Fluorinated *s*-Triazinyl Piperazines as Antimicrobial Agents

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A series of 1,3,5-triazine derivatives that contain 4-amino-2-trifluoromethyl-benzonitrile, 8-hydroxyquinoline, and different piperazines as substituents at the carbon atoms of the triazine ring have been synthesized by a simple and efficient synthetic protocol. The chemical structures of the compounds were elucidated with the aid of IR, ^{1}H NMR and ^{13}C NMR spectroscopy, and elemental analysis. The antimicrobial activity of the compounds was tested against seven bacteria (*Staphylococcus aureus* MTCC 96, *Bacillus cereus* MTCC 619, *Escherichia coli* MTCC 739, *Pseudomonas aeruginosa* MTCC 741, *Klebsiella pneumoniae* MTCC 109, *Salmonella typhi* MTCC 733, *Proteus vulgaris* MTCC 1771) and four fungi (*Aspergillus niger* MTCC 282, *Aspergillus fumigatus* MTCC 343, *Aspergillus clavatus* MTCC 1323, *Candida albicans* MTCC 183). The results indicate that some of the novel *s*-triazines have noteworthy activity in minimum inhibitory concentration as well as agar diffusion tests.

Key words: 2,4,6-Trichloro-1,3,5-triazine, 4-Amino-2-trifluoromethyl-benzonitrile, Piperazines