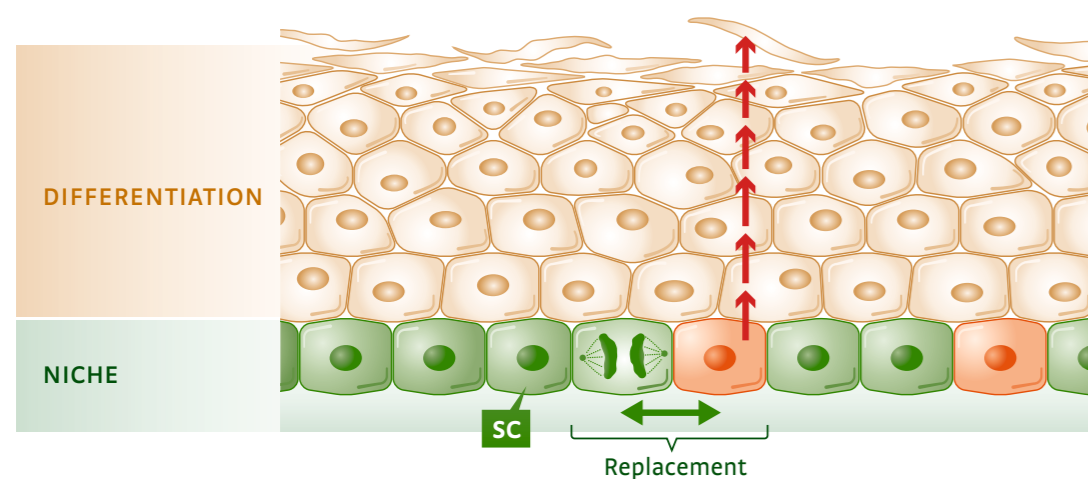


Adult tissue stem cells

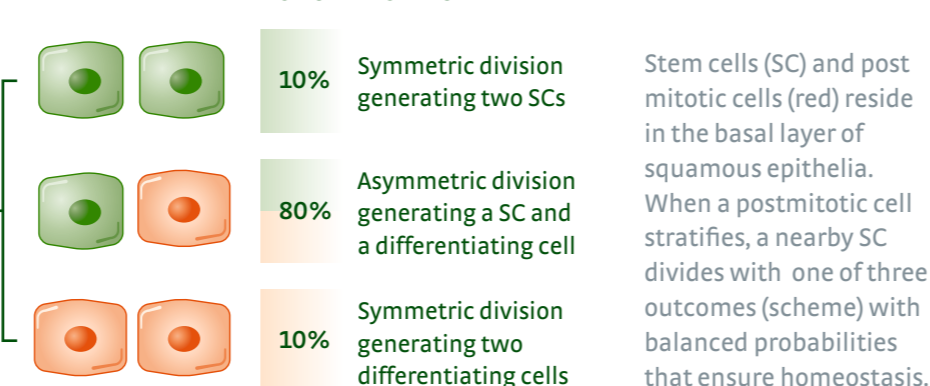
By Agnieszka Wabik & Phil Jones

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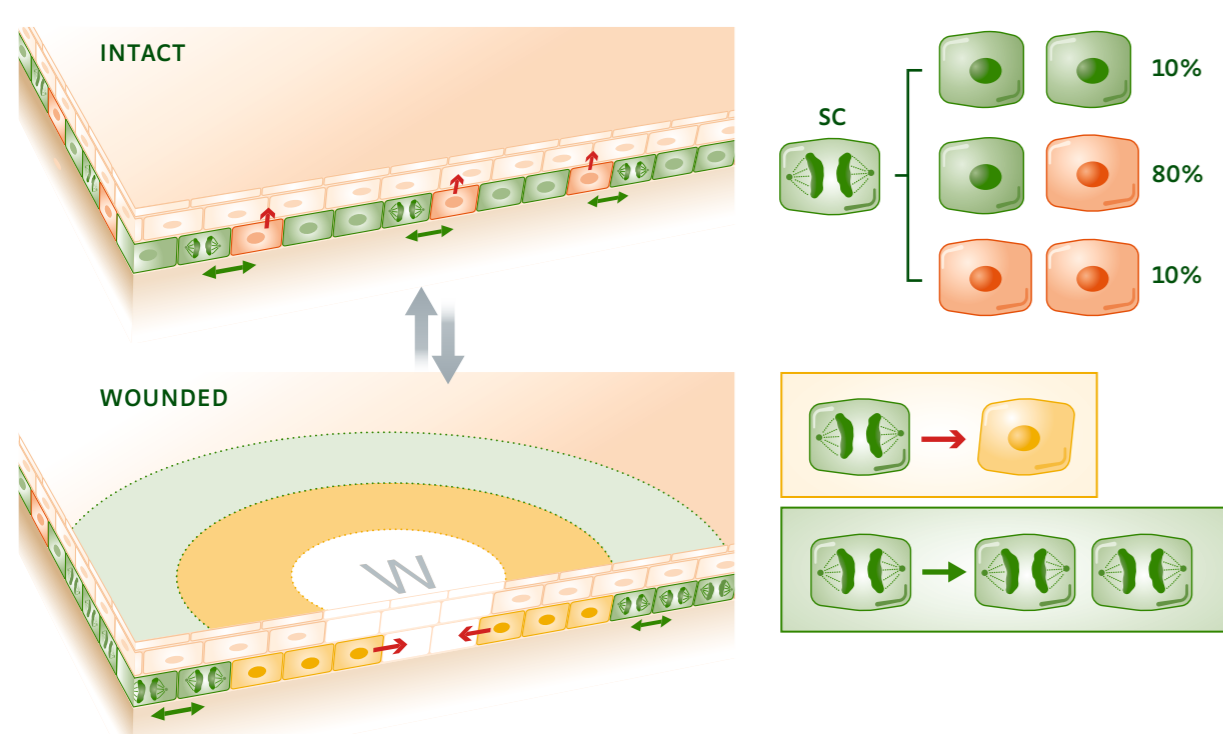
Squamous epithelia



