

SUPPLEMENTAL MATERIAL

**Gene Expression Dynamics at the Neurovascular Unit During Early Regeneration After Cerebral Ischemia/Reperfusion Injury in Mice**

Figure 1

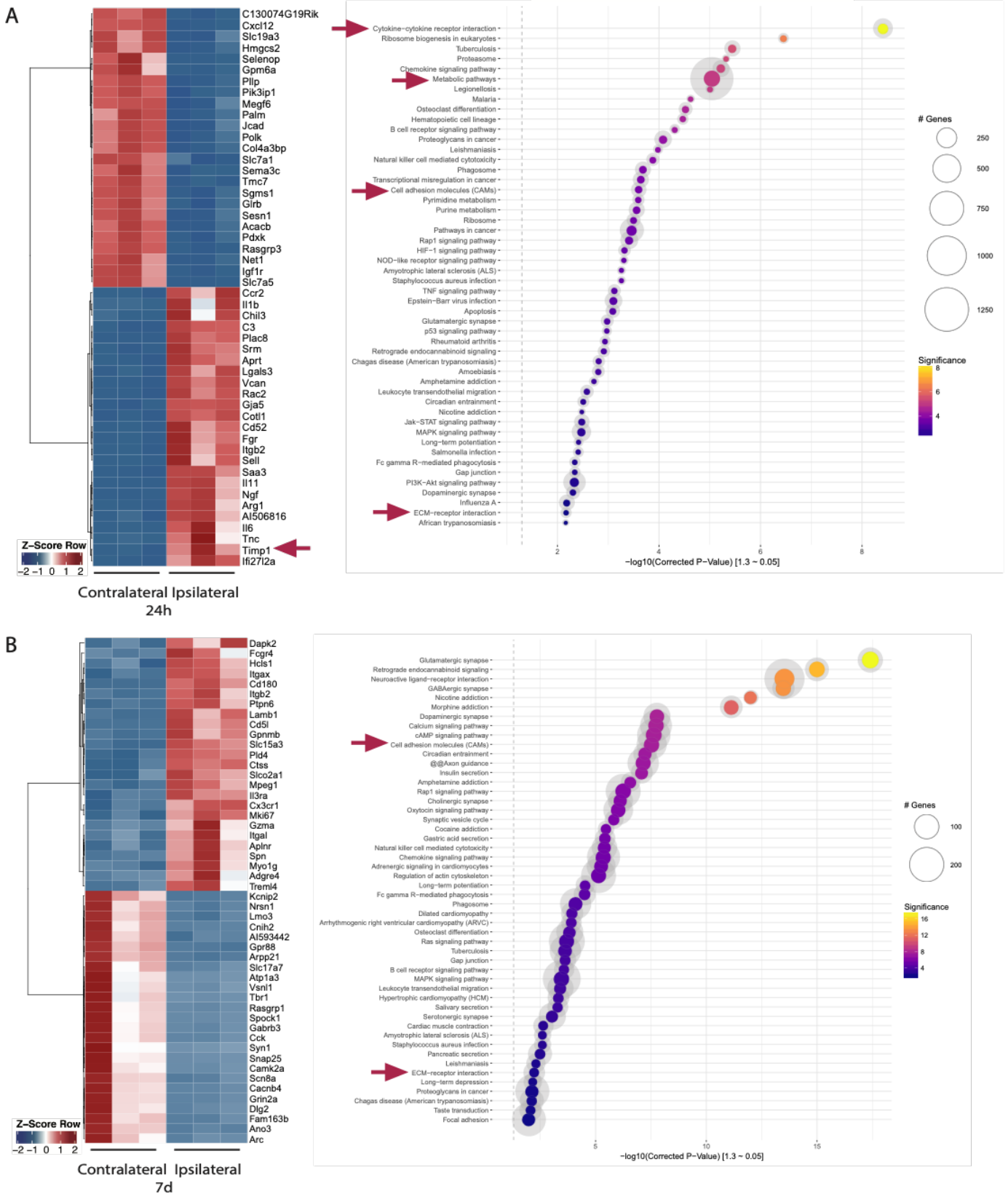
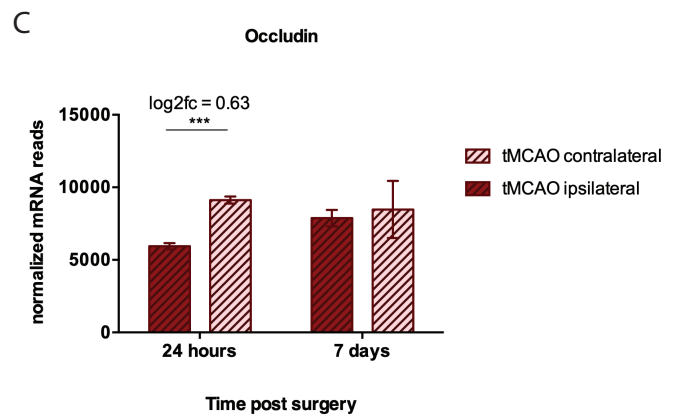
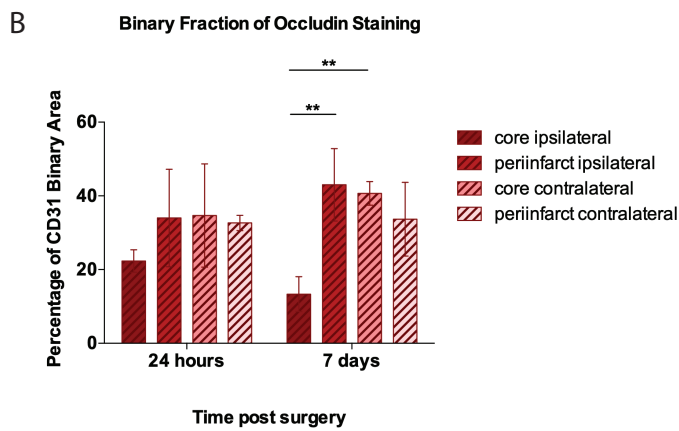
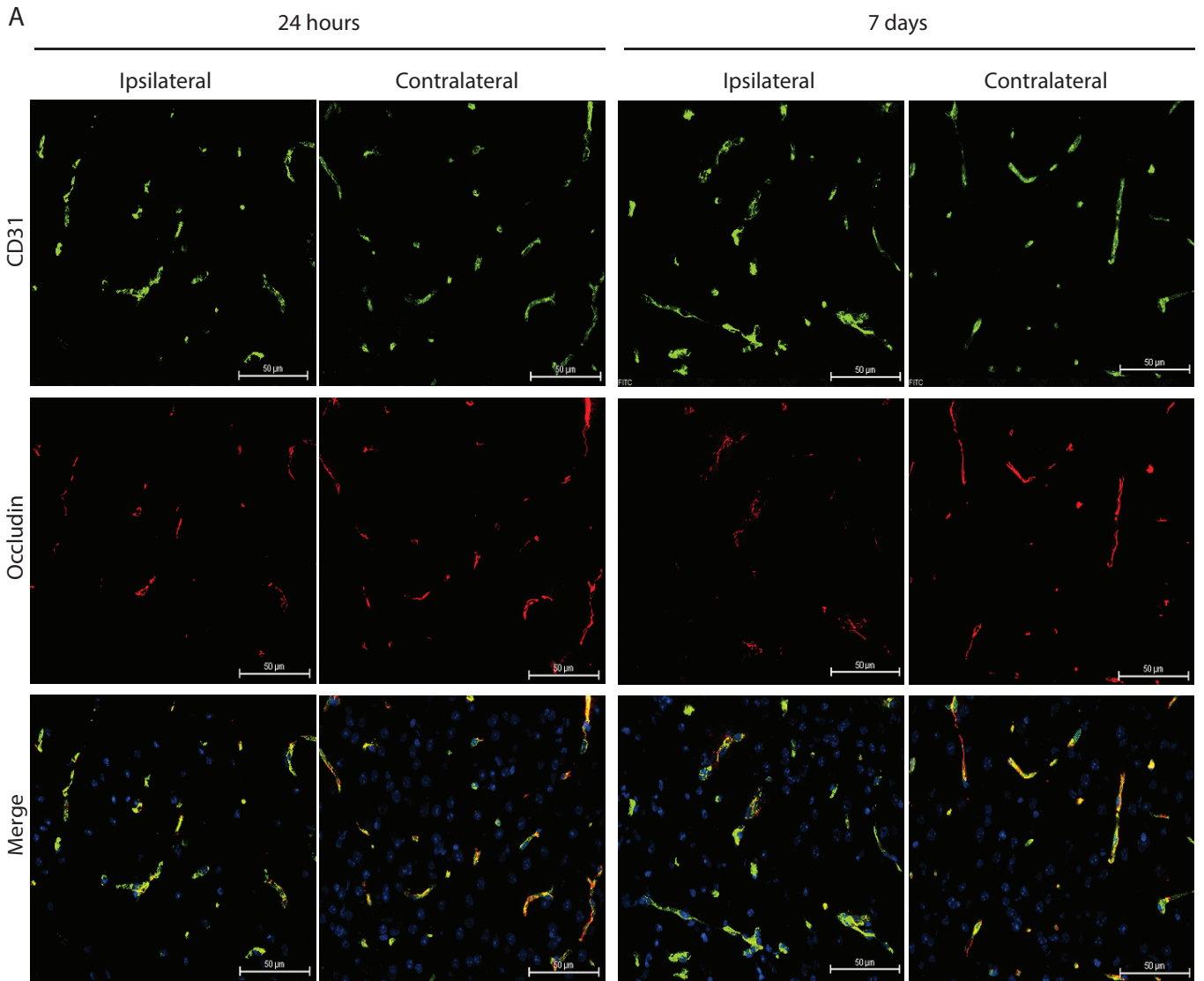


