

# Bioinspired injectable antioxidant hydrogel for prevention of postoperative adhesion

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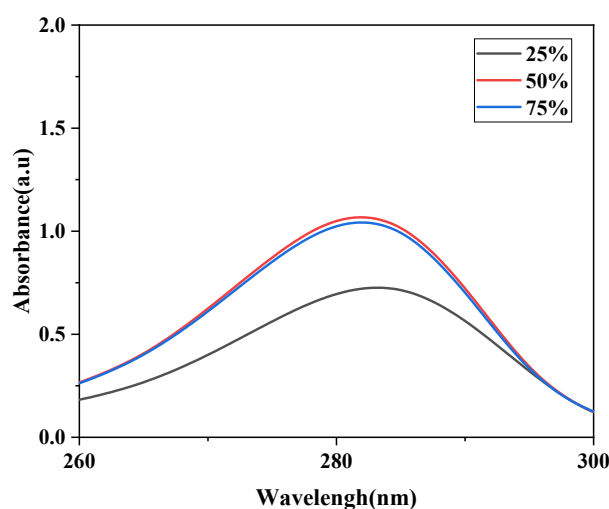


Figure S1 UV spectra of different dopamine-grafting oxidized hyaluronic acids

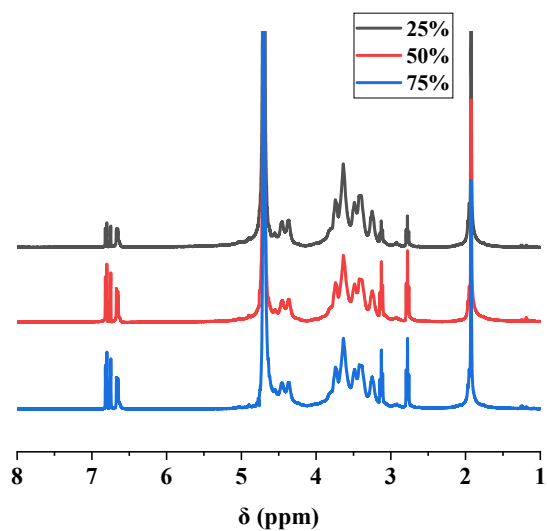


Figure S2 <sup>1</sup>H-NMR Spectra of different dopamine-grafting oxidized hyaluronic acids

