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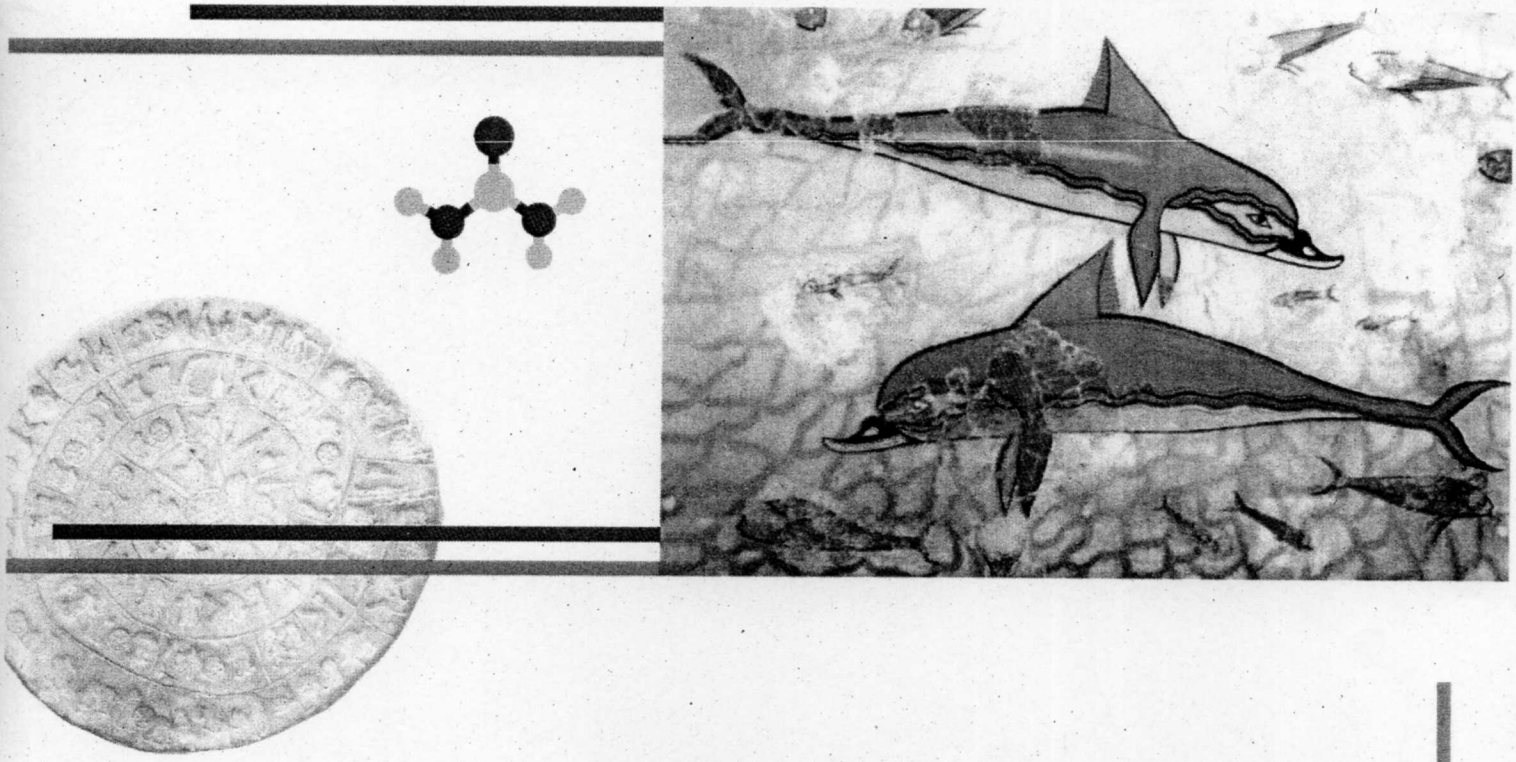

Book of Abstracts

17th European Symposium on Organic Chemistry

10th - 15th July, 2011 - Crete, GREECE

Synthetic analogues of oat antioxidants

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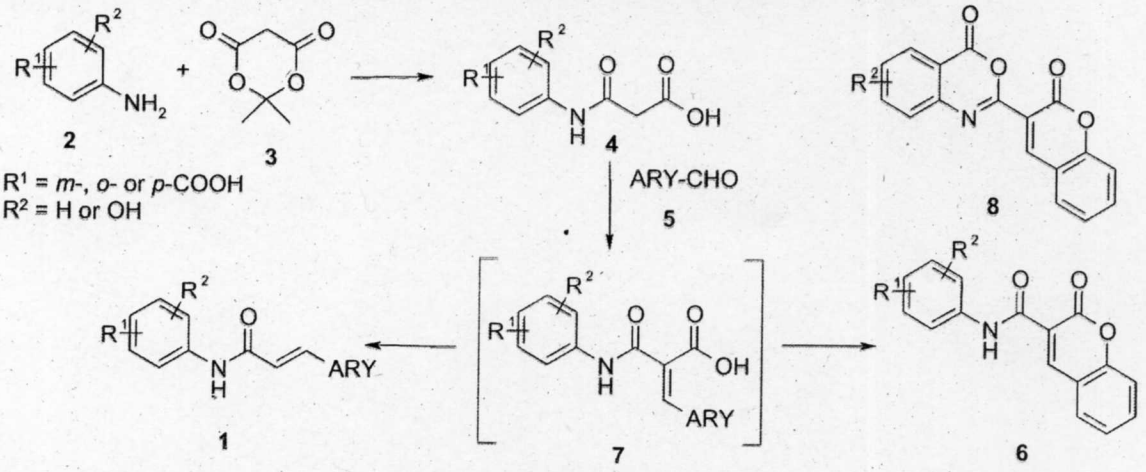
Avenantramides **1** (R^1 = *o*-COOH, R^2 = OH) are natural alkaloids exclusively isolated from oats (*Avena Sativa*)[1]; these compounds exhibit antioxidant properties,[2] as well as anti-inflammatory, antiproliferative, and anti-itching activity, which may provide additional protection against coronary heart disease, colon cancer and skin irritation.[3]
Our investigations were focused on the synthesis of analogues of avenantramides **1** and evaluation of their antiradical activity (detected with DPPH test).
Compounds **1** were obtained according known method[4], improved by ultrasonication to reduce the duration of the reactions. The target compounds **1** were synthesized from aminobenzoic acids **2** and Meldrum`s acid **3**. The obtained amides **4** were treated with aromatic aldehydes **5**, containing hydroxy- and alkoxy- (mainly, methoxy-) groups. Doebner modification of Knoevenagel condensation resulted in desired compounds **1**; in the case of salicylaldehyde it provided *N*-aryl-2-oxo-2*H*-chromene-3-carboxamides **6**. When starting compound was anthranilic acid, 2-(2-oxo-2*H*-chromen-3-yl)-4*H*-3,1-benzoxazin-4-one **8** was obtained. The hydrolysis of coumarine derivatives **6** and **8** has been studied.



A few of the synthesized compounds exhibit antiradical activity, especially those having both hydroxy- and alkoxy- groups in aromatic ring of cinnamic acid moiety.

Acknowledgment
This work has been supported by the European Social Fund within the project «Support for the implementation of doctoral studies at Riga Technical University».

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