

## **Long-term delivery of alendronate through injectable tetra-PEG hydrogel to promote osteoporosis therapy**

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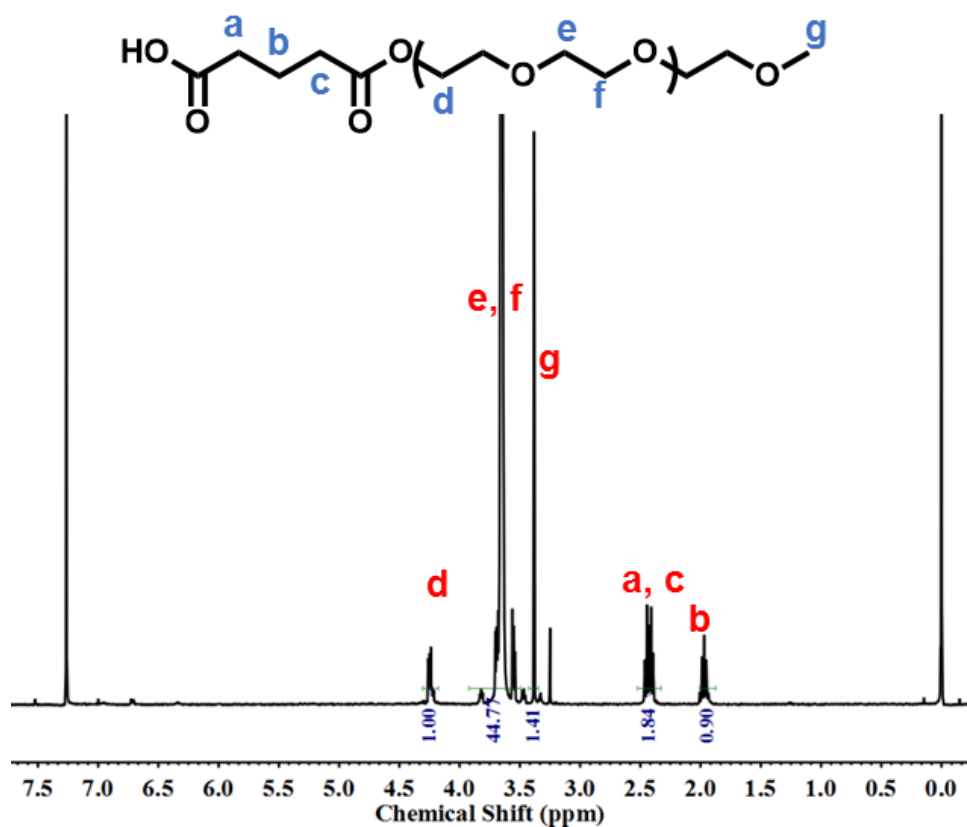


Fig. S1 <sup>1</sup>H NMR spectrum of the PEG-COOH in CDCl<sub>3</sub>.

