

# Global Veterinary Summit

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### Constructing schematic eye: Requirements, steps and the obtained clinical values. A camel-eye model

Eye is a homocentric system of lenses, which when combined in action form a very strong system of short focal length. A schematic eye is a self-consistent mathematical model of the optical system that simulate the real world performance of the eye and can be used for a range of research and development purposes. In schematic eyes model the compound optics of real eyes can be specified in terms of three cardinal points, making it possible to model paraxial ray paths and describe various optical characteristics of living eyes. Efforts to design an optical model of an eye dates back to Newton's diagram of the sheep's eye around 1680s. Schematic eyes have been designed for human, cow, horse, sheep, pig, dog, rabbit and rat. Several models have appeared over the last century, with different levels of complexity ranging from those with reduced or single refracting surfaces, to others that allow refractive index variation within the lens and have conicoidal, rather than spherical, retinal surfaces. The dimensions of ocular tissues vary from infantile to adult animals. These changes are probably the necessary concomitant of the increase in size of the eye during growth. Therefore, to accurately build a schematic model of a specific animal species ecobiometric values are needed to properly describe its visual properties. This allows the calculations of intraocular lens dioptric power to be deployed in the eyes of animals before cataract surgery to achieve emmetropia.

### Biography

Omar El-Tookhy has attained predoctoral scholarship. He did his predoctoral study from Qassim University, KSA. Currently, he is working as a Full Professor at Cairo University, School of Veterinary Medicine, Egypt. He has published more than 21 papers in reputed journals and serving as a reviewer for some international journals in his field.

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