**Nottgroup**

**Kevin Ziegler**

**Bio:** I am a graduate student in the Department of Brain Sciences at Imperial College London sponsored by the UK Dementia Research Institute (UKDRI). Before starting my PhD in the Nott lab, I completed both my bachelor’s and master’s degrees in biotechnology at Hochschule Mannheim, University of Applied Sciences. During this time, I took the opportunity to gain research experience at the Broad Institute of Harvard and MIT, the Centro de Investigaciones Biologicas, and most recently at the German Cancer Research Center (DKFZ). After various experiences in research, I realised that my curiosity was primarily focused on deciphering the many questions surrounding the brain and applying the latest multi-omics technologies to answer them. Having witnessed my grandfather suffer from vascular dementia for almost a decade, I dedicate my PhD to researching the vascular component of the brain in the context of Alzheimer's disease (AD).

Recognizing that AD is predominantly influenced by genetics, particularly with a significant portion of AD genetic risk variants located in non-coding regions, my approach is to investigate the environmentally responsive enhancer landscape of cerebrovascular cell types. By combining various enrichment strategies tailored for cerebrovascular cell types with an epigenetic assay called CUT&Tag, which enables the examination of regulatory elements such as active enhancers across the entire genome, I aim to elucidate at the bulk and single-cell level whether cerebrovascular-specific enhancers are impacted by AD genetic risk variants.