POPULATION ASYMMETRY

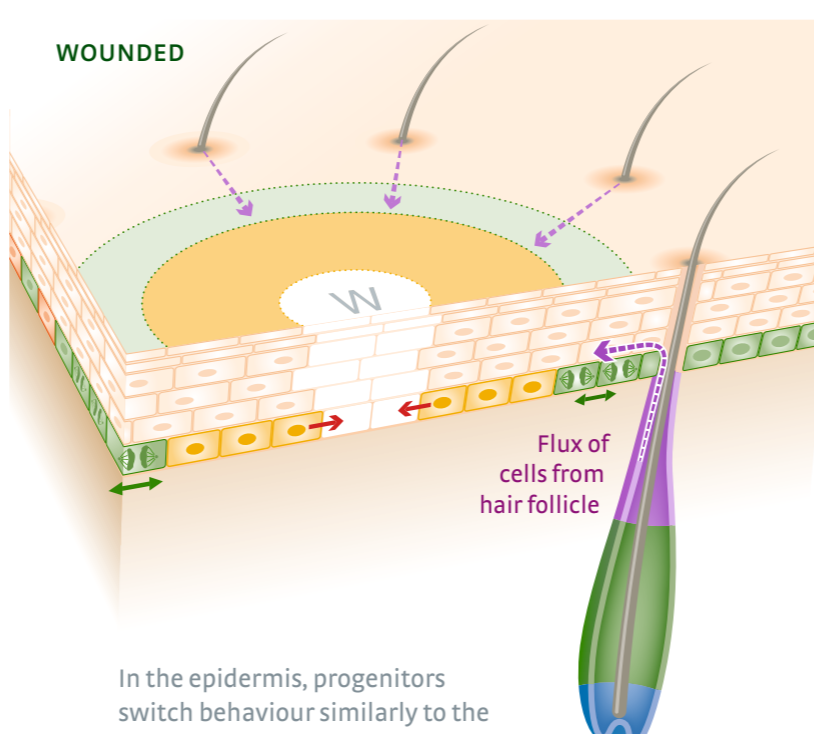


Wound repair in oesophageal epithelium



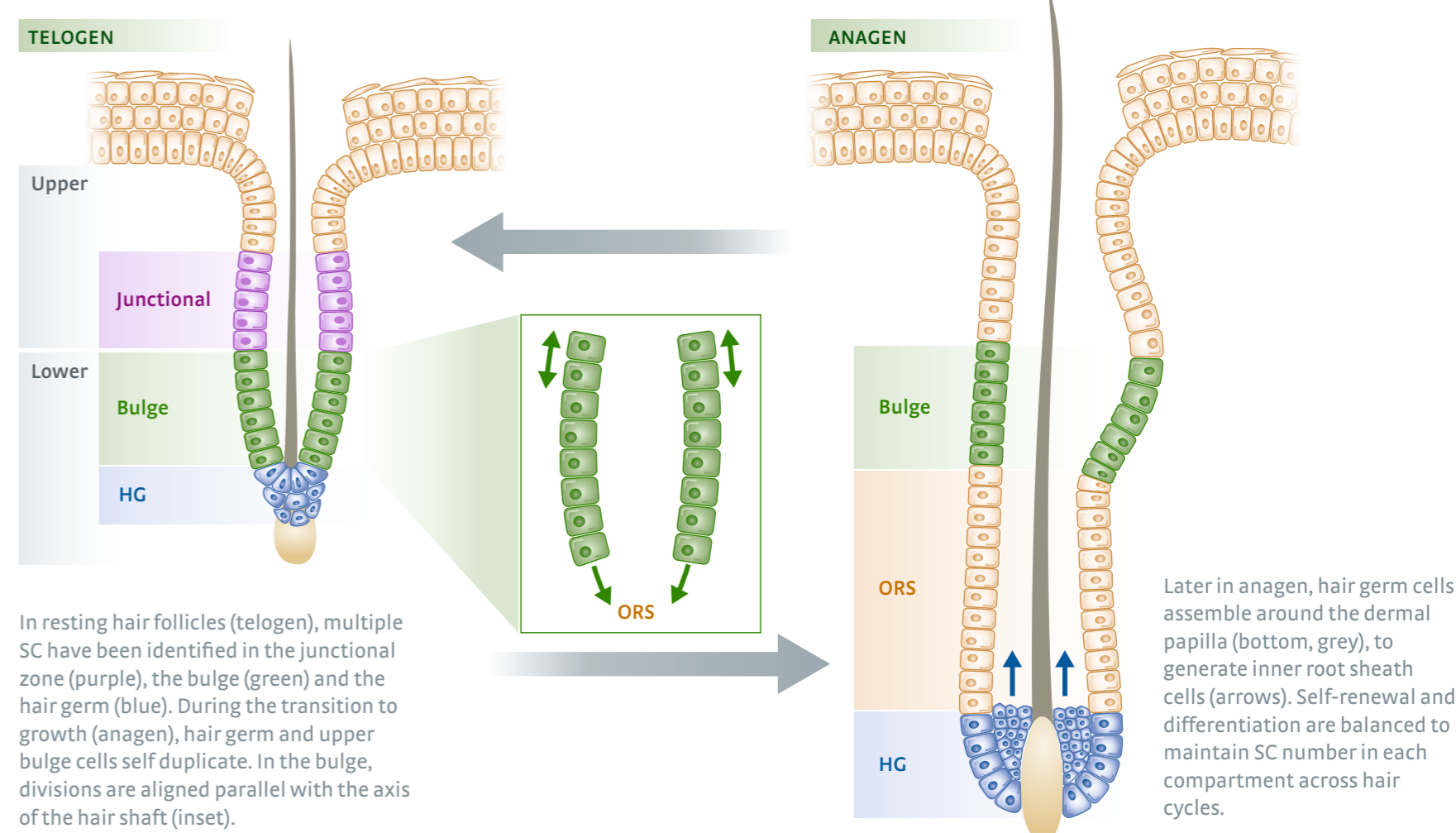
Progenitors adjacent to the wound (yellow) exit the cell cycle and migrate towards the defect (w). Behind this 'migrating front' progenitors (green) generate excess tissue to repair the epithelium. After wound closure, progenitor behaviour switches back to homeostasis.

