



# XVI LATIN-AMERICAN CONGRESS ON CHROMATOGRAPHY

&

## 9<sup>th</sup> NATIONAL MEETING ON CHROMATOGRAPHY

**January 5<sup>th</sup> - 9<sup>th</sup>, 2016**

Faculty of Sciences of the University of Lisbon

Lisbon, Portugal

**The “COLACRO Award” will be presented**

**The “Dr. Janusz Pawliszyn Award” will be presented**

### **Conference Address**

Faculty of Sciences of the University of Lisbon (FCUL)

Campo Grande, 1749-016 Lisbon, Portugal

### **Contacts**

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## CONGRESS INFO

### Congress Office

The Congress Office is located at the entrance hall of **Building C3** in FCUL.

#### Opening hours:

Tuesday, Jan 5	08:30 until 18:00	Courses on hyphenated and multidimensional techniques
Wednesday, Jan 6	08:10 until 18:40	XVI COLACRO & 9ENC
Thursday, Jan 7	08:30 until 13:00 14:30 until 18:40	XVI COLACRO & 9ENC VII WARPA
Friday, Jan 8	08:30 until 18:40	XVI COLACRO & 9ENC
Saturday, Jan 9	08:30 until 13:00	XVI COLACRO & 9ENC

### Oral presentations

The plenary (PL) and key note (KNL) lectures, as well as the oral communications (OCs), will take place at the [Main Auditorium](#) (3.2.14), [Conference Room A](#) (3.2.13) and [Conference Room B](#) (3.2.16) of building C3 (FCUL).

### Poster presentations

With the exception of PLs and KNLs, as well as OCs, the remaining contributions are posters that will not be introduced by oral presentation and will be presented at Building C6.

There will be two posters sessions:

Between **Wednesday-Thursday** ([Posters Session A](#)) and **Friday-Saturday** ([Posters Session B](#)).

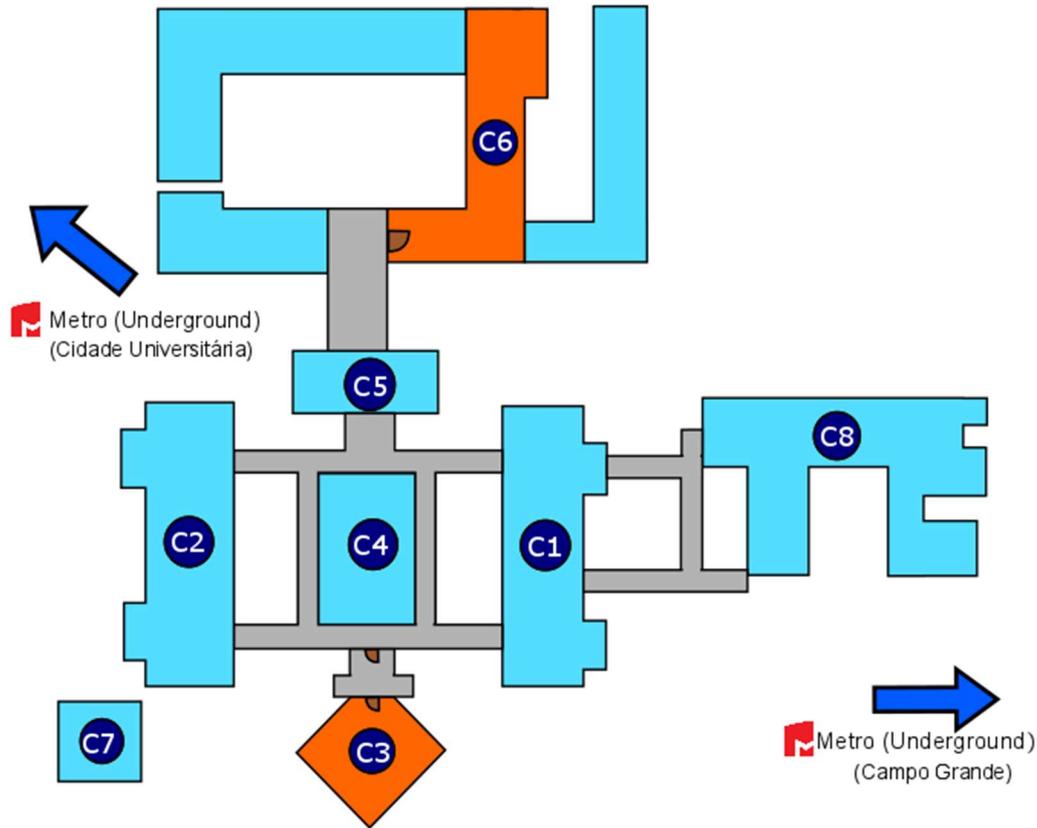
Participants allocated to **Posters Session A** are requested to remove their posters by the end of **Thursday**.

