

**11<sup>th</sup> NATIONAL MEETING ON CHROMATOGRAPHY**  
**December 9<sup>th</sup> - 11<sup>th</sup>, 2019**

**Faculty of Sciences and Technology,  
NOVA University of Lisbon  
Caparica, Portugal**

Conference Address  
Faculty of Sciences and Technology,  
NOVA University of Lisbon  
Campus de Caparica, Portugal

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## CONGRESS INFO

### Congress Office

The Congress Office is located at the entrance hall of Hotel Aldeia dos Capuchos Congress Center.

### Opening hours:

**Short Courses, Registration at FCT NOVA:** Saturday, Sunday and Wednesday, Dec. 7 and 8 from 9:30 to 17:30 and Dec. 11 at 14:30. Courses on hyphenated and multidimensional techniques, sample preparation and data treatment.

### 11ENC

Monday,	Dec. 9, 8:00 - 18:45
Tuesday,	Dec. 10, 8:45 - 18:25
Wednesday,	Dec. 11, 8:45 - 13:15

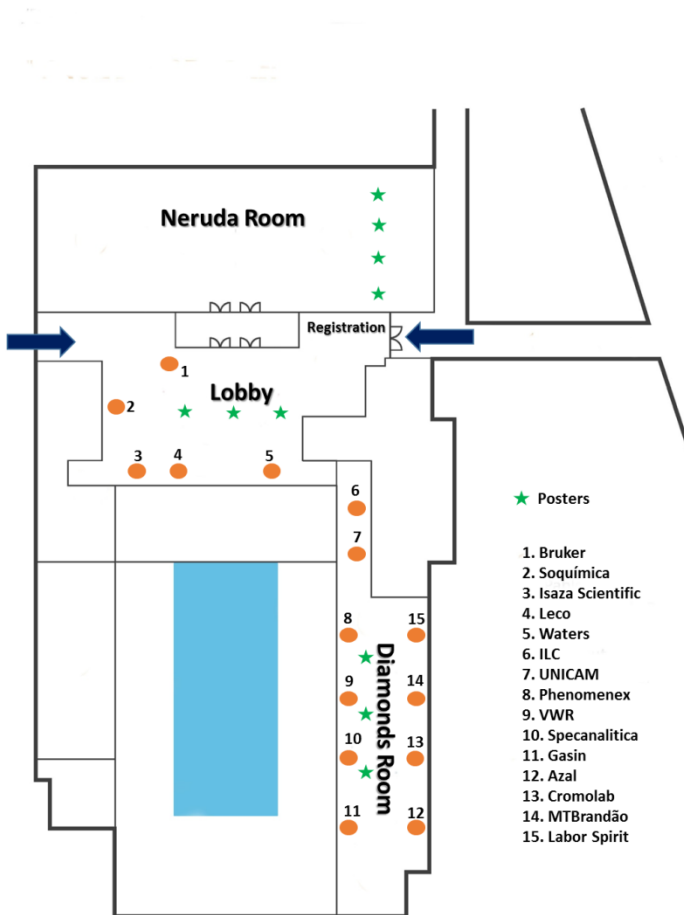
### Presentations:

The plenary (PL), oral communications (O) and flash oral communications (FO), will take place at the NERUDA ROOM.

Poster presentations (P), will be presented at the DIAMONDS ROOM, LOBBY and NERUDA ROOM

For discussion, please meet the authors at their numbered poster board at the time indicated in the scientific program. Special stickers to hang up the posters are available at the Registration Desk.

# VENUE MAP





## BADGES

**Participants and delegates are requested to wear their badges at all times. Failure to do so will result in refusal of admission to the scientific and social activities.**

### Coffee Breaks

Coffee and soft drinks will be served in the exhibition hall during the coffee break times only.

### Lunch Breaks

Meal and soft drinks will be served at Hotel Aldeia dos Capuchos during the lunch break times only.

### Social Program

**Monday, Dec 9, 19:00** “Welcome Cocktail”

#### ***Molecular Gastronomy Moments***

Local: Hotel Aldeia dos Capuchos

**Tuesday, Dec 10, 20:15** “Congress Dinner”

Local: Quinta do Mira Tejo, Monte de Caparica

**The 11ENC organization will provide transportation from the venue to table and back.**

**Wednesday, Dec 11, 13:15** “Farewell Cocktail”

Local: Hotel Aldeia dos Capuchos

**If you will attend the Conference Dinner, please let us know at the Registration Desk.**





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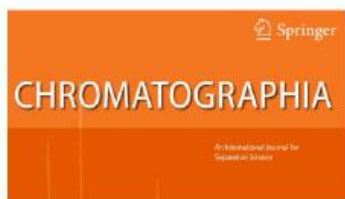
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This project has received funding from the European Union's Horizon 2020 research and innovation programme under the Marie Skłodowska-Curie grant agreement No. 775045

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## SCIENTIFIC AND SOCIAL PROGRAM

### **SATURDAY, DECEMBER 7**

09:00 Short courses registration and FCT NOVA

1. *Sample preparation methods for chromatographic analysis.*  
**9:30 to 12:30**  
Eduardo Mateus, Resolution Lab, CENSE-FCT-NOVA, Portugal
2. *MS hyphenation with LC and GC.* **14:30 to 17:30**  
Marco Gomes da Silva, Resolution Lab, LAQV-FCT NOVA, Portugal
3. *Validation of Chromatographic Methods.* **14:30 to 17:30**  
Alice Mosca – AIM, Portugal and Ricardo Bettencourt Silva – FCUL, Portugal

### **SUNDAY, DECEMBER 8**

4. *Comprehensive gas chromatography – GC x GC.* **9:30 to 12:30**  
Philip Marriott, School of Chemistry, Faculty of Science at Monash University – Australia
5. *HPLC.* **14:30 to 17:30**  
Marco Gomes da Silva, Resolution Lab, LAQV-FCT NOVA, - Portugal

### **WEDNESDAY, DECEMBER 11**

6. *Large-scale efficient extraction of chemical information from untargeted chemical profiling (GC/MS) data.* **14:30 to 17:30**  
Rasmus Bro, Copenhagen University, Faculty of Sciences – Denmark

**18:00 Courses close**



## Scientific Committee

Ana Costa Freitas (Universidade de Évora)  
Ana Maria Loureiro da Seca (Universidade dos Açores)  
António da Silva Ferreira (Universidade Católica, Porto)  
Cristina Delerue Matos (Instituto Politécnico do Porto)  
Cristina Maria Dias (Universidade de Évora)  
Eduardo Mateus (Universidade Nova de Lisboa)  
Fernanda Cosme (Universidade de Trás-os-Montes)  
Fernando Nunes (Universidade de Trás-os-Montes)  
Isabel C.F.R. Ferreira (Instituto Politécnico de Bragança)  
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Marco Gomes da Silva (Universidade Nova de Lisboa)  
Maria João Cabrita (Universidade de Évora)  
Maria Rosário Bronze (Universidade de Lisboa)  
Nuno Mateus (Universidade do Porto)  
Sílvia M. Rocha (Universidade de Aveiro)

## Organizing Committee

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José Manuel F. Nogueira (Universidade de Lisboa)  
Marco Gomes da Silva (Universidade Nova de Lisboa)  
Maria João Cabrita (Universidade de Évora)

## Chairman

Marco Gomes da Silva (Universidade Nova de Lisboa)

## Local Organization

Eduardo Mateus (Universidade Nova de Lisboa)  
Flávia Freitas (Universidade Nova de Lisboa)  
João Brinco (Universidade Nova de Lisboa)  
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Marco Gomes da Silva (Universidade Nova de Lisboa)  
Maria José Correia (Universidade Nova de Lisboa)  
Nazaré Couto (Universidade Nova de Lisboa)  
Paula Guedes (Universidade Nova de Lisboa)

## MONDAY, DECEMBER 9

8:00 *Congress registration open*

8:45 *Opening Session – Opening Ceremony, NERUDA ROOM*

**Marco Gomes da Silva** - Chairman of 11ENC,  
Universidade NOVA de Lisboa

**Adelino Galvão**, General Secretary, SPQ

**Ana Costa Freitas**, Rector Universidade de Évora

**João Sàágua**, Rector Universidade NOVA de Lisboa

### MORNING SESSION

**Session 1 Chair: Marco Gomes da Silva - Universidade NOVA de Lisboa**

9:20 **PL01** *From amino acid analysis in 1969 to characterization of protein biopharmaceuticals in 2019*

