

Abstract

In a search for new leads potent antimicrobial agents, an array of novel hydroxytriazenes i-xi were synthesized and characterized through their melting point, crystal shape, colour and elemental analysis. In vitro microbiological evaluations were carried out for all the synthesized compounds against both bacterial and fungi using the turbidimetric method. The reagent number x and xi showed significant antibacterial activities against two gram positive [Streptococcus feacalis, Staphylococcus aureus, penicillin resistance (2500 units)]. All synthesized hydroxytriazenes except reagent number viii showed antifungal activities against five fungi [Candida albicans, Cryptococcus neoformans, Sporotrichum schenckii, Trichophyton mantagrophytes, Aspergillus fumigatus}. The minimum inhibitory concentration (mic) values against these bacteria and fungi ranged from <12.5 to 50 µg/ml. Some hydroxytriazenes (x, xi) showed an unusual combined antibacterial and antifungal action, which suggest that hydroxytriazenes revealed a wide range of antimicrobial activity.