

Mapping the mechanobiology of the developing mammary gland

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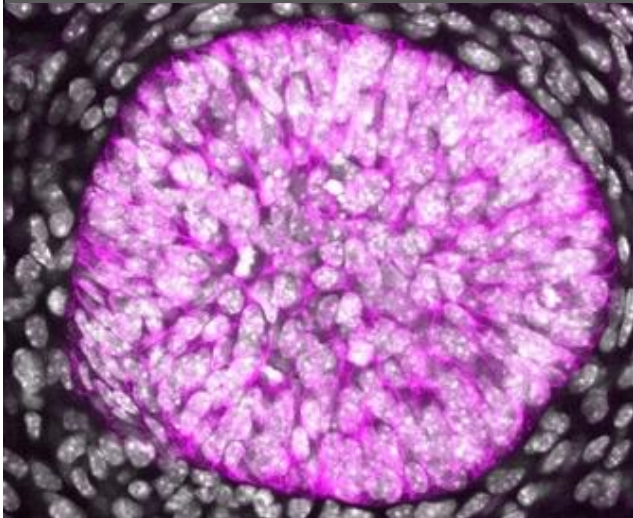


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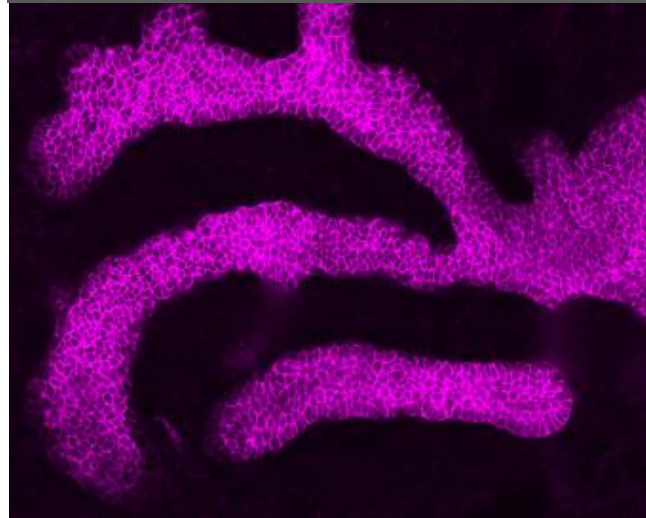
1. The lifecycle of the mouse mammary gland

