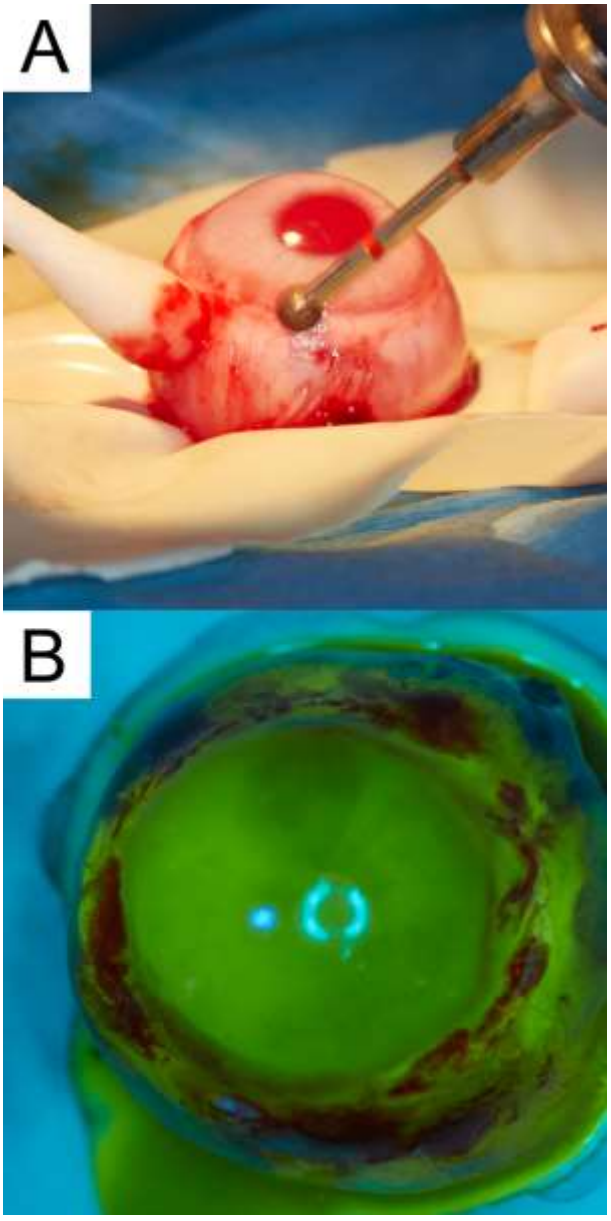
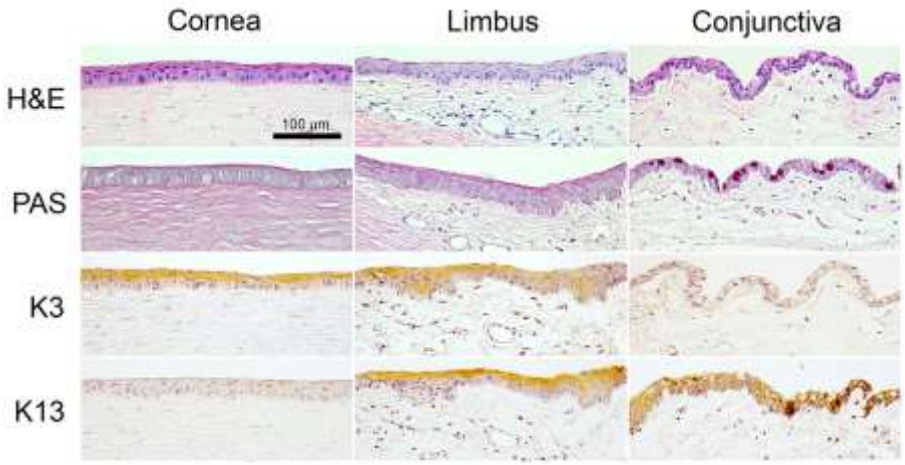
Supplementary Figures

