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ORIGINAL ARTICLE

Synthesis, SAR and antibacterial activity of hybrid chloro, dichloro-phenylthiazolyl-*s*-triazines

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Abstract A series of hybrid novel chloro (1a–9a) and dichloro (10b–18b) phenylthiazolyl-*s*-triazine were synthesized and subsequently subjected to their antibacterial activity against three gram positive viz. *Lactobacillus casei* (NCIM-2651); *Bacillus cereus* (NCIM-2458); *Staphylococcus aureus* (NCIM-2120) and three gram negative viz *Salmonella typhimurium* (NCIM-2501); *Escherichia coli* (NCIM-2065); *Klebsiella aerogenes* (NCIM-2098). The SAR studies around the lead compound revealed that introduction of electron withdrawing groups and amino (–NH–) and mercapto (–S–) linker bridge seemed more promising towards antibacterial activity. Moreover, the virtual Molinspiration screenings are in compliance with Ghose's rule.

1. Introduction

Brewing public health crisis has been obsessed by two key factors, the emergence of antibacterial resistance in imperative pathogenic species and a downturn in the figure of new antibacterial agents coming through pharmaceutical company pipelines (News and Analysis, 2010), with only six new antibiotics approved since 2003 (Fox, 2006). Consistent with historical data, the preponderance of antibiotics under clinical development are natural products or derivatives thereof (Donadio et al., 2010). However, WHO and many experts recommend policies encouraging the research and development of new, cost effective and innovative drugs (WHO, 2005).

s-Triazine analogues have been already gained substantial attention due to their cost effectiveness and diverse

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