A chitosan-based hydrogel for the dual delivery of antimicrobial agents against a bacterial methicillin-resistant *Staphylococcus aureus* (MRSA) biofilm infected wound

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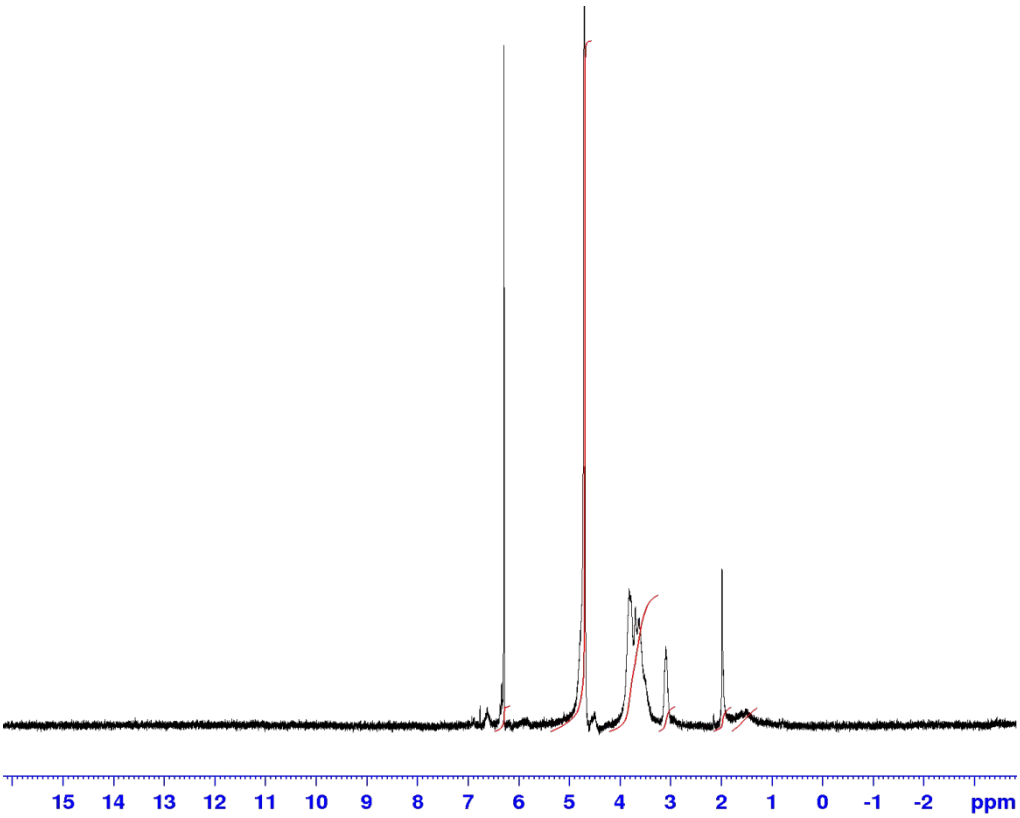