**Pat Sandra**<sup>1</sup>

<sup>1</sup> Research Institute for Chromatography, President Kennedypark 26, B-8500 Kortrijk, Belgium

10:00 **O1** *Impurity Profiling: know the unknown by HRMS*

**Liliana Silva**<sup>1</sup>, **Marco Galesio**<sup>1</sup>

<sup>1</sup> Hovione Farmaciência S.A., Analytical Development, Estrada do Paço do Lumiar, Campus do Lumiar, Edifício S, 1649-038 Lisboa, Portugal

10:20 **O02** *High sensitivity applications with High Resolution MS-QTOF: Analysis of PCB's and PCDD's in fish tissue by GC-APCI-QTOF*

**Miquel Àngel Pérez**<sup>1</sup>

<sup>1</sup> Bruker Applications Development Laboratory, Madrid, Spain

**10:45 Coffee Break & Posters Session**

## MORNING SESSION

**Session 2 Chair: Maria João Cabrita – Universidade de Évora**

### 11:10 O03 ***Effect of gamma radiation on bioactive compounds of olive wastes***

***Madureira J<sup>1</sup>, Dias M<sup>2</sup>, Barros L<sup>2</sup>, Santos-Buelga C<sup>3</sup>, Margaça FMA<sup>1</sup>, Ferreira ICFR<sup>2</sup>, Cabo Verde S<sup>1</sup>***

<sup>1</sup> Centro de Ciências e Tecnologias Nucleares (C2TN-IST), Universidade de Lisboa, E.N. 10 ao km 139.7, 2695-066 Bobadela LRS, Portugal

<sup>2</sup> Centro de Investigação de Montanha (CIMO), Instituto Politécnico de Bragança, Campus de Santa Apolónia, 5300-253 Bragança, Portugal

<sup>3</sup> Grupo de Investigación en Polifenoles (GIP-USAL), Facultad de Farmacia, Universidad de Salamanca, Campus Miguel de Unamuno s/n, 37007 Salamanca, Spain

### 11:30 O04 ***Seasonal effect on the Polycyclic Aromatic Hydrocarbons contents of *F. spiralis*, *Porphyra* spp. and *Ulva* spp. seaweed species harvested in the Portuguese coast***

***Vieira EF<sup>1</sup>, Soares C<sup>1</sup>, Ramalhosa MJ<sup>1</sup>, Sousa S<sup>1</sup>, Oliva-Teles MT<sup>1</sup>, Correia M<sup>1</sup>, Carvalho AP<sup>2</sup>, Domingues VF<sup>1</sup>, Morais S<sup>1</sup>, Delerue-Matos C<sup>1</sup>***

<sup>1</sup> LAQV, REQUIMTE, Instituto Superior de Engenharia do Porto, Instituto Politécnico do Porto, R. Dr. António Bernardino de Almeida 431, 4200-072 Porto, Portugal

### 11:50 O05 ***How far can you get in the analysis of complex mixtures through 2D-LC?***

***António Chana<sup>1</sup>***

<sup>1</sup> Agilent Technologies, C/ José Echegaray, 8, 28232 Las Rozas, Spain

### 12:15 O06 ***An improved method for determination of sotolon in Port wines***

***Milheiro J<sup>1</sup>, Vilamarim R<sup>1</sup>, Filipe-Ribeiro L<sup>1</sup>, Cosme F<sup>2</sup>, Nunes FM<sup>1</sup>***

<sup>1</sup> CQ-VR, Food and Wine Chemistry Lab, Chemistry Research Centre, University of Trás-os-Montes and Alto Douro, School of Life Sciences and Environment, Chemistry Department, 5000-801, Vila Real, Portugal

<sup>2</sup> CQ-VR, Food and Wine Chemistry Lab, Chemistry Research Centre, University of Trás-os-Montes and Alto Douro, School of Life Sciences and Environment, Biology and Environmental Department, 5000-801, Vila Real, Portugal

**12:35 O07** *Cytinus hypocistis (L.) L. extract as a source of anti-aging cosmeceutical ingredients*

**Ana Rita Silva<sup>1,2</sup>, Taofiq Oludemi<sup>1</sup>, José Pinela<sup>1</sup>, Maria Inês Dias<sup>1</sup>, Ricardo C. Calhelha<sup>1</sup>, Maria José Alves<sup>1</sup>, Andrei Mocan<sup>3</sup>, Pablo A. García<sup>2</sup>, Lillian Barros<sup>1</sup>, Isabel C.F.R. Ferreira<sup>1</sup>**

<sup>1</sup> Centro de Investigação de Montanha (CIMO), Instituto Politécnico de Bragança, Portugal

<sup>2</sup> Facultad de Farmacia, CIETUS-IBSAL, Universidad de Salamanca, Salamanca, España

<sup>3</sup> Department of Pharmaceutical Botany, "Iuliu Hațieganu" University of Medicine and Pharmacy, Romania

## 12:55 Lunch & Posters Session

### AFTERNOON SESSION

**Session 3 Chair: Eduardo Mateus - Universidade NOVA de Lisboa**

**14:20 PL02** *Extraction of chemical information from untargeted chemical profiling (GC-MS) data*

**Rasmus Bro<sup>1</sup>**

<sup>1</sup> Department of Food Science, University of Copenhagen, 1958 Frederiksberg, Denmark

**15:00 O08** *Combining analytical pyrolysis and chemometrics: A powerful approach to study complex organic matrices*

**Jiménez-Morillo NT<sup>1,2</sup>, Miller AZ<sup>2</sup>, Palma V<sup>1</sup>, Dias Barrocas C<sup>2</sup>, Cabrita MJ<sup>1</sup>**

<sup>1</sup> ICAAM – Instituto de Ciências Agrárias e Ambientais Mediterrânicas, Universidade de Évora, Núcleo da Mitra, Ap. 94, 7006-554 Évora, Portugal

<sup>2</sup> Laboratório HERCULES, Universidade de Évora, Palácio do Vimioso, 7000-809 Évora, Portugal

**15:20 O09** *Integration of data from GC-MS and UPLC-QTOF-MS to better understand wine ageing: a new graphical interface*

**A.R. Monforte<sup>1</sup>, A. C. Silva Ferreira<sup>2</sup>**

<sup>1</sup> Centro de Biotecnologia e Química Fina (CBQF), Laboratório Associado, Escola Superior de Biotecnologia, Universidade Católica Portuguesa, Rua Diogo Botelho 1327, 4169-005 Porto, Portugal

<sup>2</sup> Institute for Wine Biotechnology (IWBT), Department of Viticulture and Oenology (DVO), University of Stellenbosch, Private Bag XI, Matieland 7602, South Africa

<sup>3</sup> Cork Supply Portugal, S.A., Rua Nova do Fial 102, 4535 São Paio de Oleiros, Portugal



**15:40 O10      *The Use of Ion Mobility-MS to Resolve and Discover Sample Complexity In Small Molecule Analysis***

***Alberto Méndez***<sup>1</sup>

<sup>1</sup> Waters Corporation

**16:05 O11      *Analysis of skin volatiles using a membrane-SPME/GC-MS approach to unveil putative biomarkers for neurodegenerative diseases***

***Beatriz Andrade***<sup>1</sup>, ***Jorge Pereira***<sup>1</sup>, ***José Câmara***<sup>1,2</sup>

<sup>1</sup> CQM – Centro de Química da Madeira, Universidade da Madeira, Campus Universitário da Penteada, 9020-105 Funchal, Portugal

<sup>2</sup> Faculdade de Ciências Exatas e da Engenharia, Universidade da Madeira, Campus Universitário da Penteada, 9020-105, Funchal, Portugal

## **16.25 Coffee Break & Posters Session**

### **AFTERNOON SESSION**

***Session 4 Chair: Cristina Dias – Universidade de Évora***

**17:00 O12      *Determination of the phenolic composition of vine-canes subcritical water extracts and its utilization for production of a topical formulation***

***Manuela M. Moreira***<sup>1</sup>, ***Francisca Rodrigues***<sup>1</sup>, ***Olena Dorosh***<sup>1,2</sup>, ***Diana Pinto***<sup>1</sup>, ***Andreia F. Peixoto***<sup>3</sup>, ***Paulo Costa***<sup>4</sup>, ***Simone Morais***<sup>1</sup>, ***Cristina Freire***<sup>3</sup>, ***Cristina Delerue-Matos***<sup>1</sup>

<sup>1</sup> REQUIMTE/LAQV, Instituto Superior de Engenharia do Porto, Rua Dr. António Bernardino de Almeida 431, 4200-072, Porto, Portugal