Cell Membranes Basal Cells EpCAM Nuclei

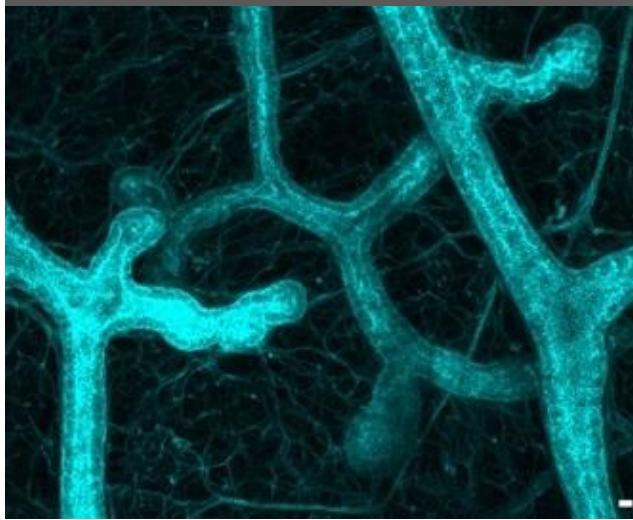
Early Embryonic



Late Embryonic



Postnatal

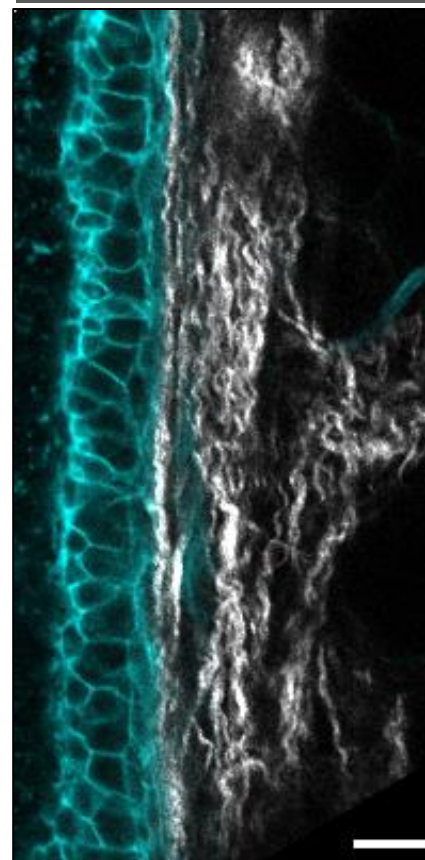


Lactating

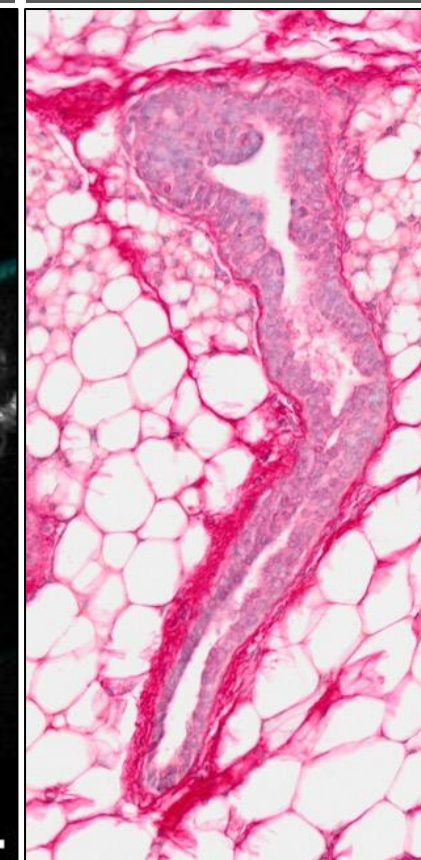


2. Characterising mechanical forces *in vivo*

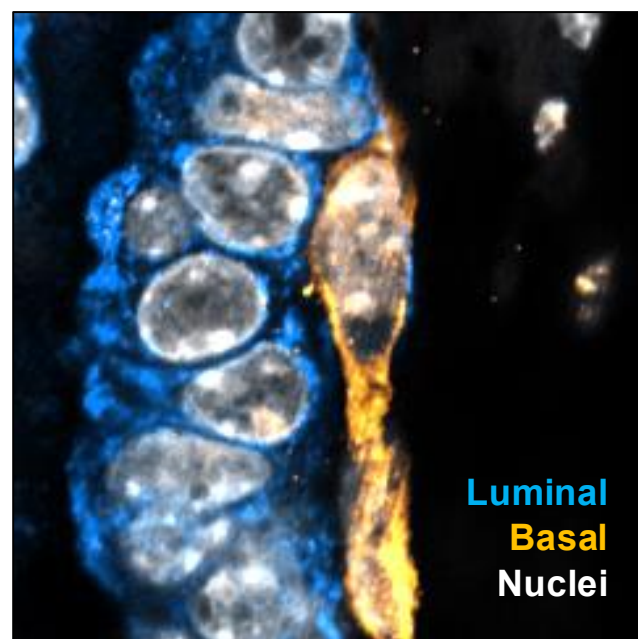
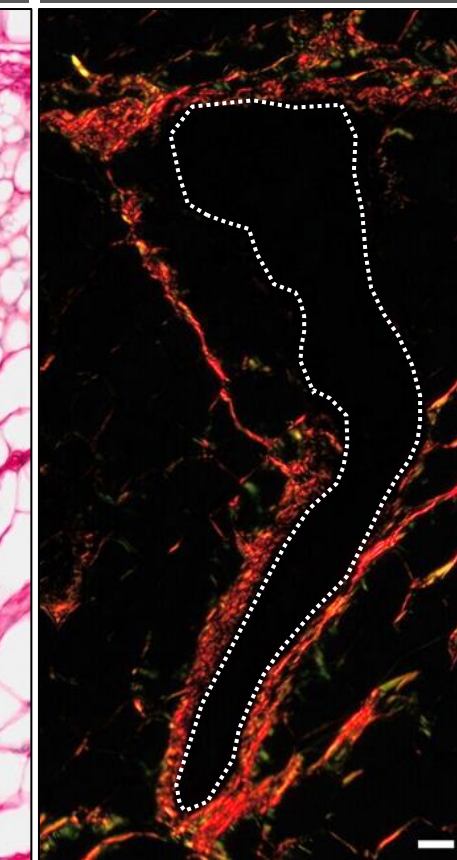
Cell Membranes SHG



