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Authors: Sheng-Lin Lee, Yang-Fang Chen, Chen-Yuan Dong

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# Optical transmittance of cornea during the embryonic development of chick

Sheng-Lin Lee, Yang-Fang Chen<sup>#</sup>, Chen-Yuan Dong<sup>\*</sup>

*Department of Physics, National Taiwan University, Taipei 106, Taiwan*

## Abstract

One of the remarkable features of the cornea is its high transparency of incident light in the visible spectrum. However, how the transmittance evolving with corneal structure is still not fully understood. In this study, we measured changes in corneal transmittance between from eighth to nineteenth day during development and imaged the lamellae of corneal stroma by nonlinear microscopy. Our results indicate that the minimum corneal transparency is at thirteenth day. The transmittance of embryonic cornea after the Day 14 rises sharply until the Day 19. The development of early stage at the tenth day displayed wavy pattern of corneal stroma. In addition, when comparing the transmissivity of the adult and embryonic corneas, larger deviations at the lower wavelengths of 320-400 nm were found to be significant. Our findings indicate that structural changes are related to the development of transmittance and the mature progress of transmittance is still continuing after birth.

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