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Synthesis of 5α-steroidal[17,16-d]pyrazolines

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Among the synthetic biologically active steroids pyrazolines have important place. Interest toward of these compounds is determined by their theoretical and practical meaning. Many steroidal pyrazolines have showed high anti-inflammatory, antitumor, antimicrobial and antiandrogen activities. 3β-Hydroxy-5α-pregn-16-en-20-one and its modified product - 3α-hydroxy-5α-pregna-9(11),16-dien-20-one have been synthesized from aglicon - tigogenin, isolated from plant Yucca gloriosa L. introduced in Georgia. By acid-catalyzed condensation of this α-enones with several hydrazines (phenyl-, p-chloro-, p-bromo-, p-methyl- and p-phenyl-phenyl¬hydrazine) cyclocondensation products - 3β-hydroxy-1′-aryl-3α-methyl-5α-androstano[17,16-d]pyrazolines and 3α-hydroxy-1′-aryl-3′-methyl-5α-androst-9(11)-eno[17,16-d]pyrazolines have been synthesized and their biological activities have been studied.

Recent Publications

1. Nadaraia N, Amiranashvili L and Merlani M (2016) Structure-activity relationship of epimeric 3,17-substituted 5α-androstane aminoalcohols. Chemistry of Natural Compounds 52(5):961-962.
2. Nadaraia N, Onashvili E, Kakhabrishvili M, Barbakadze N, Sylla B and Pichette A (2016) Synthesis and antiviral activity of several N-containing 5α-steroids. Chemistry of Natural Compounds 52(5):853-855.
3. Barbakadze N, Nadaraia N, Kakhabrishvili M, Onashvili E and Katritzky A (2016) Synthesis from tigogenin of 17β-amino-5α-androstan-3β-ol peptide derivatives. Chemistry of Natural Compounds 52(3):445-447.
4. Nadaraia N, Kakhabrishvili M, Onashvili E, Barbakadze N, Getia M, Pichette A, Sikharulidze M and Makhmudov U (2014) Synthesis of several 5α-androstano[17,16-d]pyrazolines from tigogenin. Chemistry of Natural Compounds 50(6):1024-1028.
5. Barbakadze N, Jones R, Rosario N, Nadaraia N, Kakhabrishvili M, Hall D and Katritzky A (2014) Chemical modification of oximes with N-protected amino acids. Tetrahedron 70(40):7181-7184.

Biography

Nanuli 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 chemistry and synthesis of biologically active compounds. She is the author of more than 40 papers in reputed journals and presentations at 50 international scientific conferences.

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Notes:

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