MH P 2

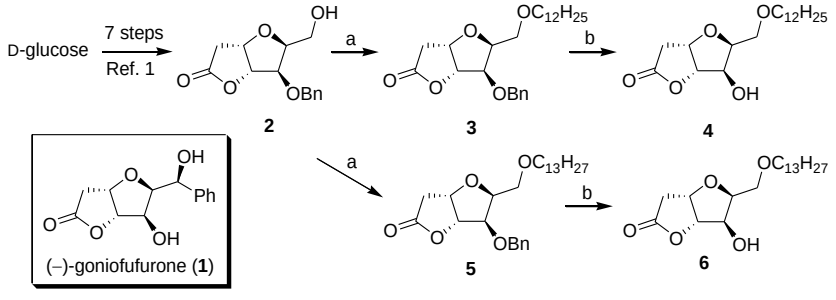
Sinteza i biološka ispitivanja novih analoga (–)-goniofufurona

Slađana M. Kekezović, Bojana Srećo Zelenović, Vesna Kojić*, Goran Benedeković, Mirjana Popsavin, Velimir Popsavin

Prirodno-matematički fakultet, Trg Dositeja Obradovića 3, Novi Sad, Srbija

**Institut za onkologiju Vojvodine, Put dr Goldmana 4, Sremska Kamenica, Srbija*

Sintetizovani su novi analozi (–)-goniofufurona (**1**), molekuli **4** i **6**, polazeći od komercijalno dostupne D-glukoze (*Scheme 1*).[1] Furanolaktoni **4** i **6** se mogu smatrati nestirilnim analozima (–)-goniofufurona (**1**), suprotnog enantiomera prirodnog citotoksičnog laktona (+)-goniofufurona. Sintetizovana jedinjenja su podvrgnuta *in vitro* testovima prema velikom broju tumorskih ćelijskih linija, kao i prema normalnim fetalnim fibroblastima pluća. Osim antiproliferativne aktivnosti, biće predstavljeni i rezultati SAR analize.



Scheme 1. Reagents and conditions: (a) $C_{12}H_{25}Br$ for **3**, $C_{13}H_{27}Br$ for **5**, Ag_2O, AgOTf, Et_2O, reflux; (b) H_2, 10 % Pd/C, EtOH, rt.

Synthesis and biological evaluation of novel (–)-goniofufurone analogues

Slađana M. Kekezović, Bojana Srećo Zelenović, Vesna Kojić*, Goran Benedeković, Mirjana Popsavin, Velimir Popsavin

Faculty of Sciences, University of Novi Sad, Trg Dositeja Obradovića 3, Novi Sad, Serbia

**Oncology Institute of Vojvodina, Put dr Goldmana 4, Sremska Kamenica, Serbia*

New (–)-goniofufurone (**1**) analogues, compounds **4** and **6**, were synthesized starting from commercially available D-glucose (*Scheme 1*).[1] Furanolactones **4** and **6** might be considered as non-styryl analogues of (–)-goniofufurone (**1**), the opposite enantiomer of naturally occurring cytotoxic lactone (+)-goniofufurone. Synthesized compounds were evaluated by *in vitro* experiments against a number of tumour cell lines, as well as against normal foetal lung fibroblasts. Apart from antiproliferative activity the results of SAR analysis will be presented.

Acknowledgement: *The work was supported by a grant from the Ministry of Education, Science and Technological Development of the Republic of Serbia (Project 172006).*

1. V. Popsavin, B. Srećo, G. Benedeković, M. Popsavin, J. Francuz, V. Kojić, G. Bogdanović, *Bioorg. Med. Chem. Lett.* **2008**, *18*, 5182.