Wound repair in epidermis

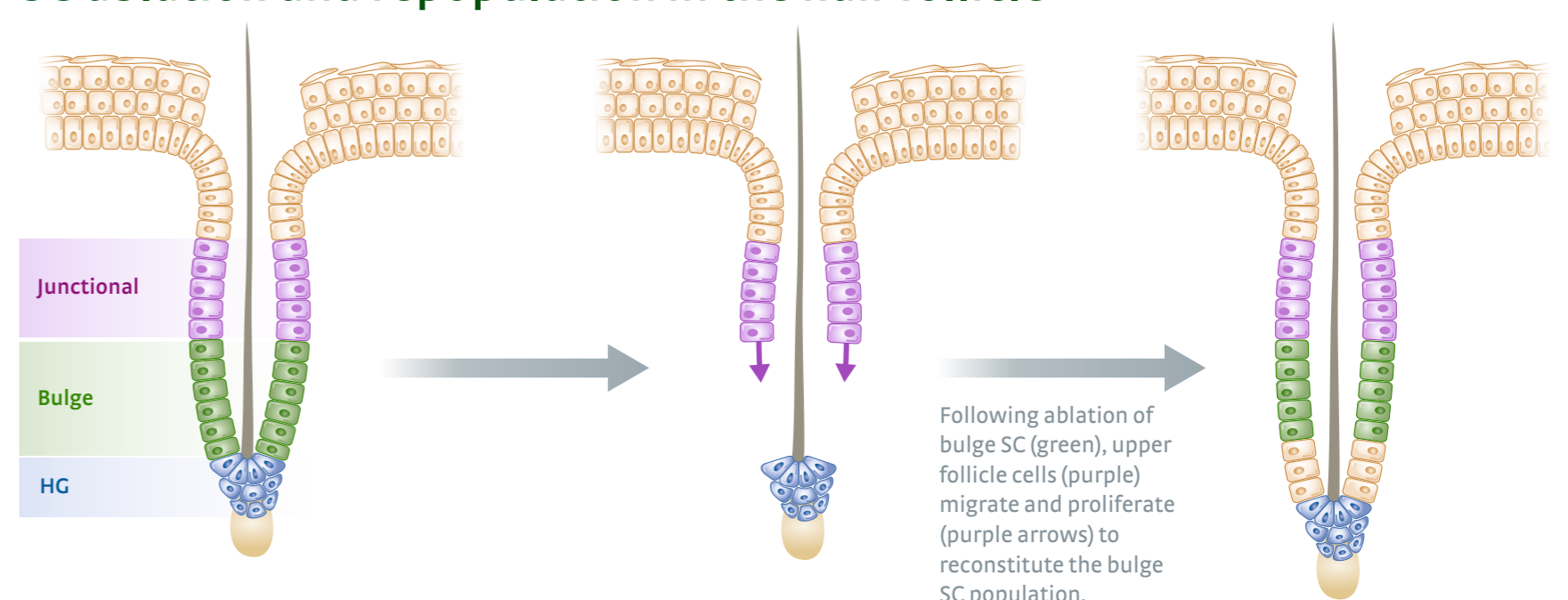


In the epidermis, progenitors switch behaviour similarly to the oesophagus. Wound repair is further supported by a flux of cells from hair follicles (purple arrows).

