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## Epithelial-mesenchymal Interactions in the Developing Follicle

Produced for the CRC for Premium Quality Wool undergraduate program by; Dr Graham Cam, CSIRO Animal Production.

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## Skin recombination experiments



**Graham Cam** 



Later stage recombination experiments

 Only mouse dermal cells will respond to form a mouse plug

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 Once the plug is formed, the dermal papilla is required to stimulate the hair matrix cells to divide rapidly

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## Tissue interactions in the hair follicle bud



First dermal message "Make an appendage"

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**Epidermal message** 

Second dermal message "Make a follicle"



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## **Epithelial-mesenchymal messages**

There are messages present in the skin

 they are ordered and pass back and forth between the epidermis and dermis

 The messages become more specific as development progresses

 These messages are the basis of the epidermal-mesenchymal (E-M) interactions.