

Electronic Supporting Information for

Gelapin, a degradable genipin cross-linked gelatin hydrogel

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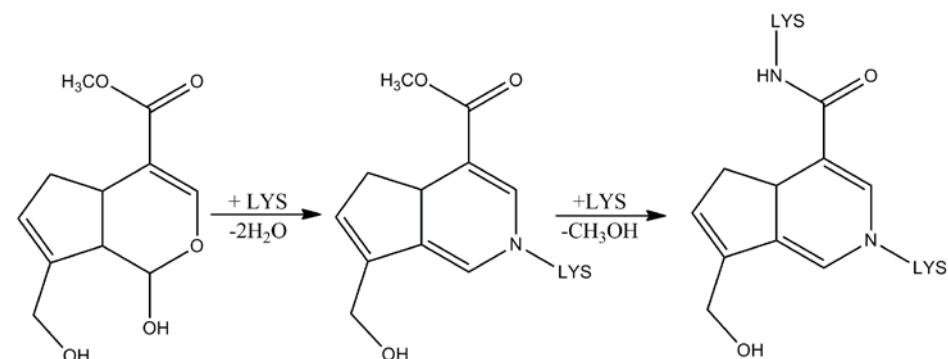


Figure S1. Schematic of the reaction scheme for the cross-linking of gelatin by genipin. The abbreviation, LYS, is short for lysine which is the main cross-linkable residue in gelatin.

Table S1. The swelling ratio for Gelapin hydrogels after various soaking periods at pH 7.4 and 8.2. The sample naming convention is in the format Gelapin-[gelatin % (w/v)]/[genipin % (w/w)]. The dash (-) indicates where a sample has dissolved.

Sample	Swelling ratio (%), pH = 7.4								Swelling ratio (%), pH = 8.2					
	0 h	3 h	6 h	12 h	24 h	48 h	72 h	168 h	0 h	3 h	6 h	12 h	24 h	48 h
Gelapin-2/4.9	100	-	-	-	-	-	-	-	100	-	-	-	-	-
Gelapin-2/7.3	100	88	-	-	-	-	-	-	100	-	-	-	-	-
Gelapin-2/12.2	100	76	60	40	26	23	22	22	100	-	-	-	-	-
Gelapin-2/19.5	100	76	60	40	28	23	23	23	100	83	-	-	-	-
Gelapin-3/4.9	100	93	-	-	-	-	-	-	100	-	-	-	-	-
Gelapin-3/7.3	100	87	78	64	48	38	36	35	100	-	-	-	-	-
Gelapin-3/12.2	100	82	70	54	39	31	29	29	100	88	75	58	39	31
Gelapin-3/19.5	100	77	64	45	32	27	26	26	100	87	75	54	35	-

Gelatin-4/2.4	100	-	-	-	-	-	-	-	100	-	-	-	-	-	-
Gelatin-4/7.3	100	86	77	65	50	40	37	37	100	92	85	75	59	46	
Gelatin-4/12.2	100	81	69	54	40	33	31	31	100	89	80	67	50	38	
Gelatin-4/19.5	100	79	66	50	37	30	29	29	100	87	76	62	45	35	
Gelatin-5/2.4	100	100	99	95	90	85	82	81	100	-	-	-	-	-	
Gelatin-5/7.3	100	87	79	67	54	44	41	40	100	93	87	79	66	53	
Gelatin-5/12.2	100	83	72	59	45	36	35	34	100	89	82	71	56	43	
Gelatin-5/19.5	100	81	69	55	42	34	32	32	100	88	78	66	49	38	
Gelatin-10/2.4	100	99	97	95	91	87	86	86	100	105	107	107	105	104	
Gelatin-10/7.3	100	92	86	78	68	58	55	54	100	96	93	88	79	69	
Gelatin-10/12.2	100	90	84	75	63	53	50	48	100	96	92	87	78	67	
Gelatin-10/19.5	100	90	82	72	60	50	46	45	100	94	88	81	69	56	

Table S2. Gelatin released from Gelapin hydrogels of various compositions after 24 hours of soaking in PBS.

Sample	Gelatin released (% total gelatin)
	24 h
Gelapin-2/12.2	-
Gelapin-2/19.5	-
Gelapin-3/7.3	0.078 ± 0.001
Gelapin-3/12.2	-
Gelapin-3/19.5	-
Gelapin-4/7.3	0.065 ± 0.002
Gelapin-4/12.2	-
Gelapin-4/19.5	-
Gelapin-5/2.4	0.58 ± 0.02
Gelapin-5/7.3	0.70 ± 0.03
Gelapin-5/12.2	-
Gelapin-5/19.5	-
Gelapin-10/2.4	1.31 ± 0.05
Gelapin-10/7.3	0.48 ± 0.02
Gelapin-10/12.2	0.15 ± 0.01
Gelapin-10/19.5	-