



**5th Portuguese Young
Chemists Meeting**
(5th PYChem)
&
**1st European Young
Chemists Meeting**
(1st EYChem)

Centro Cultural Vila Flor
Guimarães, Portugal
26th – 29th of April



ICVS/3B's
Institute for
Chemical and
Bioscience
Innovation



Câmara Municipal de Guimarães





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General Programme

	26 April	27 April	28 April	29 April
9:00-13:20	Registration and Workshop of Open Science and European Open Access Policies in H2020	Organic Chemistry and Medicinal Chemistry	Inorganic, Physical, Analytical and Electrochemistry	Materials Chemistry and Nanomaterials and Surface Chemistry
13:30	Opening Ceremony	Lunch	Lunch	Lunch
14:00 - 18:00	Green Chemistry + Chemistry of Natural Products	Biochemistry and Medicinal Chemistry	CHEM2NATURE Symposium Chemical strategies for modification of natural origin materials Assembleia GQJ (17h)	Materials Chemistry and Nanomaterials and Surface Chemistry
18:00				Closing Ceremony
19:00	Welcome Cocktail	Walking Tour	Gala Dinner	
21:30	Get-together night			



27th April

8h30	<p>Organic Chemistry + Medicinal Chemistry</p> <p>Chair: Dr. Fernanda Proença Young chair: Raquel Ribeiro Seixas</p>	<p>PL2 - Nuno Maulide (50+10) "Organic synthesis with rearrangements: catalysis of unusual bond forming reactions"</p>
09h30		<p>OP10- Novel Metal-Free Approach to Promising COX-2 Inhibitors via Bronsted Acids-Catalyzed Decomposition of Diazofuranones Dmitrii Semenov (10+5)</p>
09h45		<p>OP11- Luminescent Boranils and Boron-diketonates Samuel Guieu (10+5)</p>
10h00		<p>OP12- Synthesis of copper(II) complexes of arylhydrazones and their application as catalysts in oxidation of cycloalkanes in different media Gonçalo Antunes de Oliveira Tiago (10+5)</p>
10h15		<p>OP13- A novel strategy towards a regioselective one-pot synthesis of azaindoles Marina Joana Dias Pires (10+5)</p>
10h30		<p>OP14- Functionalization of Internal Alkynes: A New Approach to 1,2-Disubstituted Cyclopentadienes Nikola Topolovean (10+5)</p>
10h45		<p>Coffee break + Poster session</p>
11h15		<p>Organic Chemistry + Medicinal Chemistry</p> <p>Chair: Dr. Armando Silvestre Young Chair: Sílvia Domingos Fernandes</p>
11h50	<p>OP15 - Application of Cinchona-alkaloids Organocatalysts in a Novel and Efficient Synthetic Pathway to Rivastigmine Sílvia Domingos Fernandes (10+5)</p>	
12h05	<p>OP16- Modular Oxindole Synthesis -- a General and Efficient Rhodium-Catalysed Addition of Arylboronic Acids to Isatin-Derived N-Boc-Protected Carolina Silva Marques (10+5)</p>	
12h20	<p>OP17- Iridium Catalyzed Asymmetric Hydrogenation of Quinoline and Quinoxaline Derivatives Tahar Ayad (10+5)</p>	
12h35	<p>OP18- Novel Fluorescent Organic Salts based on Cationic or Anionic Dyes Andreia Sofia de Almeida Baptista Forte (10+5)</p>	
12h50	<p>OP19- Candidacidal potential of licorice phenolic extract: emphasis on its mode of action Natália Ana Pereira da Cruz Martins (10+5)</p>	
13h05	<p>OP20- Development of Integrated Systems for Extraction and Purification of Monoclonal Antibodies directly from CHO Cell Cultures Emanuel Augusto Vieira Capela (10+5)</p>	



13h20		Lunch
14h20	Biochemistry + Medicinal Chemistry Chair: Vitor Gaspar Young chair: Filipa João Fernandes Gomes	PL3 - Helder Santos (50+10) "Bridging between engineering and medicine – Current applications of nanomedicines for cancer, diabetes and cardiovascular diseases"
15h20		OP21- Development of new anti-bacterial agents Carolina dos Santos Vinagreiro (10+5)
15h35		OP22- Synthesis of Anticancer Symmetric Bis(N-alkylaniline)triarylmethanes via Friedel–Crafts-Catalyzed Reaction between Secondary Anilines Rafael Filipe Teixeira Arbuéz Goems (10+5)
15h50		OP23- Identification of Inhibitors and Mechanisms of Inhibition of Protein Tyrosine Phosphatases – Potential Therapeutical Targets in Various Pathological Disorders Kuban-Jankowska Alicja (10+5)
16h05		OP24- Anticancer activity and molecular signalling of potent chemotherapeutics- 2-methoxyestradiol and fulvestrant in therapy of osteosarcoma Magdalena Gorska (10+5)
16h20		OP25- Action of new porphyrin conjugates with potential anti-malaria activity on membranes Sofia Inês Leal Duarte (10+5)
16h35		OP26- Self-assembled polymer-metal micelles: new promising anticancer agentes Leonor de Sá Nogueira Côte-Real (10+5)
16h50		PYCA Award (10+5)
17h05		IL5 - Maria João Moreno (30 + 5) "Importance of passive processes in cholesterol homeostasis - absorption at the intestine and distribution in the blood"
17h35		Coffee Break + Poster Session
18h00		



OP19 - Candidacidal potential of licorice phenolic extract: emphasis on its mode of action

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Medicinal plants have gained a special attention in the last years, due to its renowned health benefits, such as antimicrobial effects [1]. In fact, several natural matrices have been increasingly studied, namely for its antifungal activity against opportunistic fungi [2,3]. *Candida* species, although commensal microorganisms, have caused severe organic dysfunctions to the host, once current antifungal agents have lost their recognized efficiency [2]. So, numerous studies have been carried out focusing the mechanisms of acquired drug-resistance by *Candida* species [4–6]. However, apart from the discovery of an efficient multi-drug therapy (i.e. chemical drugs and also natural extracts combination), the discovery of the involved mechanisms of actions, morphological changes and related kinetic parameters are of major importance. *Glycyrrhiza glabra* L. (licorice) hydromethanolic extract have evidenced promissory candidacidal effects, and therefore, the involved mechanisms of action need to be clarified. Thus, in the present study these modes of action were assessed, by using flow cytometry. Overall, the licorice extract induced significant and irreversible primary damages on *Candida* cells, being membrane disruption and consequent unviability one of the main targets. In fact, after membrane destabilization, cells lost their proper homeostasis, their metabolic functions were blocked and, consequently cells lost functionality. The relevance and interest of the achieved results open new insights towards the upcoming use of the present phenolic matrix, being important to evaluate its *in vivo* efficacy. Therefore, further studies are necessary to deepen knowledge on this field, aiming not only to establish therapeutic and prophylactic doses, but also to improve the clinical intervention in *Candida* infections.

References

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