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## White-Light and Laser Confocal Microscopic Findings of Rabbit Conjunctiva

*Kobayashi A, Yoshita T, Sugiyama, K. ; Ophthalmic Surg Lasers Imaging. Mar-Apr 2004; 35(2):146-8.*

### ABSTRACT

**BACKGROUND AND OBJECTIVE:** To report laser and white-light confocal microscopic findings of ex vivo rabbit conjunctiva to investigate the potential application of these confocal microscopes as diagnostic devices for normal and pathologic conjunctiva.

**MATERIALS AND METHODS:** Three male albino rabbits were killed and six eyeballs were removed with as much bulbar conjunctiva as possible. The bulbar conjunctiva approximately 5 mm away from the limbus was then subjected to an ex vivo laser and white-light confocal microscopic analysis.

**RESULTS:** Using laser confocal microscopy, conjunctival epithelial cells, subepithelial conjunctival vessels, and sclera were clearly observed. By contrast, white-light confocal microscopy yielded images of conjunctival epithelium, subepithelial layers, and sclera that were not clearly defined.

**CONCLUSIONS:** This study indicates that laser confocal microscopy has a superior ability to visualize ex vivo, non-fixed conjunctiva when compared with white-light confocal microscopy. It also suggests that the laser confocal microscope might be a useful, non-invasive, in vivo, ?quasi-cytological? device for observing and diagnosing the conjunctival condition in humans.