Supplementary figures

Molecular background of toxic substances induced morphological alterations in the umbilical cord vessels and fetal red blood cells

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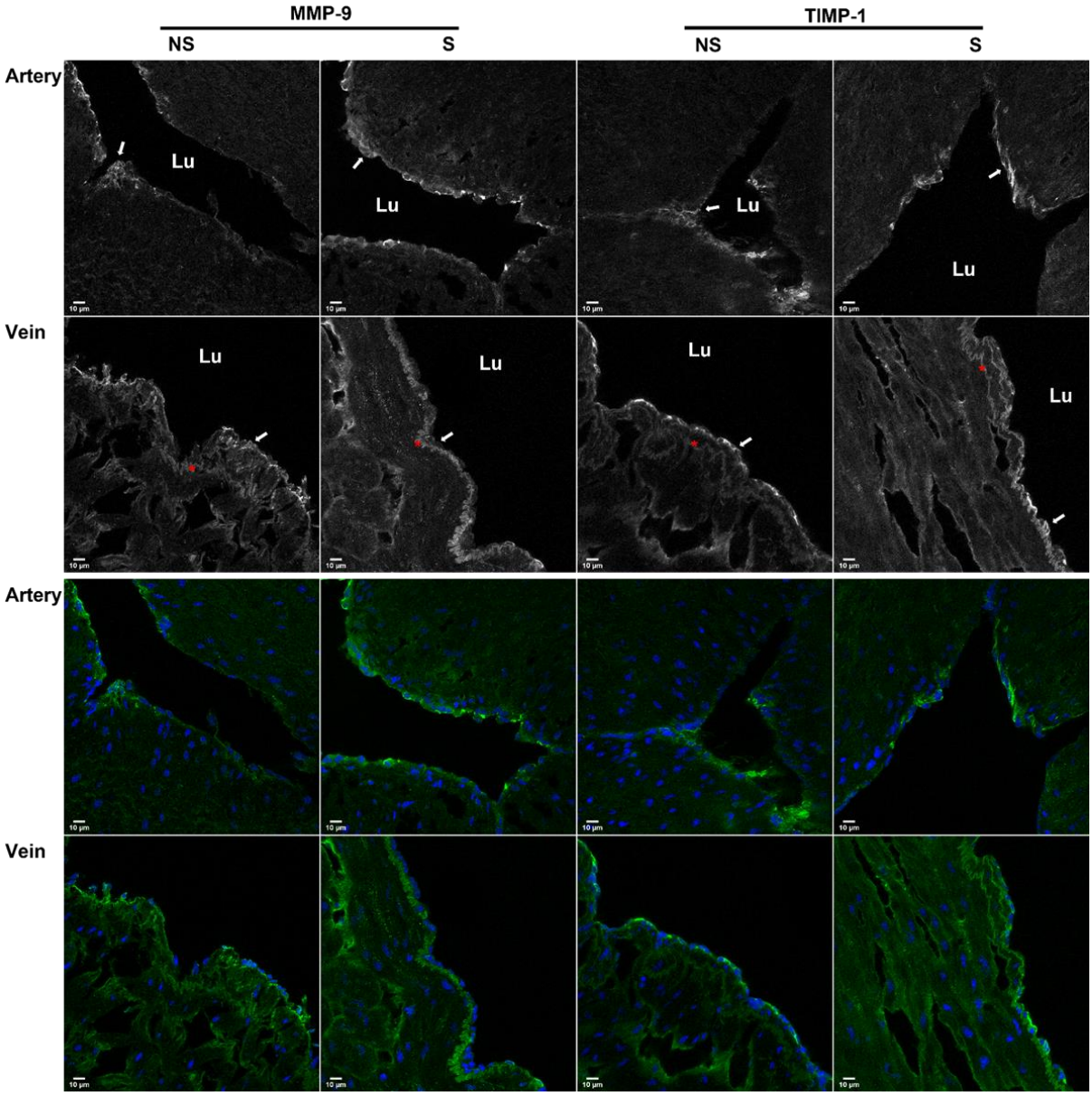

Figure S1. Representative confocal images of MMP-9 and TIMP-1 specific immunolabelling on the consecutive umbilical cord sections

Top two panels indicate the 8-bit images used for semi-quantification, corresponding to the TIMP-1 or MMP-9 channels, respectively. Bottom two panels are the merged DAPI, MMP-9/TIMP-1 images showing the exact localisation. White arrows – endothelial cells, Lu – vessel lumen, red asterisks – lamina basalis. Scale bar – 10 μm.

