

Abstract Submitted  
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**Mucin Production Dynamics at the Surface of Corneal Epithelial Cells**<sup>1</sup> TRISTAN HORMEL, TAPOMOY BHATTACHARJEE, ANGELA PITENIS, JUAN URUEA, GREGORY SAWYER, THOMAS ANGELINI, Univ of Florida - Gainesville — Mucous layers form at the apical surface of many epithelia, protecting tissues from pathogens and environmental wear and damage. Although these layers contain many materials they are primarily composed of mucin glycoproteins, the concentration of which may be physiologically controlled to maintain specific rheological properties and to provide proper lubrication. Nowhere is this truer than at the surface of the eye's corneal epithelium, where the mucous layer must additionally achieve structural integrity to withstand the stresses created by blinking, and remain transparent in order to enable vision. I will present results on the growth dynamics, concentration, and rheology of a model corneal epithelial mucous layer, all of which can be viewed as important parameters at this interface. I will also discuss modulation of the mucous layer's dynamics with variation in environmental conditions.

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