Table S1 Molar ratios of raw materials for polyurethane emulsions

Ratios(mol)	PCL	LDI	DMPA	TEA	ADH
PU	1.0	2.7	1.0	1.0	0
PU-ADH	1.0	2.7	1.0	1.0	1.5

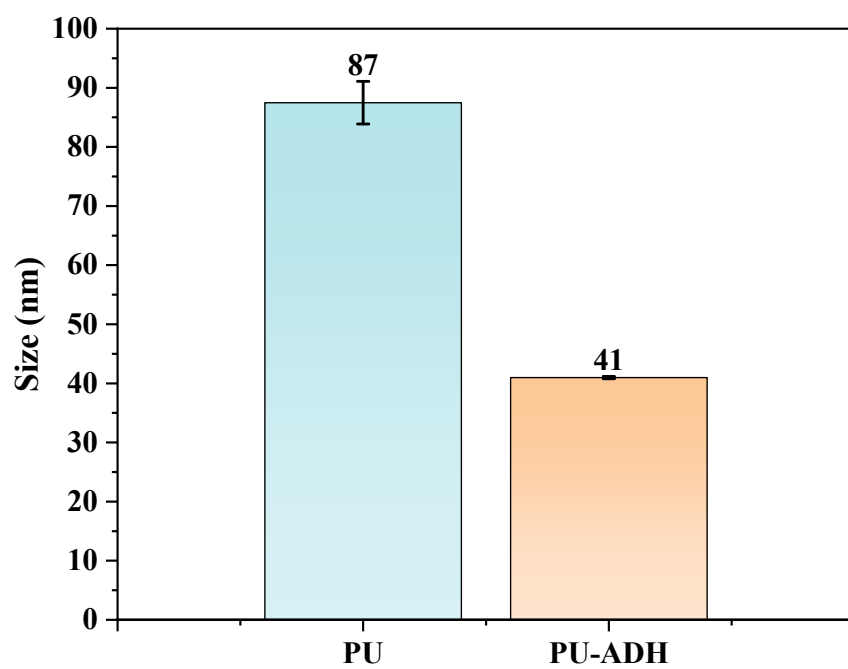


Figure S3 Particle size of PU and PU-ADH emulsions

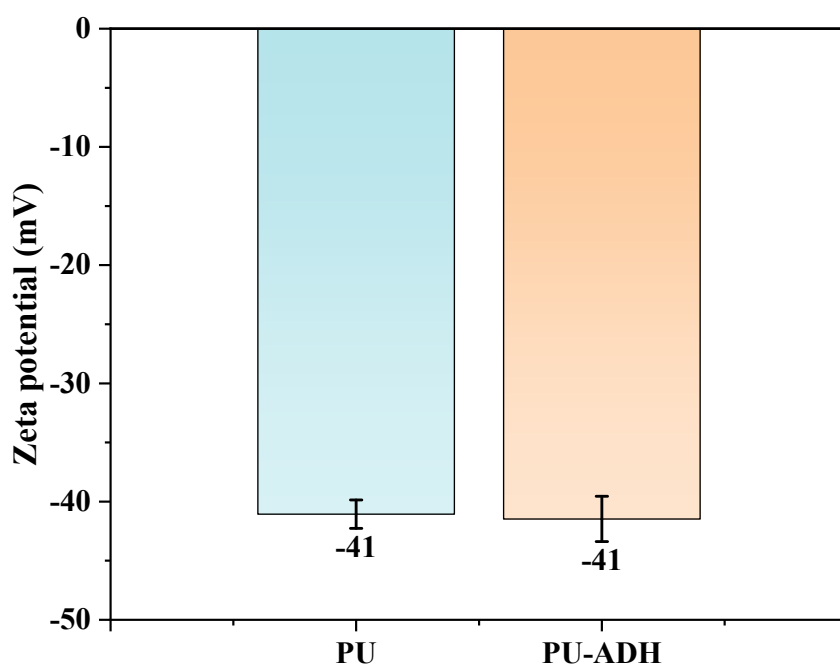


Figure S4 Potential of PU and PU-ADH emulsions

Table S2 Different proportions of PU-OHA-D hydrogel

Ratio	PU-ADH			OHA		OHA-D		Final mass fraction
	10%	20%	30%	3%	5%	3%	5%	
1	/	6	/	/	4	/	0	14.0%
2	/	6	/	/	3	/	1	14.0%
3	/	6	/	/	2	/	2	14.0%
4	/	2	/	/	3	/	1	10.0%
5	/	4	/	/	3	/	1	12.5%
6	/	8	/	/	3	/	1	15.0%
7	6	/	/	/	3	/	1	8.0%
8	/	/	6	/	3	/	1	20.0%
9	/	6	/	3	/	1	/	13.2%

