

# Sequencing the Blood Brain Barrier in Alzheimer's Disease

Gabriel Mateus Bernardo Harrington

*Research Associate / Webber Group*

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Founding funders:



Medical  
Research

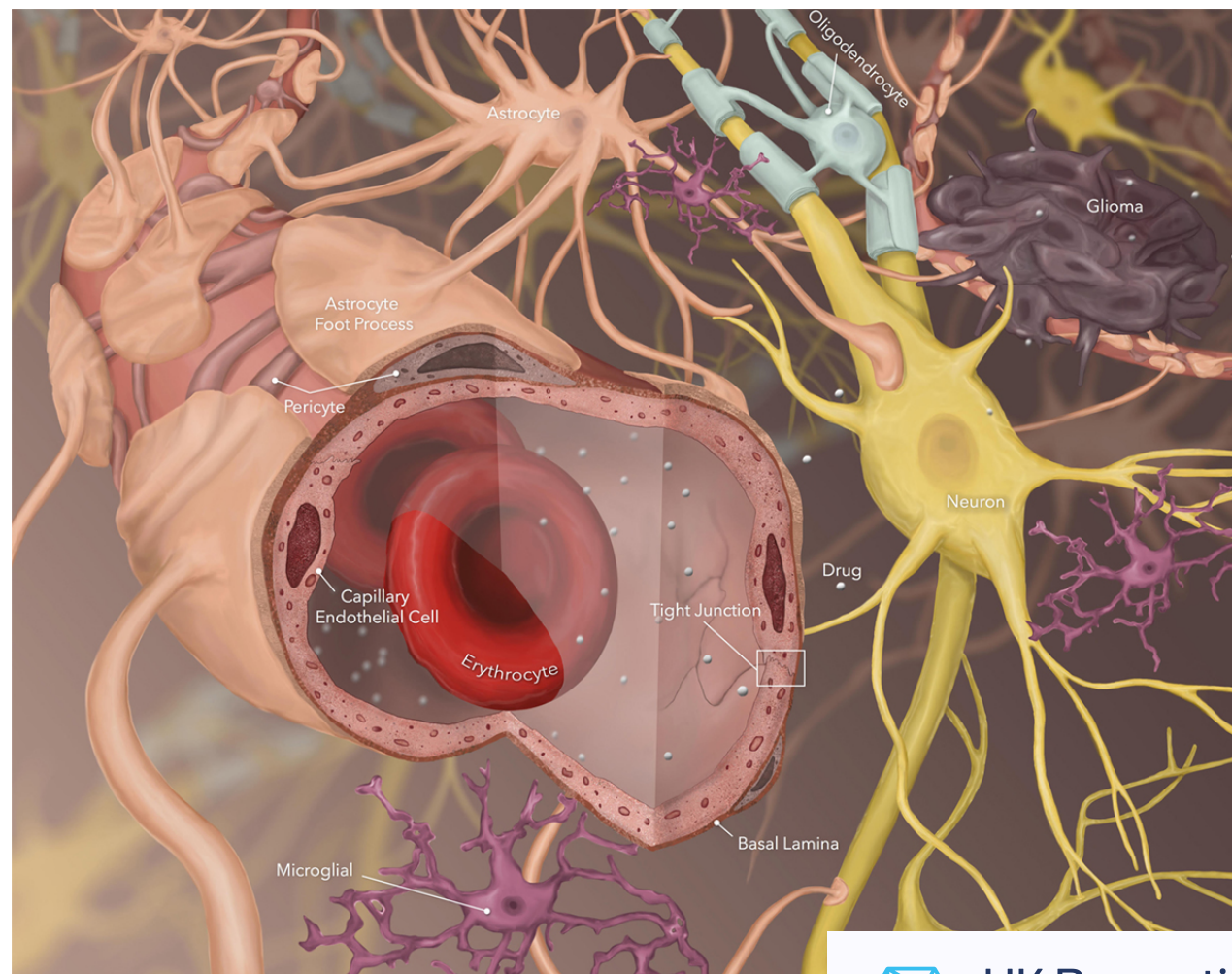


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Made with the [UKDRI Quarto template](#) by [GMBH](#). Code available on GitHub [here](#). Licensed under [CC-BY-SA](#)