Figure S1: H[1] NMR spectrum of maleic anhydride chitosan

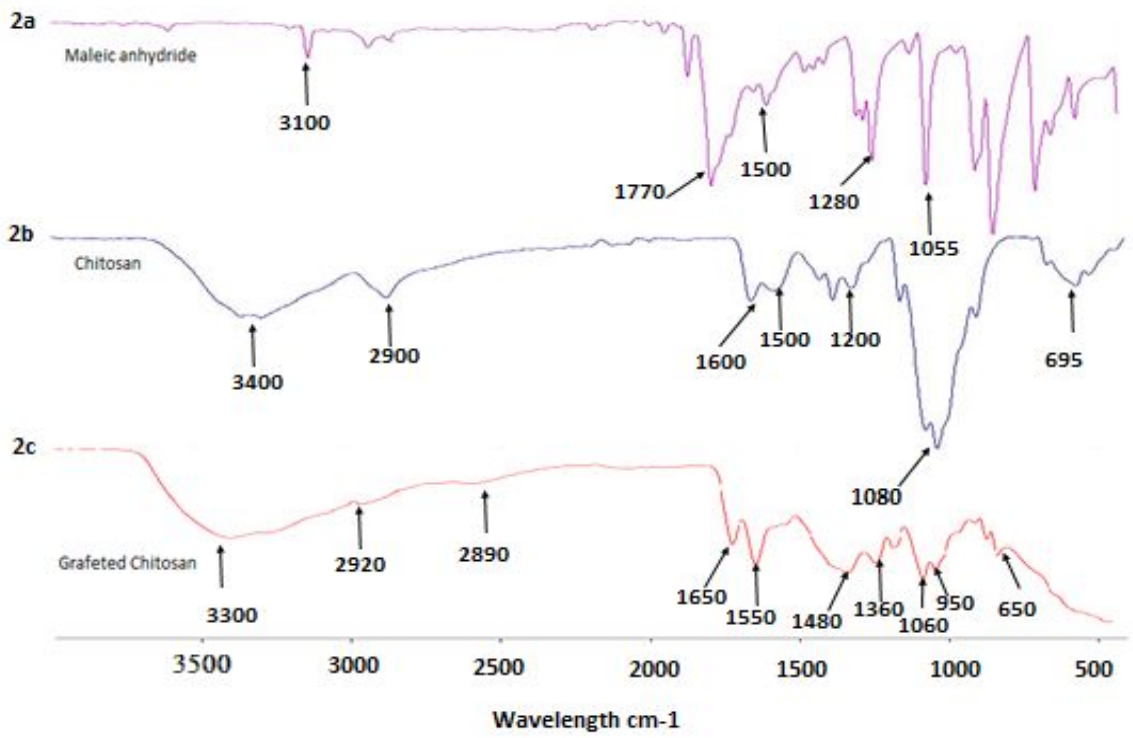

Figure S2: FTIR images of (2a) maleic anhydride, (2b) chitosan and (2c) grafted chitosan.

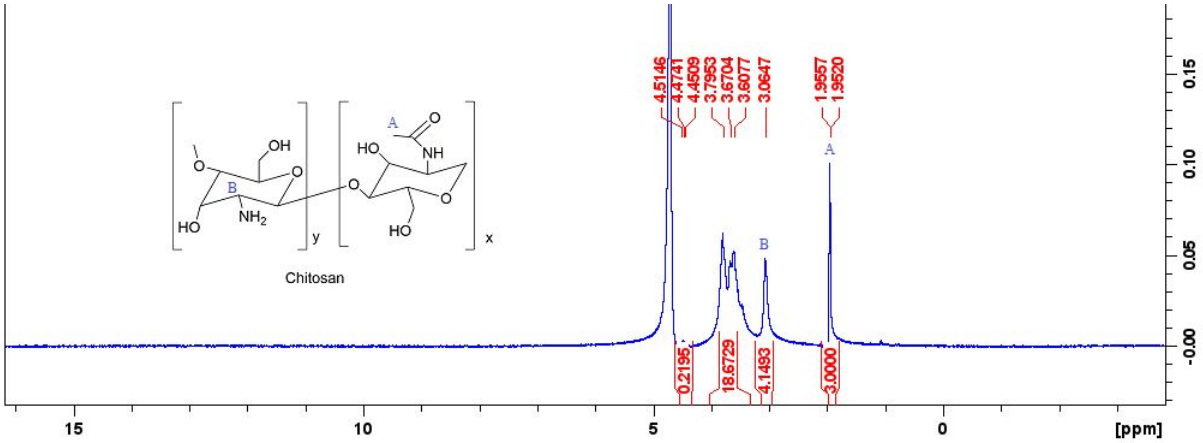

Figure S3: Proton NMR intergradation of the pristine chitosan.

