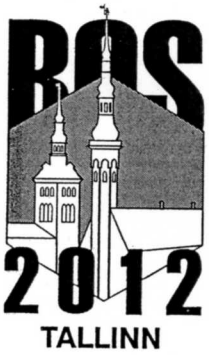

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Program and Abstracts

A CONVENIENT SYNTHESIS OF *N*-ARYL-3-ARYLPROPANAMIDES

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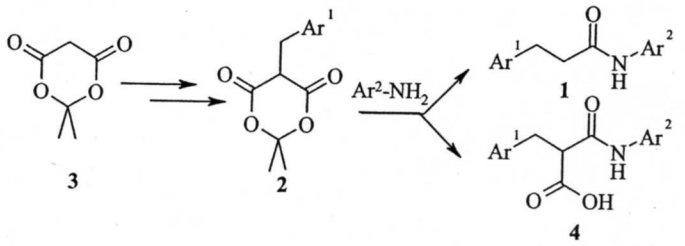
N-Aryl-3-arylpropanamides **1** rise interest due to their biological activity: hydrocinnamamides demonstrate anti-irritant, anti-itching, anti-inflammatory and antimicrobial properties, can be used for treatment of cancer and movement disorders; a range of *N*-alkyl-3-arylpropanamides exhibit antioxidant properties.[1] Most often amides **1** are obtained by acylation of anilines with 3-arylpropionic acids or their activated derivatives; the shortage of this method is the need for protecting groups when one or both of reactants contain free hydroxyl group(s) in the aromatic ring.

Here we propose a new, convenient method for synthesis of compounds **1**: cleavage of 5-arylmethyl-2,2-dimethyl-1,3-dioxane-4,6-diones (**2**) with anilines; compounds **2** can be easily prepared from Meldrum`s acid **3** and Ar^1CHO into two steps). We obtained a range of *N*-aryl-3-arylpropanamides (containing OH, OMe or NMe_2 in the aromatic moiety of propionic acid and COOH or OMe in the aniline ring) with good yields (at least 70%). Besides that we managed to isolate intermediates of this reaction - 2-arylmethyl-*N*-aryl-malonamic acids **4**. All the synthesized compounds **1** were tested for their antiradical activity - a few of them were remarkably better antioxidants than traditional antioxidant BHT.



3 2 1 4

1. (a) Roleira, F. M. F.; Siquet, C.; Orrù, E.; Garrido, E. M.; Garrido, J.; Milhazes, N.; Podda, G.; Paiva-Martins, F.; Reis, S.; Carvalho, R. A.; Tavares da Silva, E. J.; Borges, F. *Bioorg. Med. Chem.* **2010**, *18*, 5816-5825. (b) Aladedunye, F.; Catel, Y.; Przybylski, R. *Food Chem.* **2012**, *130*, 945-952. (c) Ley, J. U. S. Pat. 6,117,365, Sep 12, 2000. (d) Ley, J. P. *Int. J. Cosmetic Sci.* **2001**, *23*, 35-48.

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