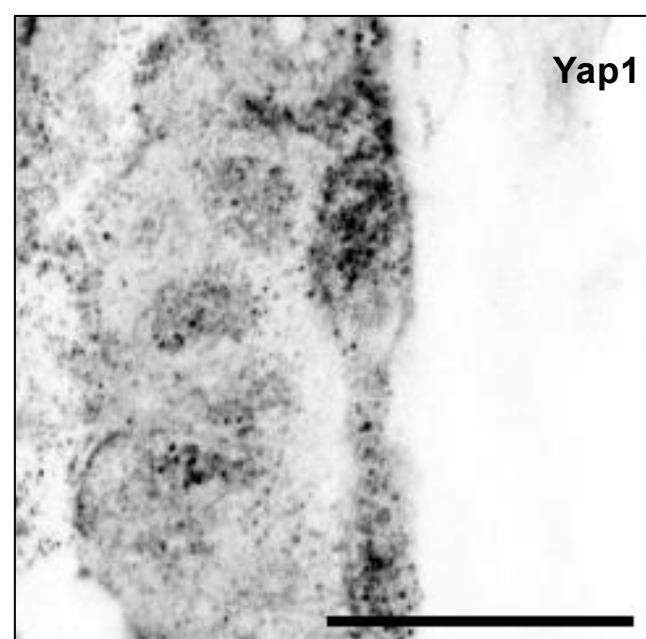
Picosirius Red; BF



Picosirius Red; PL

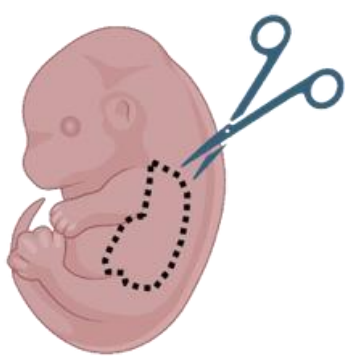


Luminal
Basal
Nuclei



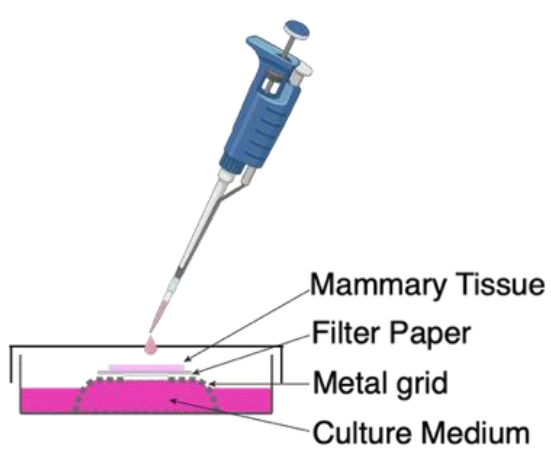
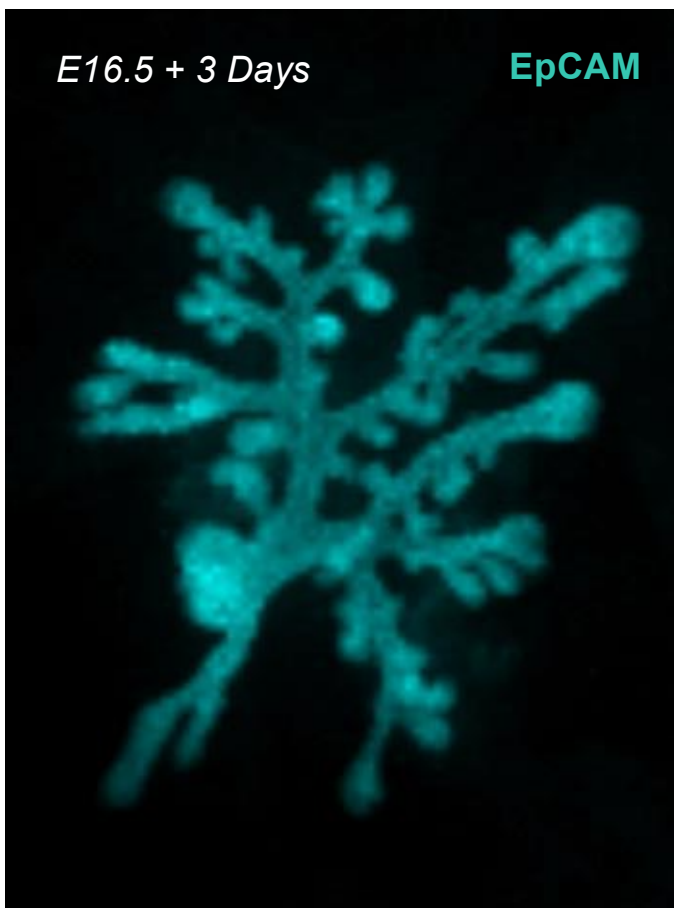
Yap1