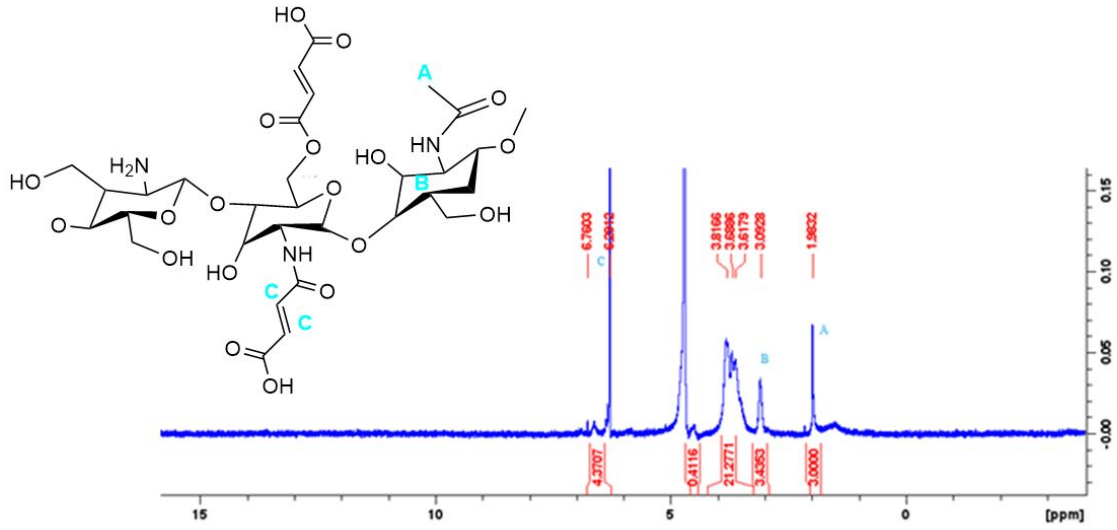

Figure S4: Proton NMR intergradation of the grafted chitosan.

Table S1: Swelling ratio and swelling capacity of hydrogel in pH 7.4 at body and room temperatures respectively.

	pH 7.4			
	Body temperature		**Room temperature**	
Time (hrs)	**Swelling ratio**	**Swelling capacity (%)**	**Swelling ratio**	**Swelling capacity (%)**
0.5	2.78	278.5263158	2.04	204.6315789
1	4.36	436.5263158	3.50	350.6315789
2	7.54	754.1052632	4.47	447.0526316
3	8.60	860.7368421	5.53	553.0526316
4	10.05	1005.894737	6.05	605.1578947
5	10.51	1051.052632	6.80	680.1052632
6	12.33	1233.684211	8.38	838.2105263
12	14.43	1443.368421	9.64	964.8421053
24	26.94	2694.736842	15.84	1584.210526