<sup>2</sup> Instituto de Tecnologia Química e Biológica António Xavier, Av. da República 2780-157 Oeiras, Portugal

<sup>3</sup> REQUIMTE/LAQV, Dep. de Química e Bioquímica, Faculdade de Ciências, Universidade do Porto, Rua do Campo Alegre s/n, 4169-007 Porto, Portugal

<sup>4</sup> UCIBIO/REQUIMTE, MedTech-Laboratory of Pharmaceutical Technology, Department of Drug Sciences, Faculty of Pharmacy, University of Porto

**17:20 O13      *HPLC and UHPLC Selectivity – Finding a Selectivity Starting Point***

***Zeshan Aqeel***<sup>1</sup>, ***Felipe Silva***<sup>2</sup>, ***PhD. Jason Anspach***<sup>1</sup>, ***and Ryan Splitstone***<sup>1</sup>

<sup>1</sup> Phenomenex, Inc., 411 Madrid Ave., Torrance, CA 90501 USA

<sup>2</sup> Phenomenex C/ Valgrande 8, planta 2.1.B., 28108 Alcobendas, Madrid, Spain

**17:45 O14      *Separation of Nadolol Racemates by High pH Reversed-Phase Fixed-Bed and Simulated Moving Bed Chromatography***

***R. Arafah<sup>1,2</sup>, A. Ribeiro<sup>1,2</sup>, A. Rodrigues<sup>2</sup>, L. Pais<sup>1,2</sup>***

<sup>1</sup> Centro de Investigação de Montanha (CIMO), Instituto Politécnico de Bragança, Campus de Santa Apolónia, Apartado 1134, 5301-857 Bragança, Portugal

<sup>2</sup> Laboratory of Separation and Reaction Engineering, Department of Chemical Engineering, Faculty of Engineering, University of Porto, Rua Dr. Roberto Frias s/n, 4200-465 Porto, Portugal

**18:05 O15      *Pharmaceutical drugs as emerging pollutants in aqueous media of Northeast Portugal***

***A. Oliveira<sup>1</sup>, A. Ribeiro<sup>1,2</sup>, P. Brito<sup>1</sup>, A. Queiroz<sup>1</sup>***

<sup>1</sup> Centro de Investigação de Montanha (CIMO), Instituto Politécnico de Bragança, Campus de Santa Apolónia, 5300-253 Bragança, Portugal

<sup>2</sup> Laboratory of Separation and Reaction Engineering, Department of Chemical Engineering, Faculty of Engineering, University of Porto, Rua Dr. Roberto Frias s/n, 4200-465 Porto, Portugal

**18:25 FO1 (P04)      *Chemical characterization of the hydrodistillation residual water and essential oil of Crithmum maritimum***

***Jorge M. Alves-Silva<sup>1,2,\*</sup>, Inês Guerra<sup>1,\*</sup>, Maria José Gonçalves<sup>1</sup>, Carlos Cavaleiro<sup>1</sup>, Maria Teresa Cruz<sup>3</sup>, Artur Figueirinha<sup>4</sup>, Lúgia Salgueiro<sup>1</sup>***

<sup>1</sup> CIEPQPF and Faculty of Pharmacy, University of Coimbra, Azinhaga de Santa Comba, Celas, 3000-548 Coimbra, Portugal

<sup>2</sup> iCBR, Faculty of Medicine, University of Coimbra, Azinhaga de Santa Comba, Celas, 3000-548 Coimbra, Portugal

<sup>3</sup> CNC, Faculty of Pharmacy, University of Coimbra, Azinhaga de Santa Comba, Celas, 3000-548 Coimbra, Portugal

<sup>4</sup> LAQV, REQUIMTE, Faculty of Pharmacy, University of Coimbra, Azinhaga de Santa Comba, Celas, 3000-548 Coimbra, Portugal

\* Authors contributed equally to the work

18:29 FO2 (P18) ***Occurrence of polybrominated diphenyl ethers and their metabolites in Douro river biota***

***D. Menezes-Sousa<sup>1,2</sup>, S.C. Cunha<sup>1</sup>, F.H.S. Fogaça<sup>3</sup>, M.B. Alonso<sup>2</sup>, J.P.M. Torres<sup>2</sup>, A. Marques<sup>4,5</sup>, L. Guilhermino<sup>6,7</sup>, J.O. Fernandes<sup>1</sup>***

<sup>1</sup> LAQV, REQUIMTE, Laboratório de Bromatologia e Hidrologia, Faculdade de Farmácia, Universidade do Porto, Porto, Portugal

<sup>2</sup> Laboratório de Radioisótopos Eduardo Penna Franca, Instituto de Biofísica Carlos Chagas Filho, Centro de Ciências da Saúde, Universidade Federal do Rio de Janeiro, Rio de Janeiro, Brasil

<sup>3</sup> Empresa Brasileira de Pesquisa Agropecuária, Brasil

<sup>4</sup> ZIPMA, Divisão de Aquacultura e Valorização, Instituto Português do Mar e da Atmosfera, I.P., Avenida de Brasília, 1449-006, Lisboa, Portugal

<sup>5</sup> CIIMAR, Universidade do Porto, Rua dos Bragas 289, 4050-123, Porto, Portugal

<sup>6</sup> ICBAS - Institute of Biomedical Sciences of Abel Salazar, University of Porto, Department of Populations Study, Laboratory of Ecotoxicology (ECOTOX), Rua de Jorge Viterbo Ferreira, 228, 4050-313 Porto, Portugal

<sup>7</sup> CIIMAR/CIMAR-LA - Interdisciplinary Centre of Marine and Environmental Research, Research Team of Ecotoxicology, Stress Ecology and Environmental Health (ECOTOX), University of Porto, Portugal

18:33 FO3 (P26) ***The use of chromatographic methods to study the contribution of oral cells in polyphenols-salivary proteins interaction***

***Soares S.<sup>1</sup>, Brandão E.<sup>1</sup>, Guerreiro C.<sup>1</sup>, Mateus N.<sup>1</sup>, de Freitas V.<sup>1</sup>, Soares S.<sup>1</sup>***

<sup>1</sup> LAQV, REQUIMTE, Departamento de Química e Bioquímica, Faculdade de Ciências, Universidade do Porto, 4169-007 Porto, Portugal

18:37 FO4 (P30) ***Analysis of phenolic and lipophilic compounds of elderberry stalks from northern Portugal using high performance chromatographic techniques coupled with mass spectrometry***

***Samuel Patinha<sup>1</sup>, Juliana V. Murteira<sup>1</sup>, Ângelo C. Salvador<sup>1,2</sup>, Sónia A. O. Santos<sup>2</sup>, Armando J. D. Silvestre<sup>2</sup>, Sílvia M. Rocha<sup>1</sup>***

<sup>1</sup> QOPNA/LAQV-REQUIMTE, Departamento de Química, Universidade de Aveiro, 3810-193 Aveiro, Portugal

<sup>2</sup> CICECO-Aveiro Institute of Materials Departamento de Química, Universidade de Aveiro, 3810-193 Aveiro, Portugal



**18:41 FO5 (P34)      *Evaluation of antiglycation potential of Sambucus nigra L.***

***Sandrine S. Ferreira<sup>1,2</sup>, Amélia M. Silva<sup>2</sup>, Fernando M. Nunes<sup>1</sup>***

<sup>1</sup> CQ-VR, Chemistry Research Centre-Vila Real, Food and Wine Chemistry Lab, University of Trás-os-Montes and Alto Douro, Quinta dos Prados, 5000-801, Vila Real, Portugal

<sup>2</sup> CITAB-UTAD, Center for Research and Technology of Agro-Environmental and Biological Sciences, University of Trás-os-Montes and Alto Douro Quinta dos Prados, 5000-801, Vila Real, Portugal

**19:00 Welcome Cocktail LOBBY**

***Molecular Gastronomy Moments***

## TUESDAY, DECEMBER 10

### MORNING SESSION

*Session 5 Chair: José Manuel Nogueira – Universidade de Lisboa*

**8:45 PL03      “Smart” Gradients for Enhancing Peak Capacity in Comprehensive Two-dimensional Liquid Chromatography under Reversed-phase Conditions: Application to Polyphenols in Food and Natural Real-world Samples**

**Paola Dugo<sup>1,2</sup>, Francesco Cacciola<sup>3</sup>, Katia Arena<sup>1</sup> and Luigi Mondello<sup>1,2,4,5</sup>**

