

## OPEN PEER REVIEW REPORT 1

**Name of journal:** Neural Regeneration Research

**Manuscript NO:** NRR-D-20-00920

**Title:** Subacute Metformin Treatment Leads to Better Functional Recovery after Spinal Cord Injury

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### COMMENTS TO AUTHORS

An interesting study and a topical subject focusing on identifying a therapeutic treatment for spinal cord injury. The behavioural and histological experiments are carried out fairly sound, but the analysis of the histology has major concerns.

The images are at different dorsoventral level of the spinal cord, which may also suggest the data was analysed from these spinal cord regions. The dorsal surface will express greater damage than ventral region due to the direction and site of impact. Therefore, the neuroinflammation and astrogliosis at the ventral region will be less than the dorsal region. Furthermore, the analysis of neurons depends on whether the plane is the grey or white matter. If the latter, there will be no neurones present. This is of particular issue when the spinal cord is cut in the longitudinal or horizontal plane. Overall, there is a need to ensure the analysis and the representative images take this into consideration. If these factors are not taken into consideration, then false negative or positive results will occur, voiding the study.