Novel Schisantherin B-loaded Prussian blue nanozyme for treating Spinal Cord Injury

Wei Wang[1, 5, 6*], Ensi Liu[2*], Jinxia Wang[3], Jianfeng Li[4], Sen Lin[2#], Xifan Mei[2,5,6#]

[1] Graduate School of Dalian Medical University, Dalian 116044, Liaoning, China.

[2] Department of Orthopedics, The Third Affiliated Hospital of Jinzhou Medical University, Jinzhou 121000, China.

[3] Department of Hematology, Linyi Central Hospital, Linyi City 276400, Shandong Province, China.

[4] Innovation Platform of Regeneration and Repair of Spinal Cord and Nerve Injury, Department of Orthopaedic Surgery, The Seventh Affiliated Hospital, Sun Yat-sen University, Shenzhen, Guangdong, China, 518107.

[5]Liaoning Provincial Key Laboratory of Medical Tissue Engineering

[6] Liaoning Provincial Collaborative Innovation Center of Medical Testing and Drug Development

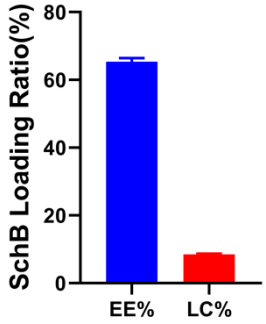
[#] Corresponding author.

Email: aldrin_lin@163.com

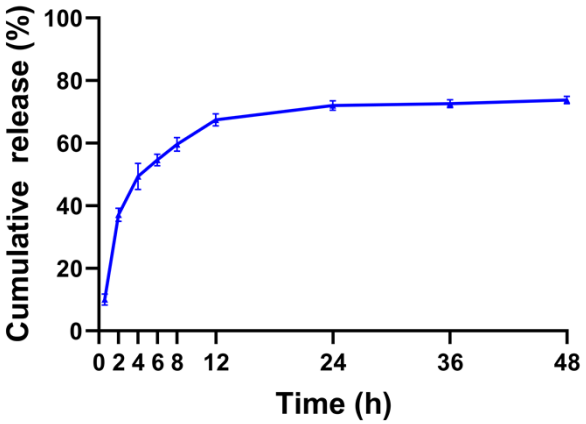
Email: meixifan@jzmu.edu.cn

*These authors contributed equally to this work

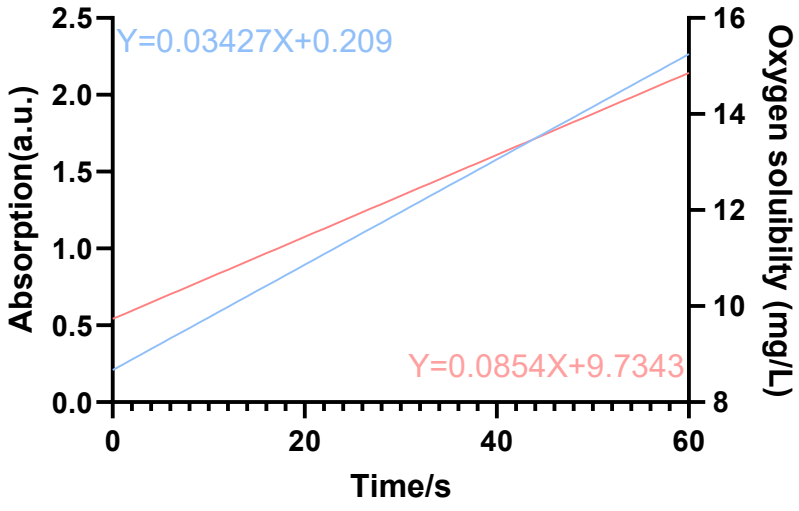
This PDF file includes: Supplementary Figure 1 To Figure 12.



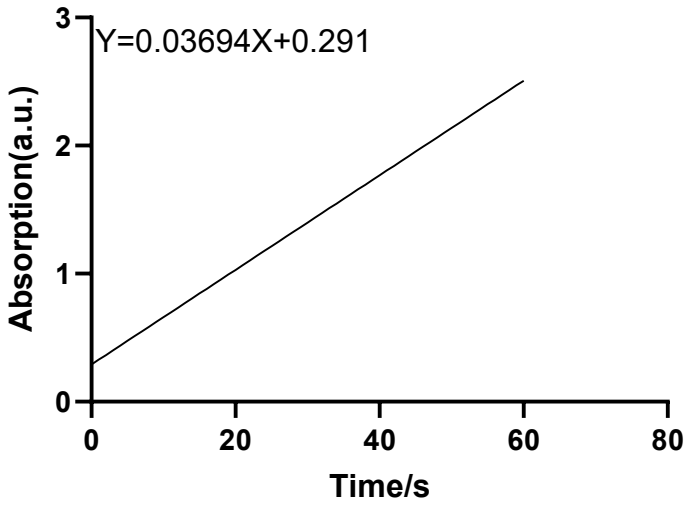
Supplementary Figure 1. EE% and LC% of SchB@PBzyme.