<sup>1</sup>Department of Chemical, Biological, Pharmaceutical and Environmental Sciences, University of Messina, Messina, Italy

<sup>2</sup>Chromaleont s.r.l., c/o Department of Chemical, Biological, Pharmaceutical and Environmental Sciences, University of Messina, Messina, Italy

<sup>3</sup>Department of Biomedical, Dental, Morphological and Functional Imaging Sciences, University of Messina, Messina, Italy

<sup>4</sup>Unit of Food Science and Nutrition, Department of Medicine, University Campus Bio-Medico of Rome, Rome, Italy

<sup>5</sup>BeSep s.r.l., c/o Department of Chemical, Biological, Pharmaceutical and Environmental Sciences, University of Messina, Messina, Italy

**9:25 O16      New coloring strategy for dairy products using anthocyanin extracts from edible flowers**

**Tânia C.S.P. Pires<sup>1,2</sup>, Rúbia C.G. Corrêa<sup>1,3</sup>, Maria Inês Dias<sup>1</sup>, Lillian Barros<sup>1</sup>, João C.M. Barreira<sup>1</sup>, Celestino Santos-Buelga<sup>2</sup>, Isabel C.F.R. Ferreira<sup>1</sup>**

<sup>1</sup> Centro de Investigação de Montanha (CIMO), Instituto Politécnico de Bragança, Campus de Santa Apolónia, 5300-253 Bragança, Portugal

<sup>2</sup> Grupo de Investigación en Polifenoles (GIP-USAL), Facultad de Farmacia, Universidad de Salamanca, Campus Miguel de Unamuno s/n, 37007 Salamanca, España

<sup>3</sup> Program of Master in Science, Technology and Food Safety, Cesumar Institute of Science, Technology and Innovation (ICETI), University Center of Maringá (UNICESUMAR), Maringá, Paraná, Brazil



## MORNING SESSION

**Session 6 Chair: Ana Maria Seca – Universidade dos Açores**

### 11:10 O20 **Validation of a method to quantify acrylamide in biscuits**

**João Siopa<sup>1</sup>, Fernanda Cosme<sup>1,2</sup>, Fernando M. Nunes<sup>1,3</sup>**

<sup>1</sup> Centro de Química de Vila Real (CQ-VR) – Food and Wine Chemistry Lab, Universidade de Trás-os-Montes e Alto Douro, Quinta de Prados, 5001-801, Vila Real, Portugal

<sup>2</sup> Departamento de Biologia e do Ambiente, Universidade de Trás-os-Montes e Alto Douro, Quinta de Prados, 5001-801, Vila Real, Portugal

<sup>3</sup> Departamento de Química, Universidade de Trás-os-Montes e Alto Douro, Quinta de Prados, 5001-801, Vila Real, Portugal

### 11:30 O21 **Very Fast analysis of TCA In cork Disks by HS-SPME GC/MS/MS – A Proof-of concept**

**Cátia Santos<sup>1</sup>, Renato Cres<sup>2</sup>, Marco Gomes da Silva<sup>1</sup>, Eduardo Mateus<sup>3</sup>**

<sup>1</sup> LAQV, REQUIMTE, Departamento de Química, Faculdade de Ciências e Tecnologia, Universidade Nova de Lisboa, 2829-516 Caparica, Portugal

<sup>2</sup> SOQUÍMICA – Sociedade de Representações de Quimica, Lda., Rua Coronel Santos Pedroso, 15 - 1500-207 Lisboa, Portugal

<sup>3</sup> CENSE- Center for Environmental and Sustainability Research, DCEA, Faculdade de Ciências e Tecnologia, Universidade Nova de Lisboa, Caparica, Portugal

### 11:50 O22 **Polar Pesticides Anions in water and food using a new and unique Ion Chromatography and Mass Spectrometry High Resolution MSM or MSMS method**

**Ettlin Daniel<sup>1</sup>, Jorge Alves<sup>2</sup>, Anne Marie Compianno<sup>3</sup>**

<sup>1</sup> Unicam Sistemas Analíticos Lda. - Alameda Antonio Sergio 22 -7B -1495-132 Miraflores, Portugal

<sup>2</sup> Unicam Sistemas Analíticos Lda - Alameda Antonio Sergio 22 -7B -1495-132 Miraflores, Portugal

<sup>3</sup> Thermo Scientific – Laboratoire de CSC – Villebom sur Ivette – Les Ullys – France

**12:15 O23**      ***Chemical characterization of Cistus ladanifer L. lipophilic fraction: an underexploited raw material of biologically active terpenes***

***Valentina F. Pinheiro<sup>1</sup>, Olinda Guerreiro<sup>1,2</sup>, David Soldado<sup>1</sup>, Patrícia A. B. Ramos<sup>3,4</sup>, Sónia A. O. Santos<sup>3</sup>, Carmen S. R. Freire<sup>3</sup>, Armando J. D. Silvestre<sup>3</sup>, Eliana Jerónimo<sup>1,2</sup>***

<sup>1</sup> Centro de Biotecnologia Agrícola e Agro-Alimentar do Alentejo (CEBAL)/Instituto Politécnico de Beja (IPBeja), 7801-908 Beja, Portugal

<sup>2</sup> Instituto de Ciências Agrárias e Ambientais Mediterrânicas (ICAAM), Universidade de Évora, 7000 Évora, Portugal

<sup>3</sup> CICECO and 4QOPNA & LAQV-REQUIMTE, Department of Chemistry, University of Aveiro, 3810-193 Aveiro, Portugal

**12:35 O24**      ***Chemical characterization of new psychoactive substances belonging to the class of synthetic cathinones in seized materials in Portugal***

***Gonçalves JL<sup>1</sup>, Alves VL<sup>1</sup>, Caldeira MJ<sup>2</sup>, Teixeira HM<sup>3,4</sup>, Câmara JS<sup>1,5</sup>***

<sup>1</sup> CQM - Centro de Química da Madeira, Universidade da Madeira, Campus Universitário da Penteada, 9020-105 Funchal, Portugal

<sup>2</sup> Laboratório de Polícia Científica da Polícia Judiciária, Novo edifício-sede da Polícia Judiciária, Rua Gomes Freire 1169-007 Lisboa

<sup>3</sup> Instituto Nacional de Medicina Legal e Ciências Forenses, I.P., Delegação Centro, Largo da Sé Nova, 3000-213 Coimbra, Portugal

<sup>4</sup> Faculdade de Medicina da Universidade de Coimbra, Azinhaga de Santa Comba, Celas, 3000-548 Coimbra, Portugal

<sup>5</sup> Faculdade de Ciências Exatas e da Engenharia, Universidade da Madeira. Campus da Penteada, 9020-105 Funchal, Portugal

**12:55 Lunch & Posters Session**



## AFTERNOON SESSION

**Session 7 Chair: José Câmara – Universidade da Madeira**

**14:30 O25 *Selective pre-enrichment of pesticide residues in olive oil samples: from MISPE technology to smart MIPs***

***Raquel Garcia<sup>1</sup>, Elisabete Carreiro<sup>2</sup>, Nuno Martins<sup>1</sup>, Marco Gomes da Silva<sup>3</sup>, Anthony J. Burke<sup>2</sup>, Ana Maria Costa Freitas<sup>1</sup>, Maria João Cabrita<sup>1</sup>***

<sup>1</sup> ICAAM – Instituto de Ciências Agrárias e Ambientais Mediterrânicas, Universidade de Évora, Núcleo da Mitra, Ap. 94, 7006-554 Évora, Portugal

<sup>2</sup> Centro de Química de Évora, Universidade de Évora, Colégio L.A. Verney, 7000 Évora, Portugal

<sup>3</sup> LAQV, REQUIMTE, Departamento de Química, Faculdade de Ciências e Tecnologia, Universidade Nova de Lisboa, 2829-516 Caparica, Portugal

**14:50 O26 *Application of Tape Adsorptive Microextraction to Determine Benzophenone & Related Compounds in Water Matrices***

***N.R. Neng<sup>1</sup>, J.M.F. Nogueira<sup>1</sup>***

<sup>1</sup> Centro de Química e Bioquímica e Centro de Química Estrutural, Faculdade de Ciências, Universidade de Lisboa, Campo Grande Ed. C8, 1749-016 Lisbon, Portugal

**15:10 O27 *Application of Deep Eutectic Solvent in extraction of PAHs in soft drinks***

***Lucas Caldeirão<sup>1,2</sup>, Helena Teixeira Godoy<sup>1</sup>, José O. Fernandes<sup>2</sup>, Sara C. Cunha<sup>2</sup>***