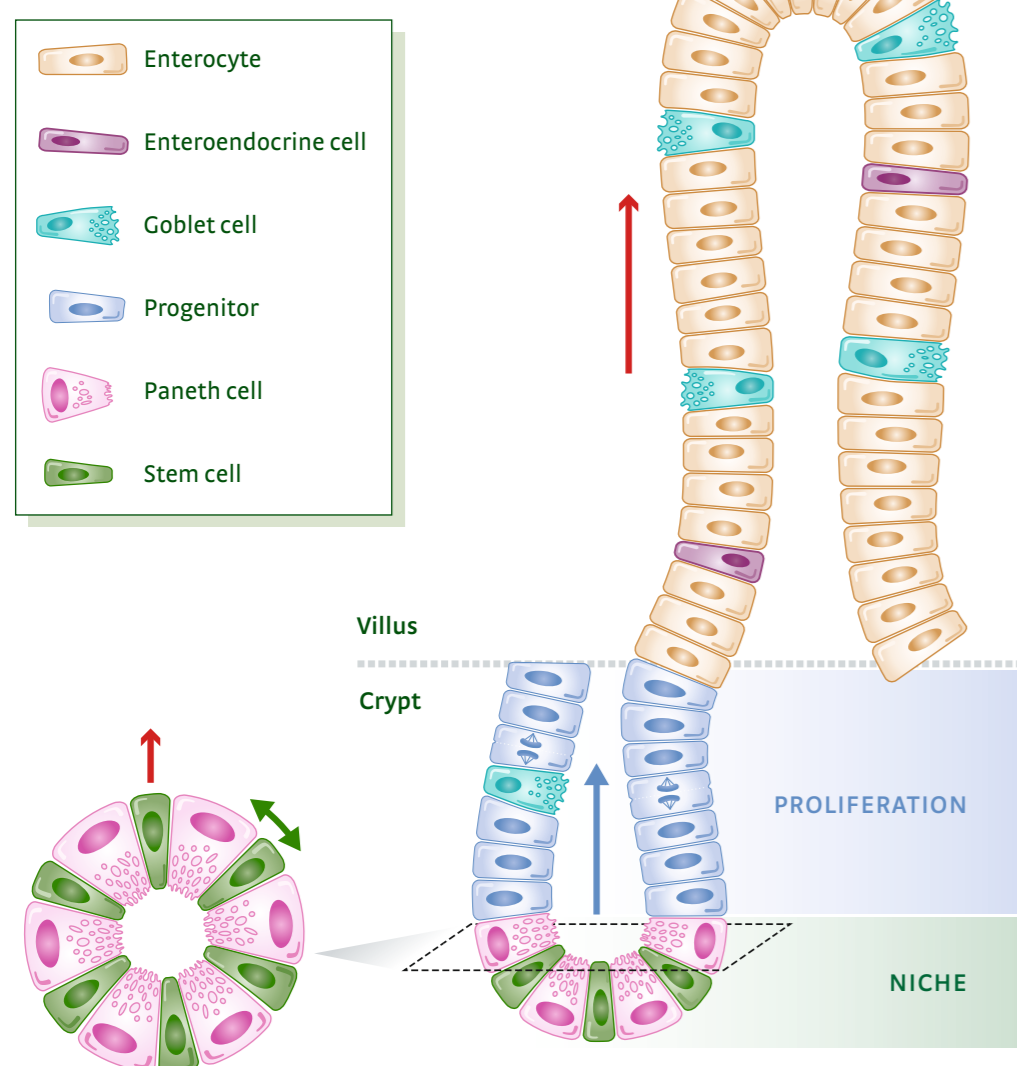
Hair follicle



SC ablation and repopulation in the hair follicle

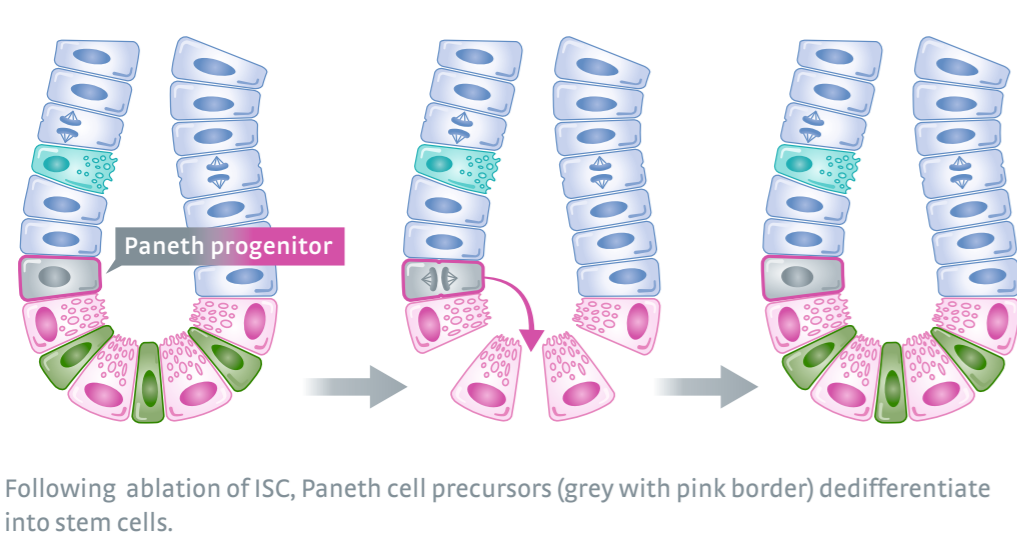


Intestinal epithelium



Intestinal SCs (ISCs, green) in their crypt base niche sustain all epithelial lineages. Inset: simplified view of the niche, illustrating close proximity of ISCs and supporting Paneth cells (purple). Self-duplicating ISCs replace differentiating cells exiting the niche.