3. *Ex vivo* mammary gland explant culture



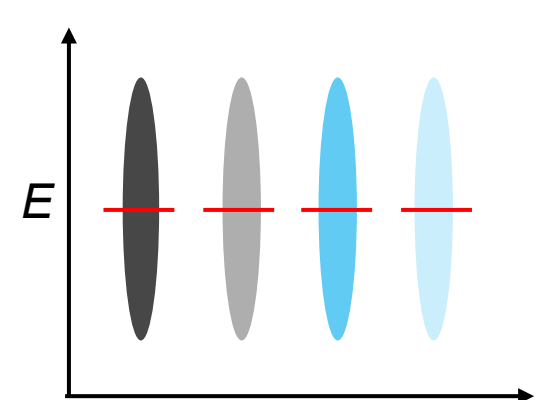
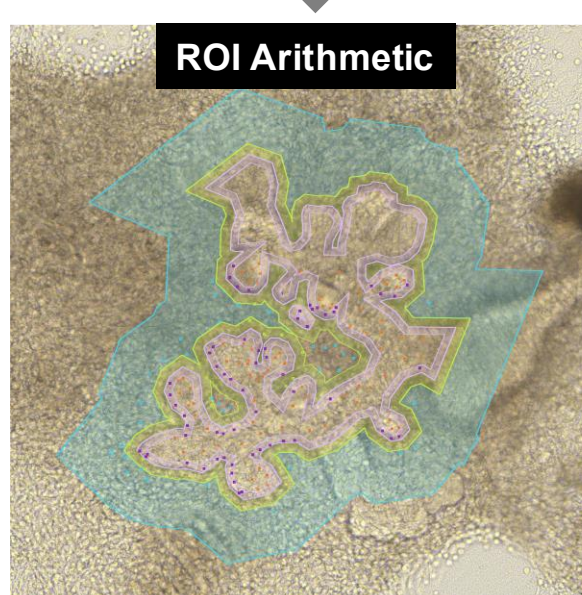
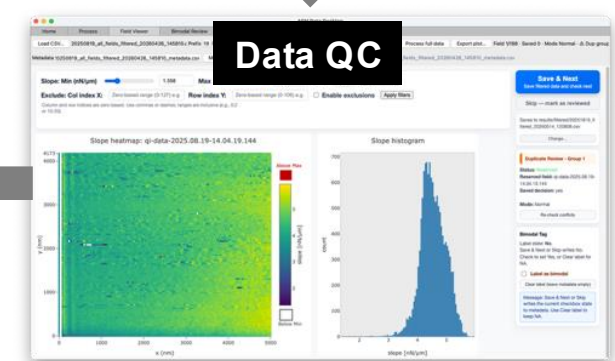
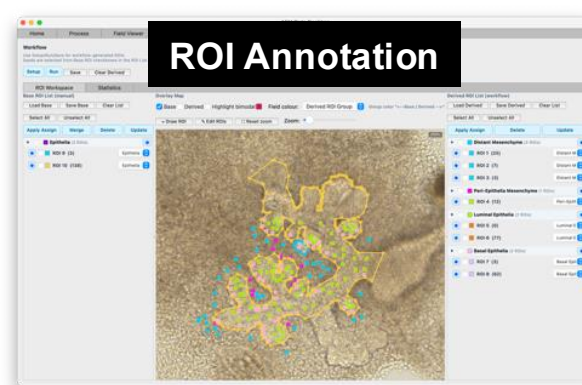
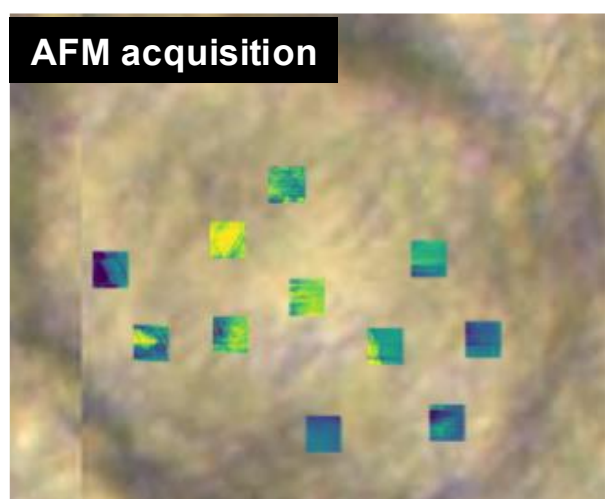
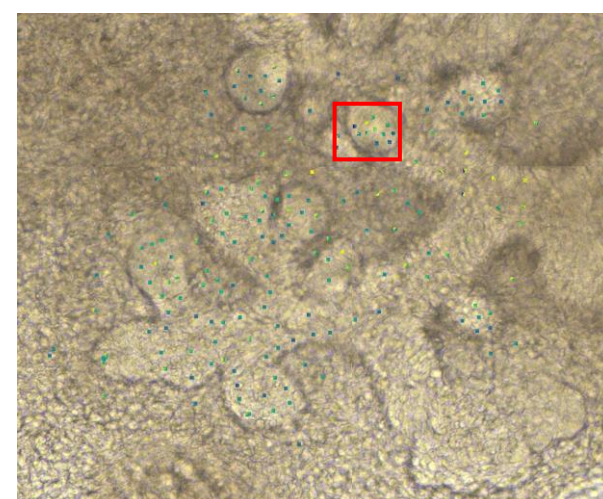
E16.5 + 3 Days

