

Background

- *Trypanosoma brucei* causes Human African Trypanosomiasis (HAT)
- Severe disruptions in sleep wake cycle and circadian rhythm are observed during the later stage of infection

Aim: To investigate hypothalamic responses in murine models of infection with trypanosome causing subclinical or clinical infections

Figure 1. *T. b. gambiense* affects circadian behaviour without noticeable clinical symptoms

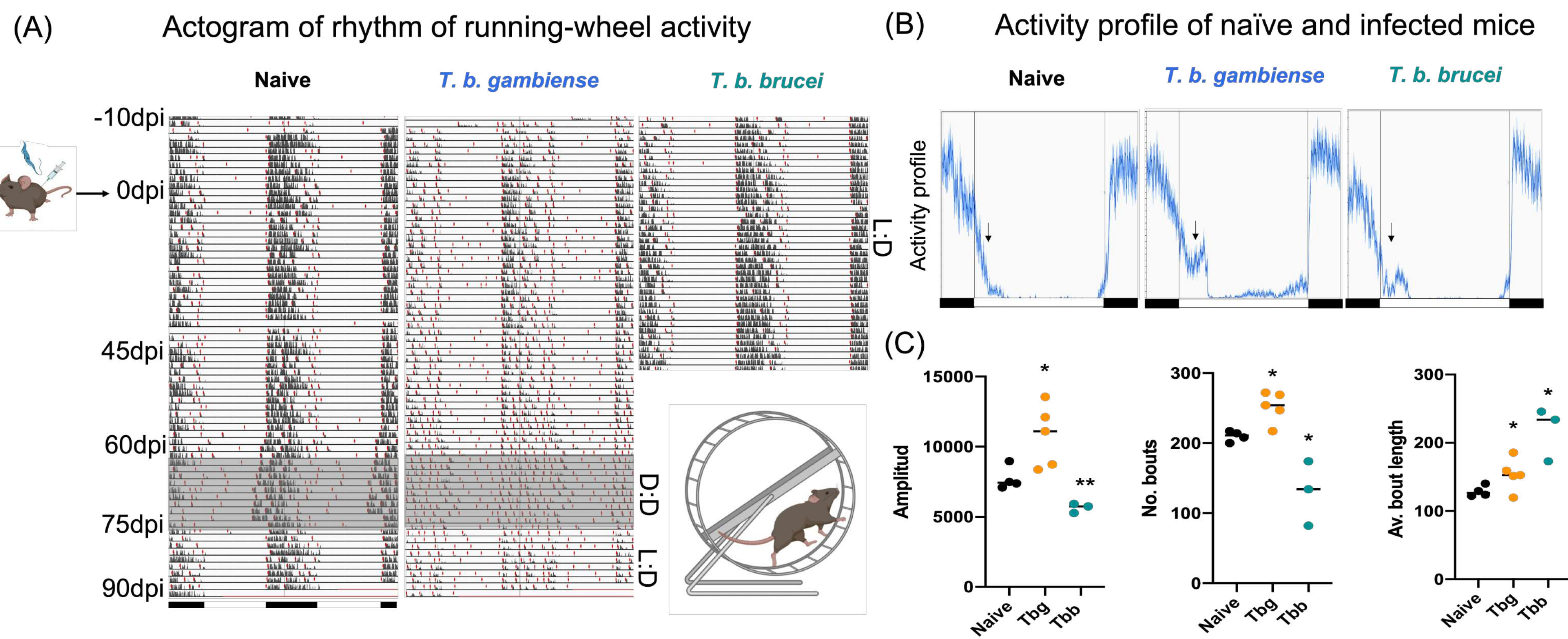


Figure 2. *T. b. gambiense* induces mild microgliosis

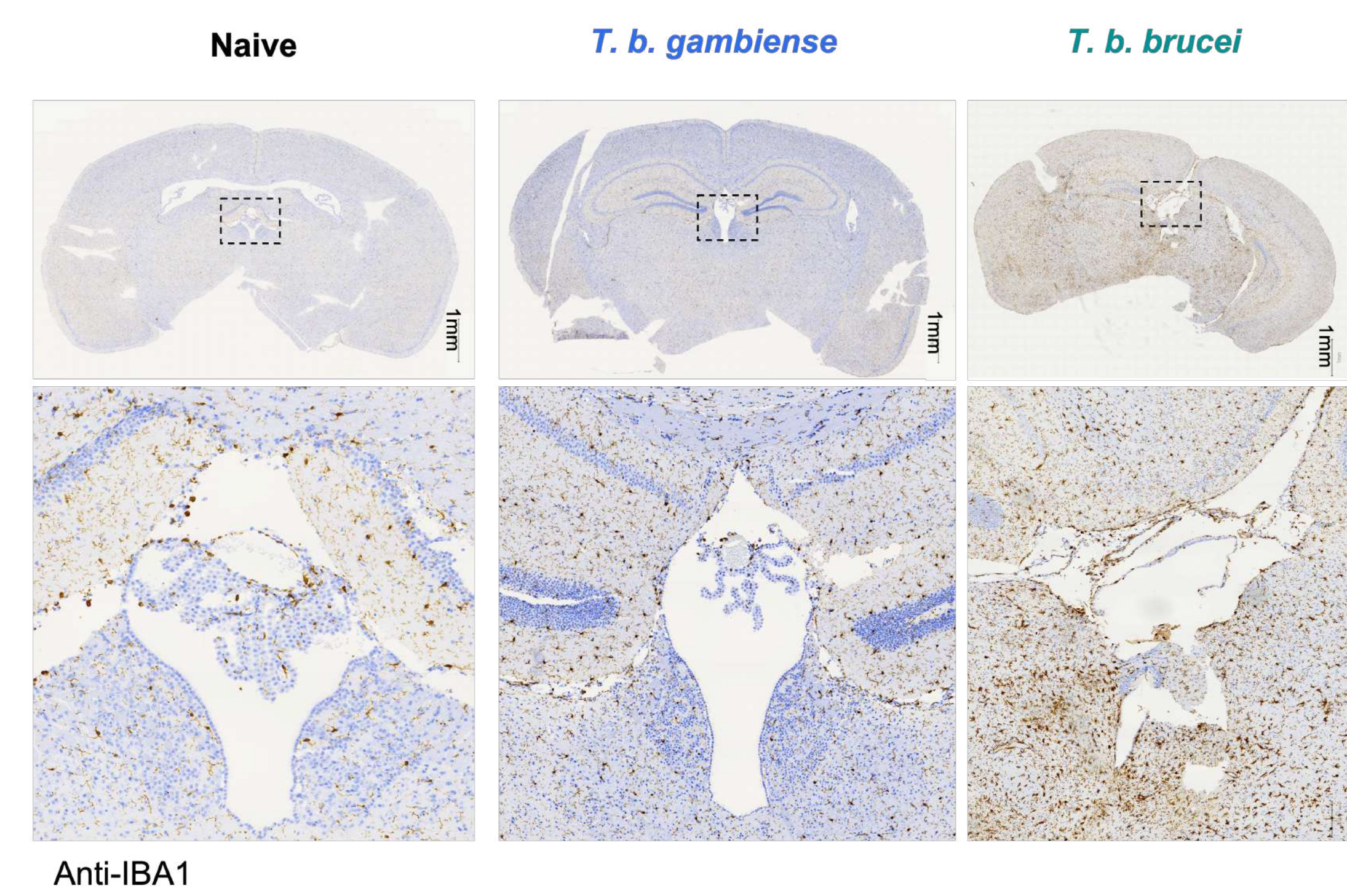


Figure 3. Detection of immune and peripheral cells in mice hypothalamus infected with *T. brucei gambiense* and *T. brucei brucei*