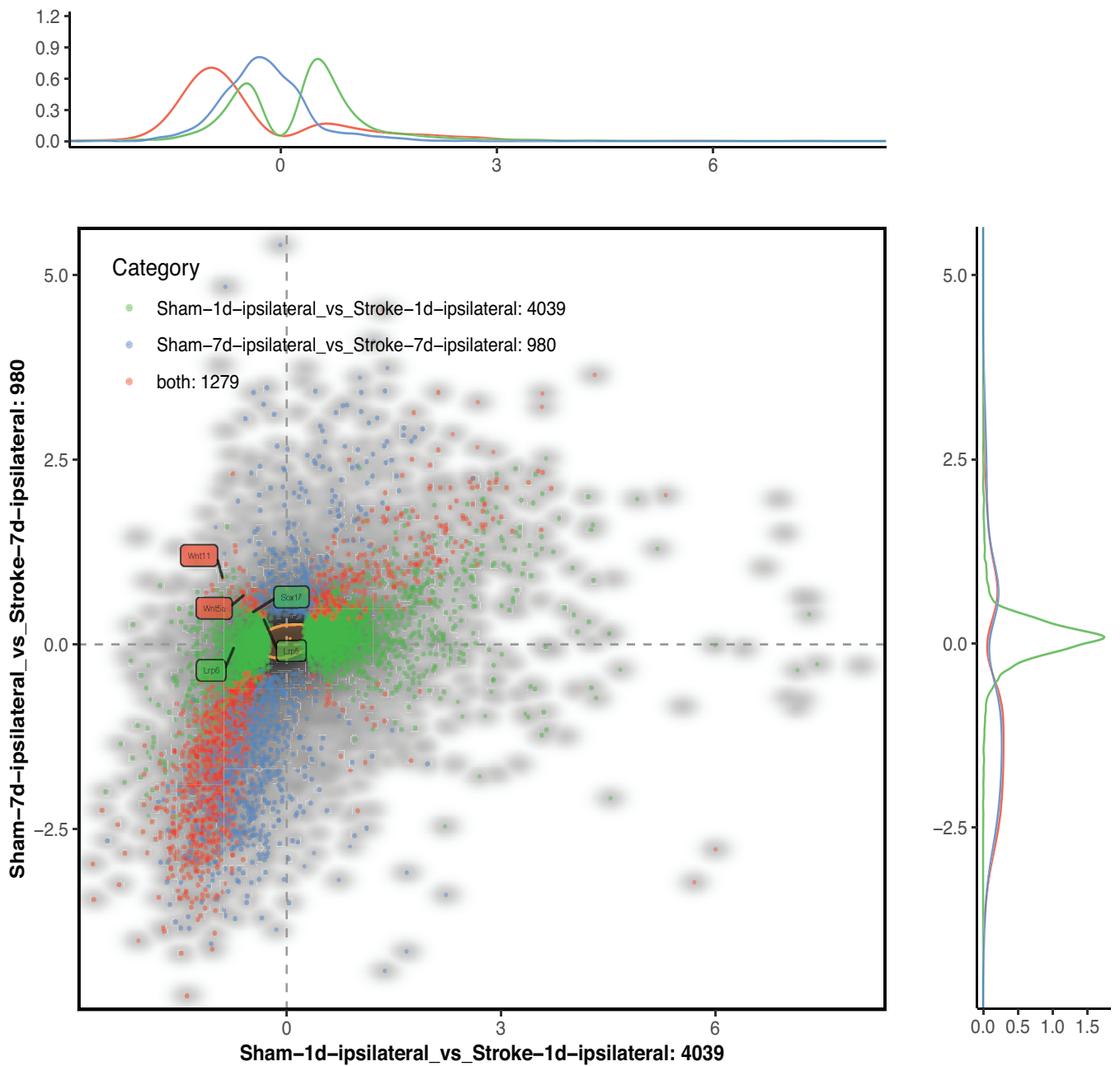
Figure II



### Time course of Occludin reduction at the NVU

**A:** Representative images of the stroke core and corresponding region on the contralateral hemisphere (green: CD31, red: Occludin, blue: DAPI), 40x magnification. **B:** Quantitative validation on protein level by immunofluorescence staining on brain cryosections 24h and 7d after tMCAO. Presented as mean percentage of Occludin vs. CD31 staining binaries  $\pm$  SD at ipsi- and contralateral hemisphere in stroke core vs. periinfarct cortex. N = 3 per group. **C:** Total mRNA reads for OCLN, normalized by DESEQ2. Presented as mean counts per group  $\pm$  SD, logarithmic fold change and summarized p-value (n = 4 per group).

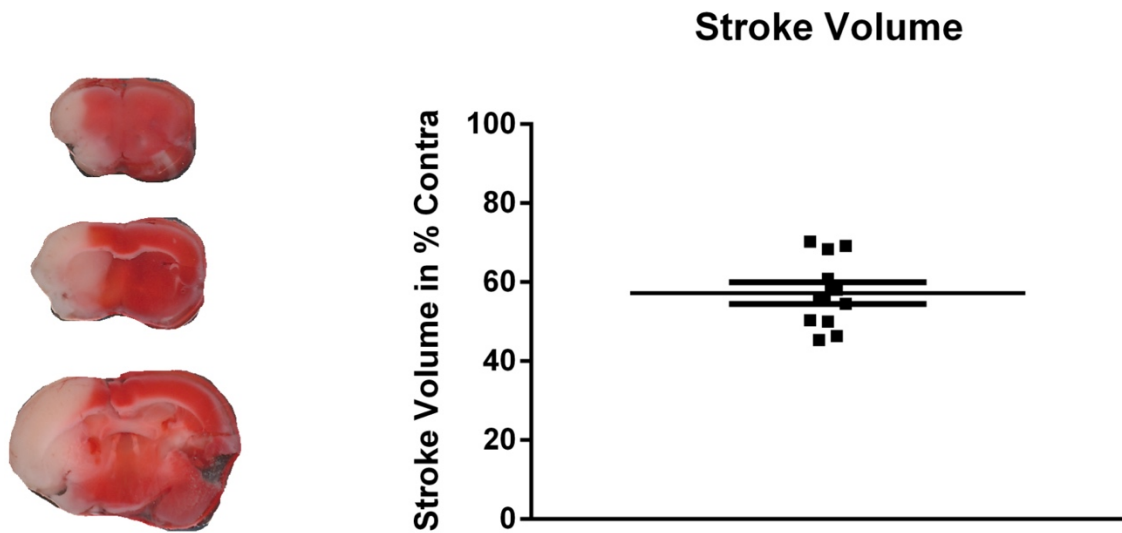
Figure III



**Global transcriptomic dynamics at the NVU within one week after stroke**

Bagplot of regulated genes in comparison 5 (stroke ipsilateral versus sham ipsilateral 24h; x-axis) versus comparison 6 (stroke ipsilateral versus sham ipsilateral 7d, y-axis). Annotation of representative genes which are significantly reduced 24h and significantly increased 7d after tMCAO (red dots in upper left quadrant) or significantly downregulated 24h and non-significantly increased 7d after tMCAO (green dots in upper left quadrant).

Figure IV



#### Stroke Volume Variance 24h post t-MCAO

Dot-plot (right) of stroke volumes 24h after 60 minutes occlusion of the right middle cerebral artery, measured semi-automatically using an ImageJ macro on TTC-stained 1mm brain slices (left). Due to potential edema formation in the ipsilateral hemisphere, stroke sizes are shown as area percentage of the contralateral hemisphere (mean with SEM, n = 11).