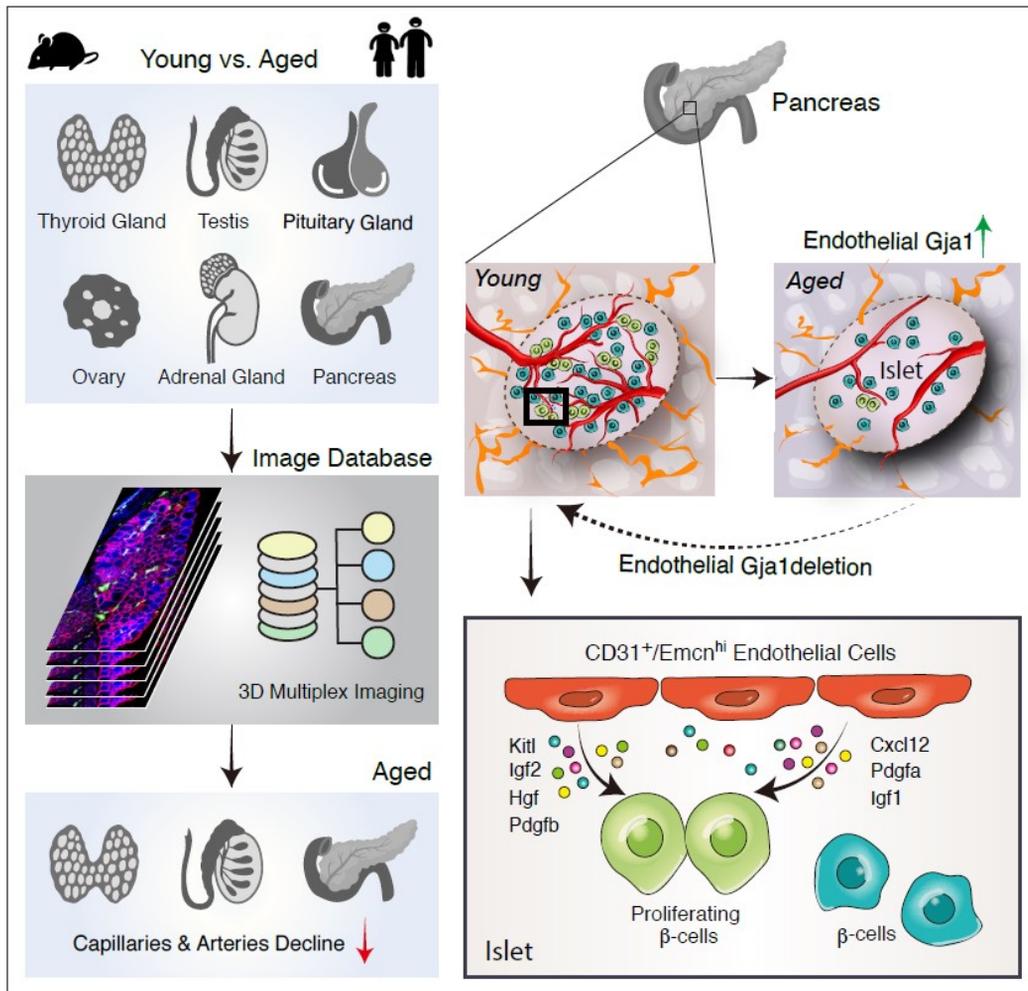


Decreased blood vessel density and endothelial cell subset dynamics during ageing of the endocrine system.

Junyu Chen, Luciana Lippo, Rossella Labella, Sin Lih Tan, Brian D Marsden, Michael L Dustin, Saravana K Ramasamy, Anjali P Kusumbe.

EMBO J. Jan 2021 doi: 10.15252/embj.2020105242.



Key findings

1. Single-cell resolution 3D imaging of young versus aged endocrine glands provides new insights into the ageing of endocrine tissues.
2. Ageing leads to loss of capillary and artery numbers but not the perivascular cells in pancreas, testis and thyroid gland with age in mice and humans.
3. Angiogenesis and beta-cell expansion are coupled by a molecularly and functionally distinct age-dependent subset of endothelial cells.
4. Endothelial Gja1 leads to the reduction of beta-cell proliferation and induces vascular ageing.
5. Over >1000 3D multicolour volumes available as a free resource for download and exploration for research.

Links to website/social media:

<https://www.ndorms.ox.ac.uk/research-groups/kusumbe-group-tissue-and-tumor-microenvironments>

Twitter: @Kusumbelab