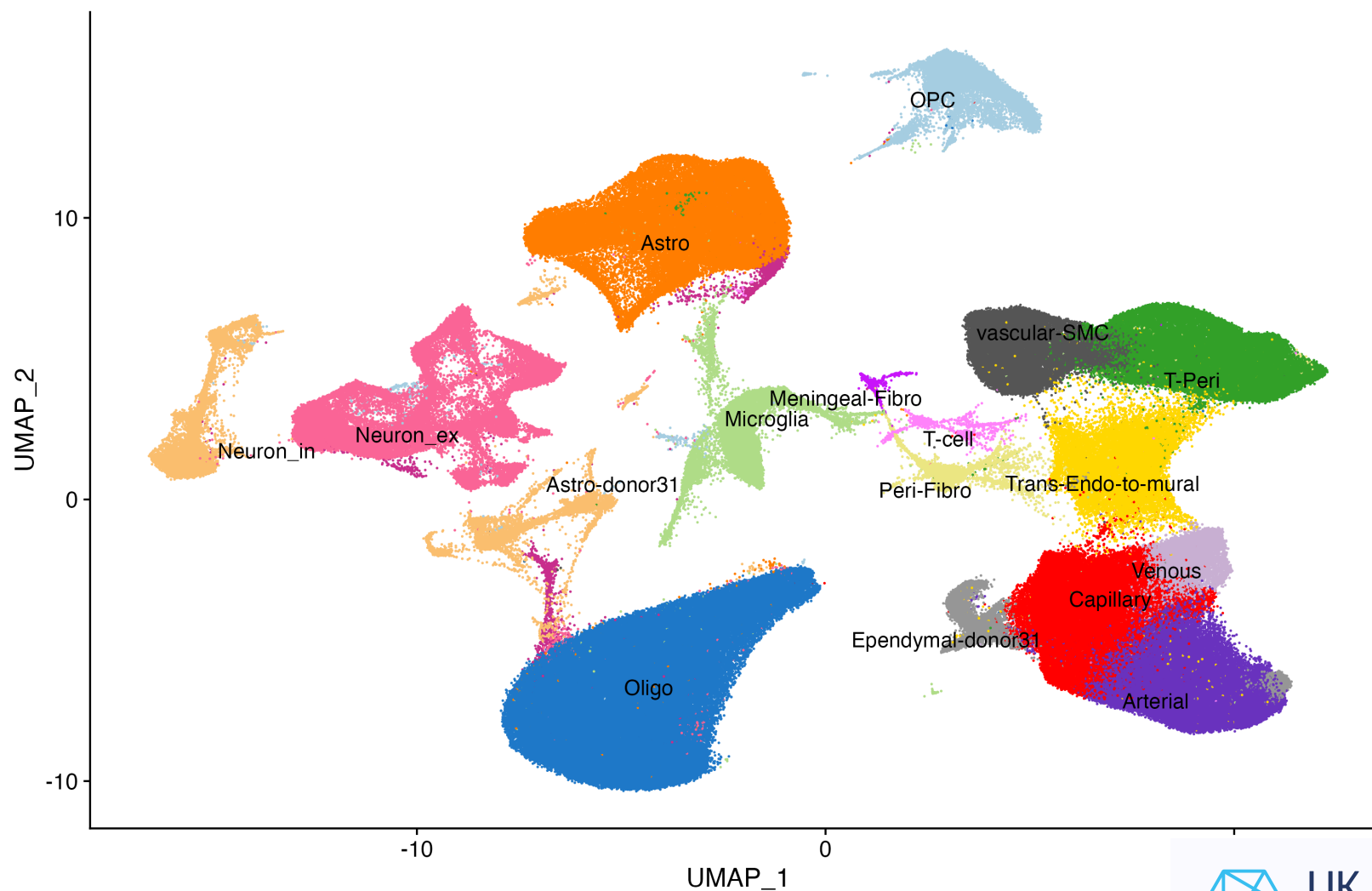
# Project design

- Sequencing post-mortem human pre-frontal cortex
- 20 cases and 20 controls
- Sample prep that separates the vascular fraction and the parenchymal fraction of the tissue
  - So 2 per donor - 80 samples sequenced
- 10X seq
- Processed data with **scFlow**



