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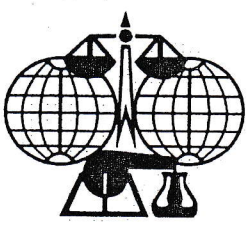

Medicinal chemistry and Agrochemicals

034-113. ***Synthesis, Antimicrobial, and Anti-inflammatory Activities of Novel 3-(1-Adamantyl)-1,2,4-triazoles, 2-(1-Adamantyl)-1,3,4-thiadiazoles and Related Derivatives.*** Ebtehal S. Al-Abdullah, Ihsan A. Shehata and Ali A. El-Emam

035-114. ***Synthesis of Carbamoylpiperidine Derivatives as Potential Platelet Aggregation Inhibitors.*** Nadia G. Haress, Ihsan A. Shehata and Omar A. Al-Deeb

036-147. ***Synthesis and antiproliferative activity of (+)-muricatacin and two novel conformationally constrained analogues.*** Bojana Srećo, Goran Benedeković, Mirjana Popsavin, Vesna Kojić, Gordana Bogdanović, Milka Jadranin and Velimir Popsavin

037-152. ***Synthesis of 1,2-Diarylquinoxalines, Estrogen Receptor Modulator Candidates, from Nitroketene N,S-Arylaminoacetals.*** Diego P. Sangi and Arlene G. Corrêa

038-199. ***Synthesis of inhibitors of α-tubulin.*** Irakusne López Martín, Jorge García-Pla, Juan Murga, Miguel Carda and J. Alberto Marco

039-240. ***Synthesis of non-purine analogs of 6-aryl-9-benzylpurines, and their antimycobacterial activities.*** Abhijit Datta Khoje, Aisvareya Kulendrn, Lise-Lotte Gundersen, Colin Charnock, Baojie Wanc and Scott Franzblau

040-277. ***Secondary Structure-Inducible Ligand Fluorescence.*** Fumie Takei, Masaki Hagihara and Kazuhiko Nakatani

041-279. **Efficient Access to Orthogonally Protected Disulfide Bridge Mimetics.** Kristian Meinander, Andrew C. Tadd, Kim Widell, Erik A. A. Wallen and Kristina Luthman

042-280. ***Bioconjugates of Protoporphyrin IX and Vitamin B_{12} as Drug Candidates for Treatment of Hypertension.*** Dorota Gryko, Anita Kożuch, Keith ó Proinsias and Rafał Loska

043-305. ***HIV-1 Integrase Inhibitors Synthesis, Antiviral Activity, and QSAR Investigation of Coumarin Analogues.*** Bo-Jian Li, Chih-Chia Chiang and Ling-Yih Hsu

044-307. ***Synthesis of spiroketal analogues as potential β-tubulin inhibitors.*** Julián Paños, Juan Murga, Miguel Carda and J. Alberto Marco

045-319. ***Derivates of Glycyrrhetinic acid induce apoptosis in tumor cells.*** Siewert, B., Schwarz, S. and Csuk, R

046-326. ***Design and synthesis of pironetin and Cobra-1 hybrids.*** Concepción Vilanova-Gallén, Jorge García-Pla, Juan Murga, Miguel Carda and J. Alberto Marco

047-338. ***Synthesis of Indole Containing Heteroaryl Piperazine Derivatives as Reverse Transcriptase Inhibitors.*** Tunca Gul Altuntas and Nilufer Akansoy

048-339. ***Synthesis of Some Novel 1H-Anilinobenzimidazole dicarboxamidines.*** Hakan Göker and Çiğdem Karaaslan

049-342. ***Synthesis of Some Novel 1H-Benzimidazole Derivatives Carrying Amide and Amidine Groups.*** Hacer Karataş and Mehmet Alp and Hakan Göker

050-343. ***Synthesis of some novel indole retinoid derivatives as potential antitumor agents.*** A. Selen Gurkan and Erdem Buyukbingol

051-347. ***Synthesis of Analogues of the anti-Helicobacter Pylori Agent (+)-Spirolaxine Methyl Ether.*** Ivaylo Dimitrov and Margaret Brimble

052-369. ***Studies on the synthesis of 5-{[4-chloro-2-(morpholin-4-yl)-1,3-thiazol-5-yl] methylidene}-thiazolidin-2,4-dione derivatives as antidiabetic agent.*** Oya Bozdağ-Dündar and Melis Ezer