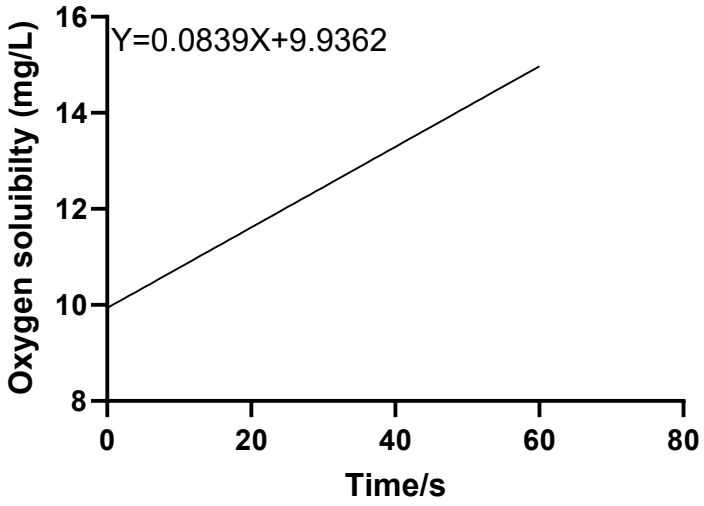
Supplementary Figure 2. Drug release of SchB@PBzyme.



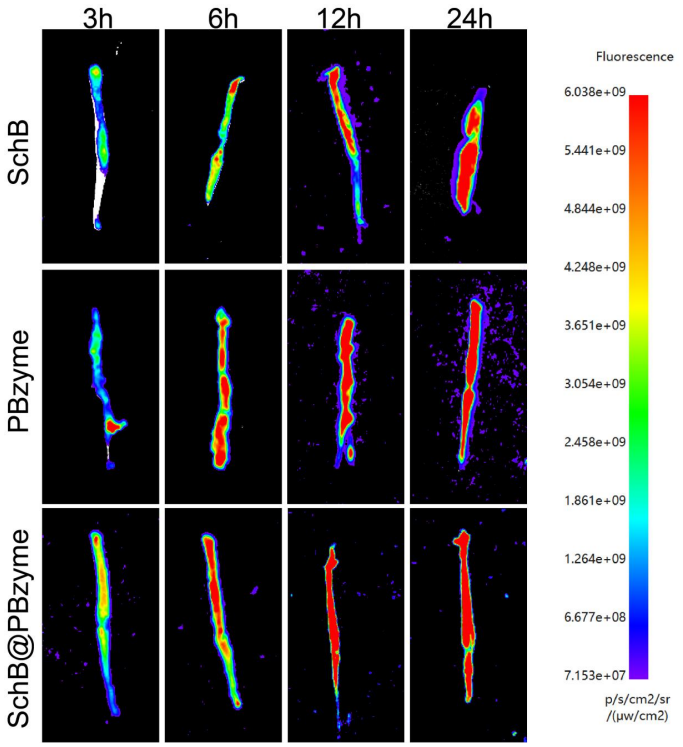
Supplementary Figure 3. SOD-like catalytic activity of SchB@PBzyme (left vertical axis). CAT-like catalytic activity of SchB@PBzyme (right vertical axis).



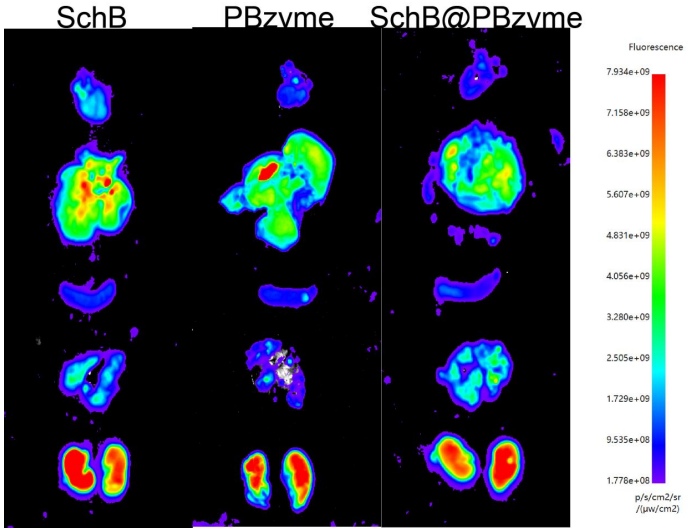
Supplementary Figure 4. SOD-like catalytic activity of PBzyme.