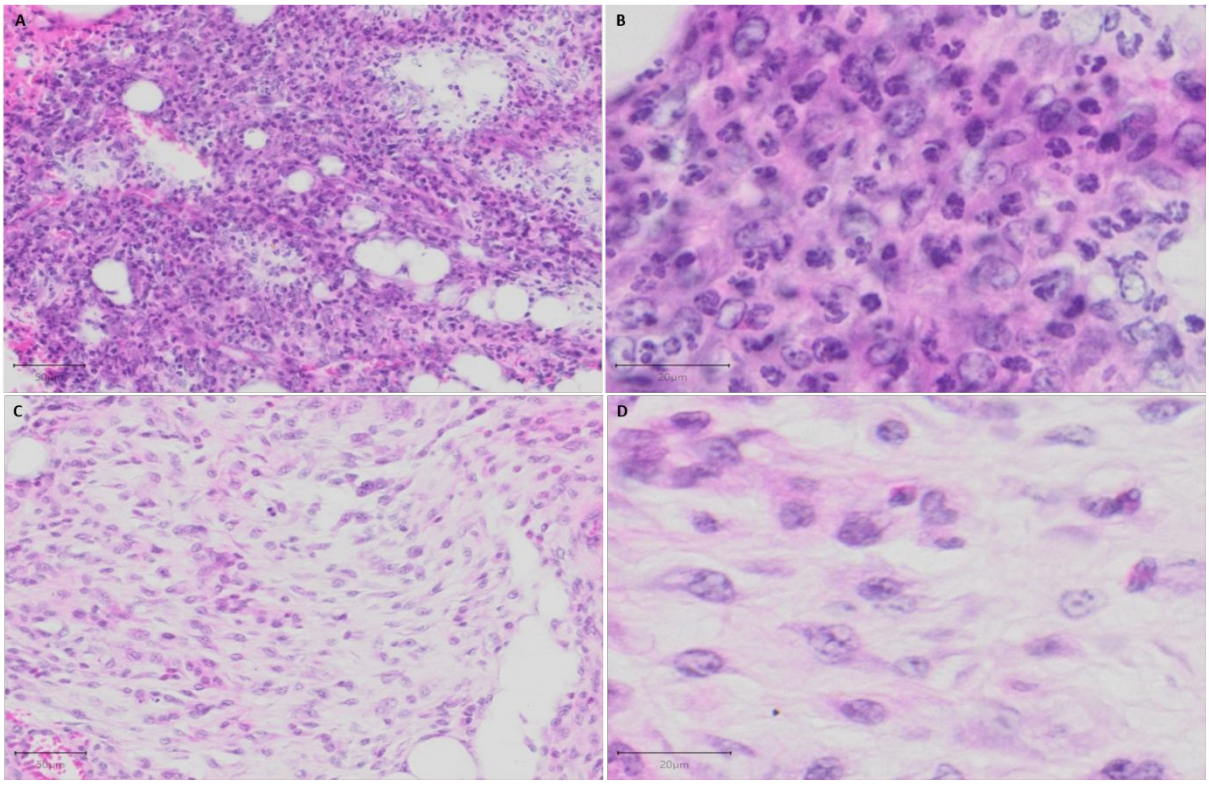

Figure S5**:** Histological analysis of H&E stained sections of untreated (A – 10X, B – 40X), HP (C – 10X, D – 40X) displaying cellular infiltration

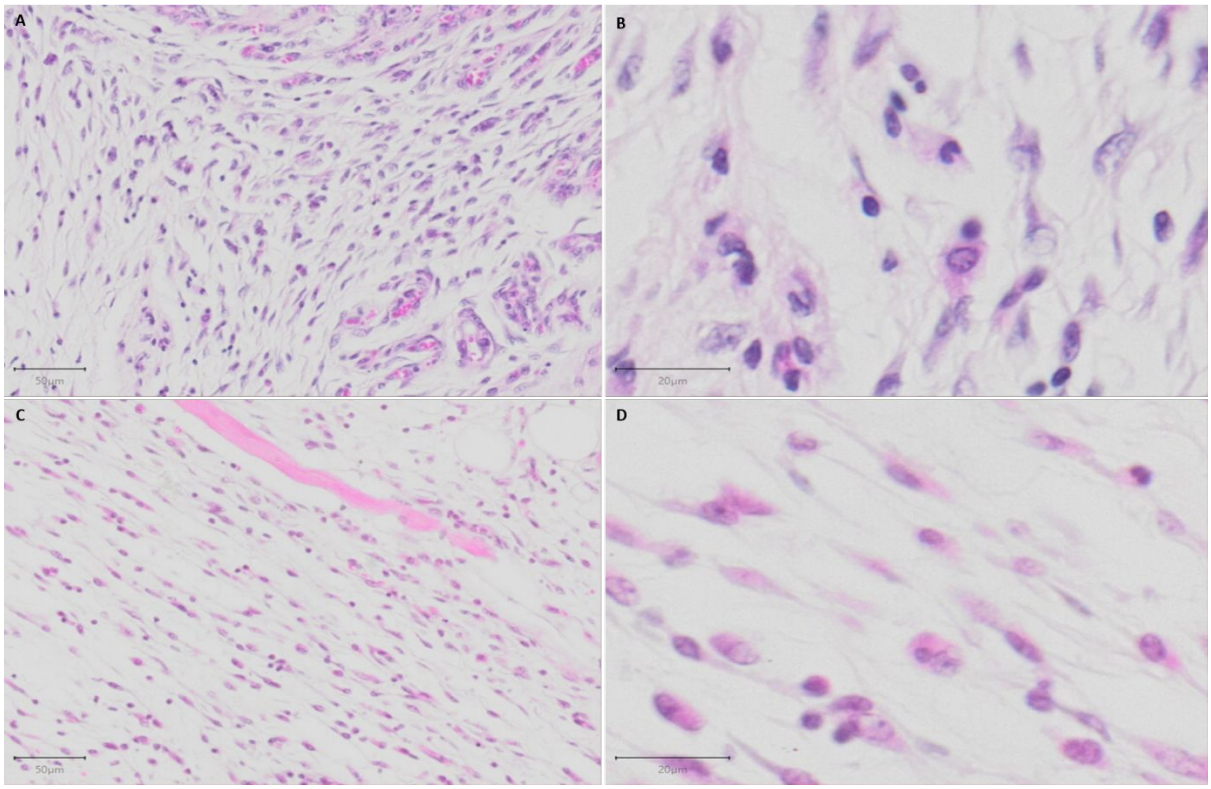

Figure S6: Histological analysis of H&E stained sections of CS-HP (A – 10X, B – 40X), CS-HP-P (C – 10X, D – 40X) displaying cellular infiltration.