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Meeting Report

11th National Meeting of Organic Chemistry and 4th Meeting of Therapeutic Chemistry

Maria Emília Sousa [1], Maria João Araújo [2], Maria Luísa do Vale [3], Paula B. Andrade [4], Paula Branco [5], Paula Gomes [6], Rui Moreira [7], Teresa M.V.D. Pinho e Melo [8] and Victor Freitas [9,*]

1 Laboratório de Química Orgânica e Farmacêutica, Departamento de Ciências Químicas, Faculdade de Farmácia, Universidade do Porto, Rua Jorge Viterbo Ferreira 228, 4050-313 Porto, Portugal; esousa@ff.up.pt
2 REQUIMTE/UCIBIO, Departamento de Química e Bioquímica, Faculdade de Ciências da Universidade do Porto, Rua do Campo Alegre, s/n, 4169-007 Porto, Portugal; mjaraujo@fc.up.pt
3 REQUIMTE/UCIBIO, Departamento de Química e Bioquímica, Faculdade de Ciências da Universidade do Porto, Rua do Campo Alegre, s/n, 4169-007 Porto, Portugal; mcvale@fc.up.pt
4 REQUIMTE/LAQV, Laboratório de Farmacognosia, Departamento de Química, Faculdade de Farmácia, Universidade do Porto, Rua de Jorge Viterbo Ferreira, 228, 4050-313 Porto, Portugal; pandrade@ff.up.pt
5 REQUIMTE/CQFB, Departamento de Química, Faculdade de Ciências e Tecnologia, Universidade Nova de Lisboa, Monte da Caparica, 2829-516 Caparica, Portugal; p420@fct.unl.pt
6 UCIBIO/REQUIMTE, Department of Chemistry and Biochemistry, Faculty of Sciences, University of Porto, Rua do Campo Alegre, 687, 4169-007 Porto, Portugal; pgomes@fc.up.pt
7 Faculdade de Farmácia, Universidade de Lisboa, Av. Gama Pinto, 1649-003 Lisboa, Portugal; rmoreira@ff.ulisboa.pt
8 Centro de Química de Coimbra, Department of Chemistry, University of Coimbra, 3004-535 Coimbra, Portugal; tmelo@ci.uc.pt
9 REQUIMTE/LAQV, Departamento de Química e Bioquímica, Faculdade de Ciências da Universidade do Porto, Rua do Campo Alegre, s/n, 4169-007 Porto, Portugal
* Correspondence: vfreitas@fc.up.pt; Tel.: +351-2204-02558

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Abstract: For the first time under the auspices of Sociedade Portuguesa de Química, the competences of two important fields of Chemistry are brought together into a single event, the 11st National Organic Chemistry Meeting and the the 4th National Medicinal Chemistry Meeting, to highlight complementarities and to promote new synergies. Abstracts of plenary lectures, oral communications, and posters presented during the meeting are collected in this report.

Keywords: organic synthesis; spectroscopic methods; natural compounds; drug metabolism and disposition; beyond small molecules; drug design; antitumor and anti-infective drugs; industrial applications

1. Aim and Scope of the Meeting

The Scientific Committee has put high expectations on the excellence of the scientific program, which includes plenary/keynote lectures from renowned scientists whose work has been an inspiration for researchers in Organic and Medicinal Chemistry. Oral communications focused on topics from the following main research fields: organic synthesis, spectroscopic methods, organic natural compounds, drug metabolism and disposition, beyond small molecules, computational methods and drug design, antitumor and anti-infective drugs, industrial applications.

