研究業績　英文表記

和文	
表題	角膜の比較解剖学研究:特に哺乳類と両生類のボーマン層とデスメ膜に注目して
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英文	
Title	Comparative observations on corneas, with special reference to Bowman's layer and Descemet's membrane in mammals and amphibians
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Abstract	Corneas of tadpole, mouse, rat, guinea pig, rabbit, cat, and human were examined by TEM and SEM in a comparative study. The differences between specimens were noted mainly by using TEM. Bowman's layer showed a tendency to be well developed in higher mammals. Tadpoles lack a Bowman's layer, lower mammals have a thin Bowman's layer, and higher mammals have a thick Bowman's layer. The boundary between the substantia propria and Descemet's membrane was distinct in higher mammals. On the other hand, there are no differences in thickness of the collagen fibrils that constitute Bowman's layer and those of the substantia propria. NaOH digestion was utilized for SEM preparation. SEM imaging revealed a textured appearance of the epithelial side of Bowman's layer. In Descemet's membrane, fibrous long spacing (FLS) fiber-like structures, which are arranged in parallel to the endothelium, were observed by both TEM and SEM. To our knowledge, this is the first report of SEM observation of FLS fiber-like structures on the endothelial surface of Descemet's membrane. SEM at a plane normal to the plane of the cornea showed that Descemet's membrane has a piled laminar structure. Descemet's membrane is closely associated with the collagen layer of the substantia propria. Collagen fibrils invading from the substantia propria into Descemet's membrane were observed with both TEM and SEM.
keyword	cornea, Bowman's layer, Descemet's membrane, FLS-like structure

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