

Poster presentation

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## Differential invasion of *Trypanosoma brucei brucei* and lymphocytes into the brain of C57BL/6

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*Trypanosoma brucei* (*T. b.*) subspecies invade the brain parenchyma at late stages of human and experimental rodent infections. Here, we compared the outcome of infection with *T. b.* in MHC-matched (H2<sup>b</sup>) C57BL/6 (B6) and 129Sv/Ev (Sv-129). While Sv-129 showed higher parasitemia and lower specific IgM (but not IgG) antibody levels than B6 mice, the number of trypanosomes, CD4<sup>+</sup> and CD8<sup>+</sup> T cells in the brain parenchyma was higher in B6 mice. B6 mice lost weight and showed higher cumulative mortality compared to Sv-129 mice. Higher levels of IL-1 $\beta$ , IL-6, IL-10, TNF- $\alpha$ , IFN- $\gamma$ , ICAM-1 and E-selectin, but low levels of TGF- $\beta$  mRNA were present in brains of B6 compared to Sv-129-infected mice. Thus, host genetics differentially determine invasion of *T. b. brucei* into the brain parenchyma, which is paralleled by the severity of inflammation in the brain and course of the disease, but not by parasitemia or antibody titers.

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