

**Supplemental information**

**Melanin-like nanoparticles alleviate ischemia-reperfusion injury in the kidney by scavenging reactive oxygen species and inhibiting ferroptosis**

**Wenxiang Feng, Nan Zhu, Yubin Xia, Zehai Huang, Jianmin Hu, Zefeng Guo, Yuzhuz Li, Song Zhou, Yongguang Liu, and Ding Liu**

## *Supplementary information*

### 1. Results and discussion

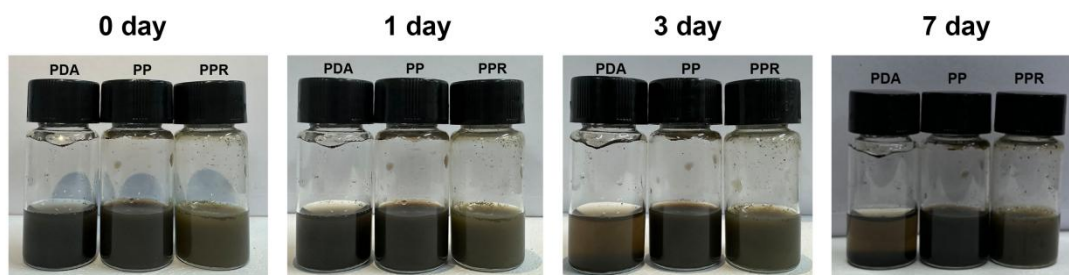


Figure S1. Related to Figure 1.

The suspension stabilities of PDA, PP and PPR NPs, after being located at room temperature for 0-7 days.

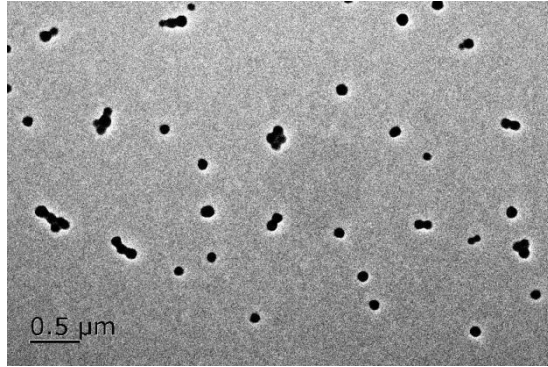


Figure S2. Related to Figure 1.

TEM images of PP with low magnification.

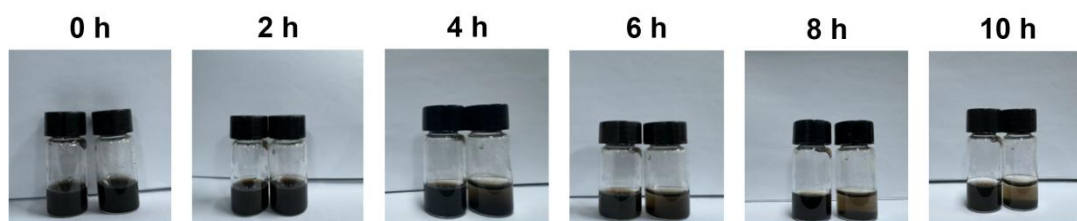


Figure S3. Related to Figure 1. The suspension stabilities of PPR NPs, after being incubated with PBS or 500  $\mu\text{M}$   $\text{H}_2\text{O}_2$  at room temperature for 0-10 hours.

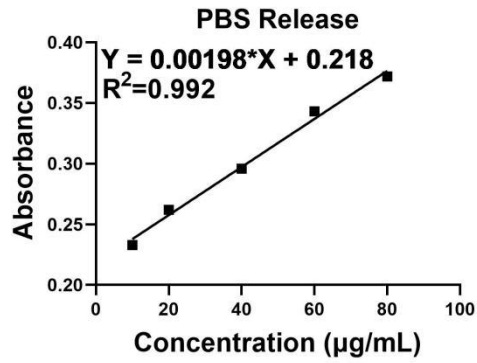


Figure S4. Related to Figure 1. The dose curve of rutin in PBS, detected by UV-Vis spectrophotometer at 350 nm.

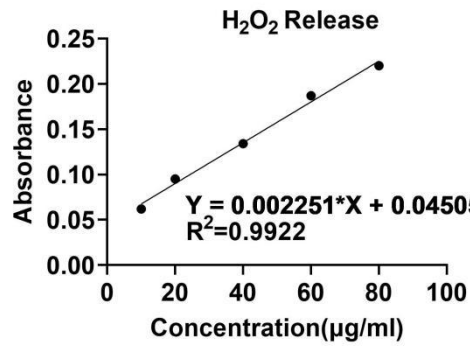


Figure S5. Related to Figure 1. The dose curve of rutin in H<sub>2</sub>O, detected by UV-Vis spectrophotometer at 350 nm.