<sup>1</sup> Departamento de Ciência de Alimentos, Faculdade de Engenharia de Alimentos, Universidade Estadual de Campinas, Rua Monteiro Lobato, 80, 13083-862, Campinas, São Paulo, Brasil

<sup>2</sup> LAQV/REQUIMTE, Laboratório de Bromatologia e Hidrologia, Faculdade de Farmácia, Universidade do Porto, Rua de Jorge Viterbo, Ferreira 228, 4050-313, Porto, Portugal

**15:30 O28 *An Innovative and Robust Triple-Quadrupole Tandem Mass Spectrometer Aid to Meet Standards and Regulatory Ignazio Garaguso<sup>1</sup>***

<sup>1</sup> PerkinElmer LAS Germany GmbH, Ferdinand-Porsche-Ring 17, 63110 Rodgau, Germany

**15:55 O29** *Evaluation of the QuEChERS and magnetic micro dispersive solid-phase extraction of brominated flame retardants in red fruits with determination by GC/MS*

***Virginia Cruz Fernandes<sup>1</sup>, Maria Freitas<sup>1</sup>, João G. Pacheco<sup>1</sup>, Valentina Fernandes Domingues<sup>1</sup>, Cristina Delerue-Matos<sup>1</sup>***

<sup>1</sup>LAQV, REQUIMTE, Instituto Superior de Engenharia do Porto, Politécnico do Porto, Rua Dr<sup>o</sup> António Bernardino de Almeida, 431, 4200-072 Porto, Portugal

**16:15 O30** *AQbD and High-throughput analytical toolkit combination to support RP-LC Method Development for Itraconazole Quantification*

***Rute Nunes<sup>1</sup>, Patrícia Nunes<sup>1,2</sup>, Lúcia Volta e Sousa<sup>1</sup>***

<sup>1</sup> Hovione Farmacênciã S.A., Analytical Development, Estrada do Paço do Lumiar, Campus do Lumiar, Edifício S, 1649-038 Lisboa, Portugal

<sup>2</sup> Faculdade de Farmácia, Universidade de Lisboa, 1649-003 Lisboa, Portugal

## 16.35 Coffee Break & Posters Session

### AFTERNOON SESSION

***Session 8 Chair: Cristina Delerue-Matos – Instituto Superior de Engenharia do Porto***

**17:00 O31** *Phytochemical composition and in vitro antioxidant and antimicrobial properties of Aloe vera leaf tissue extracts*

***Mikel Añibarro-Ortega<sup>1</sup>, José Pinela<sup>1</sup>, Ana Ćirić<sup>2</sup>, Cristina Caleja<sup>1</sup>, Olga Ferreira<sup>1,3</sup>, Marina Soković<sup>2</sup>, Lillian Barros<sup>1</sup>, Isabel C.F.R. Ferreira<sup>1</sup>***

<sup>1</sup> Centro de Investigação de Montanha (CIMO), Instituto Politécnico de Bragança, Campus de Santa Apolónia, 5300-253 Bragança, Portugal

<sup>2</sup> Department of Plant Physiology, Institute for Biological Research “Siniša Stanković”, University of Belgrade, Bulevar despota Stefana 142, Belgrade, Serbia

<sup>3</sup> Laboratory of Separation and Reaction Engineering - Laboratory of Catalysis and Materials (LSRE-LCM), Instituto Politécnico de Bragança, Campus de Santa Apolónia, 5300-253 Bragança, Portugal

**17:20 O32      *A Systematic UHPLC/HPLC Method Development Strategy with Complementary Stationary Phases to Maximise Selectivity and Resolution***

***Gemma Lo***<sup>1</sup>

<sup>1</sup> Hichrom /VWR, part of Avantor , Rua da Indústria n<sup>o</sup>6, 2610-088 Amadora, Portugal

**17:45 O33      *LC-MSMS for Human Health Diagnosis: Identification of Stress Biomarkers in Sweat***

***M. João Nunes***<sup>1</sup>, ***Cristina M. Cordas***<sup>1</sup>, ***José J.G. Moura***<sup>1</sup>, ***Luís Branco***<sup>1</sup>, ***João Paulo Noronha***<sup>1</sup>

<sup>1</sup> LAQV, REQUIMTE, Departamento de Química, Faculdade de Ciências e Tecnologia, Universidade Nova de Lisboa, 2829-516 Caparica, Portugal

**18:05 FO6 (P58)      *Determination of Perfluorooctanesulfonic Acid (PFOS) in river water and biota matrices by UPLC-MS-MS***

***Ana Fernandes Cruz***<sup>1</sup>, ***Joana Silva***<sup>1</sup>, ***Georgina Sarmento***<sup>1</sup>, ***Paula Viana***<sup>1</sup>, ***Margarida Santos Romão***<sup>1,2</sup>

<sup>1</sup> LAIST, Laboratório de Análises do Instituto Superior Técnico, 1049-001 Lisboa, Portugal

<sup>2</sup> Agencia Portuguesa do Ambiente, 2610-124 Amadora, Portugal

**18:09 FO7 (P03)      *New capillary zone electrophoresis method for the determination of cinchocaine hydrochloride and hydrocortisone***

***Ahmed S. Saad***<sup>1,2</sup>, ***Mohamed R. El-Ghobashy***<sup>1,2</sup>, ***Nada S. Ayish***<sup>1</sup> and ***Badr A. El-Zeany***<sup>1</sup>

<sup>1</sup> Cairo University, Faculty of Pharmacy, Analytical Chemistry Department, Kasr Elaini St., P.O. box 11562, Cairo, Egypt.

<sup>2</sup> October 6 University, Faculty of Pharmacy, Chemistry Department, October 6 city, Giza, Egypt

**18:13 FO8 (P01)      *Determination of N-nitrosodiethanolamine in shampoo using on-line solid phase extraction-ultra-high performance liquid chromatography coupled to tandem mass spectrometry***

***Alyne Tada***<sup>1,2</sup>, ***Susanne Rath***<sup>2</sup>

<sup>1</sup> IFB, Campus Gama, Institute Federal of Brasilia, 72429-005 Gama, DF, Brazil

<sup>2</sup> Institute of Chemistry, Department of Analytical Chemistry, University of Campinas, P.O, Box 6154, 13084 - 971 Campinas, SP, Brazil



## WEDNESDAY, DECEMBER 11

### MORNING SESSION

**Session 9 Chair: Silvia Rocha – Universidade de Aveiro**

**8:45 PL04      *Comprehensive*      *Two-Dimensional*      *Gas*  
*Chromatography – Expectations beyond Design?***

***Marriott P<sup>1</sup>***

<sup>1</sup> Australian Centre for Research on Separation Science, School of Chemistry, Monash University, Clayton 3800, Victoria, Australia

**9:25 O34      *Use of GC×GC-ToFMS to evaluate the impact of  
plant-based coatings in the preservation of ‘Rocha’ pears during  
long-term storage***

***Alexandre M. A. Fonseca<sup>1</sup>, Cindy Dias<sup>2</sup>, Ana L. Amaro<sup>2</sup>, Néelson Isidoro<sup>3</sup>, Manuela Pintado<sup>2</sup>, Armando J. D. Silvestre<sup>1</sup>, Sílvia M. Rocha<sup>4</sup>***

<sup>1</sup> CICECO, Departamento de Química, Universidade de Aveiro, 3810-193 Aveiro

<sup>2</sup> Universidade Católica Portuguesa, Centro de Biotecnologia e Química Fina – Lab. Associado, Escola Superior de Biotecnologia, 4169-005 Porto

<sup>3</sup> Cooperativa Agrícola dos Fruticultores do Cadaval, CRL (COOPVAL), Estrada Nacional 115, Km 26 2550-108 Cadaval

<sup>4</sup> QOPNA/LAQV-REQUIMTE, Departamento de Química, Universidade de Aveiro, 3810-193 Aveiro

**9:45 O35      *Influence of the growth cycle on the chemical  
composition and biological properties of Cynara cardunculus L. var.  
altilis blades and petioles***

***Filipa Mandim<sup>1,2</sup>, Ângela Fernandes<sup>1</sup>, Maria Inês Dias<sup>1</sup>, José Pinela<sup>1</sup>, Spyridon A. Petropoulos<sup>3</sup>, Marina Kostic<sup>4</sup>, Marina Sokovic<sup>4</sup>, Lillian Barros<sup>1</sup>, Celestino Santos-Buelga<sup>2</sup>, Isabel C.F.R. Ferreira<sup>1</sup>***

