Supplementary Document

Effect of the temperature of biomixing on the pH/temperature sensitive controlled drug release of a Chitooligosaccharide based hydrogel

Table S1: P-values for each set of conditions between 4°(D) and N(D).

Tomporatura	nЦ	Drug Release amount (%)		p-value
remperature	pm	N(D)	4(D)	(α=0.05)
37°C	1.2	36.87±2.188	61.60±4.4313	0.062
57 C	6.8	21.633±1.570	98.313±1.3825	0.000
30°C	1.2	42.95±0.912	21.475±1.83	0.002
50 C	6.8	26.82±0.33	12.65±0.70	0.001

Table S2: MIC and MBC values of the drug loaded COS-CMC-PEGDA hydrogel along with the drug only against *K. pneumonia* (ATCC 13883).

Bacterial isolates	Material	MIC (mg/ mL)	MBC (mg/ mL)
K. pneumonia (ATCC 13883)	N (D)	5	5
	4 (D)	2.5	2.5
	Vancomycin	2.5	2.5



Fig. S1: Disc diffusion test against (a) *B. cereus;* (b) *K. pneumonia* and Well diffusion test against (c) *B. cereus* (d) *K. pneumonia*. Clear area around the discs indicates the zone of inhibitions and the diameters were measured in mm. PBS solution was used as a negative control, while vancomycin hydrochloride was used as a positive control. The diameter of the disc was 6 mm each.



Fig. S2: Determination of the minimum inhibitory concentration (MIC). (a) after adding resazurin dye. (b) after 4 hrs of incubation. Rows 7 and 8 are positive and negative controls respectively. The color shifting from blue to pink suggests the presence of metabolically active bacterial cells which irreversibly reduced resazurin to resorufin by cellular enzymes. (c) and (d) represent determination of the minimum bactericidal concentration (MBC). The numerical values indicate the column numbers of the 96 well plate of their respected rows. For every row except the positive and negative controls, 2, 3, 4 and 5 no. columns were chosen to assess the viability of bacterial cells.