6. CONCLUSION

Nonselective binding to the homologous 5-HT_{2A} and 5-HT_{2B} receptors is an important hurdle in the search for a selective 5-HT_{2C} agonist. We synthesized a series of 3-substituted 1-methyl-3-benzazepine-2-ones with alkyl/cycloalkylmethyl/benzyl groups at this position. Some 8-chloro derivatives were also synthesized. All the synthesized compounds were evaluated *in vitro* on the rat thoracic aortic strip and isolated rat fundus for their 5-HT_{2A} and 5-HT_{2B} receptors' sensibilities. Compounds found inactive on these isolated tissue preparations were further evaluated using despair swim test and elevated plus maze test to determine their *in vivo* 5-HT_{2C} receptor activity. The selected compounds (**8, 13-15, 25, 31,** and **37**) also caused a decrease in DA and 5-HT levels in the brains of the treated animals similar to that caused by *m*-CPP **(XI)**. The selectivity issue was resolved by 5-HT_{2C} mediated penile erection and hypophagic response shown by these compounds in the treated animals. The study established 5-HT_{2C} receptor selective agonist activity of compounds (**8, 13-15, 25, 31,** and **37**) which could act as lead molecules for development of drugs for selective 5-HT_{2C} receptor actions.