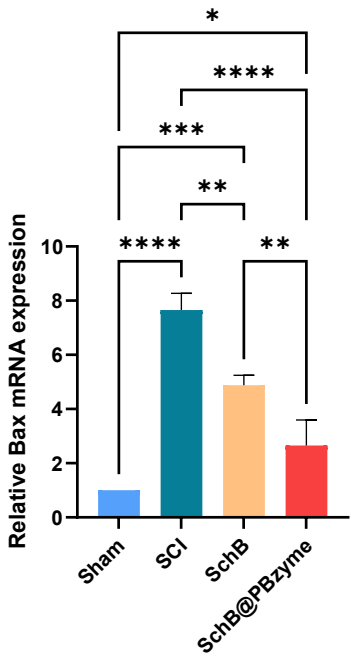
Supplementary Figure 5. CAT-like catalytic activity of PBzyme.



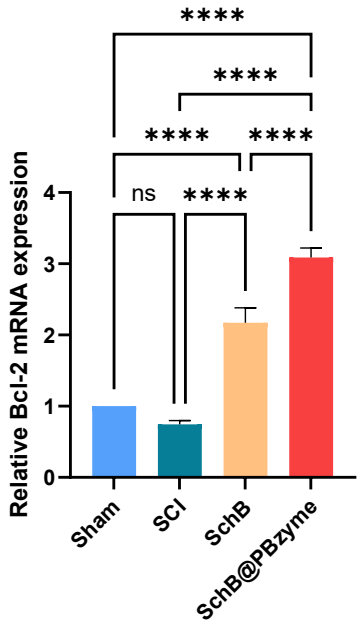
Supplementary Figure 6. Ex vivo fluorescent imaging of spinal cords from different groups of mice(n=3).



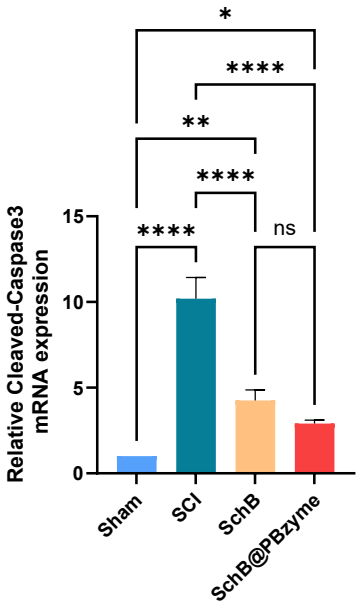
Supplementary Figure 7. Ex vivo fluorescence imaging of mouse organs from each material group (n=3).



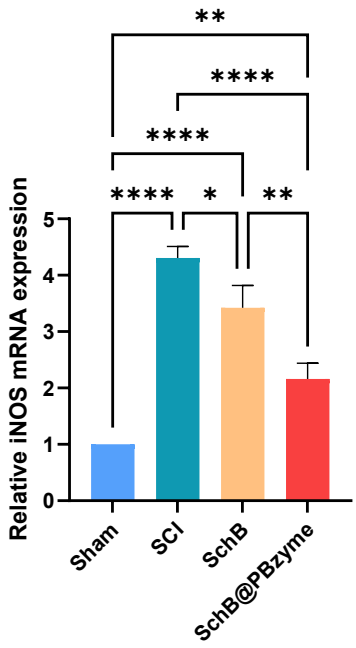
Supplementary Figure 8. Quantitative analysis of Bax relative mRNA expression.per group, *P< 0.05, **P< 0.01, and ns: no significance, compared with the Sham group.



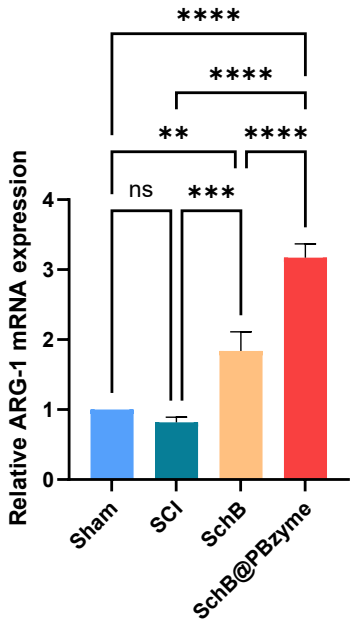
Supplementary Figure 9. Quantitative analysis of Bcl-2 relative mRNA expression.per group, *P< 0.05, **P< 0.01, and ns: no significance, compared with the Sham group.



Supplementary Figure 10. Quantitative analysis of Cleaved Caspase-3 relative mRNA expression.per group, *P< 0.05, **P< 0.01, and ns: no significance, compared with the Sham group.



Supplementary Figure 11. Quantitative analysis of iNOS relative mRNA expression.per group, *P< 0.05, **P< 0.01, and ns: no significance, compared with the Sham group.



Supplementary Figure 12. Quantitative analysis of ARG-1 relative mRNA expression.per group,

*P< 0.05, **P< 0.01, and ns: no significance, compared with the Sham group.