SUMMARY OF THE PROJECT

Title: Synthesis and biological evaluation of benzoannelated N-rich privileged scaffolds for Neurological disorders

A series of benzazepines were synthesized to assess their potential as D_1 agonists. The synthesized compounds were evaluated for their D_1 agonistic potential using isolated mesenteric artery preparation. Compound (**4**) emerged prominently as a potent D_1 agonist in these experiments.

DA receptor modulating properties of a series of benzazepine derivatives have been evaluated *in vitro* using isolated rat superior mesenteric artery strips. Amongst the compounds so evaluated, Compound (**8)** was found to be the most potent and relatively more selective D_3 antagonists. Compound **(8)** significantly attenuated 7-OH-PBZI (selective D_3 agonist) mediated relaxation of pre-constricted mesenteric arterial strips. Compound **(8)**-mediated D_3 antagonist activity was evidenced by their pA_2 values of 7.68±0.15 and 8.12±0.34 respectively. **8** has shown least effect on A-77636 (selective D_1 agonist) or bromocriptine (preferential D_2 agonist) mediated relaxation suggesting their relatively selective D_3 antagonist activity. novel benzazepine derivative (**8)** was found to be potent and preferentially selective D_3 receptor antagonists that have significant antipsychotic activity with low incidence of extrapyramidal side effects.