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<sup>2</sup> GIP-USAL, Facultad de Farmacia, Universidad de Salamanca, Salamanca, Spain

<sup>3</sup> University of Thessaly, Department of Agriculture, Crop Production and Rural Environmental, Magnissia, Greece

<sup>4</sup> Institute for Biological Research “Siniša Stanković”, University of Belgrade, Belgrade, Serbia



**11:30 O39      *Comprehensive aroma profiling of food and beverages by GC×GC-TOF MS/FID/SCD***

***Laura McGregor<sup>1</sup>, Anthony Buchanan<sup>1</sup>, Aaron Parker<sup>1</sup>, Hannah Calder<sup>2</sup> and Jody Dunstan<sup>2</sup>***

<sup>1</sup> SepSolve Analytical, 22 Commerce Road, Lynch Wood, Peterborough, PE2 6LR, United Kingdom

<sup>2</sup> Markes International Ltd, Gwaun Elai Medi-Science Campus, Llantrisant, Wales, CF72 8XL, United Kingdom

**11:55 O40      *Using chromatography to unveil the secrets of the past***

***Ana Manhita<sup>1</sup>, Mafalda Costa<sup>1</sup>, Catarina Miguel<sup>1</sup>, Silvânia Afonso<sup>1</sup>, Cristina Barrocas Dias<sup>1,2</sup>***

<sup>1</sup> Laboratório HERCULES, Universidade de Évora, Largo Marquês de Marialva 8, 7000-809 Évora, Portugal

<sup>2</sup> Departamento de Química, Escola de Ciências e Tecnologia, Universidade de Évora, Rua Romão Ramalho 59, 7000-671 Évora, Portugal

**12:15 FO11 (P68)      *Chemical characterization of the sacred wood: final resting place of Benedictine Abbots of St. Margaret, Bijela***

***A. Fundurulić<sup>1,3</sup>, A. Janeš<sup>2</sup>, A. Manhita<sup>3</sup>, A. Celant<sup>1</sup>, C. Barrocas Dias<sup>3</sup>, D. Magri<sup>1</sup>***

<sup>1</sup> Department of Environmental Biology, Faculty of Mathematical, Physical and Natural Sciences, Sapienza University of Rome, Piazzale Aldo Moro 5, 00185 Rome, Italy

<sup>2</sup> Department for Archaeology, Division for Archaeological Heritage, Croatian Conservation Institute, Kožarska 5, 10 000 Zagreb, Croatia

<sup>3</sup> HERCULES Laboratory, University of Évora, Palácio do Vimioso, Largo Marques de Marialva 8, 7000-809 Evora, Portugal

**12:19 FO12 (P73)      *Discrimination of Lavandula essential oil growing in Castelo Branco region by GC-MS and FTIR-ATR***

***Joana Domingues<sup>1,2</sup>, Daniela Coutinho<sup>1</sup>, Fernanda Delgado<sup>1,3,4</sup>, José Carlos Gonçalves<sup>1,3,4</sup>, Ofélia Anjos<sup>1,3,5</sup>***

<sup>1</sup> CBPBI- Plant Biotechnology Center of Beira Interior, Quinta da Senhora de Mércules, Apartado 119, 6001-909, Castelo Branco, Portugal

<sup>2</sup> CICS-UBI- Health Sciences Research Centre, Universidade da Beira Interior, Av. Infante D. Henrique 6200-506, Covilhã, Portugal

<sup>3</sup> IPCB-ESA- Instituto Politécnico de Castelo Branco, Escola Superior Agrária, Quinta da Senhora de Mércules, Apartado 119, 6001-909. Castelo Branco, Portugal

<sup>4</sup> CERNAS-IPCB- Research Centre for Natural Resources, Environment and Society, Instituto Politécnico de Castelo Branco, Portugal

<sup>5</sup> CEF - Centro de Estudos Florestais, Instituto Superior de Agronomia, Universidade de Lisboa, Tapada da Ajuda, 1349-017 Lisboa, Portugal

**12:23 FO13 (P17)      *Using SPME/GCxGC-ToFMS approach for a rapid and early evaluation of food contamination based on A. niger biomarkers pattern***

***Carina Costa<sup>1</sup>, João Raul Belinato de Souza<sup>2</sup>, Adelaide Almeida<sup>3</sup>, Fabio Augusto<sup>2</sup>, Sílvia M. Rocha<sup>1</sup>***

<sup>1</sup> Department of Chemistry & QOPNA/LAQV- REQUIMTE, University of Aveiro, 3810-193 Aveiro, Portugal

<sup>2</sup> Institute of Chemistry, University of Campinas and National Institute of Science and Technology in Bioanalysis (INCTBio)

<sup>3</sup> Department of Biology & CESAM, University of Aveiro, 3810-193 Aveiro, Portugal

**12:27 FO14 (P74)      *Development of methodologies to evaluate odour retention capacity in textiles***

***Inês Pinheiro<sup>1</sup>, Ana Magalhães<sup>1</sup>, Catarina Costa<sup>1</sup>, Lorena Coelho<sup>1</sup>***

<sup>1</sup> CeNTI, Centro de Nanotecnologia, Materiais Técnicos, Funcionais e Inteligentes, 4760-034 Vila Nova de Famalicão, Portugal





**12:31 FO15 (P75)      *Rapid determination of some of the most used pesticides in Northeast Portugal as emerging contaminants in rivers by SPME/GC-MS.***

***A. Oliveira<sup>1</sup>, R. Ben Hmida<sup>1</sup>, A. Ribeiro<sup>1,2</sup>, P. Brito<sup>1</sup>, A. Queiroz<sup>1</sup>***

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<sup>2</sup> Laboratory of Separation and Reaction Engineering, Department of Chemical Engineering, Faculty of Engineering, University of Porto, Rua Dr. Roberto Frias s/n, 4200-465 Porto, Portugal

**12:35 Closing Ceremony & “Best Presentation”  
Awards**

**13:15 Farewell Cocktail**

## LIST OF POSTERS

### **P01 *Determination of N-nitrosodiethanolamine in shampoo using on-line solid phase extraction-ultra-high performance liquid chromatography coupled to tandem mass spectrometry***

***Alyne Tada<sup>1,2</sup>, Susanne Rath<sup>2</sup>***

<sup>1</sup>IFB, Campus Gama, Institute Federal of Brasília, 72429-005 Gama, DF, Brazil

<sup>2</sup>Institute of Chemistry, Department of Analytical Chemistry, University of Campinas, P.O. Box 6154, 13084 - 971 Campinas, SP, Brazil

### **P02 *Essential oil from *Chenopodium ambrosioides*: chemical profile in CG/MS and fenotypical analysis of subpopulation T lymphocytes in rats infected with *T. cruzi****

***Marley Garcia Silva<sup>1</sup>, Cássia Mariana Bronzon da Costa<sup>2</sup>, Wygny Araujo Macedo<sup>3</sup>, José Clóvis do Prado Júnior<sup>2</sup>***

<sup>1</sup>Laboratório de Qualidade e Propriedades Físicas e Químicas de Produtos Vegetais. Instituto Federal de Brasília, Campus Gama, DF 480, SN, Brasília (DF), Brazil

<sup>2</sup>Laboratório de Parasitologia, Faculdade de Ciências Farmacêuticas de Ribeirão Preto, Universidade de São Paulo, Campus Ribeirão Preto, Av. Café, SN, Monte Alegre, Ribeirão Preto (SP), Brazil

<sup>3</sup>Laboratório de Fisiologia e Farmacologia, Universidade Federal de Goiás, Regional Catalão, Av. Dr. Lamartine Pinto de Avelar, 1120, Catalão (GO), Brazil

### **P03 *New capillary zone electrophoresis method for the determination of cinchocaine hydrochloride and hydrocortisone***

***Ahmed S. Saad<sup>1,2</sup>, Mohamed R. El-Ghobashy<sup>1,2</sup>, Nada S. Ayish<sup>1</sup> and Badr A. El-Zeany<sup>1</sup>***

<sup>1</sup>Cairo University, Faculty of Pharmacy, Analytical Chemistry Department, Kasr Elaini St., P.O. box 11562, Cairo, Egypt

<sup>2</sup>October 6 University, Faculty of Pharmacy, Chemistry Department, October 6 city, Giza, Egypt