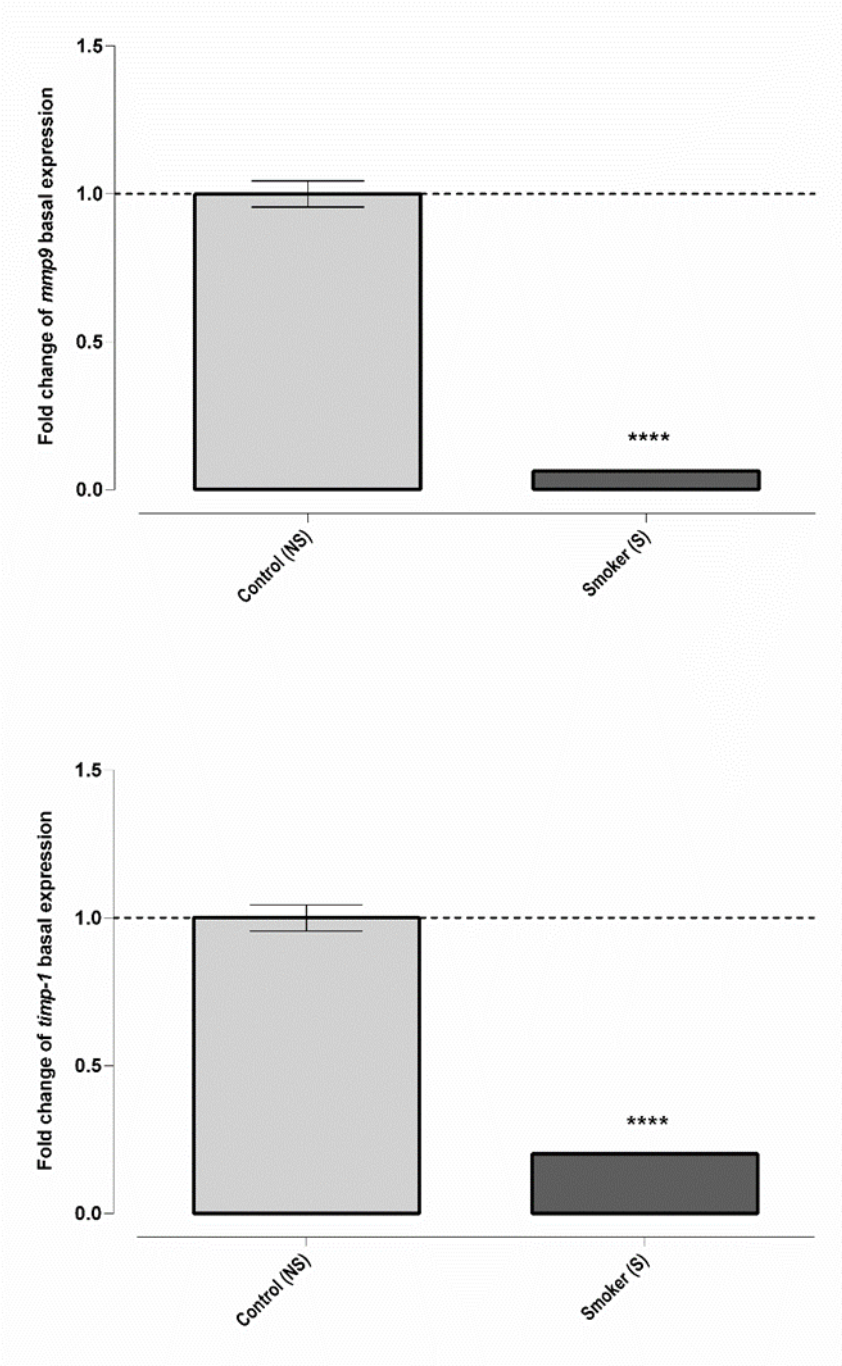

Figure S2. Differences in basal expression of *mmp-9* and *timp-1* genes in untreated Ns and S sample sets

Basal expression of *mmp-9* and *timp-1* genes in the samples with smoking origin relative to the untreated controls (dotted lines). Statistical analysis was done by using two-way (A) and one-way (B) ANOVA followed by Holm-Sidak's multiple comparisons test (**** $P \leq 0.0001$).