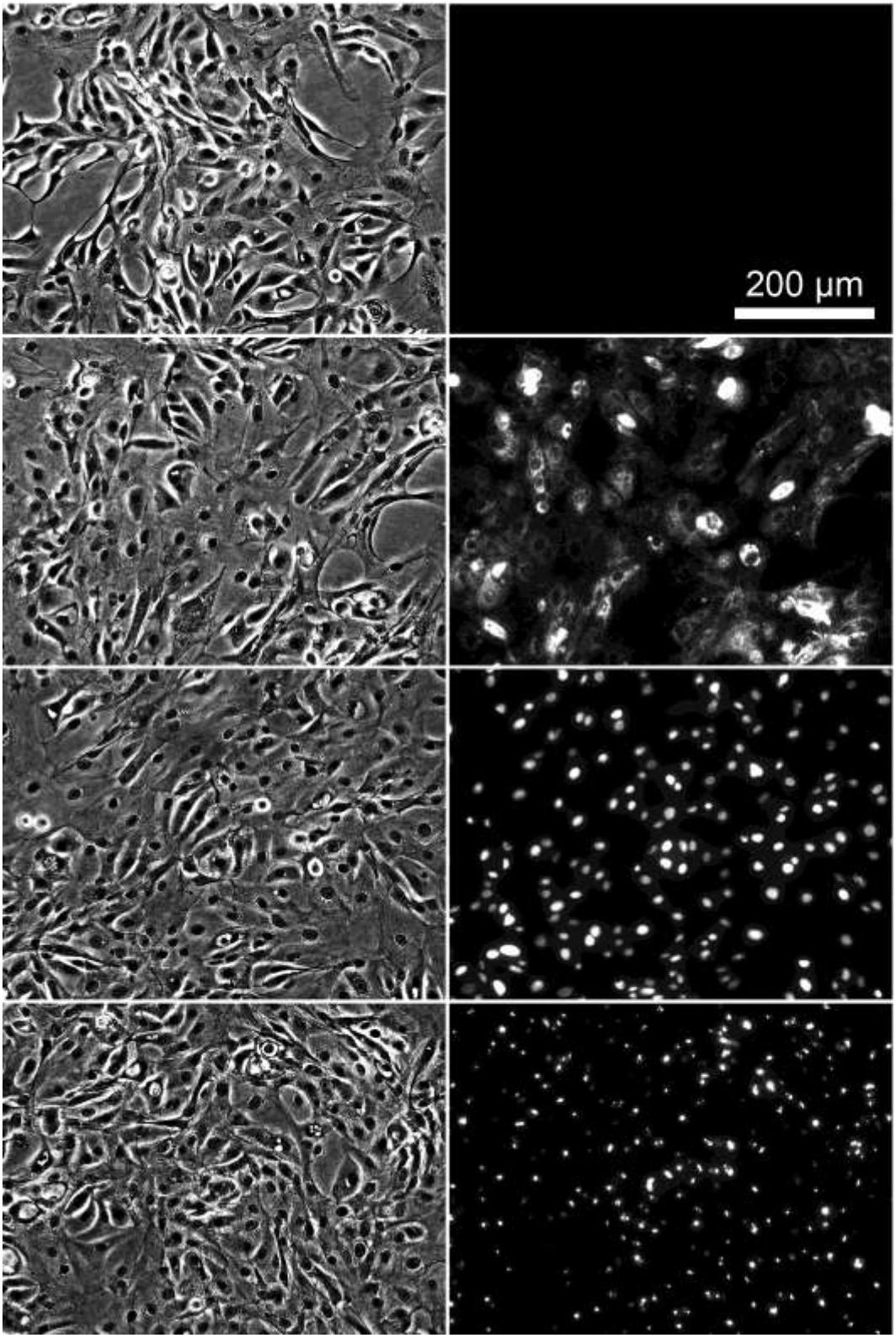


Supplementary Figure 1. Demonstration of method used to mechanically debride the corneal epithelium. (A) Photograph displaying application of the Algerbrush II rotating burr tool to the corneal-limbus of a proptosed rabbit eye (*in vivo*). (B) Gross evaluation of epithelial debridement via fluorescein staining immediately following application of the Algerbrush II instrument. The relatively even distribution of green fluorescence observed under cobalt lamp illumination (Keeler handheld slit lamp) suggests that the majority of epithelial cells have been removed.



