In total 80 pigs from four producers were included. Correlations between the measured variables were calculated. For every event, i.e. loading, unloading, lairage and driveway to stunning, the recordings were summarized. Analyses of variance were performed to investigate the effect of the four events prior to slaughter on the post mortem blood concentration of glucose, lactate and creatine kinase activity (CK), blood and loin temperature and pH.

Results
There was a significant correlation between CK and skin damage score on the shoulder (P<0.0001) and between CK and slipping and falling in the driveway to stunning (P=0.03). Handling in the driveway to stunning affected the blood concentration of lactate (P=0.03) and glucose (P=0.005) significantly. There was no effect of handling in the driveway to stunning on CK. Further, there was a significant difference between producers on the concentration of lactate and CK. There were no significant effects of the behavior and management recordings on blood or loin temperature or pH.

Conclusion
The study indicates that the blood concentration of lactate, glucose and the creatine kinase activity are related to the behavior and management prior to slaughter and might be relevant indicators for documentation of animal welfare on the day of slaughter.