



Thursday, May 31, 2018

LSC 3 | 2:00 - 3:00PM

Dr. Douglas Hamilton

Associate Professor and now Assistant Dean for Research
Oral Biology, School of Dentistry, Anatomy & Cell Biology
The University of Western Ontario, London, ON

“Periostin as a Modulator of Wound Healing and Fibrotic Processes in Connective Tissues”

Periostin is a non-structural secreted matricellular protein that is highly expressed in collagen-rich tissues with its role in tissue development, repair, and remodeling becoming increasingly defined. Periostin is required for transition of mesenchymal cells to the contractile myofibroblast phenotype, specifically by modulating non-canonical TGF- β signalling through β 1 integrins and focal adhesion kinase. As will be discussed, temporal upregulation of periostin is a critical event determining successful healing in skin, and localized delivery may represent a therapeutic in impaired healing, but it is also associated with scarring. Despite healing more rapidly and with less scarring than skin, oral tissues are still associated with fibrotic conditions, which would appear to implicate periostin. As will be highlighted, using human tissue as well as multiple animal and cell culture models, our laboratory has begun to define what appears to be a subtle, but multifaceted role for periostin in healing of gingival and palatal tissues. Despite periostin being implicated in α -smooth muscle actin expression, in the oral cavity, whether fibroblasts assume a myofibroblast phenotype in healing is location dependent. As will be highlighted, despite the similarities in skin and oral connective tissues, the role of periostin appears to be context dependent.

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