



How does SARS CoV-2 infect blood vessels?

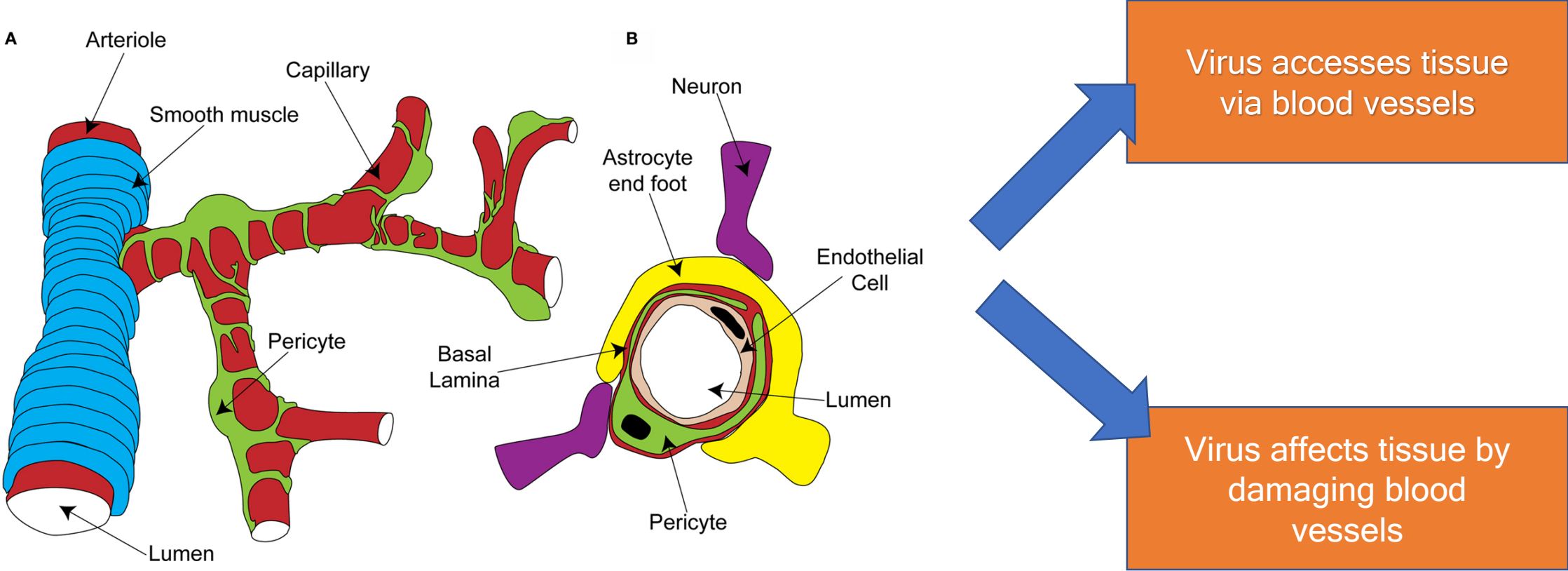
Catherine Hall

Luca Biasetti

Ed Wright

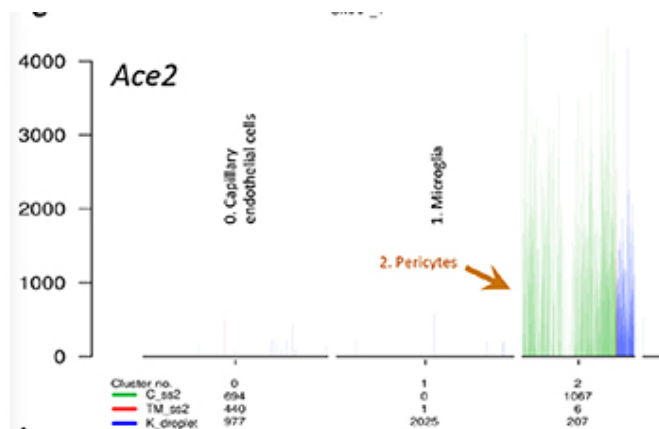
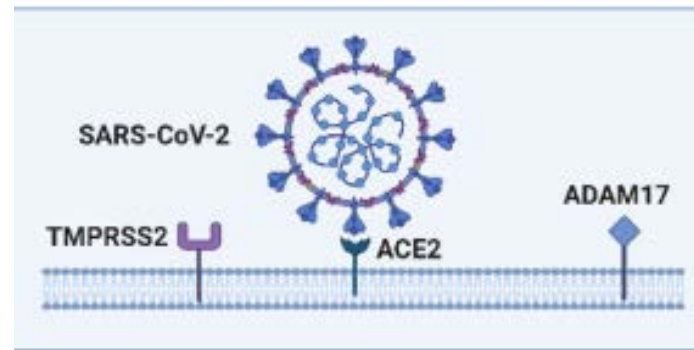
Louise Serpell

