6. Conclusion

With an aim to extend our ongoing research work on development of novel therapeutics for the treatment of Alzheimer's disease, a series of novel vicinal diaryltriazine and pyrimidine derivatives have been designed in which vicinal diaryltriazine/pyrimidine scaffold was combined with substituted benzylpiperidine, the active pharmacophore of donepezil through ethylene diamine linker. All the proposed compounds were synthesized successfully with good yields using two general schemes 1 and 2 involving 8-9 synthetic steps. It was envisaged that the newly synthesized vicinal diaryltriazines/pyrimidines would be potential anti-Alzheimer's agents as the interaction of vicinal diaryltriazine with PAS of AChE enzyme has already been disclosed, in which the benzyl piperidine side chain binds to the CAS of the AChE enzyme. Presence of nitrogen containing heterocycles such as triazine and pyrimidine could be helpful in controlling the basicity of the resulting compounds which would be crucial for the BBB permeation.

Using general scheme-3, an attempt has been made to prepare novel donepezil hybrid molecules wherein the vicinal diaryltriazine scaffold has been clubbed with the 5,6-dimethoxyindan-1-one of donepezil. We hope that these new vicinal diaryltriazine-donepezil hybrids would be effective to treat Alzheimer's disease.

All the proposed compounds have been confirmed for their structures by IR, ^{1}H-NMR and mass analysis and submitted for the biological evaluation to determine their potential as anti-Alzheimer agents.