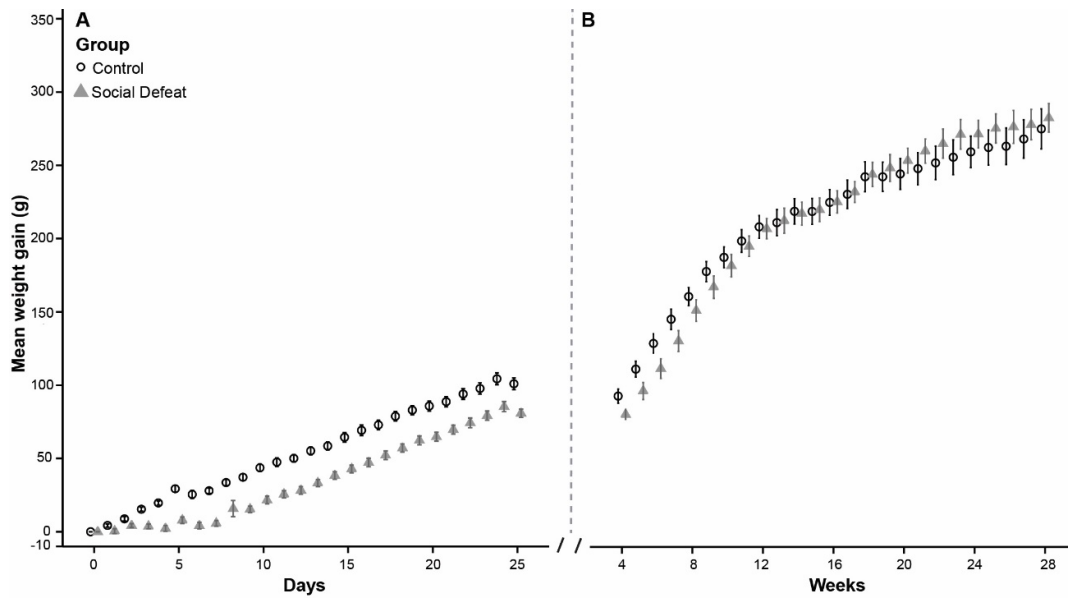
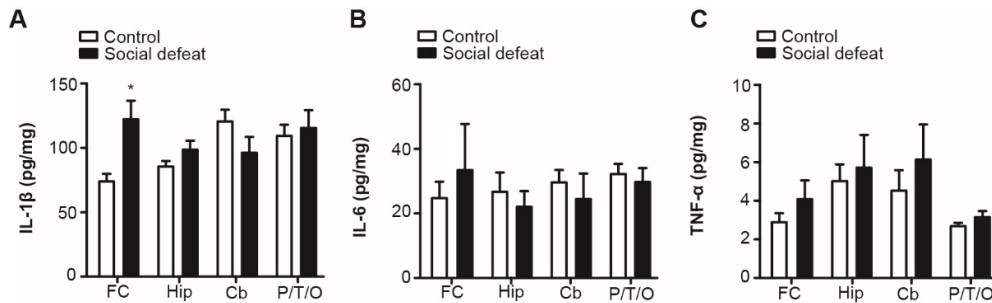


### Supplementary material



**Supplementary Fig. 1** - (A) Bodyweight gain (g) of control (n=18) and SoD rats (n=19) from day 0 to 25 of the short-term protocol, with significant decreased bodyweight gain in SoD rats evident already on day 2 ( $p < 0.01$ ) and with no recovery up to day 25 ( $p < 0.001$ ); (B) No significant difference in bodyweight gain (g) of control (n=8) and SoD rats (n=9) was found from week 5 to 28 of the follow-up protocol.



**Supplementary Fig. 2** - Assessment of the pro-inflammatory cytokines in the frontal cortex (FC), hippocampus (Hip), cerebellum (Cb) and parietal/temporal/occipital cortex (P/T/O) in the brains of control and defeated rats on day 25. **(A)** IL-1 $\beta$  levels were increased in the frontal cortex of SoD rats, \* $p < 0.05$ . No significant differences were found in the other investigated brain areas. **(B)** Quantification of IL-6 revealed no significant differences between groups in any brain regions. A moderate effect size was found in the frontal cortex ( $d = 0.63$ ) of SoD rats. **(C)** TNF- $\alpha$  levels did not differ between groups in any brain regions; a moderate effect size was found in the frontal cortex of SoD rats ( $d = 0.55$ ).