Vasculature conduit for SARS CoV-2 infection

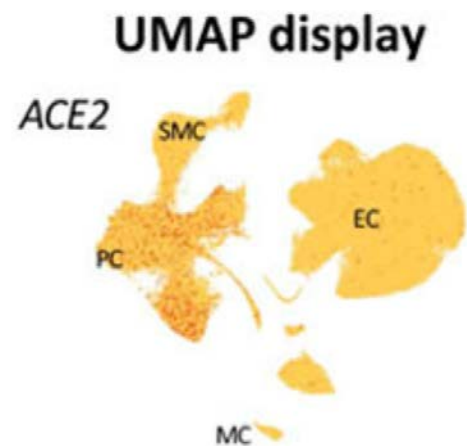


Hamilton, Attwell & Hall (2010)

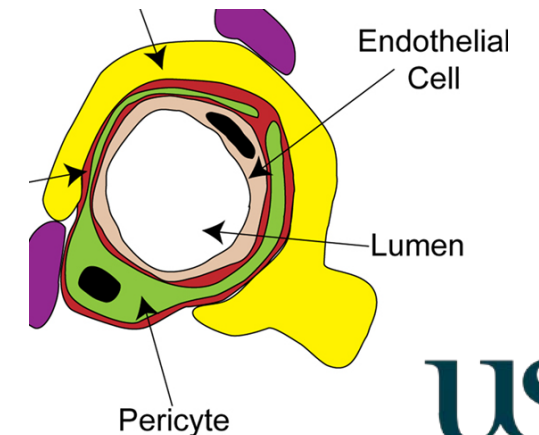
Can SARS CoV-2 infect vascular cells?



He et al (2020)




McCracken et al (2021)



Factors that affect endothelial permeability might increase COVID19 severity

APOE e4 Genotype Predicts Severe COVID-19 in the UK Biobank Community Cohort

Chia-Ling Kuo, PhD, Luke C Pilling, PhD, Janice L Atkins, PhD, Jane A H Masoli, MBChB, João Delgado, PhD, George A Kuchel, MD, David Melzer, MBBCh, PhD 

