Molecular Genetics
UNIVERSITY OF TORONTO

DEPARTMENTAL SEMINAR

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4PM - 6PM

University College RM 161

Body-wide responses to limb loss in the highly-regenerative axolotl

The regulation of limb regeneration has been most intensively studied at the genetic and molecular levels by analyzing tissues at the amputation site. Increasingly, however, changes provoked by limb loss elsewhere in the body are being appreciated. These changes are essential to understand as they may modulate the local regenerative response and change the animal's future response to injury elsewhere in the body. Building a systems-level understanding of limb regeneration will likely also inform our interpretation of how this complex trait may have been shaped over evolutionary time. We will present our work investigating mechanisms whereby tissues distant to amputation injury in axolotl change at the transcriptional and epigenetic levels, highlighting internal limb tissues and the nervous and neuroendocrine systems. The possible implications of these responses to localized blastema formation and, ultimately, successful limb regeneration will be highlighted.

HOST Dr. Olena Zhulyn