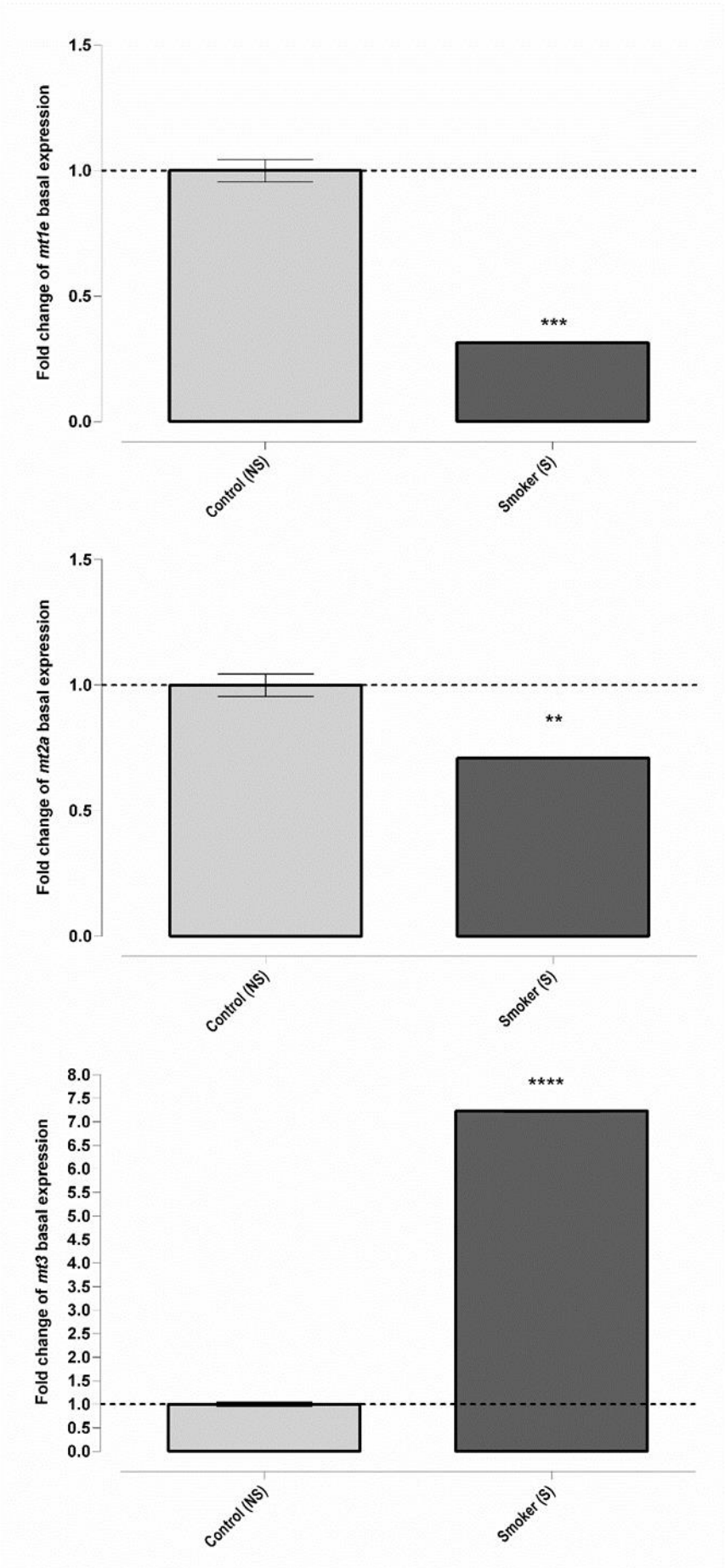
Fold change of mt1e basal expression
1.5
1.0
0.5
0.0
***
Control (NS)
Smoker (S)
Fold change of mt2a basal expression
1.5
1.0
0.5
0.0
**
Control (NS)
Smoker (S)
Fold change of mt3 basal expression
8.0
7.5
7.0
6.5
6.0
5.5
5.0
4.5
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
****
Control (NS)
Smoker (S)

Figure S3. Differences in basal expression of metallothionein genes in the untreated Ns and S sample sets

Basal expression of *mt-1e*, *mt2a* and *mt3* genes in sample sets with smoking origin relative to the untreated controls (dotted lines). Statistical analysis was done by using two-way (A) and one-way (B) ANOVA followed by Holm-Sidak's multiple comparisons test (** $P \leq 0.01$; *** $P \leq 0.001$; **** $P \leq 0.0001$).