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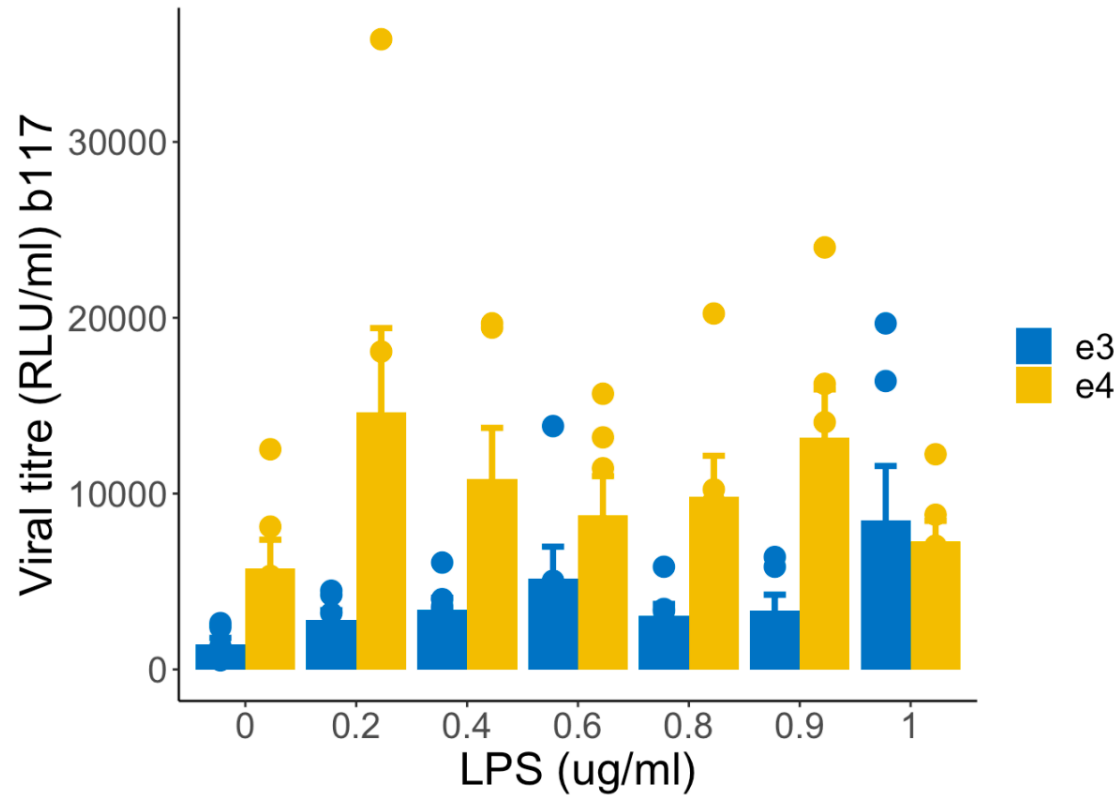
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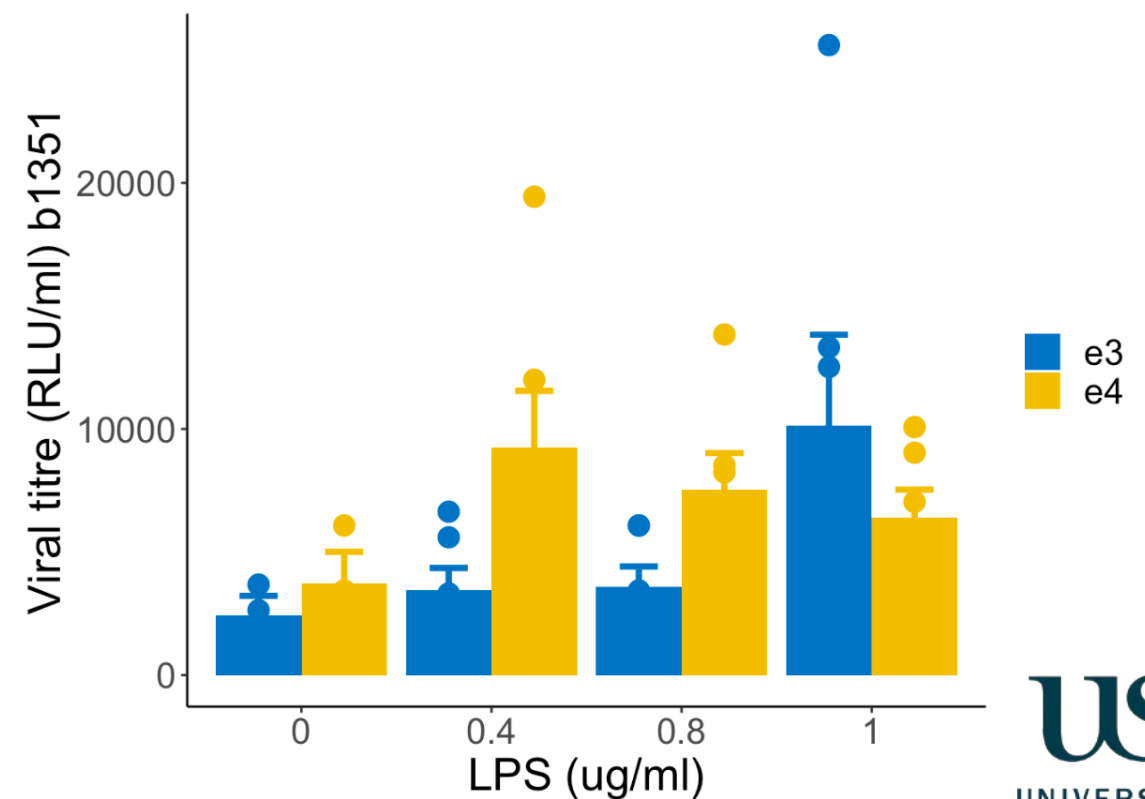
Do these factors also affect infectivity of vascular cells with SARS CoV-2?

