

# SISOC VIII

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## Synthetic Analogues of Avenanthramides

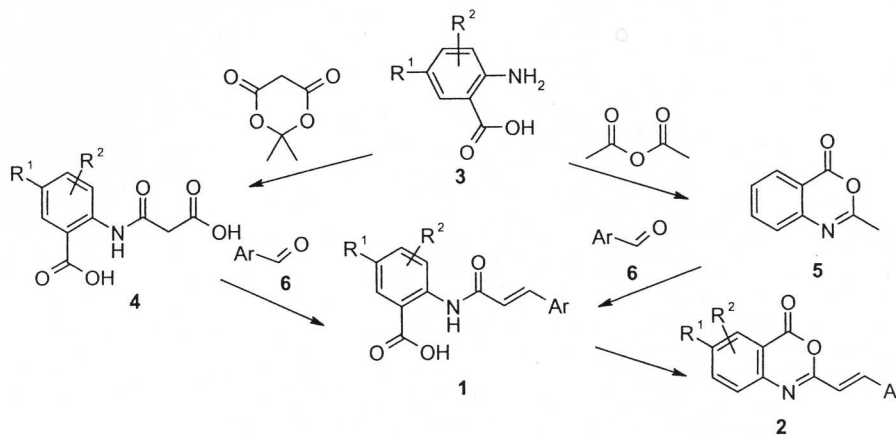
**I. Mierina, M. Jure**

Riga Technical University, Faculty of Material Science and Applied Chemistry  
 Department of Chemical Technology of Biologically Active Compounds  
 Azenes Str. 14/24, Riga, Latvia, LV 1048  
 e-mail: inesem@ktf.rtu.lv

Avenanthramides **1** ( $R^1=OH$ ) are phenolic antioxidants exclusively present in oat (*Avenus Sativa*) at approximately 300 ppm.<sup>1</sup> About 25 avenanthramides are identified till now in the extracts of oat groats and hulls.<sup>2</sup> These compounds have also been shown to exhibit anti-inflammatory, antiproliferative, and anti-itching activity, which may provide additional protection against coronary heart disease, colon cancer, and skin irritation.<sup>3</sup> Cyclic avenanthramides, named avenulamins **2**, are found in oat, too.<sup>4</sup>

We have synthesized analogues of avenanthramides from derivatives of anthranilic acid **3** ( $R^1=H, OH; R^2=H$ ) and Meldrum's acid; the corresponding amides **4** were converted to avenanthramides **1** via Doebner modification of Knoevenagel condensation.<sup>5</sup>

The same avenanthramides **1** were synthesized also by condensation of 2-methylbenzo[d][1,3]oxazin-4-one (**5**) and aromatic aldehydes **6**, containing hydroxy and/or methoxy groups. Obtained avenanthramides **1** were further used for synthesis of avenulamins **2**.



### References

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