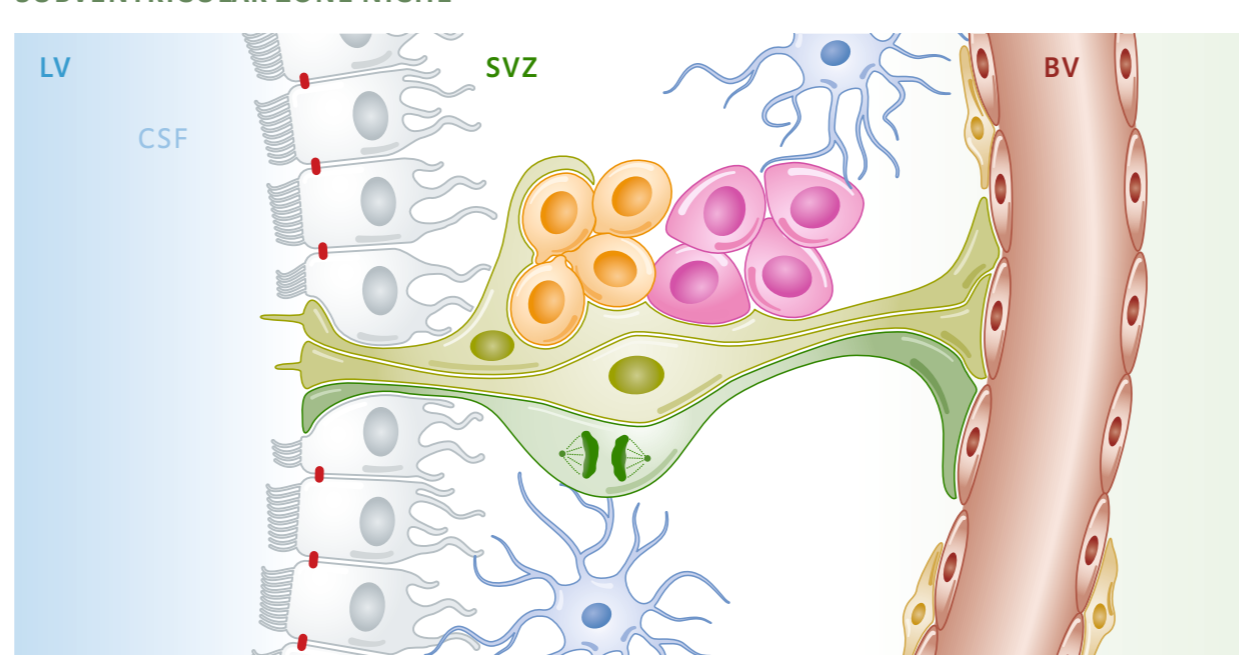
Reconstitution of intestinal SCs by differentiating progenitor cells



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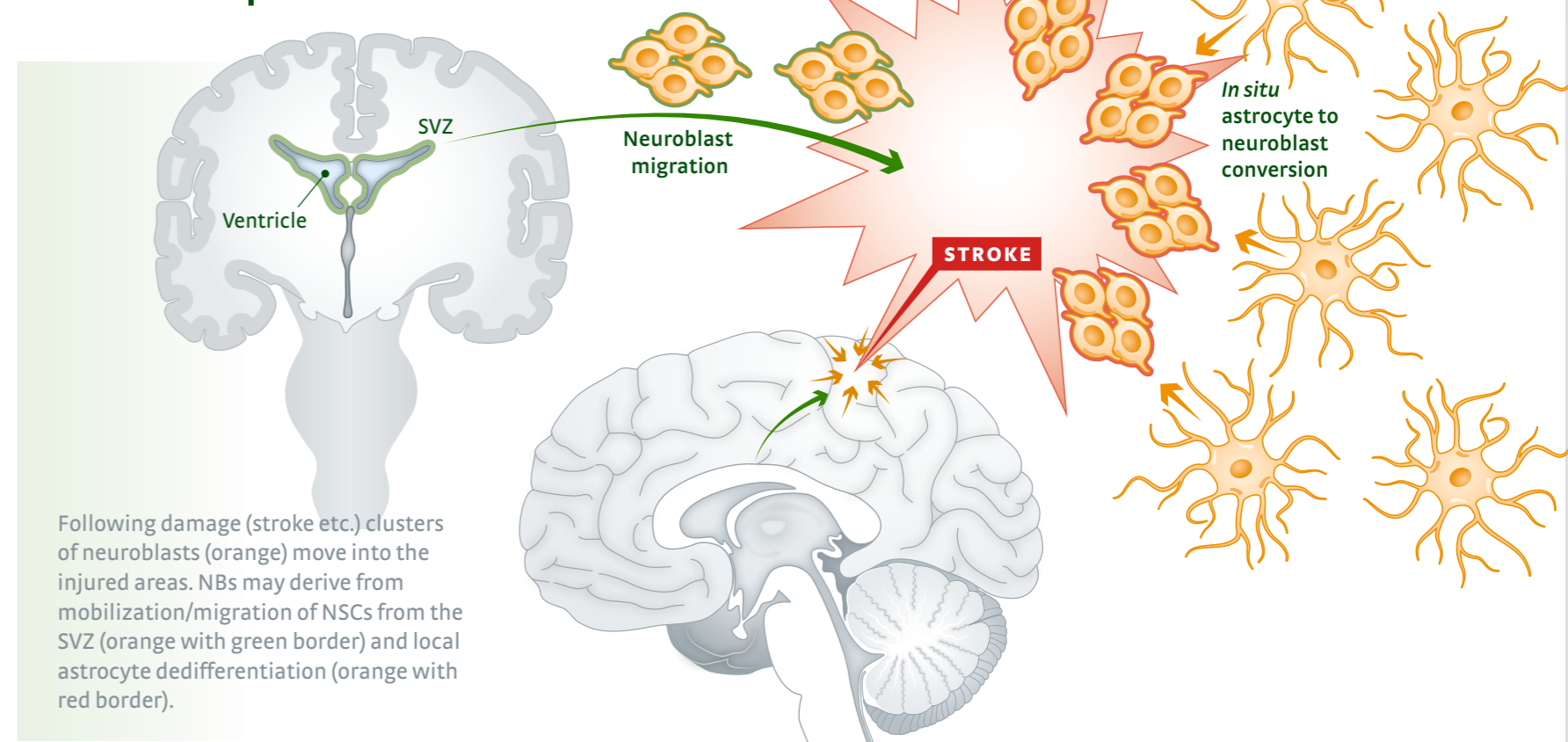
Neural stem cells

