

# Studying the embryonic cell cycle in artificial cells using microfluidics

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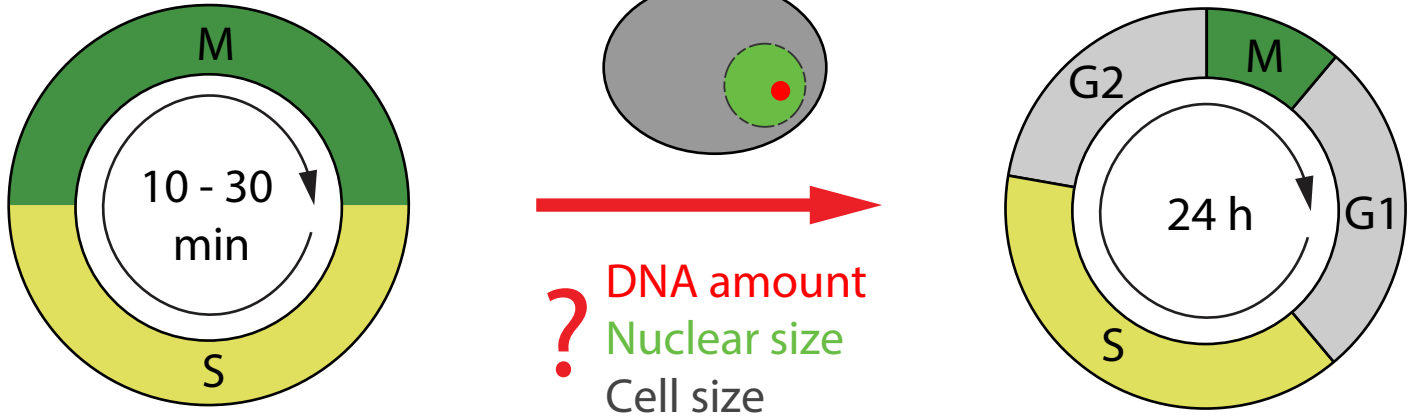
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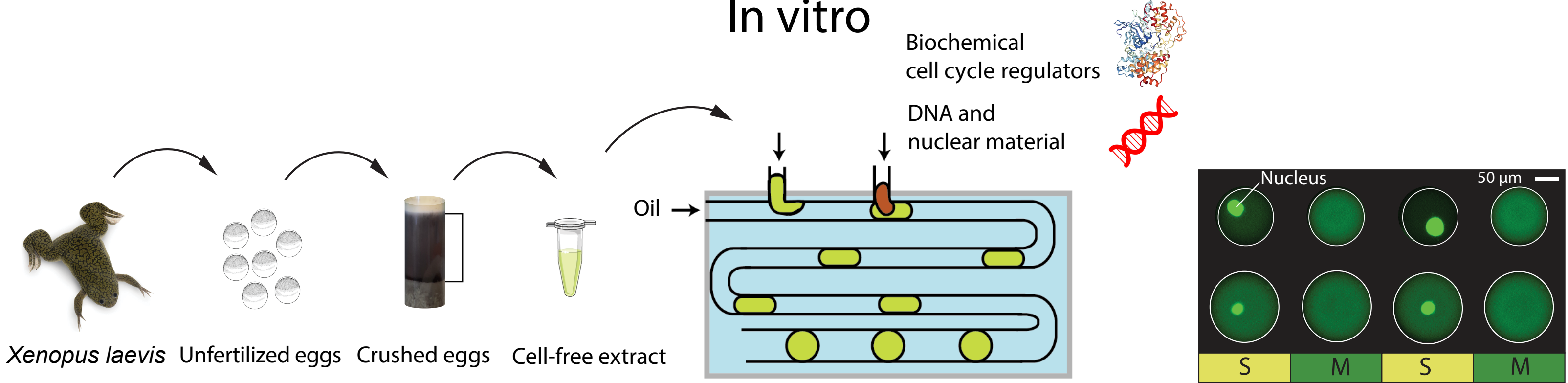
Lorem ipsum

