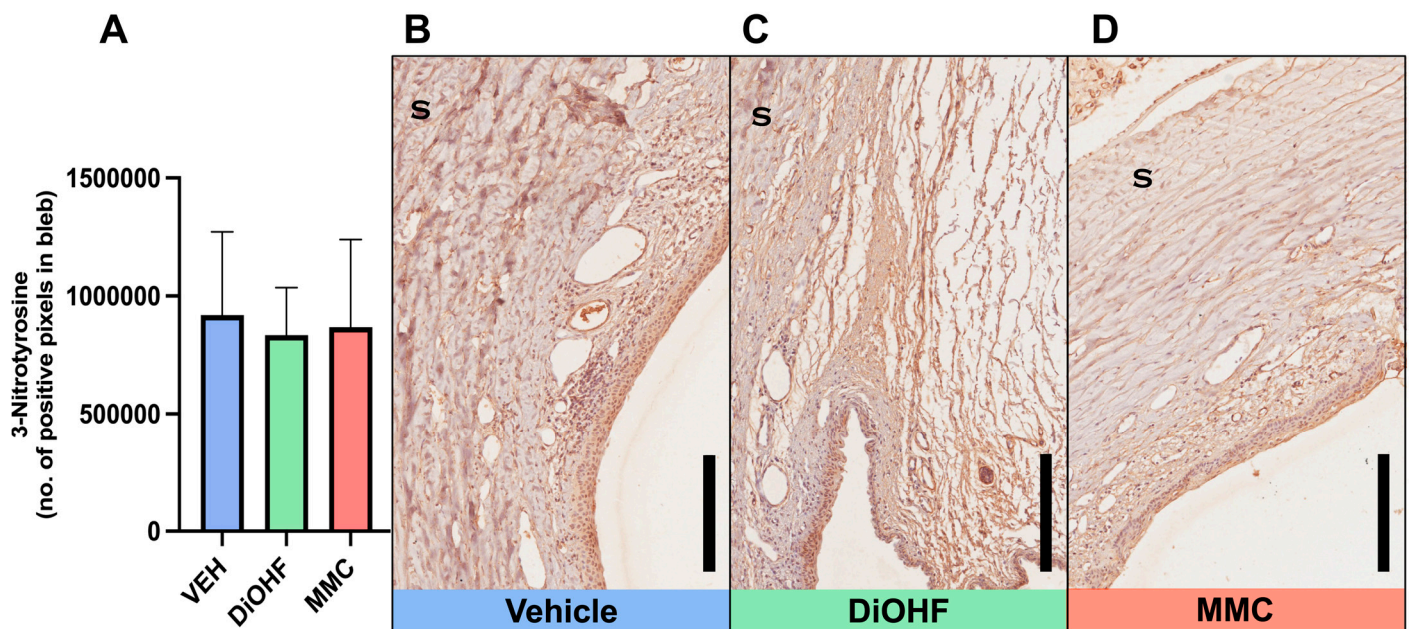


**Supplementary Figure S1: Macroscopic images of rabbit filtering blebs following GFS.** Images representative of each treatment group at |Day 0: (A) Vehicle, (B) DiOHF [10 uM] and (C) MMC [0.4 mg/mL]| |Day 7: (D) Vehicle, (E) DiOHF [10 uM] and (F) MMC [0.4 mg/mL]| |Day 15: (G) Vehicle, (H) DiOHF [10 uM] and (I) MMC [0.4 mg/mL]| |Day 21: (J) Vehicle, (K) DiOHF [10 uM]