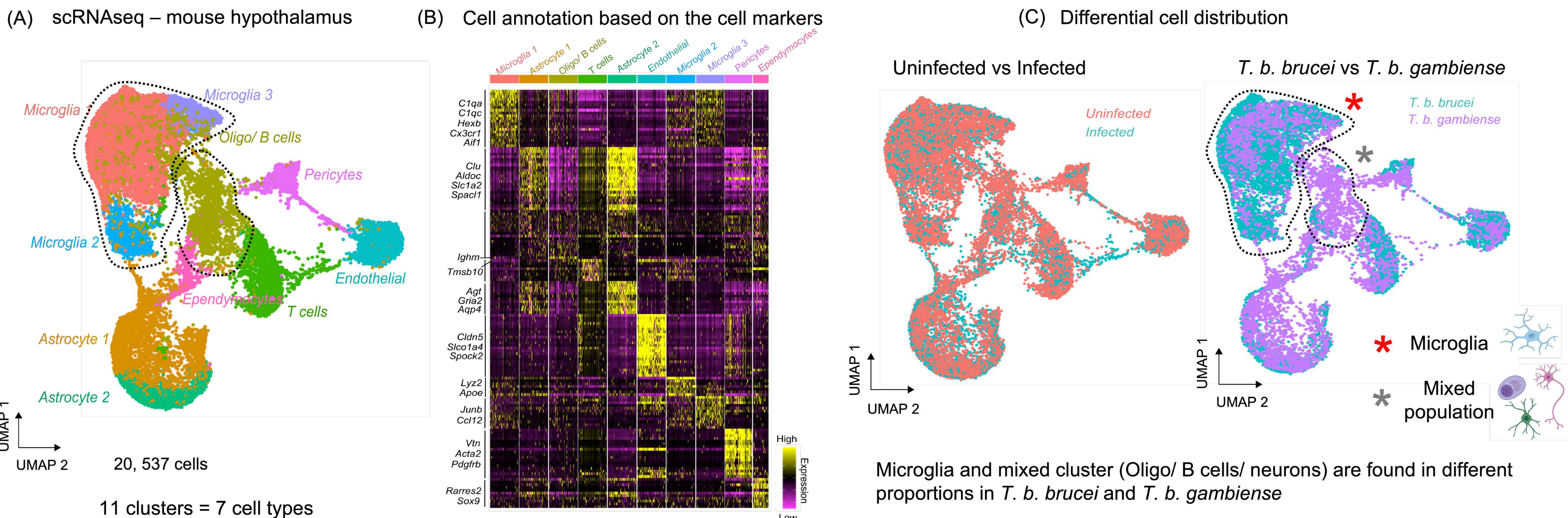


Figure 4. Differential microglia responses to *T. brucei gambiense* and *T. b. brucei*

