Supplementary Information

Synthesis and antibiotic activity of Chitosan-based comb-like co-polypeptides

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**Figure S1.** MTT cell viability assay results. Human Dermal Fibroblast (HDF) cells were exposed to the indicated concentrations of glucosamine-terminated poly(lysine) (black), CHI-graft-poly(lysine) (red), Chi-graft-poly(lysine-co-leucine) (blue), and Chi-graft-poly (leucine-block-lysine) (magenta) for 24hrs. Data are presented as the mean ± standard deviation, n=3.

MTT assay for cell viability

The cytotoxicity of CHI-g-Polypeptides was evaluated against Human Dermal Fibroblasts (HDF) cells using a MTT (3-[4,5-dimethylthiazol-2-yl]-2,5-diphenyltetrazolium bromide) assay. MTT is reduced in the mitochondria of metabolically active cells by succinate dehydrogenase to yield formazan, a water-insoluble crystal which is strongly colored purple. The amount of formazan is proportional to the number of viable cells and is quantified spectroscopically. Following a method adopted from Riss *et al*. [[1](#_ENREF_1)].Cells were grown in Sigma-Aldrich’s Fibroblast Growth Medium and seeded to a concentration 105 cells/well in a microtiter plate and incubated for 24 h at 37 °C in 5 % CO2.  Next, increasing amounts of test compounds were added to each well and again incubated for 24 h. MTT was then added to a concentration of 0.45 mg/ml and incubated. After 3 h DMSO was added to dissolve any formazan crystals and absorbance was measured at 570 nm.

1. L Riss, T.; Moravec, R.; Niles, A.; Benink, H.; Worzella, T.; Minor, L.; Storts, D.; Reid, Y., Cell Viability Assays. 2019.