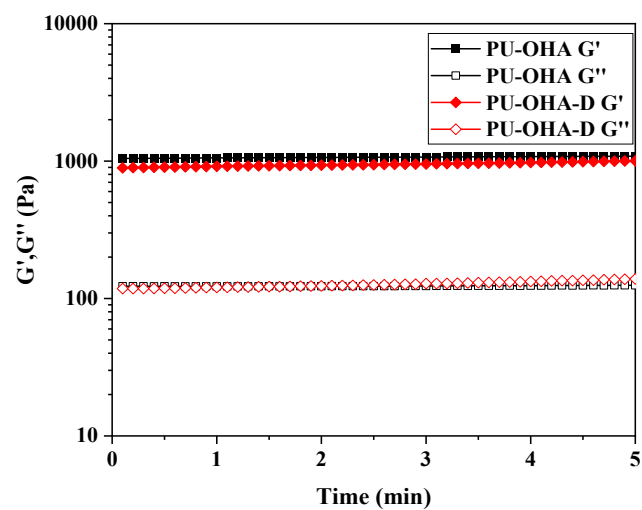


Figure S5 Curve of G' and G'' of hydrogel changing with time

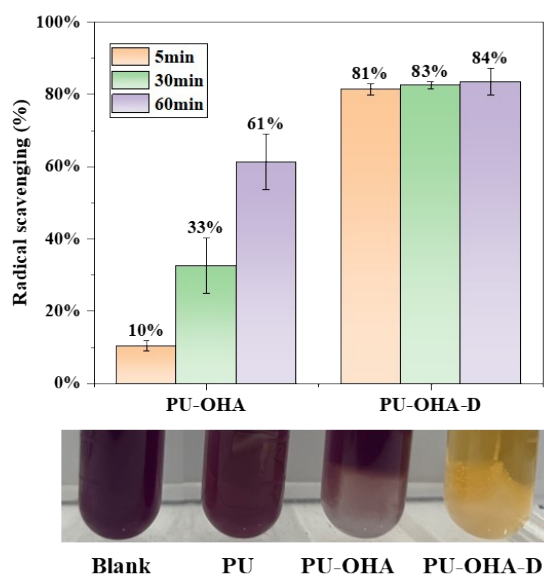


Figure S6 DPPH free radical scavenging efficiency of hydrogels at 5 min, 30 min, and 60 min along with corresponding macroscopic images at 5 min.

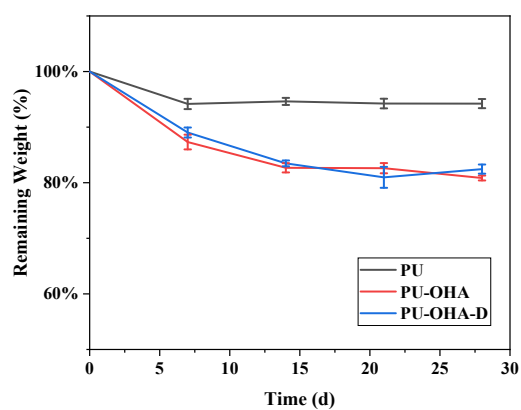


Figure S7 Degradation curves of lyophilized PU-OHA and PU-OHA-D in PBS buffer

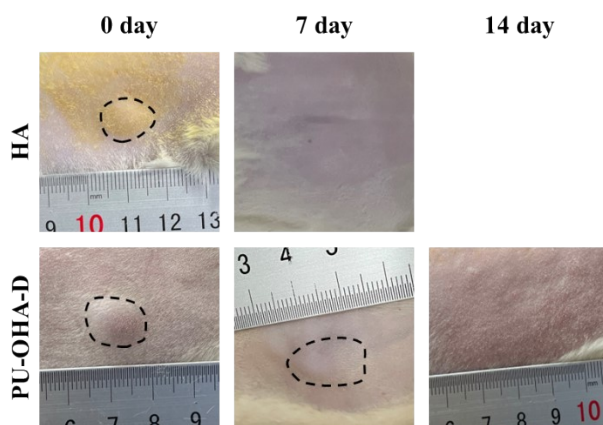


Figure S8 Subcutaneous degradation of HA and PU-OHA-D hydrogels in rats

Table S3 Peritoneal adhesion score grade for the in vivo adhesion test

Score	The condition of abdominal-blind cecum adhesion
0	No adhesions
1	Very few adhesions
2	small to moderate adhesion
3	Moderate to substantial adhesions
4	Severe adhesions

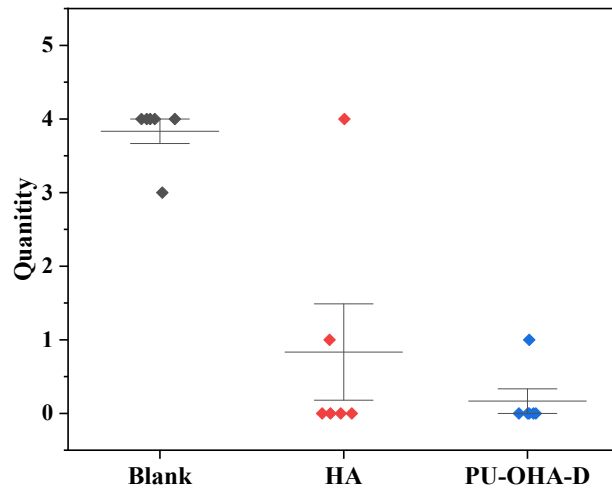


Figure S9 Abdominal-blind cecum adhesion and score statistics 14 days after surgery.