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Some new 5α-steroid hydrazones and their antimicrobial evaluation

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Steroids form an important class of biologically active compounds that exhibit diverse pharmacological activities. Among them are 5α-steroid hydrazones, which exhibit antibacterial, antiviral, anti-inflammatory, anti-cancer, cytotoxic activity

To further study the relationship between structure and activity, three series of new 5α-steroid hydrazones of epiandrosterone, pregnenolone and pregnanolone have been synthesized and their antimicrobial activity have been investigated. The initial ketones were obtained on the base of tigogenin isolated from the plant Yucca gloriosa. The structure of the synthesized 5α-steroidal hydrazones was proved using 1H, 13C-NMR and mass spectra data. The antibacterial and antifungal activity of obtained steroids have been studied. The results showed that some of them exhibited high antibacterial activity against S. aureus and P. aeruginosa. In an antifungal study the compounds showed low to moderate activity against A. fumigatus, A. niger, C. Albicans and P. funiculosum. Searching for new molecules in the field of 5α-steroid will never end.

Biography

Nanuli Nadaraia has completed her PhD at Mendeleev Moscow Chemical-Technological Institute. She is a lead research scientist at Tbilisi State Medical University. Her field of interest is a chemistry and synthesis of potential biologically active organic compounds. Nanuli Nadaraia has published over 40 scientific papers, has participated in about 60 international scientific conferences; She is co-author of 1 monograph and 1 patent.

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