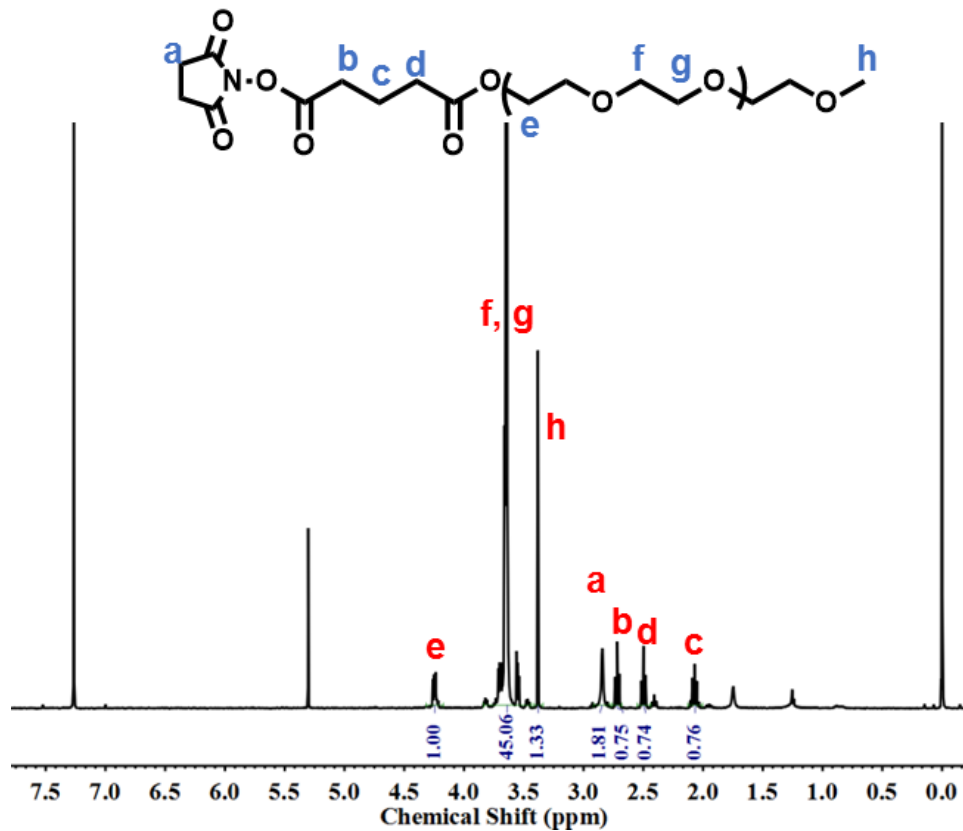


Fig. S2 <sup>1</sup>H NMR spectrum of the PEG-NHS in CDCl<sub>3</sub>.

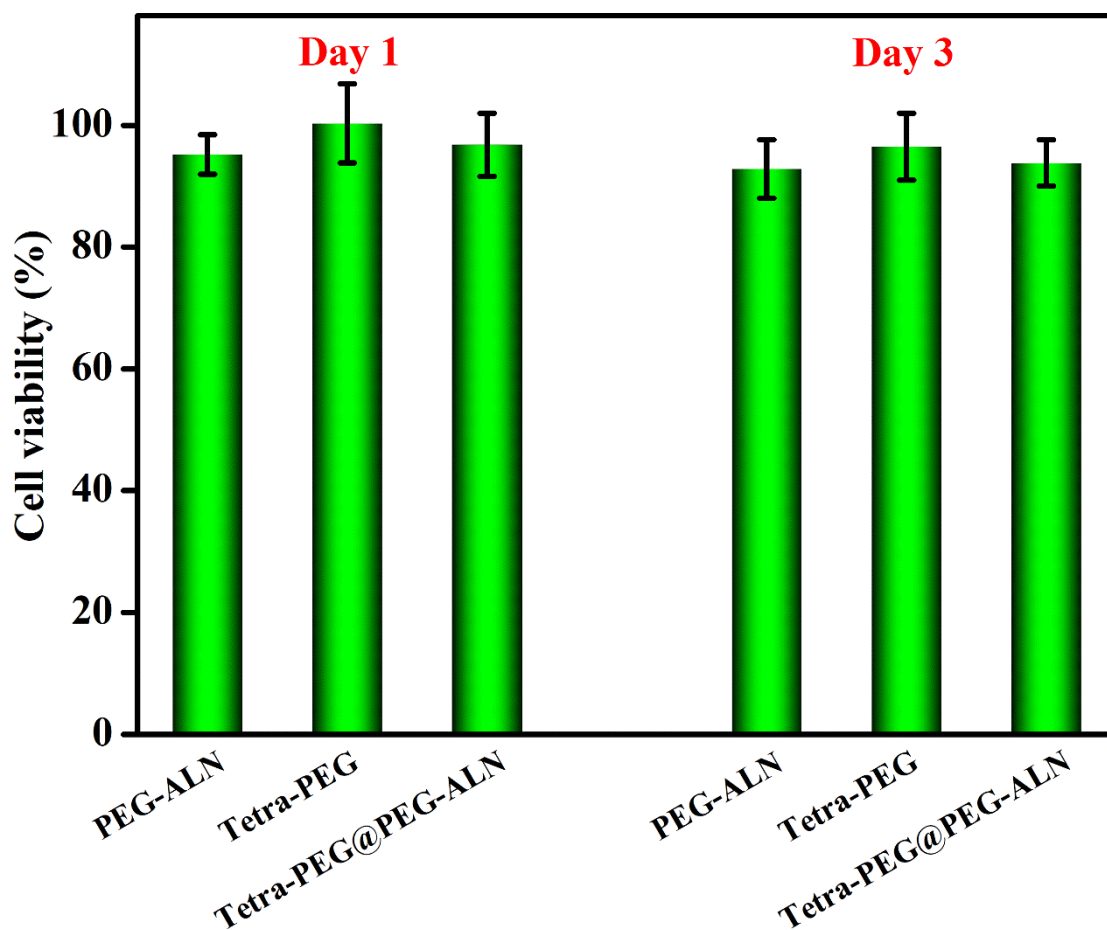


Fig. S3 Cell viability analysis after cultivation for 24 and 72 h.