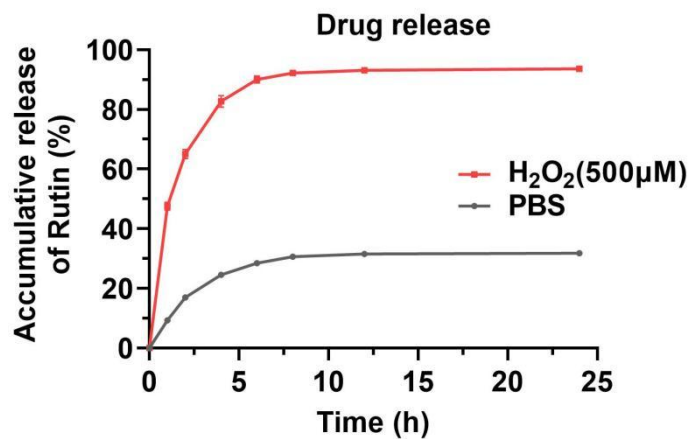


Figure S6. Related to Figure 1. The release curve of rutin of PPR under PBS or H<sub>2</sub>O<sub>2</sub> solutions.

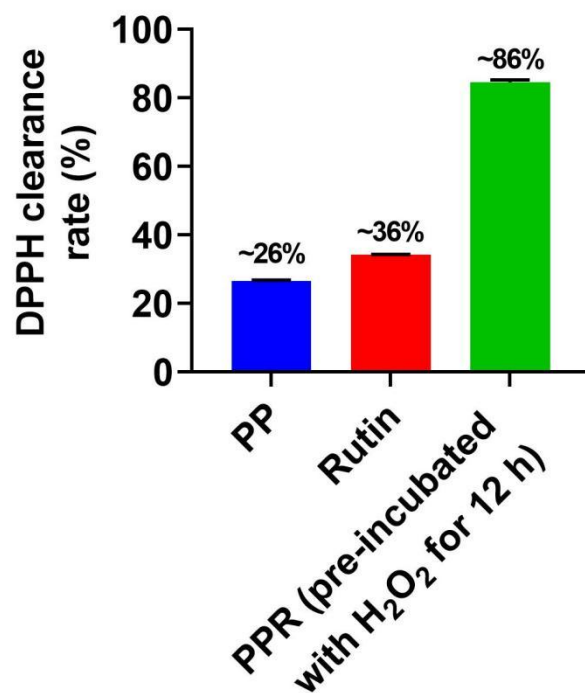


Figure S7. Related to Figure 1. DPPH clearance of rutin, PP and PPR NPs, while PPR NPs were pre-incubated with 500  $\mu\text{mol}$  H<sub>2</sub>O<sub>2</sub> condition for 12 h.

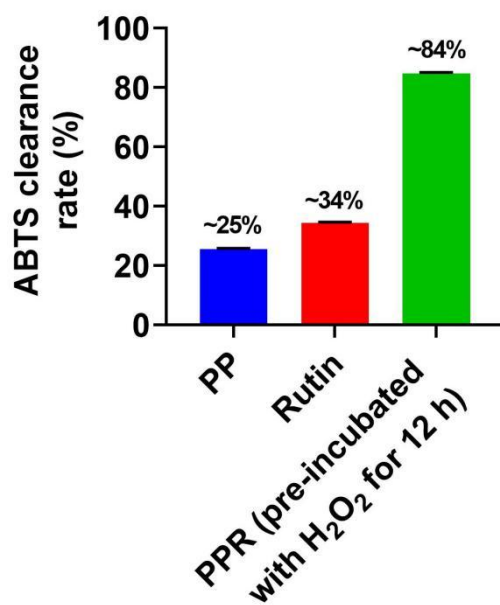


Figure S8. Related to Figure 1. ABTS clearance of rutin, PP and PPR NPs, while PPR NPs were pre-incubated with 500  $\mu\text{mol}$  H<sub>2</sub>O<sub>2</sub> condition for 12 h.

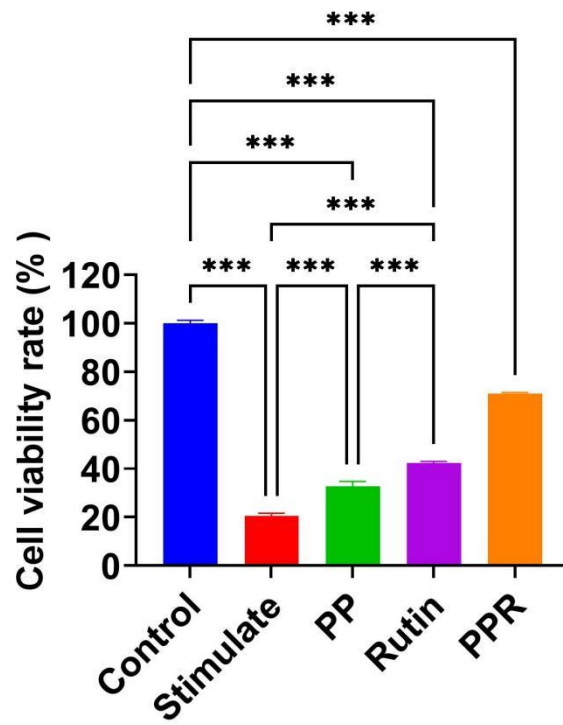


Figure S9. Related to Figure 2. Cell viabilities of HK-2 cells at hypoxic culture box (refer to stimulate), after being incubated with rutin, PP and PPR NPs, using CCK-8 assay.  $n=3$ . \*\*\* $P<0.001$ .