Introduction

The hair follicle dermal niche: an instructive framework for tissue formation and regeneration

- Tissue morphogenesis requires a template provided by an instructive niche to direct organized growth and differentiation (Xin, Cell 2016).
- Epithelial-mesenchymal interactions lead to the coordinated formation of an epithelial placode and its associated dermal niche called the dermal condensate (DC) (Hardy, Trends Genet 1992, Millar, J Invest Derm 2002).
- The DC matures into the dermal papilla, essential for HF growth and regeneration.
- The signals and cell behaviors that lead to DC formation are poorly defined due to the lack of tools to discriminate molecular and cellular differences between seemingly uniform cells.

What are the molecular and cellular events that lead to DC cell differentiation?

Tracing a DC differentiation pathway

DC cells are immediate quiescent progeny of proliferative population

Where are highly proliferative cells located in the peri-DC?

What is the fate of proliferative peri-DC cells?

Conclusion

Future directions

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