Title:	Synthesis of some pyridine substituted α,β unsaturated carbonyl compounds as potential bacterial fatty acid biosynthesis enoyl ACP reductase inhibitors
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Abstract:	Antibiotics are an important tool for humanity to counter the threat posed by the microbial diseases. With the significant developments in chemistry and medicine, scientists have been able to develop several classes of drug molecules that can cater to our needs. However bacteria being an evolving organism has been able to develop its own defense mechanisms and thus attaining the resistance against drug molecules. The threat of Antimicrobial Resistance (AMR) is so acute that even the World Health Organization (WHO) has recognized this fact and urged scientists to come up with new class of drugs which once again could give us an upper hand against our oldest foe. One such emerging class of drug molecules is the “Bacteria fatty acid biosynthesis (FAB) inhibitors”, which specifically target the fatty acid biosynthetic pathway in the bacterial cell. The limited resistance in bacteria, sequential conservation of the FAB cycle in several species, and rather underexplored pathway are the key features making them an attractive domain for further exploration. In our work here, we present the synthesis of pyridine based α,β-unsaturated carbonyl compounds which are modelled around certain known drug molecules (still under clinical trials) in this category and thus, could potentially serve the purpose of FAB inhibitors.
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