ABSTRACT:

Mycobacterium tuberculosis which causes tuberculosis, is primarily resident within macrophages. 1,3-β-glucan has been proposed as a ligand to target drug loaded nanoparticles (NPs) to macrophages. In this study we characterized the intracellular pharmacokinetics of the anti-tubercular drug rifampicin delivered by 1,3-β-glucan functionalized PLGA NPs (Glu-PLGA). We hypothesized that Glu-PLGA NPs would be taken up at a faster rate than PLGA NPs, and consequently deliver higher amounts of rifampicin into the macrophages.