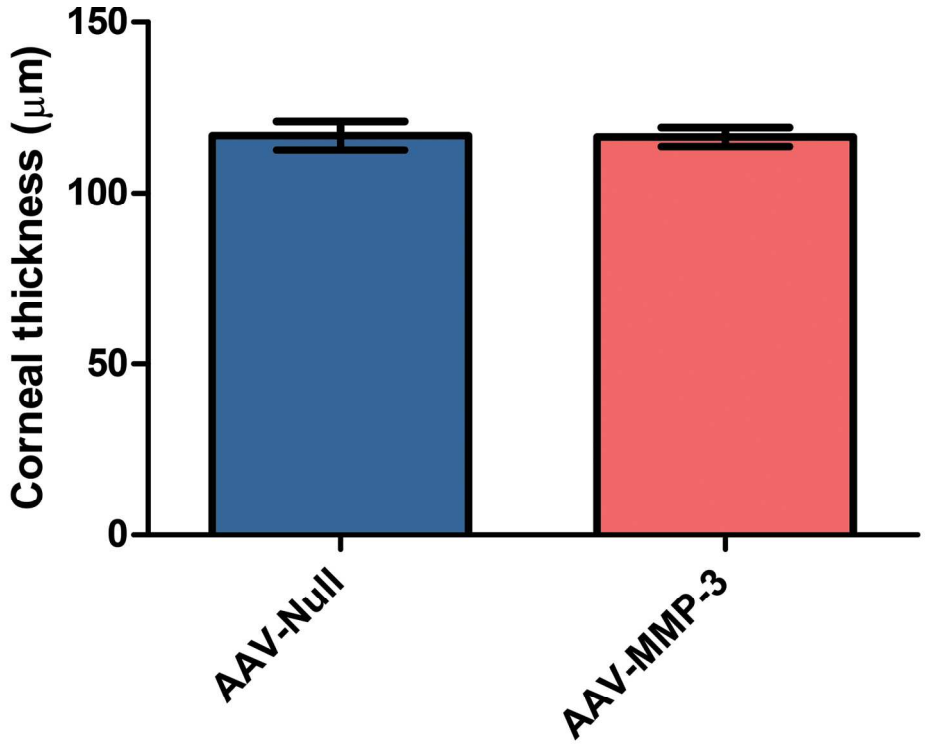

Fig.S2. Analysis of central corneal thickness. Central corneal thickness was quantified between AAV-MMP-3 injected eyes versus control. Average central corneal thickness (μm) between treatments was statistically compared by a paired Student's t-test. Error bars denote 95% CI. (n = 4 pairs of eyes).
Fig S2

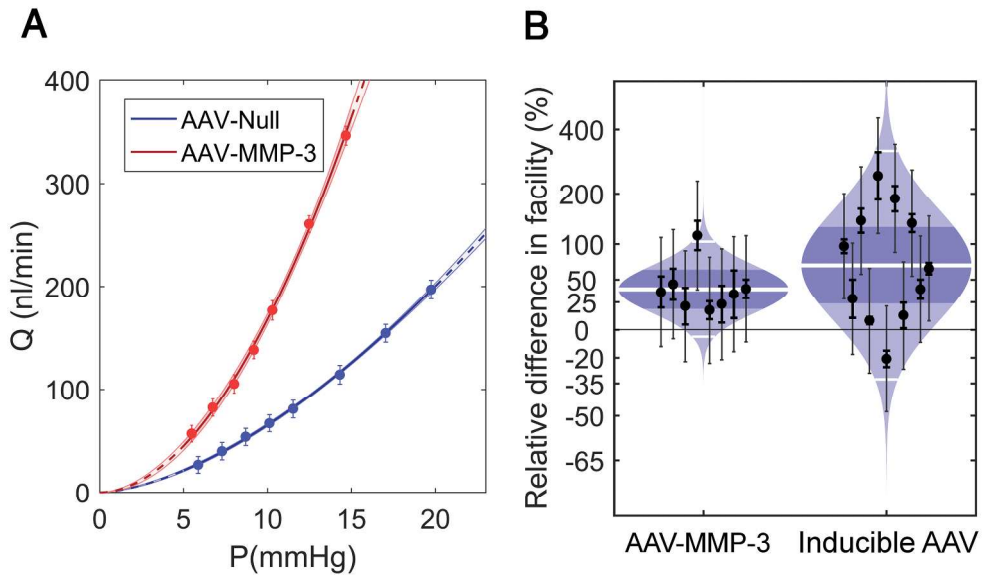

Fig.S3. Supplementary perfusion representations. (A) Plot depicting the relationship between flow (Q) and pressure (P) in a standard perfusion. As applied pressure increases, flow rate through the eye also increases. AAV-MMP-3 treated eyes have a greater response in flow to pressure increases compared to AAV-Null controls. (B) Relative differences in facility for paired eyes in both the constitutive and inducible viruses are depicted in the cello plot.

