The emergence of antimicrobial drugs is a breakthrough health intervention that has helped to save millions of lives and reduce the morbidity of several infectious diseases. However, the concrete advances in control of infectious diseases need to tackle the parallel upsurge in resistance to antimicrobials. There has been an alarming situation in the healthcare industry today, since antibiotic resistance/superbugs has become a serious clinical issue. The armory of antibiotics is becoming less efficient leaving only few dependable replacements. The healthcare sector is intimidated by the labor and costs of putting an entirely new molecule in the market [1]. The reliability of developing new anti-infective molecules is being questioned. Methicillin-resistant *Staphylococcus aureus* (MRSA) has challenged many potential antibiotics [2]. MRSA may lead to deactivation and inefficacy of antibiotics. The increased use of vancomycin and linezolid, effectual antibiotics against Methicillin-resistant *Staphylococcus aureus* (MRSA) has resulted in resistant isolates. The thickening in the bacterial cell wall has prevented vancomycin from reaching the target nascent cell wall precursors [3]. This necessitates the development of potent antibiotics against MRSA activity with a different mode of action. Amongst few novel antibiotics, lipopeptide antibiotics have emerged as stars of the recent times [4]. They are produced by soil actinomycetes via non-ribosomal biosynthetic pathways. Their structure consists of an acyl chain conjugated to a linear or cyclic peptide sequence; the peptide portion can either have cationic or anionic residues [5]. Daptomycin is a promising member of the lipopeptide antibiotic family, which has displayed a broad spectrum of activity in vitro against a wide range of gram-positive bacteria, including Methicillin-resistant *Staphylococcus aureus* and vancomycin-resistant Enterococci. Daptomycin has got the FDA approval in 2003 for the treatment of patients with complicated skin and skin structure infections, right-sided endocarditis and bacteremia [6]. Daptomycin is not affected by mechanisms that confer specific resistance to beta-lactam agents (including methicillin), glycopeptides (such as vancomycin), quinupristin/dalfopristin, linezolid or other agents potentially useful against Gram-positive bacteria species. The mechanism of its action involves calcium-dependent dissipation of membrane potential leading to the release of intracellular ions from the cell and bacterial death [7]. The unique mechanism of action and low resistance profile, together with rapid bactericidal action make Daptomycin a promising alternative in future to act against resistant organisms.

**Keywords** Daptomycin; multi-drug resistance; methicillin-resistant *Staphylococcus aureus* (MRSA); cyclic lipopeptide Antibiotic

**References**