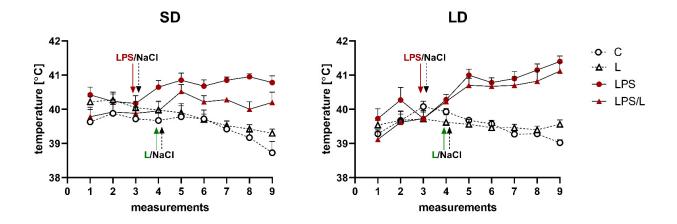
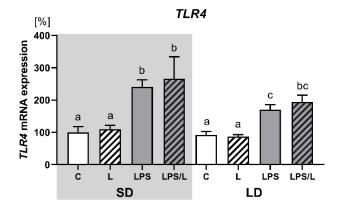
## 1 Supplementary Materials

## **Supplementary Figure S1:** Body temperature values throughout the experiments.



**Figure S1.** Mean (±SEM) body temperature values measured in ewes every half hour throughout the experiments carried out during short-day (SD, left panel) and long-day (LD, right panel) photoperiod.

## 6 Supplementary Figure S2: mRNA expression of *TLR4*



**Figure S2.** Mean (±SEM) relative TLR4 mRNA expression in the ovine choroid plexus of saline (*C*, control – white bars), saline-leptin (*L*, white hatched bars), LPS (grey bars) and LPS-leptin (LPS/L, grey hatched bars) treated ewes, during short-day (SD, dark background) and long-day (LD, light background) photoperiod. The results are presented as percentage values [%], where SD C group is considered as 100%.

13 Supplementary Figure S3: Cycle quantification values of LEPRa and LEPRb expression.

- 14 Cq (cycle quantification) values obtained from raw real time PCR data analyzed with using Real-Time
- 15 PCR Miner software:
- *LEPRa* Cq range from 22.4 to 25.6; mean ( $\pm$  SEM) 23.2  $\pm$  0.1
- *LEPRb* Cq range from 21.7 to 25.8; mean ( $\pm$  SEM) 23.7  $\pm$  0.1