SUBVENTRICULAR ZONE NICHE

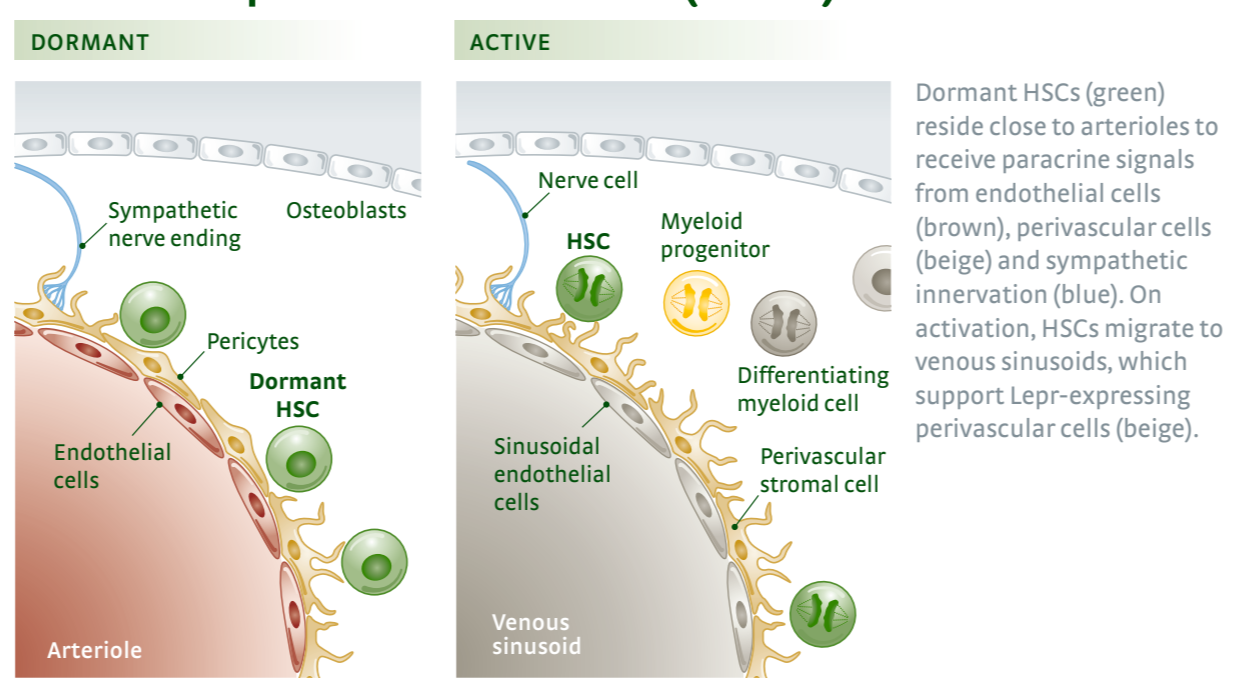


Quiescent Neural SC (light green) reside in the sub ventricular zone niche. They extend processes into the cerebrospinal fluid (blue, left) and to endothelial cells (brown, right) that line blood vessels. Transit amplifying cells (pink) and neural precursor cells (orange) are adjacent to NSCs. Figure adapted from (Silva-Vargas et al, 2013).