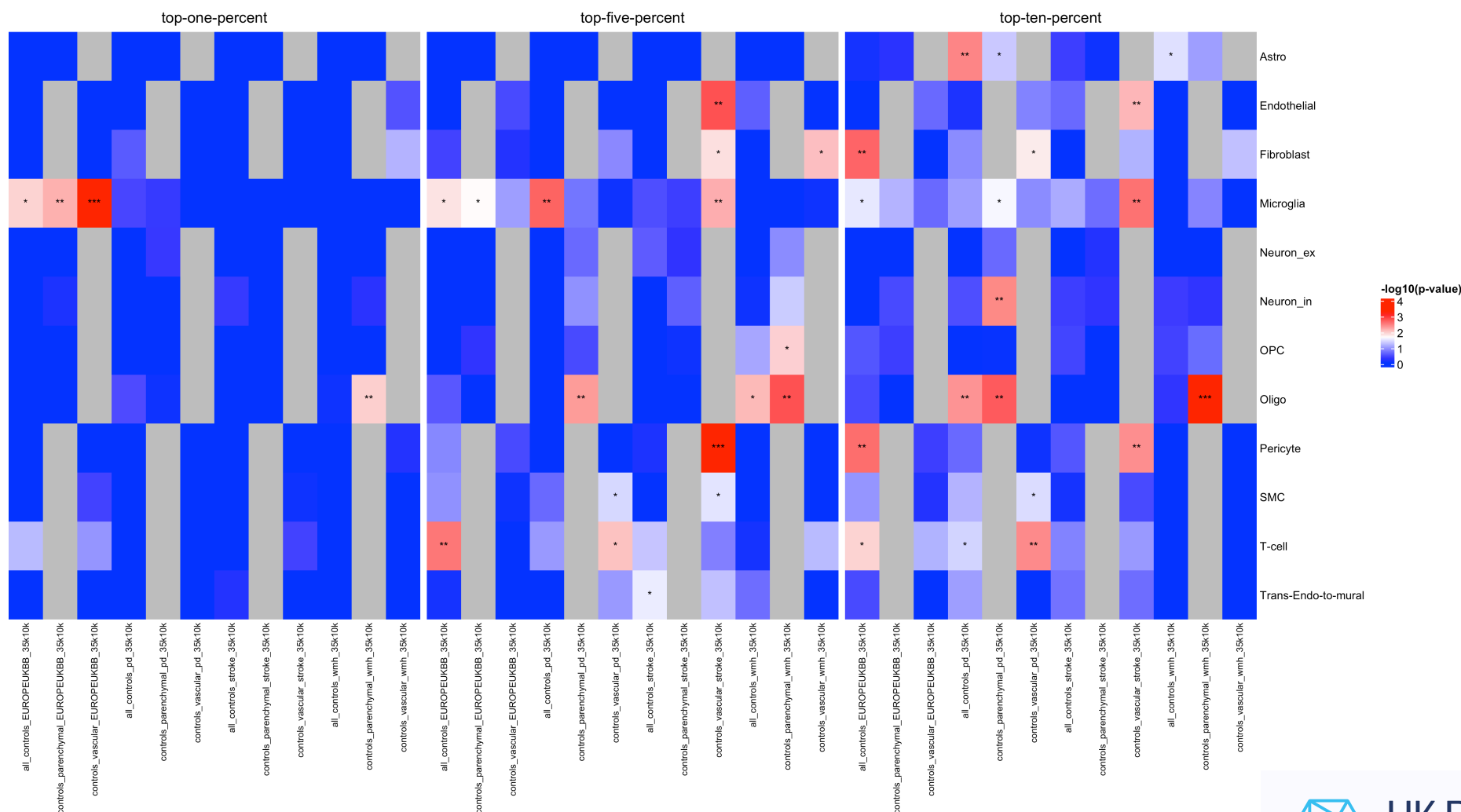
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# UMAP