# How do DNA and nuclei influence the early embryonic cell cycle?

## Objective

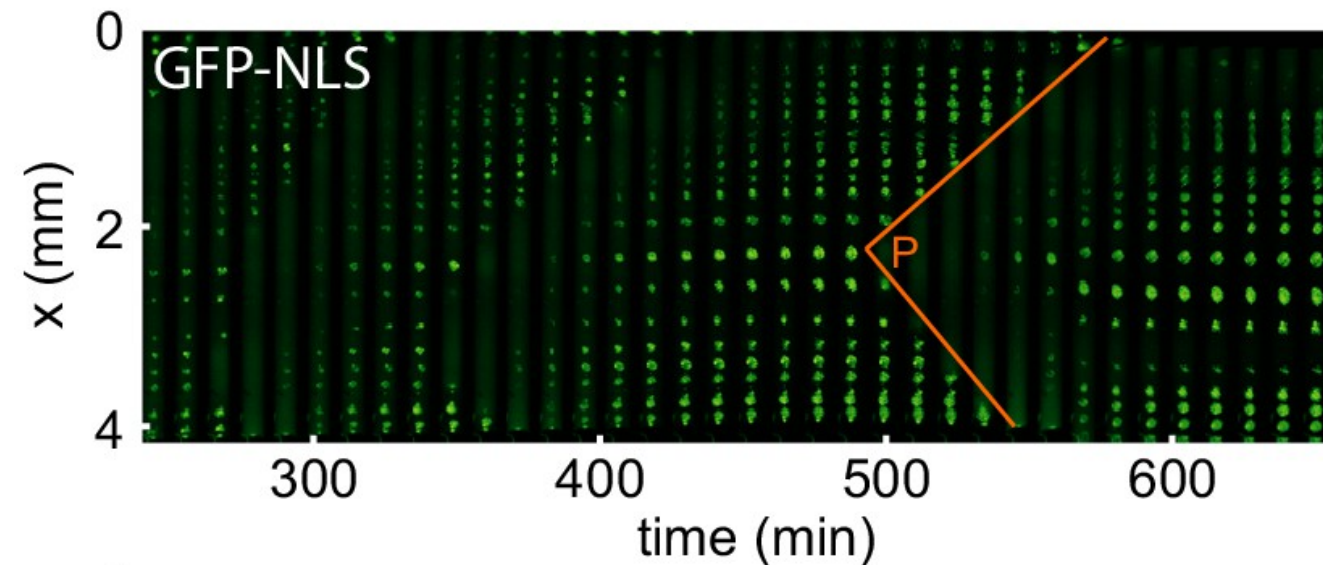


## In vitro

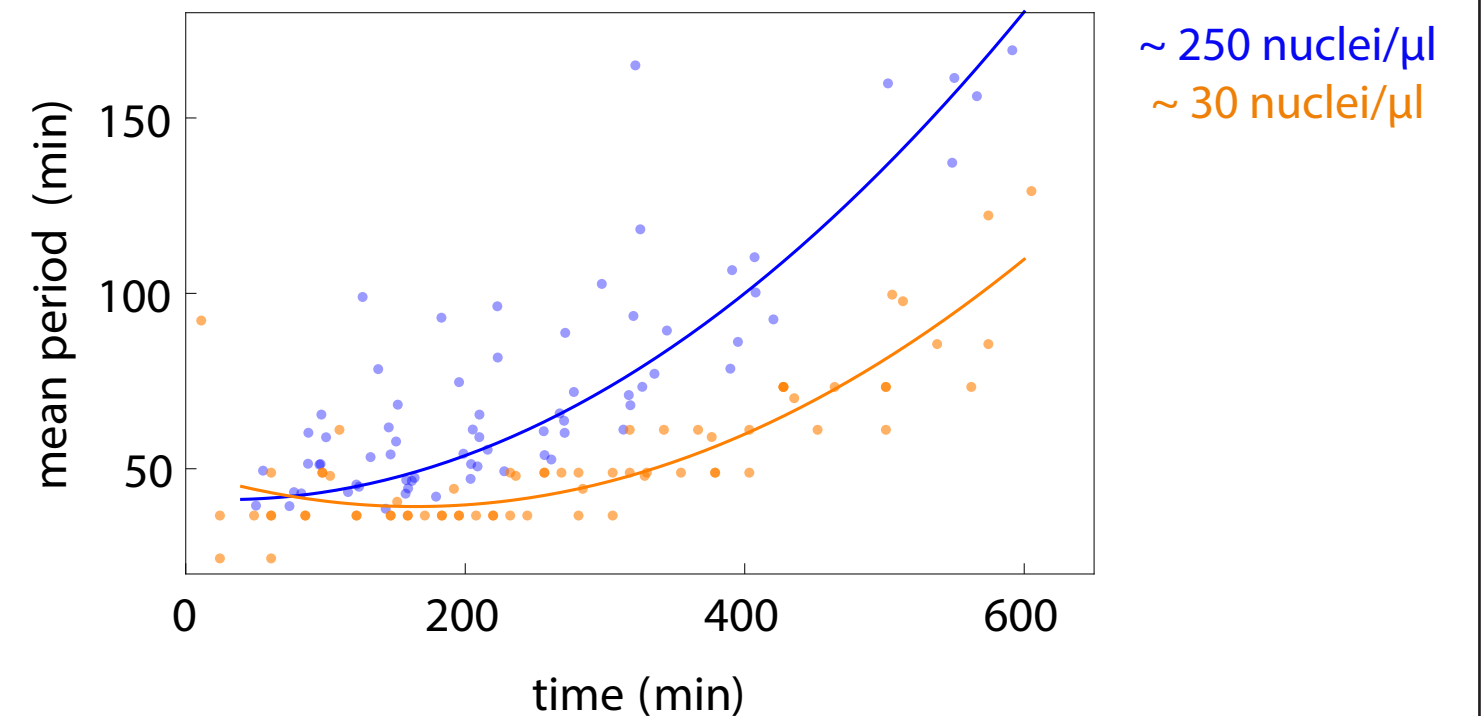


# Nuclei determine the spatial origin of mitotic waves

The nucleus serves as the pacemaker for the cell cycle

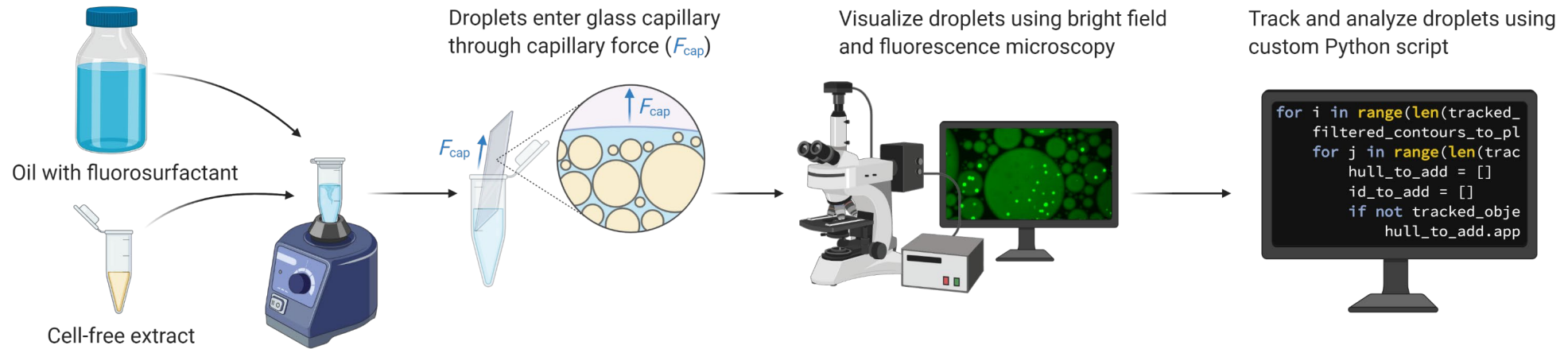


Nuclear density controls cell cycle period



F. E. Nolet, A. Vandervelde, A. Vanderbeke, L. Piñeros, J. B. Chang, and L. Gelens,  
“Nuclei determine the spatial origin of mitotic waves,” *Elife*, vol. 9, May 2020.

# Size influences the cell cycle of artificial cells



Bright field (tracked)

GFP-NLS (nuclei)

Fluorescent microtubules

Hoechst (DNA)