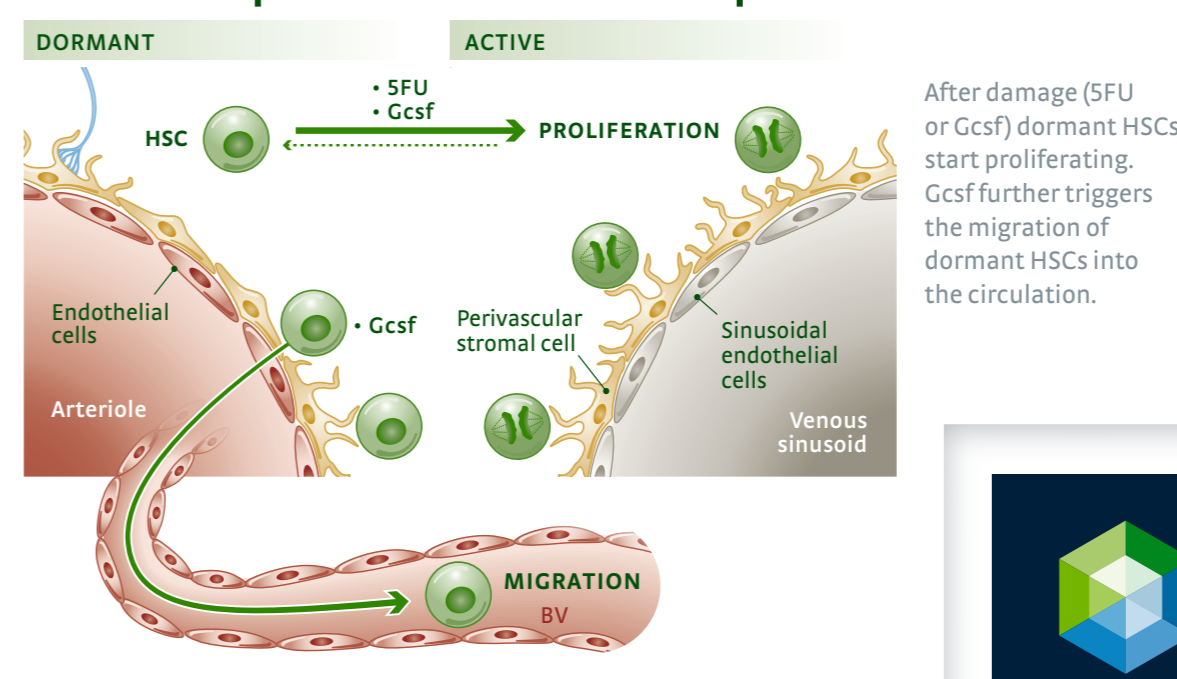
Neural responses to stroke



Haematopoietic stem cells (HSCs)