**P04 Chemical characterization of the hydrodistillation residual water and essential oil of *Crithmum maritimum***

**Jorge M. Alves-Silva<sup>1,2,\*</sup>, Inês Guerra<sup>1,\*</sup>, Maria José Gonçalves<sup>1</sup>, Carlos Cavaleiro<sup>1</sup>, Maria Teresa Cruz<sup>3</sup>, Artur Figueirinha<sup>4</sup>, Lígia Salgueiro<sup>1</sup>**

<sup>1</sup> CIEPQPF and Faculty of Pharmacy, University of Coimbra, Azinhaga de Santa Comba, Celas, 3000-548 Coimbra, Portugal

<sup>2</sup> ICBR, Faculty of Medicine, University of Coimbra, Azinhaga de Santa Comba, Celas, 3000-548 Coimbra, Portugal

<sup>3</sup> CNC, Faculty of Pharmacy, University of Coimbra, Azinhaga de Santa Comba, Celas, 3000-548 Coimbra, Portugal

<sup>4</sup> LAQV, REQUIMTE, Faculty of Pharmacy, University of Coimbra, Azinhaga de Santa Comba, Celas, 3000-548 Coimbra, Portugal

\* Authors contributed equally to the work

**P05 Bar Adsorptive Microextraction (BA $\mu$ E) applied to the Determination of Six Tricyclic Antidepressants**

**M. N. Oliveira<sup>1</sup>, S. M. Ahmad<sup>1</sup>, N. R. Neng<sup>1</sup>, J. M. F. Nogueira<sup>1</sup>**

<sup>1</sup> Centro de Química e Bioquímica e Centro de Química Estrutural, Faculdade de Ciências, Universidade de Lisboa, Campo Grande, 1749-016 Lisboa, Portugal

**P06 Ergosterol rich-extracts from *Pleurotus ostreatus* (Jacq. ex Fr.) P. Kumm: A comparative study between mushroom and its bio-residues**

**Taofiq Oludemi<sup>1</sup>, Ana Rita Silva<sup>1,3</sup>, Cristina Costa<sup>2</sup>, Miguel A. Prieto<sup>1,4</sup>, Joana Barros<sup>2</sup>, Inês Ferreira<sup>2</sup>, João Nunes<sup>2</sup>, Lillian Barros<sup>1</sup>, Isabel C.F.R. Ferreira<sup>1</sup>**

<sup>1</sup> Centro de Investigação de Montanha (CIMO), Instituto Politécnico de Bragança, Bragança, Portugal

<sup>2</sup> Centre Bio R&D Unit, BLC3-Technology and Innovation Campus, Oliveira do Hospital, Portugal

<sup>3</sup> Facultad de Farmacia, CIETUS-IBSAL, Universidad de Salamanca, Spain

<sup>4</sup> Nutrition and Bromatology Group, Faculty of Food Science and Technology, University of Vigo, Spain

**P07 *Phytochemical profile and biological activities of 'Ora-pro-nobis' leaves (Pereskia aculeata Miller), an underexploited superfood from the Brazilian Atlantic Forest***

**Jéssica A. A. Garcia<sup>1,2</sup>, Rúbia C.G. Corrêa<sup>3,4</sup>, Lillian Barros<sup>3</sup>, Carla Pereira<sup>3</sup>, Rui M.V. Abreu<sup>3</sup>, Maria José Alves<sup>3</sup>, Ricardo C. Calhelha<sup>3</sup>, Adelar Bracht<sup>1,2</sup>, Rosane M. Peralta<sup>1,2</sup>, Isabel C.F.R. Ferreira<sup>3</sup>**

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<sup>2</sup> Graduate Program in Food Science, State University of Maringá, Paraná, Brazil.

<sup>3</sup> Centro de Investigação de Montanha (CIMO), Instituto Politécnico de Bragança, Campus de Santa Apolónia, 5300-253 Bragança, Portugal.

<sup>4</sup> Program of Master in Science, Technology and Food Safety, Cesumar Institute of Science, Technology and Innovation (ICETI), University Center of Maringá (UNICESUMAR), Maringá, Paraná, Brazil.

**P08 *Targeted metabolites' analysis of Hibiscus sabdariffa L. calyces from Guinea-Bissau (West Africa)***

**Custódio Lobo Roriz<sup>1,2</sup>, Eliana Pereira<sup>1</sup>, Cristina Caleja<sup>1</sup>, Luís Catarino<sup>3</sup>, Lillian Barros<sup>1</sup>, Isabel C.F.R. Ferreira<sup>1</sup>**

<sup>1</sup> Centro de Investigação de Montanha (CIMO), Instituto Politécnico de Bragança, Campus de Santa Apolónia, 5300-253 Bragança, Portugal

<sup>2</sup> Dpto. Nutrición y Ciencia de los Alimentos. Facultad de Farmacia. Universidad Complutense de Madrid (UCM), Madrid, Spain

<sup>3</sup> Centre for Ecology, Evolution and Environmental Changes (cE3c), Faculdade de Ciências, Universidade de Lisboa, Campo Grande, 1749-016 Lisboa, Portugal

**P09 *Qualitative doping analysis of  $\beta$ -blockers in urine by GC-MS/MS***

**Rocha Gomes T.<sup>1</sup>, Gomes S.<sup>1</sup>, Salema B.<sup>1</sup>, Ruivo J.<sup>1</sup>**

<sup>1</sup> Laboratório de Análises de Dopagem, Av. Professor Egas Moniz (Estádio Universitário), 1600-190 Lisboa, Portugal

### **P10 *Effects of calcium silicate on the chemical and bioactive composition of Pleurotus ostreatus var. Florida***

***Rossana V. C. Cardoso<sup>1,2</sup>, Márcio Carochó<sup>1</sup>, Ângela Fernandes<sup>1</sup>, Diego Cunha Zied<sup>3</sup>, João C.M. Barreira<sup>1</sup>, Ana M. González-Paramás<sup>2</sup>, Lillian Barros<sup>1</sup>, Isabel C.F.R. Ferreira<sup>1</sup>***

<sup>1</sup> Centro de Investigação de Montanha (CIMO), Instituto Politécnico de Bragança, Campus de Santa Apolónia, 5300-253 Bragança, Portugal

<sup>2</sup> Grupo de Investigación en Polifenoles (GIP), Unidad de Nutrición y Bromatología, Facultad de Farmacia, Universidad de Salamanca, Campus Miguel de Unamuno, E-37007 Salamanca, España

<sup>3</sup> Faculdade de Ciências Agrárias e Tecnológicas (FCAT), Universidade Estadual Paulista, Campus Dracena, 17900-000 São Paulo, Brazil

### **P11 *UV-C radiation increases Vitamin D2 content in Pleurotus ostreatus***

***Rossana V. C. Cardoso<sup>1,2</sup>, Ângela Fernandes<sup>1</sup>, João C.M. Barreira<sup>1</sup>, Ana M. González-Paramás<sup>2</sup>, Lillian Barros<sup>1</sup>, Isabel C.F.R. Ferreira<sup>1</sup>***

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### **P12 *HPLC-PDA-MS/MS analysis of the leaves of two Jasminum species from Egypt***

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### ***P13 Insights into the phenolic composition and bioactive properties of Aloe vera flower***

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### ***P14 Determination of MOSH and MOAH by CGXCG-TOFMS***

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### ***P15 Chemical Profile of Nutraceutical Formulations with Natural Preservatives***

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### ***P16 Analytical strategies based on tandem mass spectrometry detection for quantification of bioactive compounds in biological matrices***

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**P17 Using SPME/GCxGC-ToFMS approach for a rapid and early evaluation of food contamination based on *A. niger* biomarkers pattern**

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**P18 Occurrence of polybrominated diphenyl ethers and their metabolites in Douro river biota**

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**P19 Determination of Micro Pollutants in Sediment of the Portuguese Coast**

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**P20 Wine aroma and SO<sub>2</sub> influence on white must fermentation**

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**P21 Valorization of sugars from aqueous fraction resulting from liquefaction of eucalyptus wood**

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**P22 Method development for multimycotoxin analysis – aflatoxins, ochratoxin A and zearalenone – in the medicinal plant Tribullus terrestris**

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**P23 Monitoring tranexamic acid in human urine by automatic solid-phase extraction combined with liquid chromatography-mass spectrometry**

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## **P24 Analysis of Environmental Contaminants in Smoked and Cured Codfish Samples**

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## **P25 Assessment of Contaminants in Salmon Using QuEChERS Methodology and Liquid Chromatography**

