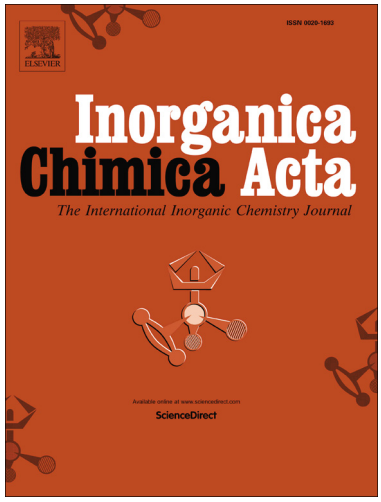

Research paper

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Synthesis of Heteroleptic Pentavalent antimonials bearing Heterocyclic Cinnamate moieties and their Biological studies

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ABSTRACT

In the search of new drugs with high therapeutic efficacy, antimony (V) dicarboxylates bearing cinnamate moieties with general formula $[SbR_3(O_2CR')_2]$ have been synthesized and characterized by spectroscopic techniques like FTIR, multinuclear (^1H and ^{13}C) NMR and single crystal X-ray diffraction. The organic moieties (R) in the complexes are phenyl and *p*-tolyl while the carboxylates are heterocyclic acrylates. In the crystal structure of $[Sb(phenyl)_3(O_2CC_2H_2C_4H_3O)_2]$ (**1**), $[Sb(phenyl)_3(O_2CC_2H_2C_4H_3S)_2]$ (**3**), $[Sb(p\text{-tolyl})_3(O_2CC_2H_2C_4H_3S)_2]$ (**5**) and $[Sb(p\text{-tolyl})_3(O_2CC_2H_2C_4H_2O(CH_3))_2]$ (**6**), antimony was found to adopt a distorted trigonal bipyramidal geometry and was monomeric with phenyl or *p*-tolyl groups at