Fig S3

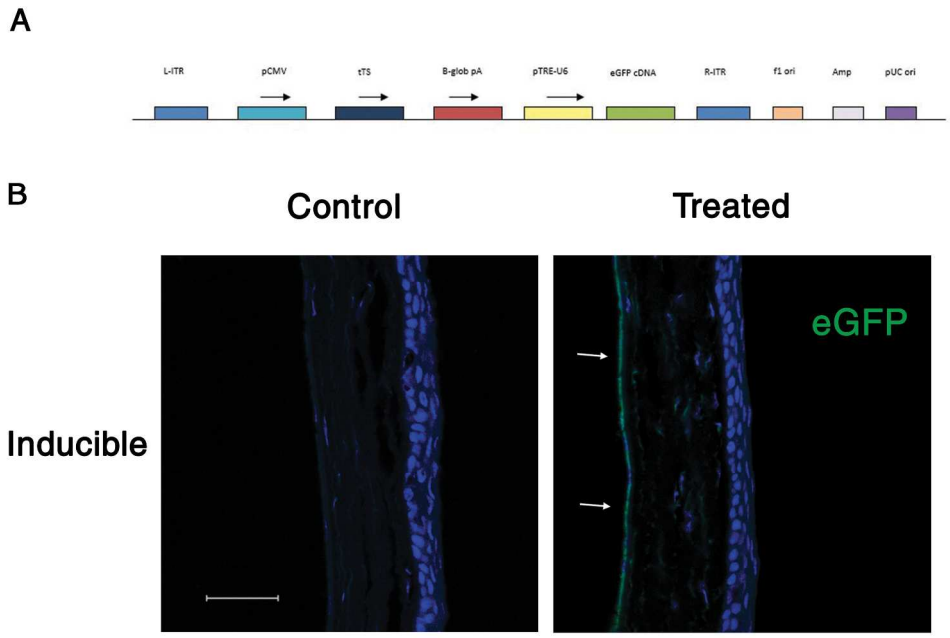

Fig.S4. Doxycycline induced expression of eGFP from corneal endothelium. (A) Illustration of the inducible vector construct. (B) AAV2/9 containing a tetracycline inducible promoter expressing eGFP was intracamerally inoculated into the anterior chamber. Expression patterns were similar to those obtained with constitutive expression of eGFP. Scale bar represents 50μm.

Fig S4

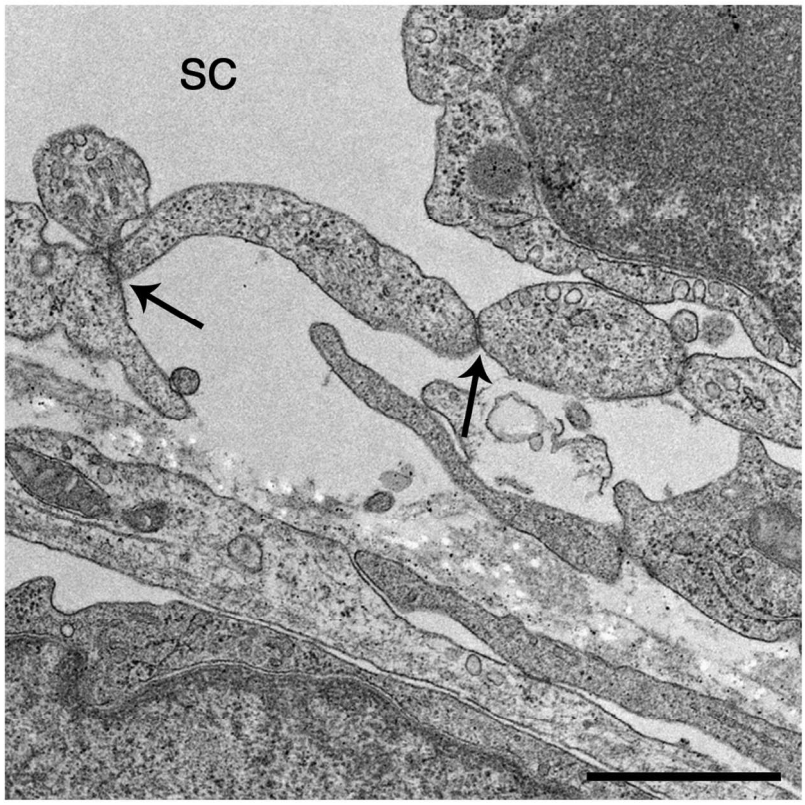

Fig. S5. TEM analysis of endothelial junctions. Ultrastructural analysis of Schlemm's Canal endothelium shows intact tight junctions between cells next to empty subendothelial regions in AAV-MMP-3 treated eyes. Scale bar represents 1 μm.
Fig S5

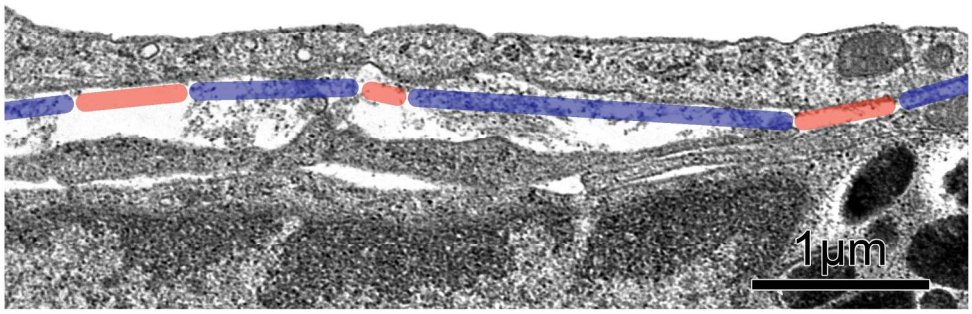

Fig. S6. Morphometric analysis of the optically empty space underlying the inner wall endothelium of SC. The anterior-posterior length of the inner wall was examined in 4 regions per eye at 10,000x magnification. Optically empty spaces (red zones) were identified, along with extracellular matrix (ECM) where the inner wall cell contacted basement membrane material, elastic fibres or amorphous material (blue zones). The ratio of optically empty length to total length (optically empty + ECM length) was defined as the percentage optically open length, as shown in Figure 6G.

Fig S6