This meeting is expected to bring together researchers with different expertise and perspectives, from senior to young scientists, to discuss and share their latest achievements in a stimulating

4.3. Morella Faya (Aiton) Wilbur Leaves and Bark: Bioactivities and Isolated Compounds (P3)

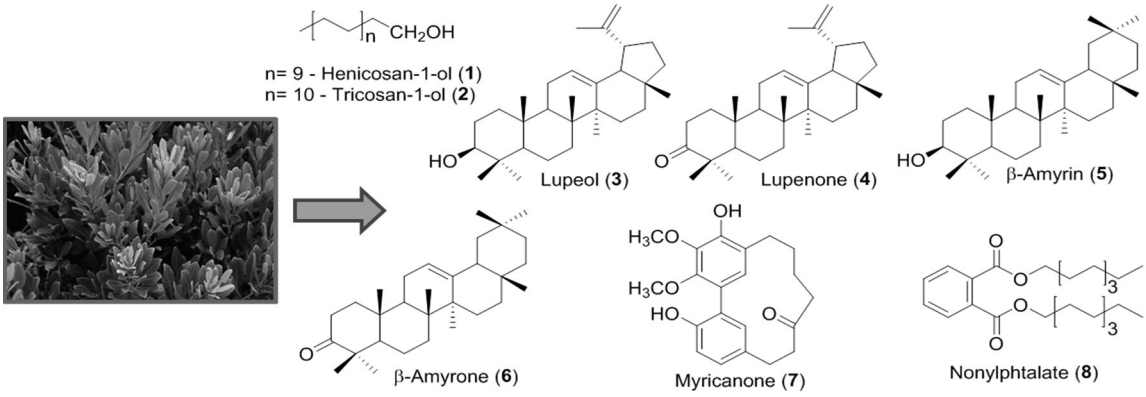
Bruno J. C. Silva [1], Maria Carmo Barreto [1], Artur M. S. Silva [2] and Ana M. L. Seca [1,2,*]

[1] DCTD, University of Azores, 9501-801 Ponta Delgada, Portugal
[2] Department of Chemistry & QOPNA, University of Aveiro, 3810-193Aveiro, Portugal
* Correspondence: anaseca@ua.pt

Morella faya (Aiton) Wilbur (syn. *Myrica faya* (Aiton)), from Myricaceae family, is an evergreen nitrogen-fixing subdecious shrub or small tree native to Macaronesia (Lutzow-Felling, C.J., *et al.* Technical Report University of Hawaii (http://manoa.hawaii.edu/hpicesu/techr/094.pdf), 1995, *94*, 1–25). *Morella* species have traditional medicine uses and metabolites that exhibit promising bioactivities (Silva, J., *et al. Int. J. Mol. Sci.* 2015, *16*, 17160–17180). Here we present the biological activity of bark and leaves extracts from *M. faya* and some compounds isolated from these extracts.

The bark acetone extract presented a strong anti-acetylcholinesterase activity, comparable to the commercial drug galanthamine. Moreover, the inhibition was also reversible, which means that it will be less toxic than an irreversible inhibitor. Both acetone extracts presented comparable inhibition values against xanthine oxidase, with only approximately 4 to 5-fold the IC_{50} for standard drug allopurinol. Considering that these extracts were reversible inhibitors, it means that they have the potential to be less toxic than allopurinol, which is approved for medical purposes.

From the most active extracts were isolated fatty alcohol (**1**–**2**), pentacyclic triterpenes with lupane and oleanane skeleton (**3**–**6**), cyclic diarylheptanoid (**7**) and a phthalate (**8**). All these compounds are reported in *M. faya* for the first time and belong to organic families well known by the broad spectrum of biological activities exhibited by its members. These results show the potential of *M. faya* as medicinal plant and source of pharmacologically active compounds.



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4.4. Natural Products: Tools for Inflammation Management (P5)

Andreia P. Oliveira, Ivone Sá, Clara Grosso, David M. Pereira, Patrícia Valentão and Paula B. Andrade *

REQUIMTE/LAQV, Laboratório de Farmacognosia, Departamento de Química, Faculdade de Farmácia, Universidade do Porto, R. Jorge Viterbo Ferreira, 228, 4050-313 Porto, Portugal
* Correspondence: pandrade@ff.up.pt

The recurrent use of anti-inflammatory drugs and their side effects led to a growing demand for viable and safer alternatives. In this context, natural products arise, playing an important role in the treatment of this pathology. Amongst natural compounds with anti-inflammatory properties,