Human corneo-conjunctival limbus anatomy assessed by scanning electron microscopy

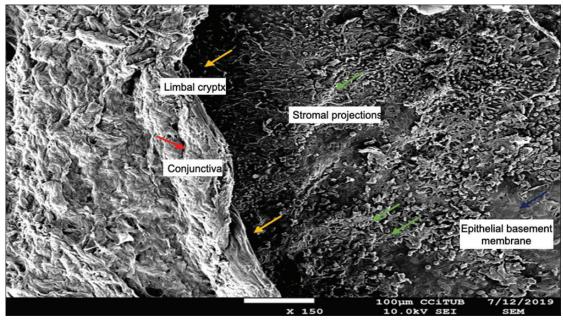


Figure 1: (×150): Red arrow: conjunctiva; yellow arrows: limbal cryptx; green arrows: stromal projections; blue arrow: epithelial basement membrane. Superficial stromal projections around the limbal crypts providing a niche for stem and epithelial cells. There is a transitional zone form peripheral projections to a smoother epithelial basement membrane centrally

Limbus is formed by the junction of the corneal and conjunctival epithelia, where the epithelium gradually becomes thicker toward the sclera. [1] It is a 1–2-mm-wide anatomical ring-shaped transition zone between the opaque sclera and the clear cornea. [2] Anatomically, the limbus contains important features related to eye functions including fibrovascular ridges radially oriented known as palisades of Vogt that host corneal stem cells for epithelial turnover. [1] Scanning electron microscopy (SEM) is a technique for obtaining high-resolution images of biological and nonbiological specimens.

Our aim was to show the ultrastructure of the corneal limbus using SEM [Fig. 1]. [3]

Financial support and sponsorship Nil

Conflicts of interest

There are no conflicts of interest.

Jorge Peraza Nieves, Carlos Rocha de Lossada, Noelia Sabater Cruz, Josep Torras Sanvicens

Hospital Clinic of Barcelona, Barcelona, Spain

Correspondence to: Dr. Carlos Rocha de Lossada, Sabino de Arana 1, Barcelona, Spain. E-mail: carlosrochadelossada5@gmail.com

References

 Consejo A, Llorens-Quintana C, Radhakrishnan H, Iskander DR. Mean shape of the human limbus. J Cataract Refract Surg 2017;43:667-72.

- Spaniol K, Witt J, Mertsch S, Borrelli M, Geerling G, Schrader S. Generation and characterisation of decellularised human corneal limbus. Graefes Arch Clin Exp Ophthalmol 2018;256:547-57.
- Versura P, Bonvicini F, Caramazza R, Laschi R. Scanning electron microscopy study of human cornea and conjunctiva in normal and various pathological conditions. Scan Electron Microsc 1985;:1695-708.

This is an open access journal, and articles are distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike 4.0 License, which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.

Access this article online	
Quick Response Code:	Website:
回路数据回	www.ijo.in
	DOI: 10.4103/ijo.IJO_2205_19

Cite this article as: Peraza Nieves J, Rocha de Lossada C, Sabater Cruz N, Torras Sanvicens J. Human corneo-conjunctival limbus anatomy assessed by scanning electron microscopy. Indian J Ophthalmol 2020;68:1665.