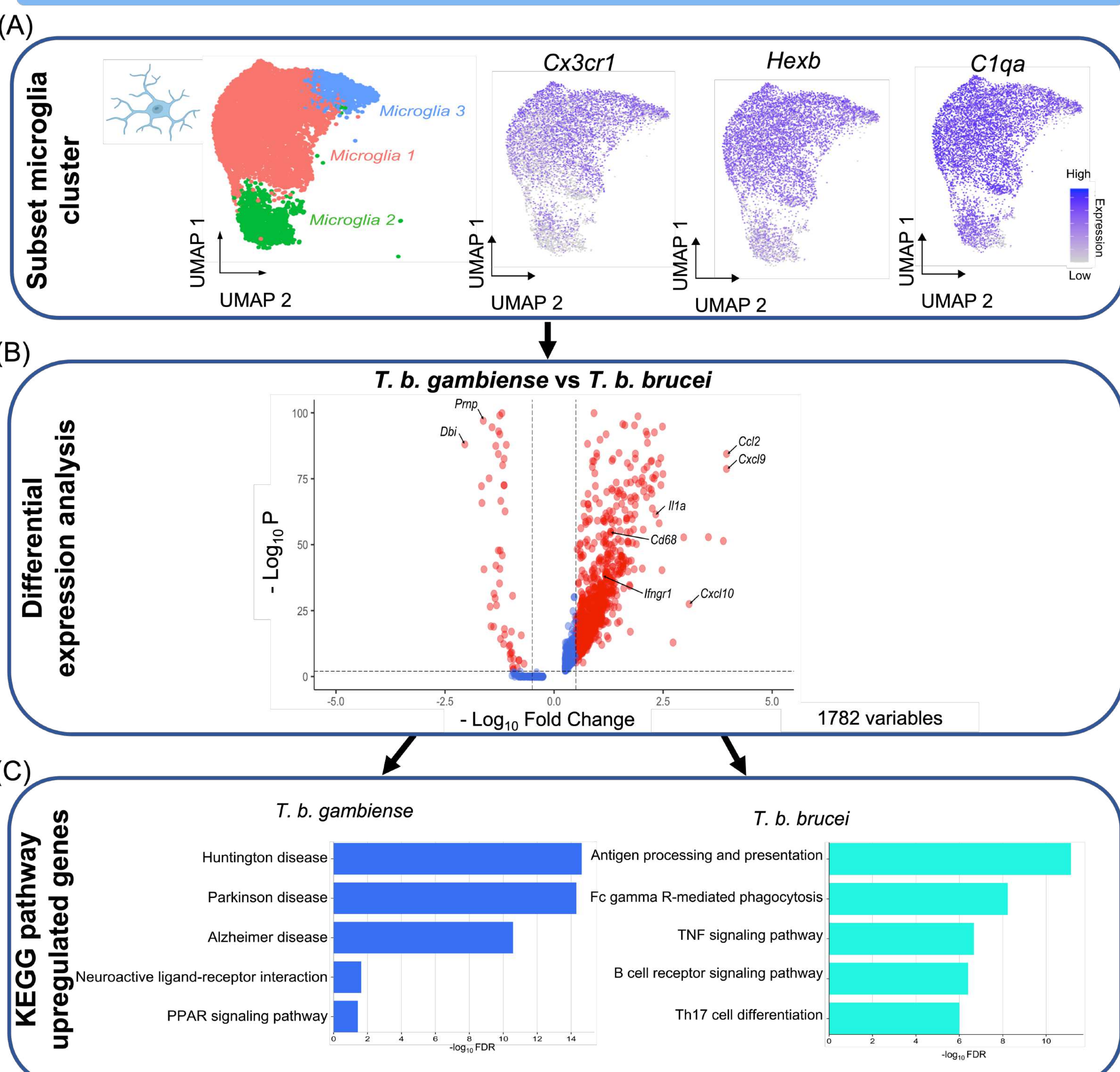
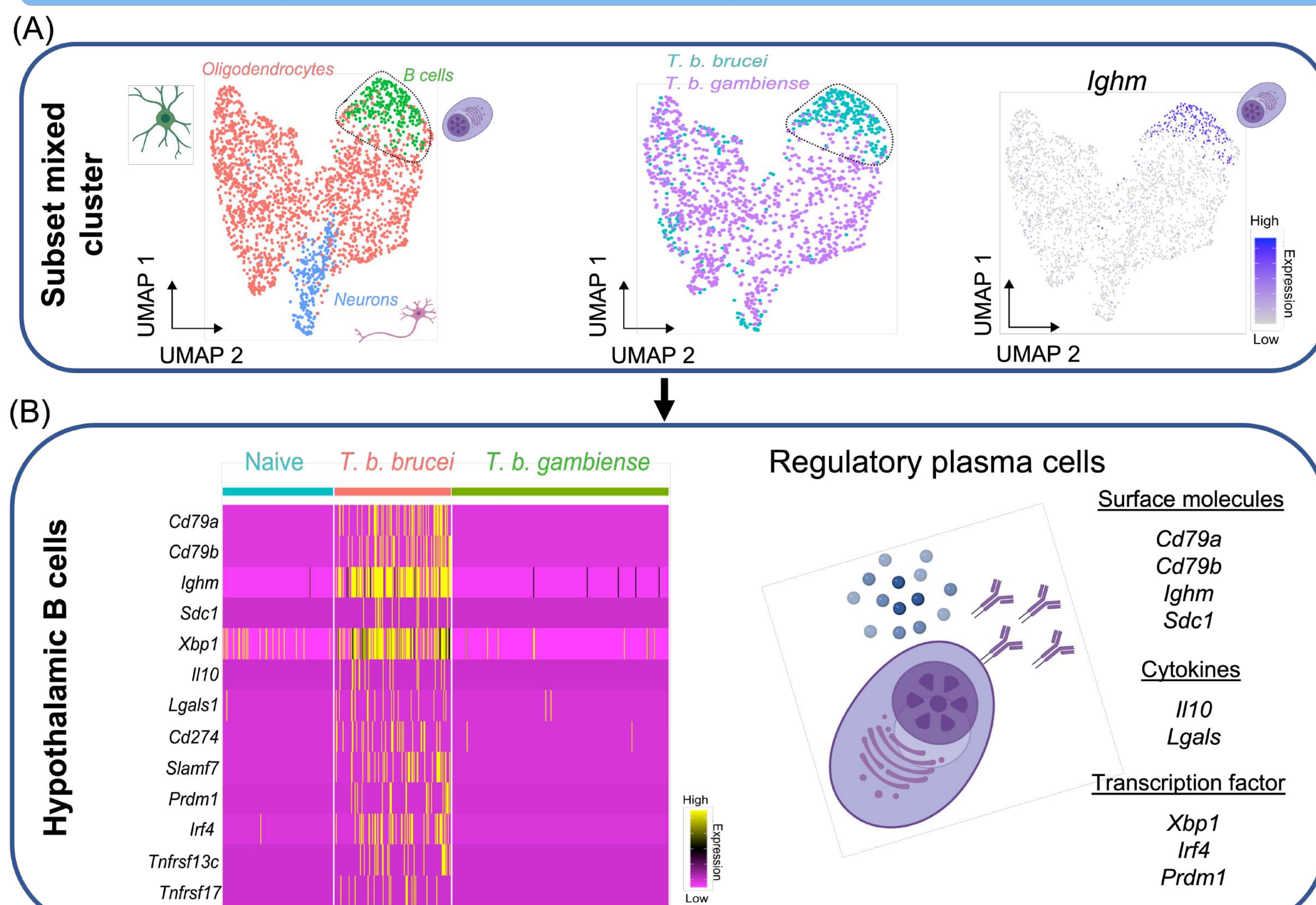


Figure 5. Regulatory B cells are exclusively found in severe CNS inflammation



Conclusions and Future directions

- Our data suggest that changes in circadian behaviour in *T. b. gambiense* infection may arise due to low-grade CNS inflammation
- *T. b. gambiense* is an ideal model to study how trypanosomes interfere with circadian rhythms with the need for pharmacological interventions
- We are currently investigating the role of microglia neuroactive peptides and PPARg in circadian disorders