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**Antonio Mastroberardino\***, 1032 W. Sheridan Road, Chicago, IL 60660, and **Javed I Siddique, Richard J Braun** and **Daniel M Anderson**. *Tear Film Dynamics: Modeling the Glycocalyx as a Poroelastic Region*. Preliminary report.

The human tear film is a complex fluid structure composed of an aqueous layer, an outermost lipid layer, and the glycocalyx, a forest of large transmembrane mucins that provide stability to the ocular surface. We formulate a thin film model based on lubrication theory and mixture theory in order to understand the dynamics between the aqueous layer and the glycocalyx, which we treat as a poroelastic region. (Received July 25, 2017)