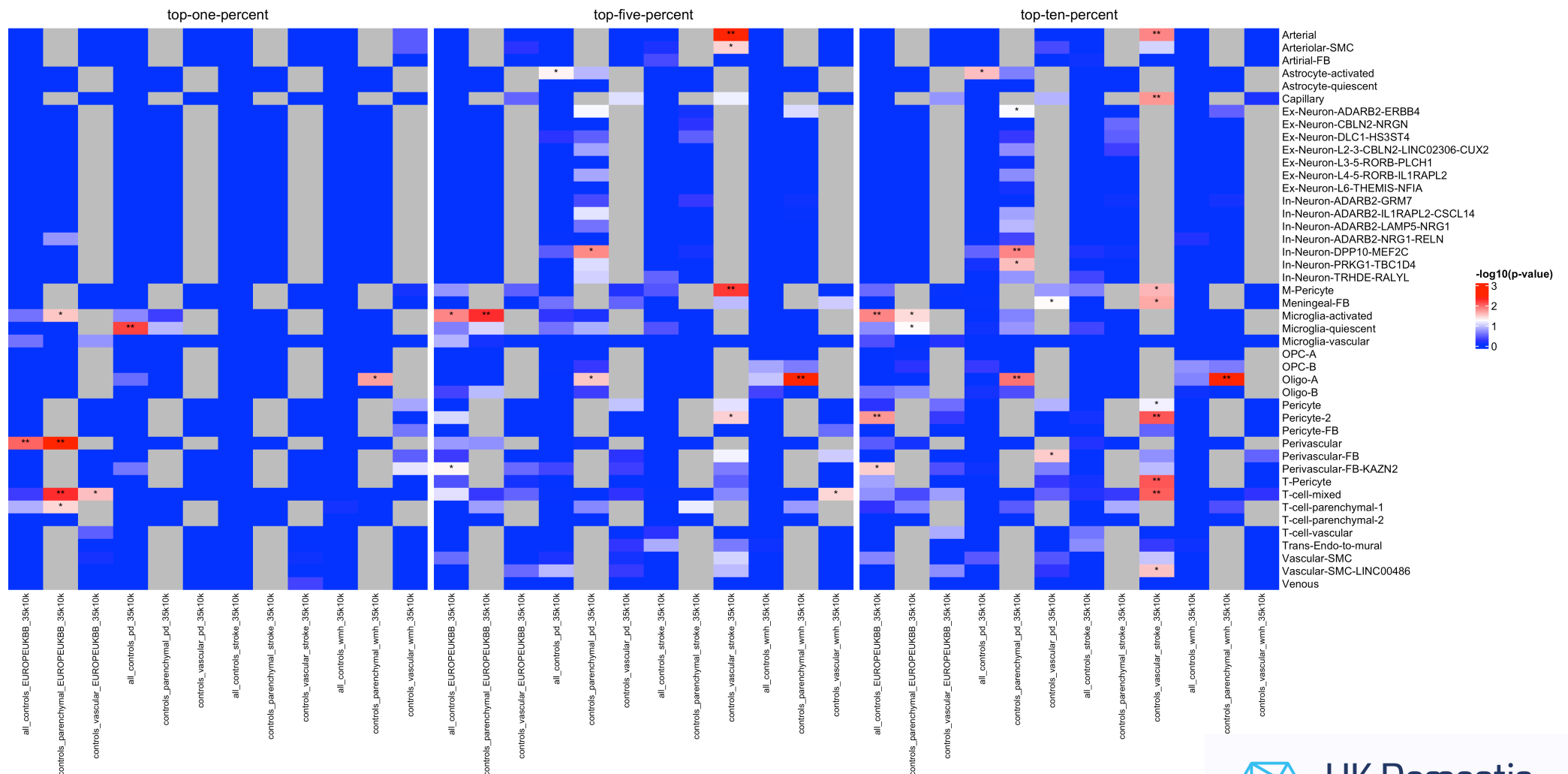


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# MAGMA - level 1 celltypes



# MAGMA - level 2 celltypes



# Thanks for listening

- If you know anything about that odd endothelial/mural cluster please talk to me!
- Slides are here: [https://h-mateus.github.io/presentations\\_dri-ecr-vascular\\_sequencing-the-bbb-in-ad\\_2024-03-14/2024-02-26\\_ecr-vascular-meeting\\_sequencing-the-bbb-in-ad.html](https://h-mateus.github.io/presentations_dri-ecr-vascular_sequencing-the-bbb-in-ad_2024-03-14/2024-02-26_ecr-vascular-meeting_sequencing-the-bbb-in-ad.html)



# References

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Warren, Katherine Elizabeth. 2018. “Beyond the Blood:brain Barrier: The Importance of Central Nervous System (CNS) Pharmacokinetics for the Treatment of CNS Tumors, Including Diffuse Intrinsic Pontine Glioma.” *Frontiers in Oncology* 8.

<https://www.frontiersin.org/articles/10.3389/fonc.2018.00239>.



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