053-376. ***Synthesis of Some Biologically Effective 2,5-Disubstituted-Benzoxazoles.*** Mustafa Arısoy and Özlem Temiz-Arpacı

054-377. ***Three-Dimensional Common-Feature Hypotheses on Benzoxazine Derivatives as Topoisomerase I Inhibitors.*** Ilkay Yildiz, Sanaz Atei, Serap Yilmaz, Egemen Foto, Tugba Ertan-Bolelli, Kayhan Bolelli, Nuran Diril, Esin Aki-Yalcin and Ismail Yalcin

055-378. ***Synthesis and Antidiabetic Activity of Some New Chromonyl-Thiazolidine-2,4-Diones.*** Meltem Ceylan-Ünlüsoy, Oya Bozdağ-Dündar and Rahmiye Ertan

056-383. ***The Synthetic Evolution in the Discovery of Potent and Selective mPGES-1 Inhibitors.*** André Giroux

Synthesis and antiproliferative activity of (+)-muricatacin and two novel conformationally constrained analogues

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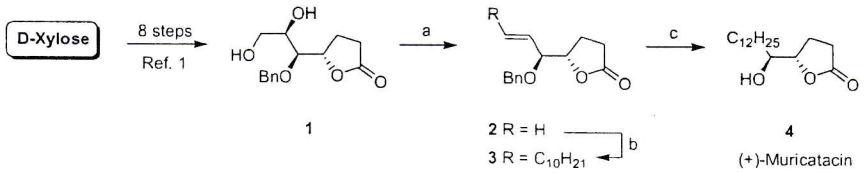
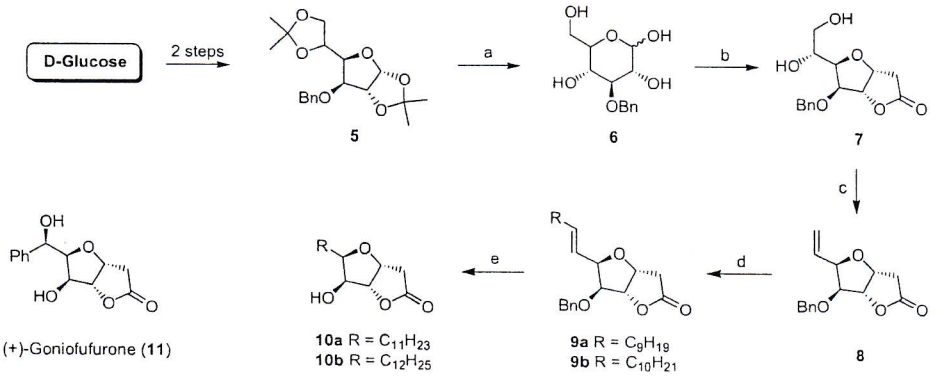
Topic: 3. Medicinal chemistry; agrochemicals

(+)-Muricatacin (**4**, Scheme 1) is naturally occurring γ-lactone that shows *in vitro* antiproliferative activity against some human neoplastic cells. Herein we describe a modified total synthesis of **4** starting from D-xylose, as well as synthesis of two new conformationally constrained (+)-muricatacin mimics (**10a** and **10b**) from D-glucose (Scheme 2). Furanolactone **10b** is one-carbon higher homologue of **10a**. In the same time, both compounds **10a** and **10b** might also be considered as dephenylated analogues of (+)-goniofufurone (**11**), a naturally occurring styryl-lactone, which also demonstrated antitumour activity. Key diols **1**[1] and **7** were converted to targets **4**, **10a** and **10b** by utilizing the same three-step sequence as outlined in the reaction schemes. Results related to antiproliferative activity of **4**, **10a** and **10b** against a number of tumour cells will be presented.



Scheme 1. Reagents and conditions: (a) I_2, imidazole, Ph_3P, CH_3CN, N_2, 90 °C; (b) 1-dodecene, Grubbs cat. 2nd generation, CH_2Cl_2, Ar, rt; (c) H_2, 10% Pd/C, MeOH, rt.



Scheme 2. Reagents and conditions: (a) TFA:H_2O (1:1), rt; (b) Meldrum's acid, Et_3N, DMF, 46–48 °C; (c) I_2, imidazole, Ph_3P, CH_3CN, N_2, 90 °C; (d) 1-undecene for **9a**, 1-dodecene for **9b**, Grubbs cat. 2nd generation, CH_2Cl_2, Ar, rt; (e) H_2, 10% Pd/C, MeOH, rt.

References

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