LPS and APOE genotype increase SARS CoV-2 infectivity of mouse endothelial cells

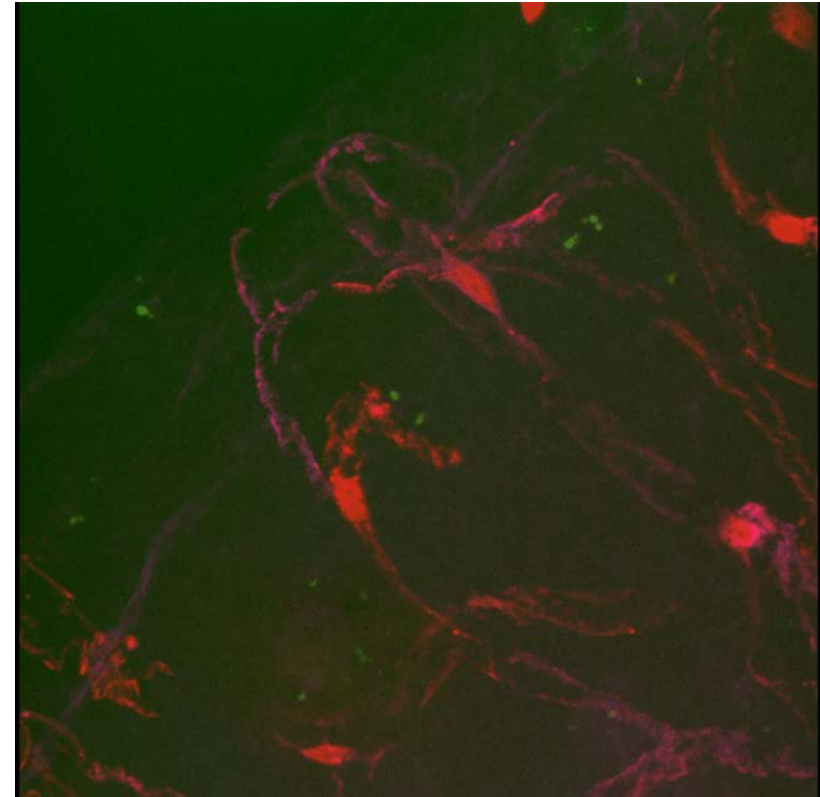
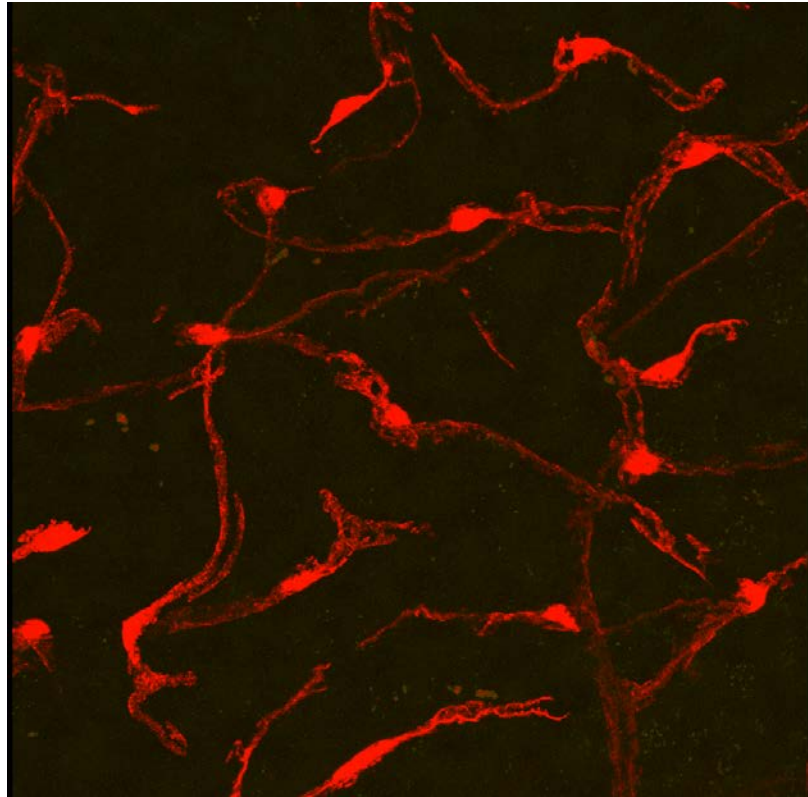
B.1.1.7



B.1.351



In vivo infection with B.1.1.7 of APOE4/4 mouse brain



Next steps

- Cultured mouse pericytes, human endothelial cells and pericytes with LPS.
- In vivo infectivity - cell colocalization, different organs, effect of LPS



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