

Context

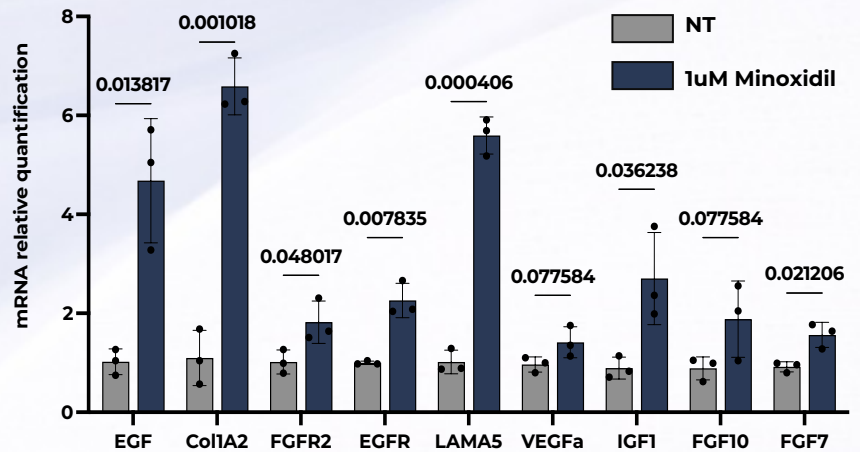
Hair follicle biology relies on **complex multicellular interactions** that standard models cannot replicate with sufficient fidelity to generate predictive, translatable data.

Unlike simplified cell-based assays, BioHive organoids embed the full hair follicle unit, preserving its **native architecture, cellular hierarchy and growth dynamics**, enabling **mechanistic evaluation** at both **molecular** and **structural** levels.

Molecular activation of hair follicles quantified by RT-qPCR

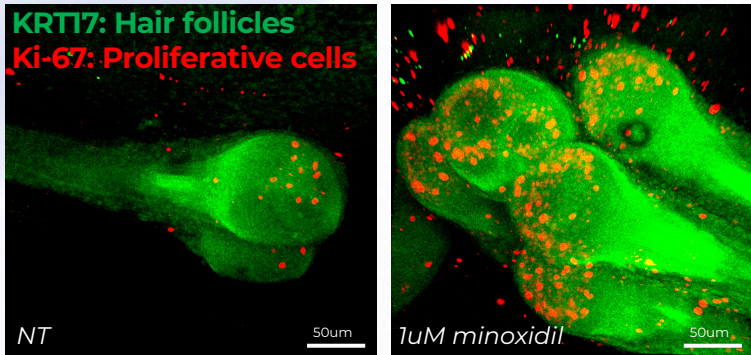
To characterize **hair follicle activation**, BioHive organoids are profiled across the **key molecular pathways governing follicle biology**

- **Growth factor signaling:** EGF, FGF7, FGF10, IGF1, FGFR2, EGFR, VEGF-A
- **Extracellular matrix remodeling:** Col1A2, LAMA5, MMP family
- **Proliferation & cell cycle:** Ki-67, KRT17, SOX9, LGR5, BCL2
- **Dermal papilla activation:** Wnt/ β -catenin pathway

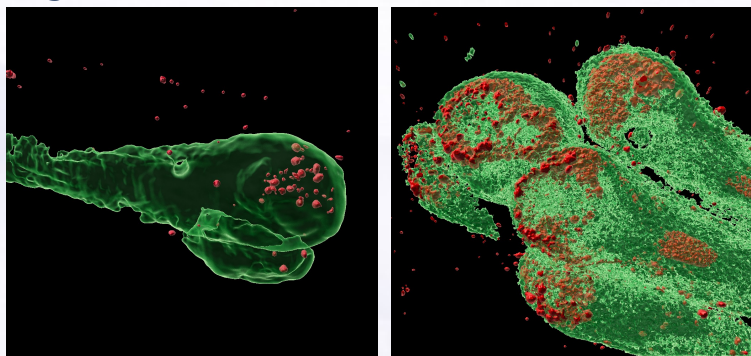


Hair growth quantification using high resolution confocal microscopy

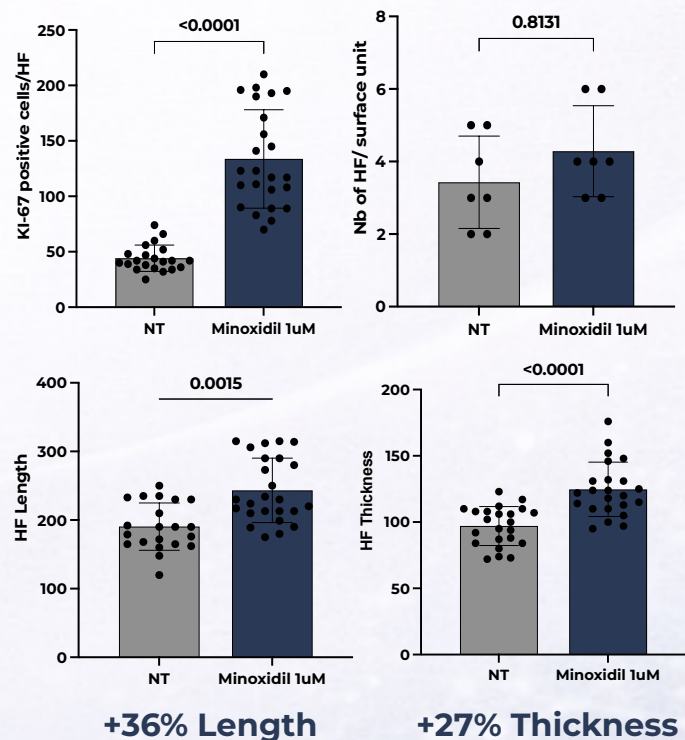
Acquisition



Segmentation



Quantification



→ Test your actives on a complete hair follicle unit and its microenvironment

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