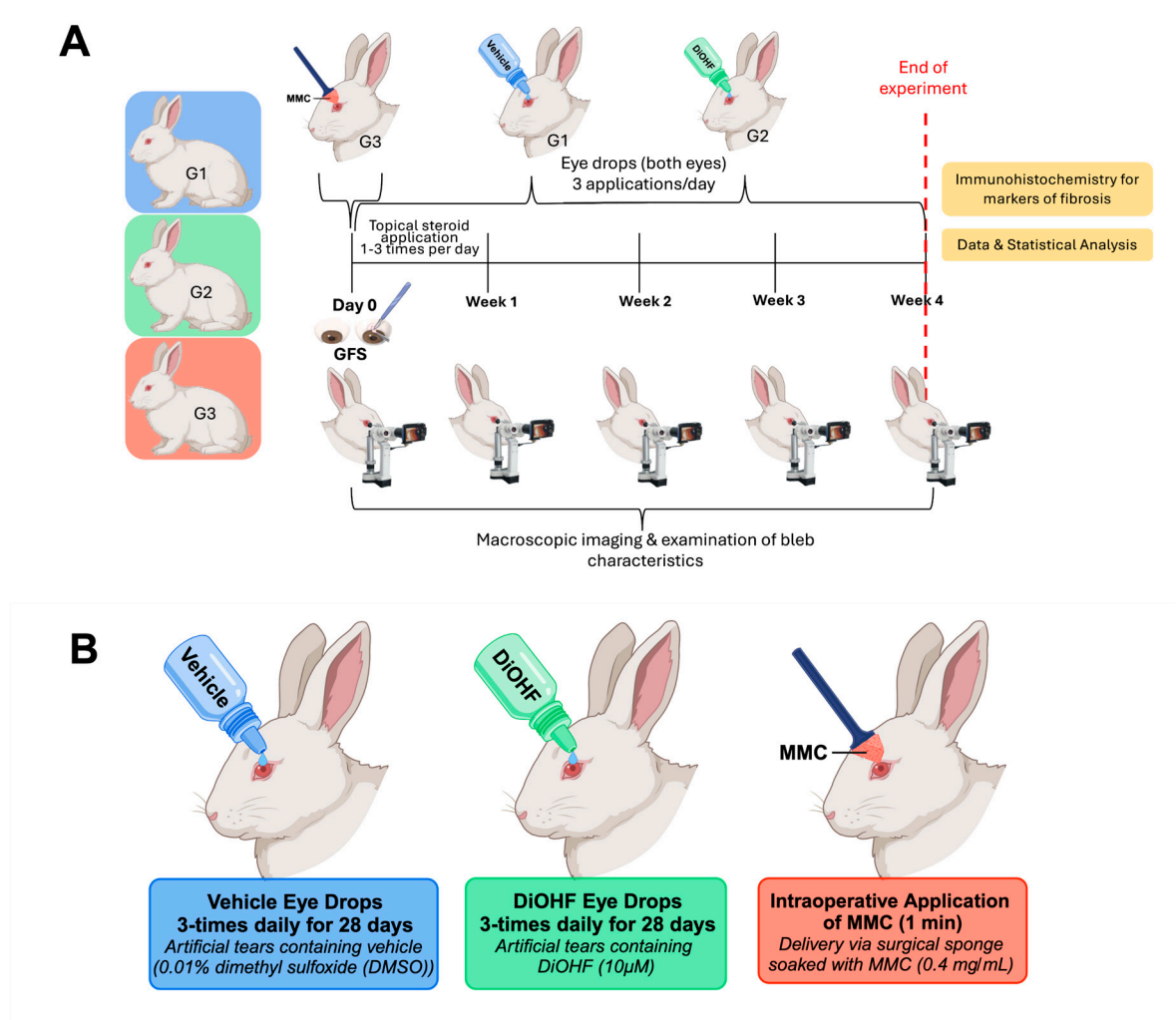
and (L) MMC [0.4 mg/mL] | Day 28: (M) Vehicle, (N) DiOHF [10  $\mu$ M] and (O) MMC [0.4 mg/mL]. All blebs lie within the outlined region.

**Supplementary Table S1.** Grading Scale for Bleb Characteristics

	Size	Vascularity	Ischaemia scale
0	No Bleb	Not Present	Not Present
1	Small	Mild	Mild
2	Medium	Moderate	Moderate
3	Large	Severe	Severe



**Supplementary Figure S2. 3NT expression in rabbit blebs at 28 days following GFS.** (A) Quantitative data, by positive pixel count, of total 3NT-positive bleb areas following post-GFS treatment with vehicle, DiOHF or MMC. Vehicle, 0.01% DMSO; DiOHF, 10 $\mu$ M; MMC, 0.4 mg/mL (One-way ANOVA with Tukey's post hoc test, n=5, \* indicates significance of P<0.05. Data are presented as mean  $\pm$  SD). (B-D) Representative images of blebs from operated rabbit eyes that received post-GFS treatment to the surgical site with either daily vehicle eye drops, daily DiOHF eye drops or a one-time intraoperative application of MMC. S, sclera. Scale bar, 200 $\mu$ m.



**Supplementary Figure S3: Experimental Design.** (A) Timeline of experiment over 4 weeks. (B) Detailed treatment groups. *Created with BioRender.com*

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