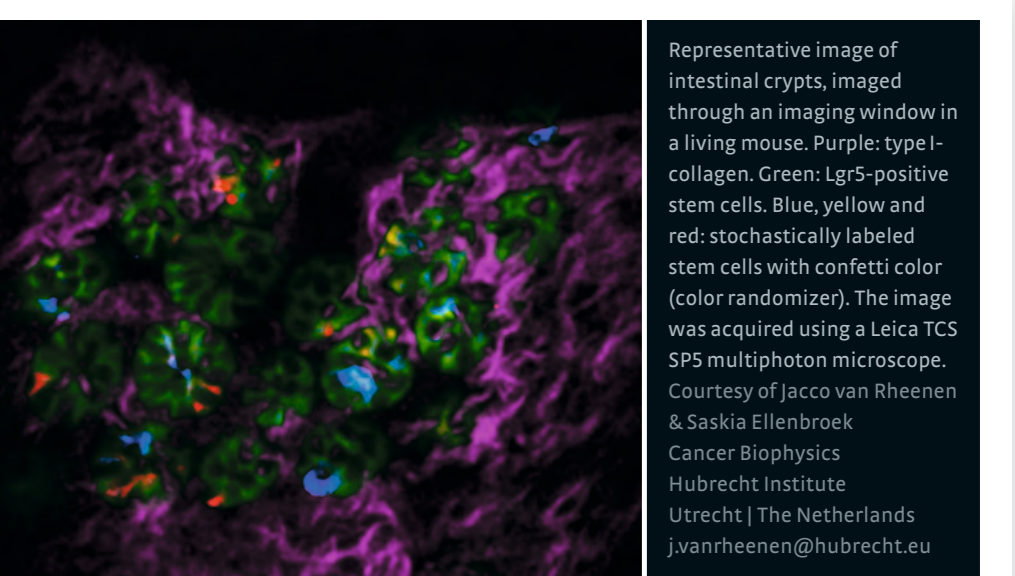
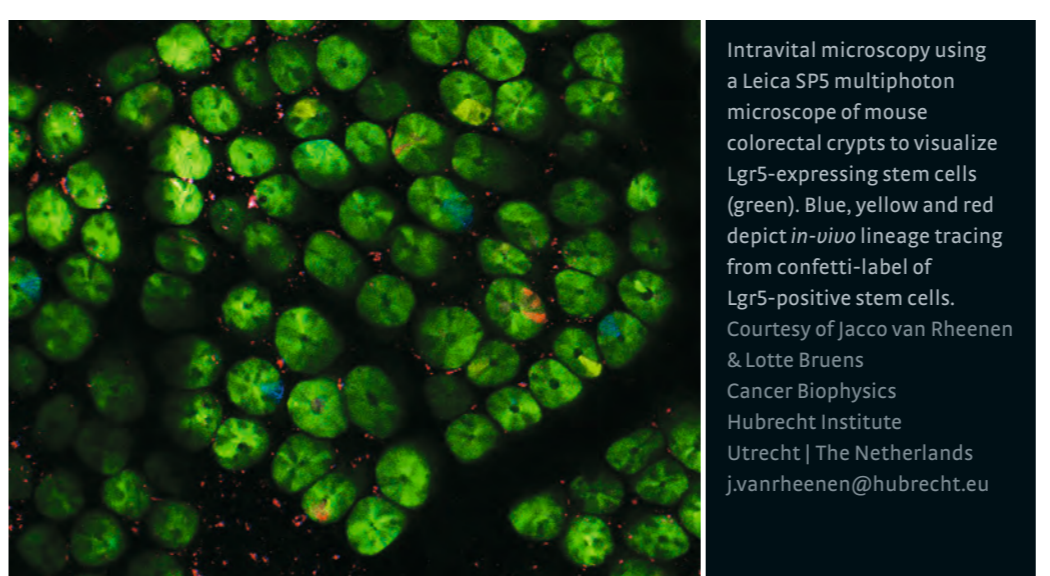
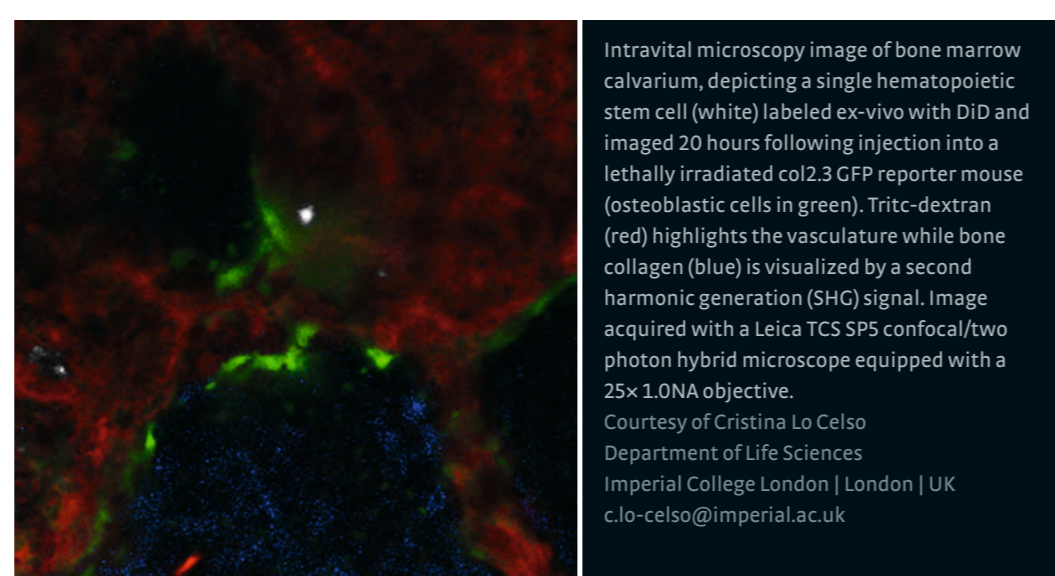
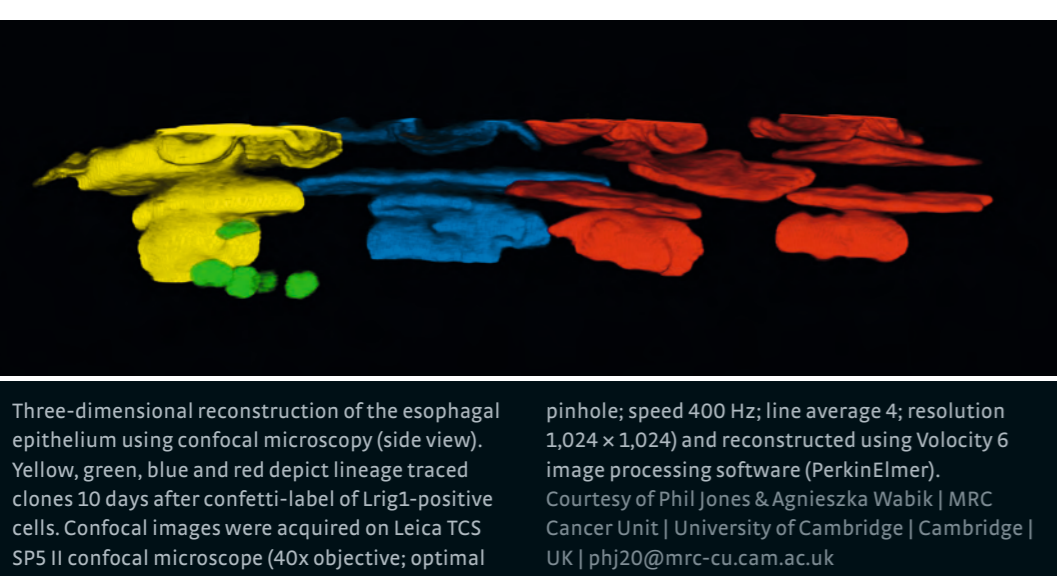
Haematopoietic SC stress responses



The graphics and texts on this poster have been adapted from a review published in *The EMBO Journal*: Wabik A & Jones PH (2015) **Switching roles: The functional plasticity of adult tissue stem cells.** *The EMBO Journal* (doi:10.15252/embj.201490386) Published March 2015.

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