EpCAM



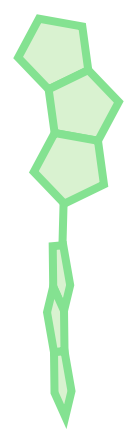
Mammary Tissue
Filter Paper
Metal grid
Culture Medium

4. Custom AFM data annotation and analysis

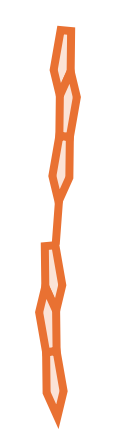


Illustrative example of distinct analysis and comparison

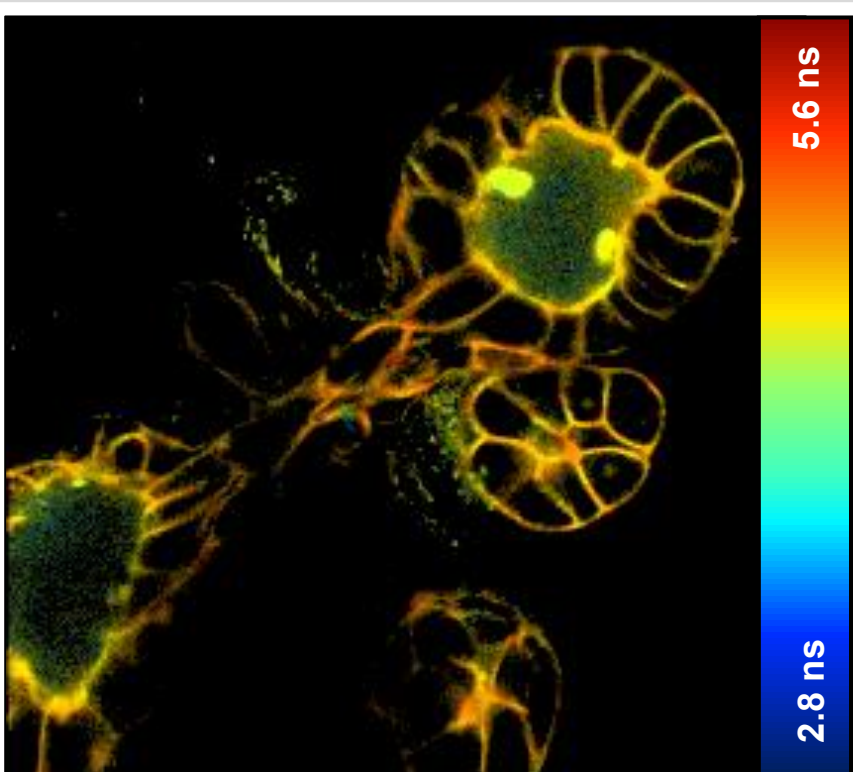
5. Utilising live imaging tools to derive cell membrane tension in organoids



Low Tension



High Tension



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Wolfson Bioimaging Facility