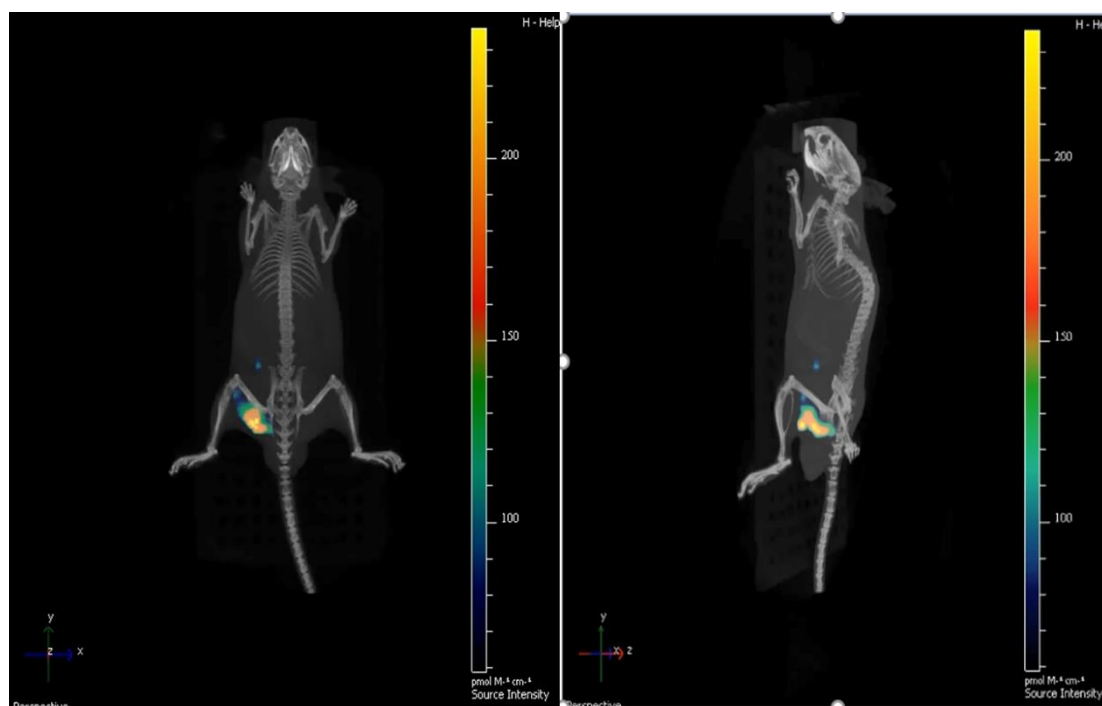
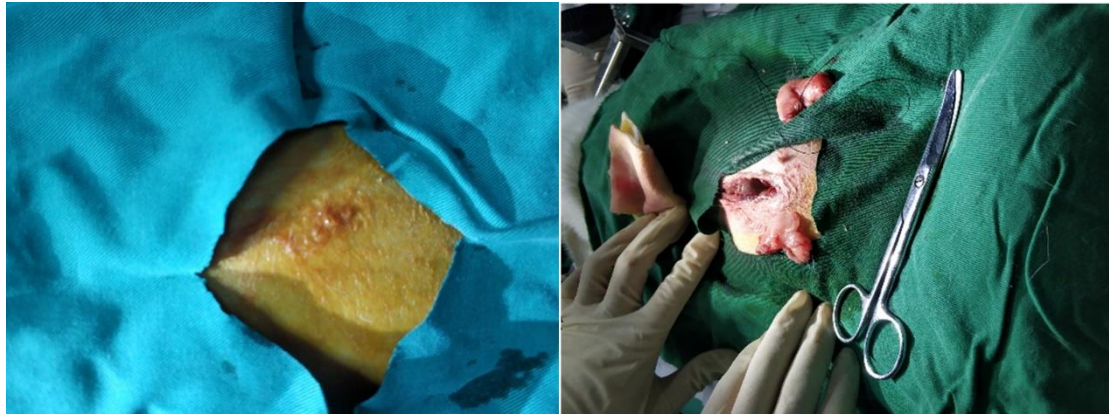


Fig. S4 Three-dimensional fluorescent imaging after injection of tetra-PEG hydrogel.



**Fig. S5** Surgery photos of rabbits in the ovariectomized group.