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## **P26 The use of chromatographic methods to study the contribution of oral cells in polyphenols-salivary proteins interaction**

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## **P27 Optimization of extraction procedure for Brominated Flame Retardants evaluation on Shrimp samples**

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## **P28 Optimization of Synthetic Musks in Human Adipose Tissue by Gas Chromatography Mass Spectrometry**

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**P29 Evaluation of QuEChERS for the determination of organic pollutants in Portuguese cherries from conventional and organic farming**

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**P30 Analysis of phenolic and lipophilic compounds of elderberry stalks from northern Portugal using high performance chromatographic techniques coupled with mass spectrometry**

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**P31 HS-SPME/GC-qMS as a new approach for direct acrylamide analysis in biscuits**

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**P32 Evaluation of the composition in organic acids, vitamin E and phenolic compounds of lovage (*Levisticum officinale* W.D.J. Koch) roots**

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**P33 Comparison of the volatile profile of the essential oils extracted from the aerial parts and roots of lovage (*Levisticum officinale* W.D.J. Koch)**

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**P34 Evaluation of antiglycation potential of *Sambucus nigra* L.**

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**P35 Identification of possible authenticity markers of PDO “Pera Rocha do Oeste” using HS-SPME/GC×GC-ToFMS**

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**P36 Aliphatic Hydrocarbons of seaweeds from the North Portuguese Coast**

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**P37 UHPLC-MS/MS method development for polyphenol profiling in Portuguese vineyard pruning from different grape varieties**

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**P38 Molecular fingerprinting of the Brazilian sugarcane spirits to go further on the understanding of their aroma properties**

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**P39 Phytochemical characterization of *Moringa oleifera* Lam. extracts**

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**P40 Analysis of *Cistus ladanifer* extracts by gas chromatography coupled to mass spectrometry and its interest in the cosmetics and pharmaceuticals fields.**

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**P41 Fate of emerging organic contaminants in soil after irrigation with reclaimed wastewater: decay and by-products identification**

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**P42 Monitoring antibiotics in surface and wastewater samples in a River Basin**

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**P43 Optimization of a SPE-GC-MS method for the determination of 25 pesticides in surface water**

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**P44 Chromatographic separation of phenolic compounds from monovarietal extra virgin olive oils**

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**P45 Optimization and evaluation of uncertainty in oil spill source identification by GC-MS**

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**P46 LC-MS and GC-MS detection of phytohormones: can it be used to evaluate crop Mn toxicity protection induced by arbuscular mycorrhizal fungi?**

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**P47 Method optimization for profiling fatty acids content in *Micropterus salmoides* using gas chromatography – mass spectrometry**

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#### **P48 Sugar profile of honey by ion chromatography**

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#### **P49 Matrix pH Effects on Bar Adsorptive Microextraction Efficiency**

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#### **P50 Screening of ‘Spice’ herbal mixtures using GC-MS and NMR as complementary techniques**

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**P51 Evaluation of bioactive potential and volatome pattern of foods from vegetable origin**

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**P52 The chemical profile of Lobophora variegata chloroform extract by GC-MS**

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**P53 Development of a SPME/GC-MS method based on Quality by Design approach, for evaluation of fish deterioration progress through TMA and DMA quantification.**

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**P54 Characterization of volatile composition of fruit distillates by GC-FID**

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**P55 Os desafios da quantificação motivada pelos efeitos de matriz observados na análise de Pesticidas em amostras de água por SPE-GC/MS, SPE-LC-MS/MS e Injeção direta em UPLC-MS/MS**

**Alexandre Rodrigues<sup>1</sup>, Ana Penetra<sup>1</sup>, Andreia Videira<sup>1</sup>, Vitor Vale Cardoso<sup>1</sup>, Maria João Benoliel<sup>1</sup>**

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**P56 Optimization and validation of an SPE-HPLC-DAD method for glyphosate quantification in surface waters**

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**P57 UPLC-HRMS applied to surfactants**

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**P58** *Determination of Perfluorooctanesulfonic Acid (PFOS) in river water and biota matrices by UPLC-MS-MS*

**Ana Fernandes Cruz<sup>1</sup>, Joana Silva<sup>1</sup>, Georgina Sarmento<sup>1</sup>, Paula Viana<sup>1</sup>, Margarida Santos Romão<sup>2</sup>**

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**P59** *Development of target methods for triclosan monitorization in effluents at trace levels using gas chromatography-triple quadrupole mass spectrometry and electronic tongues*

**Cátia Magro<sup>1</sup>, Davide Mendes<sup>2</sup>, Flávia Freitas<sup>2</sup>, Marco Silva<sup>2</sup>, Alexandra Ribeiro<sup>1</sup> & Eduardo Mateus<sup>1</sup>**

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**P60** *Expanding capabilities in multi-residue pesticide analysis using SFC-MS/MS*

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**P61** *Unraveling the spatial and temporal biodiversity of grape varieties: the case study of the Portuguese Bairrada Appellation*

**Jéssica Marques<sup>1,2</sup>, Alisa Rudnitskaya<sup>3</sup>, Ana Raquel Santos<sup>2</sup>, José Pedro Soares<sup>2</sup>, Sílvia M. Rocha<sup>1</sup>**

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**P62** *C18 vs Biphenyl Selectivity Comparison of Aromatic Compounds in Sunscreen using Superficially Porous or Core-Shell Kinetex HPLC/UHPLC Columns*

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### **P63 *Determination of beer aging markers as 2,4-dinitrophenylhydrazones by HPLC***

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### **P64 *Fast, effective and comprehensive trace and ultra-trace analysis of multiple pesticides in waters***

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### **P65 *The use of Statistic Tools for QuEChERS Content Optimization in the Extraction of Ibuprofen and its Metabolites in Different Types of Soil Samples***

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### **P66 *Determination of antibiotics and psychiatric drugs in Douro and Leça Rivers (waters and sediments samples)***

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**P67 *Transporting olive oil in Roman times – chemical analysis of Dressel 20 amphorae from Pax Iulia civitas***

***Cristina Barrocas Dias<sup>1,2</sup>, Sérgio Martins<sup>1</sup>, Ana Manhita<sup>1</sup>, Marco Gomes da Silva<sup>3</sup>, Maria da Conceição Lopes<sup>4</sup>, Maria João Cabrita<sup>5</sup>***

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**P68 *Chemical characterization of the sacred wood: final resting place of Benedictine Abbots of St. Margaret, Bijela***

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**P69 *Separation of positional isomers of fluorophenyl acetic acid***

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**P70 *Determination and quantification of photoinitiators from printing inks in bibs***

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**P71 Optimization and validation of two methods to determine the levels of AFM1 in milk and cheese samples using immunoaffinity columns for extraction and HPLC-FLD for quantification**

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**P72 The isotopic composition ( $\delta^{13}\text{C}$ ,  $\delta^2\text{H}$  and  $\delta^{18}\text{O}$ ) of Mediterranean extra virgin olive oils**

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**P73 Discrimination of Lavandula essential oil growing in Castelo Branco region by GC-MS and FTIR-ATR**

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**P74 *Development of methodologies to evaluate odour retention capacity in textiles***

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**P75 *Rapid determination of some of the most used pesticides in Northeast Portugal as emerging contaminants in rivers by SPME/GC-MS.***

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**P76 *Determination of pesticides in post-consumer packing: Extraction procedures and comparison between GC/TOFMS and GC/MS/MS***

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**P77 *Preventing Future Health Risks: exploring GC/MS tools for monitoring phthalates in food matrices***

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**P78 Decoding the chemical ecology of the eucalyptus weevil *Gonipterus platensis* (Coleoptera, Curculionidae)**

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**P79 Control of the dry wood termite *Cryptotermes brevis* – semiochemicals potential role**

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**P80 Finding a needle in a haystack: Dereplication of complex extracts from marine-derived actinomycetes using LC-MS/MS-based Molecular Networking**

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**P81 *Electro-reactor as a polishing step for the removal of emerging organic contaminants from wastewater: microcosm scale***

**Nazaré Couto<sup>1</sup>, Cristiana Gonçalves<sup>1</sup>, Joana P. Dionísio<sup>1</sup>, Eduardo Mateus<sup>1</sup>, Alexandra B. Ribeiro<sup>1</sup>, Paula Guedes<sup>1,2</sup>**

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**P82 *Analysis of Histamine and Spermidine in commercial fish species by GC-MS and ELISA: an assessment of seafood quality***

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**P83 *Simultaneous isolation of polar and non-polar functional extracts from Opuntia robusta peels***

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