

# The Biological and Biomedical Joint Seminar Series

(Hosted by the departments of Molecular & Cellular Biology, Chemistry & Biochemistry, Cellular & Molecular Medicine, and Plant Sciences)

*“Centrosome loss results in an unstable genome and malignant prostate tumors”*

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ENR2 Room S215 @ I1AM

Hosted By: Ted Weinert



**Localized, nonindolent prostate cancer (PCa) is characterized by large-scale genomic rearrangements and other forms of chromosomal instability (CIN), yet how this occurs remains unclear. A well-established mechanism of CIN is the overproduction of centrosomes, which promotes tumorigenesis in various mouse models.**

**We developed a single-cell assay for quantifying centrosomes in human prostate tissue.**

**Surprisingly, centrosome loss—which has not been described in human cancer—was associated with PCa progression. Strikingly, transient or chronic centrosome loss transformed prostate epithelial cells, which produced highly proliferative and poorly differentiated malignant tumors in mice.**

**Centrosome loss could create a cellular crisis with oncogenic potential in prostate epithelial cells.**

<http://rogerslab.arizona.edu/>

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