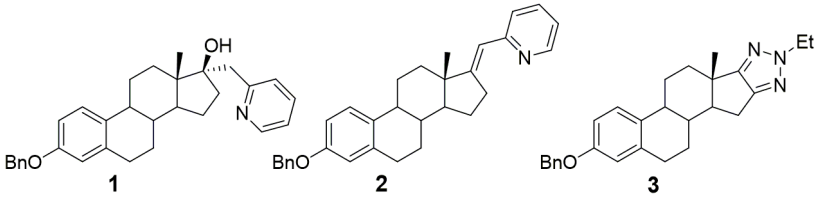
OH P 5

Sinteza i antiproliferativna aktivnost heterocikličnih estrogenih derivata

Ivana Z. Kuzminac, Andrea R. Nikolić, Dimitar S. Jakimov,* Marija N. Sakač
Univerzitet u Novom Sadu, Prirodno-matematički fakultet, Departman za hemiju, biohemiju i zaštitu životne sredine, Trg Dositeja Obradovića 3, Novi Sad
**Institut za onkologiju Vojvodine, Put dr Goldmana 4, 21204 Sremska Kamenica, Srbija*

Hemijski modifikovani prirodni estrogeni su poznati antitumorski agensi. Oni se pre svega ističu svojom antiestrogenom aktivnošću, usled koje su neki od njih našli primenu u lečenju estrogen-zavisnih kancera dojke. Međutim, retki su estrogeni derivati koji u svojoj strukturi poseduju heterociklični prsten. Ova strukturna karakteristika kod androgena je osim izuzetne antitumorske aktivnosti, doprinela i poboljšanju njihove selektivnosti prema pojedinim tumorima. Imajući ovo u vidu, u ovom radu su polazeći od benzil-etra estrona sintetisani 17α-pikolil i 17-pikoliniliden derivati **1** i **2**, kao i *N(2)*-supstituisani D-kondenzovani 1,2,3-triazolski derivat **3**. Za odabrana jedinjenja je ispitana antiproliferativna aktivnost na šest tumorskih i jednoj normalnoj ćelijskoj liniji.



Synthesis and antiproliferative activity of heterocyclic estrogen derivatives

Ivana Z. Kuzminac, Andrea R. Nikolić, Dimitar S. Jakimov,* Marija N. Sakač
University of Novi Sad, Faculty of Sciences, Department of Chemistry, Biochemistry and Environmental Protection, Trg Dositeja Obradovića 3, Novi Sad
**Oncology Institute of Vojvodina, Put dr Goldmana 4, 21204 Sremska Kamenica, Serbia*

Modified natural estrogens are well known antitumor agents. They have found widespread use in the treatment of breast cancer due to their antiestrogen activity. However, estrogen derivatives with a heterocyclic ring are rare. This structural feature in androgens has contributed to selectivity for specific tumors, in addition to excellent antitumor activity. With this in mind, we have synthesized 17α-picolyl and 17-picolinylidene estrogen derivatives **1** and **2**, as well as a compound with a *N(2)*-substituted D-condensed triazole ring **3**. The starting compound in these syntheses was benzyl ether of estrone. For selected compounds, antiproliferative activity was tested on six tumor and one normal cell line.

Authors would like to thank the Ministry of Education, Science and Technological Development of the Republic of Serbia (Grant No. 172021) for financial support.