October 2024: Paper-of-the-month

Wälchli, T., Ghobrial, M., Schwab, M. *et al.* **Single-cell atlas of the human brain vasculature across development, adulthood and disease.** *Nature* 632, 603–613 (2024). https://doi.org/10.1038/s41586-024-07493-y

Pan, X., Li, X., Dong, L. *et al.* **Tumour vasculature at single-cell resolution.** *Nature* 632, 429–436 (2024). https://doi.org/10.1038/s41586-024-07698-1

We're back after the summer break with two groundbreaking studies by *Wälchli et al.* (1) and *Pan et al*. (2)., both published in *Nature* in July 2024 and which we couldn't keep from you any longer! Both studies performed single-cell RNA sequencing to study endothelial cell heterogeneity, either in the human developing, adult and diseased brain (1) or across 31 cancer types (2) from over 117-372 samples, respectively, thereby generating two in depth molecular atlases of the human vasculature. Both papers highlight the activation of developmental programs in the neoangiogenic (pathologic) vasculature. Furthermore, both used diffusion maps to study lineage relationships in arteriovenous specification. Finally, they also studied cell-cell interaction between ECs and the neurovascular unit (1) or the tumor microenvironment (2). Altogether, both studies can be used as powerful resources for future investigations and hence provide two useful, large and extensive datasets for the vascular research community.