

Syal, K.; Flentie, K.; Bhardwaj, N.; Maiti, K.; Jayaraman, N.; Stallings, C. L.; Chatterji, D. 2017, “Synthetic (p)ppGpp Analogue Is an Inhibitor of Stringent Response in Mycobacteria”, *Antimicrob. Agents Chemother.*, 61, e00443 – 17.

In collaboration with Professor D. Chatterji, MBU, IISc.

This research pertains to the development of novel antibacterial therapies. (p)ppGpp is the master regulator of stringent response for the survival of the bacteria. Relacin is a novel compound which inhibits (p)ppGpp synthesis, where the presence of the isobutyryl group at the C-2 position of guanine moiety is crucial for inhibition. This work shows that substitution of this group with a benzoyl ring increases the permeability of the molecule across membranes. Enzyme kinetics, long term persistence, biofilm formation and biofilm disruption are assayed in *M. smegmatis* and the inhibition efficiency is delineated.