Sridevi Chigurupati, Clin Pharmacol Biopharm 2015, 4:4
http://dx.doi.org/10.4172/2167-065X.C1.012

OMICS International
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# Pharma Middle East

November 02-04, 2015 Dubai, UAE

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## Green synthesis and antibacterial activity of novel azomethines

Green chemistry is the design of chemical products and processes that reduce or eliminate the use and/or generation of hazardous substances. Solvents are auxiliary materials used in chemical synthesis. The development of green chemistry redefines the role of a solvent, the only natural solvent on earth is water. It is obvious that water is the most inexpensive and environmentally benign solvent. A series of azomethines (C-1 to C-6) were synthesized from β-phenyl acrolein moiety using various aromatic amines using water as green solvent instead of hazardous chemicals. The increased incidences of severe opportunistic bacterial infections in immunological deficient patients together with the development of resistance among pathogenic gram positive and gram negative bacteria, motivated investigators to find some newer molecules that may be effective against antibiotic resistant bacteria. The synthesized compounds were further characterized and screened for antibacterial activity by test tube dilution method and disc diffusion method using gentamycin as standard drug. The antibacterial study revealed that the minimum inhibitory concentrations of C-5 and C-6 were found to be potent when compared to standard drug gentamycin against gram positive bacteria (*B. subtilis* and *S. aureus*) and gram negative bacteria (*P. aeruginosa* and *K. pneumoniae*). Apart from this, the minimum inhibitory concentration of compounds C-3 and C-4 also showed their high potential against *B. subtilis* and *P. aeruginosa*, respectively. All the six azomethines showed good activity against *S. aureus*. The antibacterial potency of newly synthesized compounds is attributed to the presence of azomethine linkage in the molecules.

### Biography

Sridevi Chigurupati has completed her PhD in Pharmaceutical Sciences from JNTU University, India. Her area of research is Synthetic and Green Chemistry. She has more than 10 years of experience in academics and research. At present, she is working as Senior Lecturer in AIMST University at Malaysia. She has published more than 20 papers in reputed journals and has been serving as a Reviewer and Editorial Board Member for many reputed journals like *Medicinal Chemistry Research, Journal of Applied Pharmaceutical Sciences, Journal of Pharmacognosy, and Arabian Journal of Chemistry.*

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