Genome Sciences Seminar

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remote viewing option: https://depts.washington.edu/gsrestrc/remote.htm

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"Apple snails: looking at regeneration with a new pair of eyes"

Vertebrate eyes are complex sensory organs, defined as camera-type, constituted by cornea, lens, retina and optic nerve organized in one closed chamber. Until now, we lacked suitable models for investigating the complete regeneration of these complex sensory organs.

The apple snail *Pomacea canaliculata* not only has camera-type eyes, but they can also fully regenerate after amputation in adults. In this system - for the first time - full regeneration of adult camera-type eyes can be systematically explored at the molecular, cellular and genetic level.

In our laboratory, we apply genetic tools, cutting-edge sequencing techniques and advanced imaging to expand our understanding of adult regeneration and stem cell biology and develop innovative strategies with clear potential for translation to biomedical and tissue engineering fields. We use *P. canaliculata* as a new platform to discover novel concepts in regeneration, plasticity and evolutionary conservation of the visual system that in the long term can be applied to improve human health.

Questions? Contact Brian Giebel at bgiebel@uw.edu or visit the Seminar website at http://www.gs.washington.edu/news/seminars.htm