



In vitro Antibacterial Activities of Silver (I) 4-Substituted Benzenesulfonate Derivatives

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SUMMARY. A new series of silver (I) 4-substitutedbenzenesulfonate derivatives (**1-8**) have been synthesized in order to search for new potential antibacterial agents. The antibacterial activity of **1-8** against various strains of bacteria has been determined. Compounds **2-4** (silver (I) 4-methylbenzenesulfonate (**2**), silver (I) 4-methoxybenzenesulfonate (**3**), and silver (I) 4-aminobenzenesulfonate (**4**)) showed broad spectrum of antibacterial activities against both Gram-positive (methicillin-resistant *Staphylococcus aureus*, *Staphylococcus aureus*, *Bacillus subtilis*, *Enterococcus faecalis* and vancomycin-resistant *Enterococcus faecalis*) and only one Gram-negative bacterium (*Shigella sonnei*). The Structure-Activity Relationship (SAR) has also been reported.

KEY WORDS: Antibacterial activity, Benzenesulfonate, Bioactivity, Methicillin-resistant *Staphylococcus aureus*, Silver (I), Vancomycin-resistant *Enterococcus faecalis*.

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