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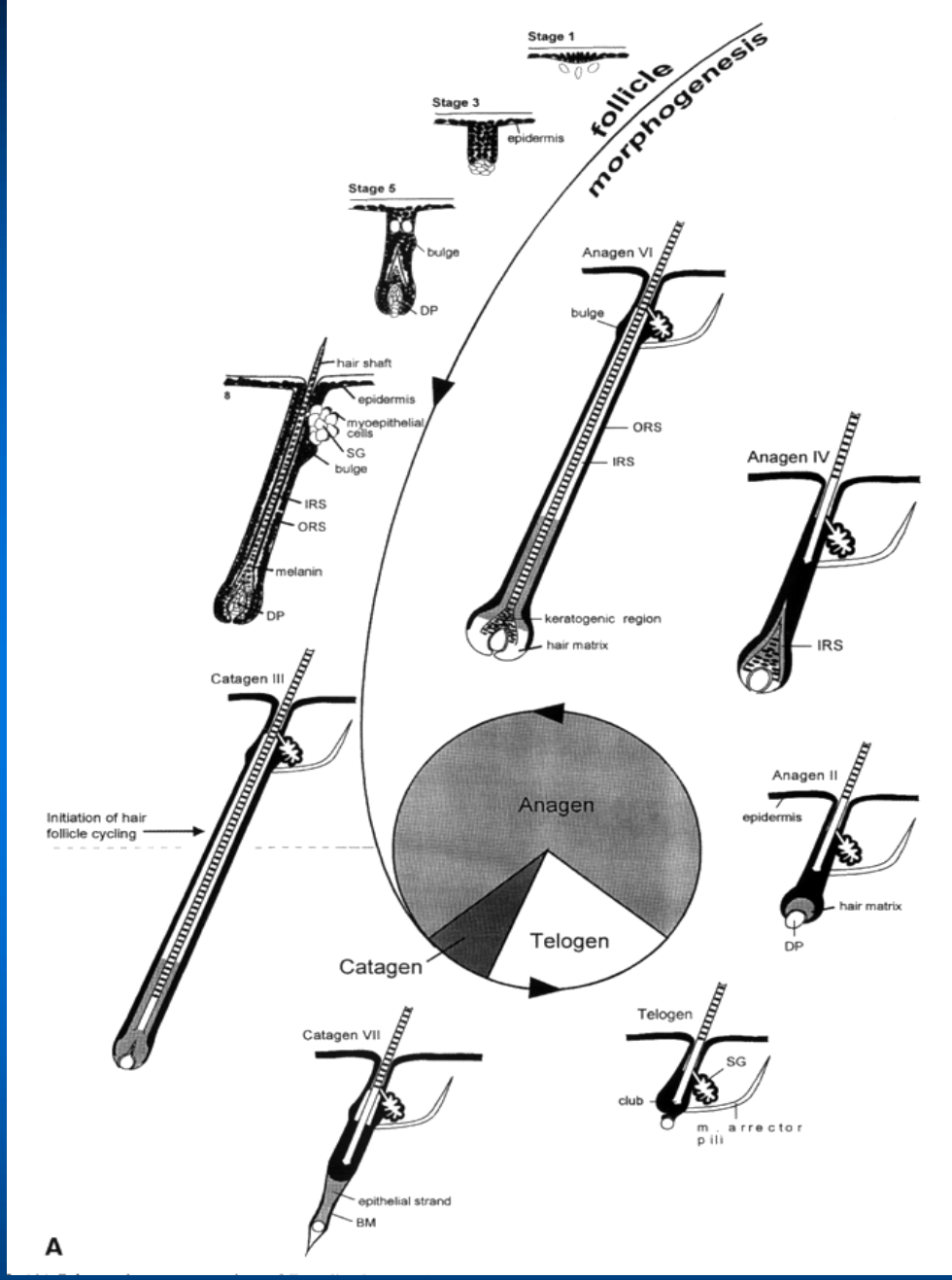
Epithelial-mesenchymal Reactions in the Adult Follicle.

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Links between the follicle cycle and follicle initiation



A

Graham Cam

Source: Muller-Rover, S. et al. (1999)



Dermal papillae retain their inductive properties in the adult

- Dermal papilla can induce follicle formation
 - whole dermal papilla transplanted from a follicle to epidermis that contains no follicles, such as a mouse foot pad, will induce a new follicle to form.
 - dermal papilla cells will induce new follicles when placed in contact with the epidermis
- Epithelial-mesenchymal interactions are involved.

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Epithelial-mesenchymal interactions in the follicle

- E-M interactions occur between the bulb (epithelial tissue) and the dermal papilla (mesenchymal tissue)
- The papilla contains ECM
 - some components disappear during telogen
 - the ECM modulates the activity of growth factors
 - this may influence what factors are available during the follicle cycle

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Summary

- Relationships and respective roles of the adult dermal papilla and hair bulb matrix epithelium, appear similar to those of their embryonic precursors
- The dermal component plays a dominant role in both settings but must be primed by the epidermis to attain its full inductive potential

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