5α-steroidal amines: Synthesis and biological activity

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Steroidal amines are characterized with wide spectrum of pharmacological activities such as antitumor, anti-inflammatory, antibacterial and anti-arrhythmic activity. On the basis of epiandrosterone acetate, product of transformation of tigogenin (isolated from plant Yucca gloriosa), eight possible epimer of 3-amino-17-hydroxy- and 17-amino-3-hydroxy-5α-androstane have been synthesized and their radioprotective and antiarrhythmic activities have been investigated. Among epimeric aminoalcohols the highest radioprotective activity showed 3β-amino-5α-androstan-3β-ole, while with the highest antiarrhythmic activity is characterized 17β-amino-5α-androstan-3β-ole. Based on these results some conclusion about structure-activity relationship of synthesized compounds could be made. For radioprotective activity more profitable is diaxial orientation of amino- and hydroxy groups; whereas, diequatorial orientation is favorable for the antiarrhythmic activity. Some synthesized of N-alkyl- and N-dialkylamino acetyl derivatives of 17β-amino-5α-androststan-3β-ole and 17β-amino-5α-androst-2-ene exhibit antiviral, antitubercular and antitumor activities.

Biography
N Nadaraia has completed her PhD from 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 biologically active compounds. She is the author of more than 40 papers in reputed journals and has presented at 50 international scientific conferences.