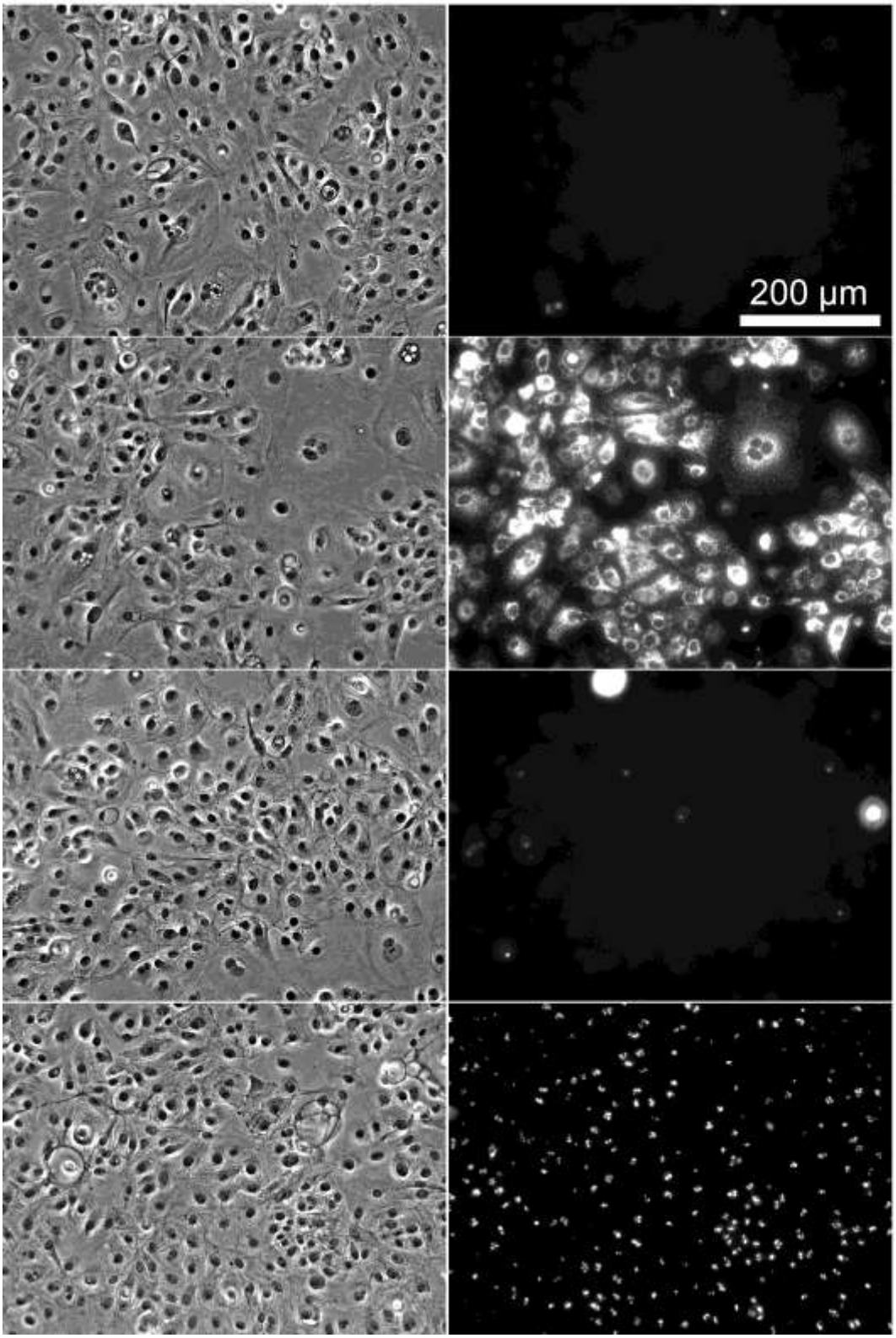
Supplementary Figure 2. Demonstration of normal morphology (H&E) and staining patterns for PAS reactivity, keratin 3 and keratin 13 within the cornea, limbus and conjunctival tissue of non-wounded rabbits. Note: while K3 and K13 display differential expression between the corneal and conjunctival epithelium respectively, both markers are observed within the epithelium of the limbal junction.

Human Corneal-Limbal Epithelial Cells



Supplementary Figure 3. Screening of potential human-specific antibodies by immunostaining of human corneal-limbal epithelial cells (HLE). Third passage cultures of HLE (p3) displayed reactivity towards all three monoclonal antibodies (mab) tested; an anti-mitochondrial antibody (113-1) and two antibodies to human nuclear antigen (HNA; 235-1 and 3E1.3). The 3E1.3 antibody to HNA bound more selectively to nucleoli than mab 235-1.

Rabbit Corneal-Limbal Epithelial Cells



Supplementary Figure 4. Screening of potential human-specific antibodies by immunostaining of rabbit corneal-limbal epithelial cells (RLE). Third passage cultures of RLE (p3) displayed reactivity towards anti-mitochondrial mab 113-1 and anti-HNA mab 3E1.3, but not towards the anti-HNA mab 235-1 (bright areas corresponded to non-specific debris).