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.**



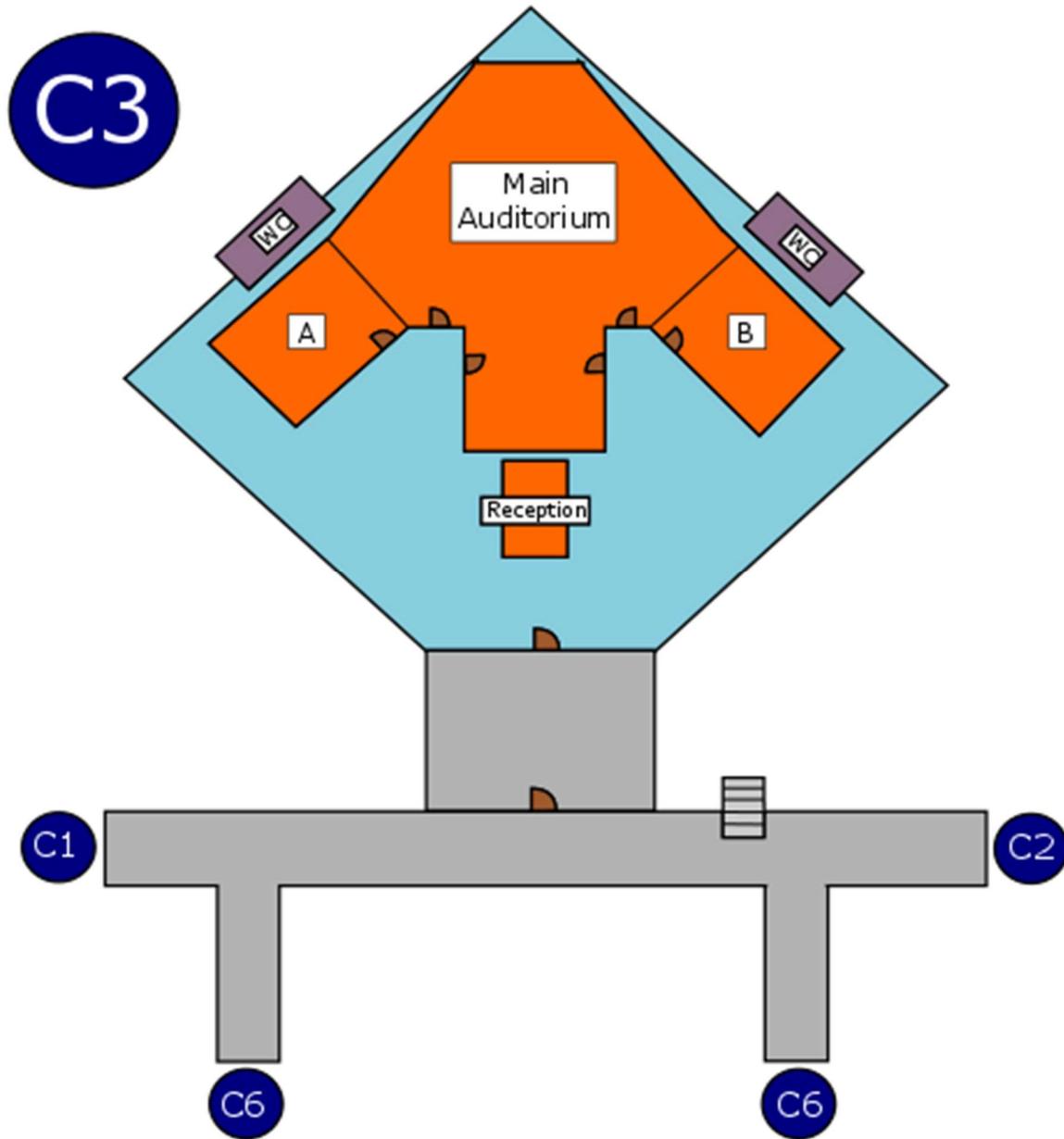
### Conference Map (FCUL)



**Building C3** - Conference area

**Building C6** - Exhibition area

Building C3 (FCUL)



**Main Auditorium** (3.2.14)

**A** – **Conference Room A** (3.2.13)

**B** – **Conference Room B** (3.2.16)

## 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

The coffee breaks will be served in the atrium of **Buildings C3 or C6.**

## Social Program

Tuesday, Jan 5	19:00	“Welcome Reception” Local: Building C3 atrium
Wednesday, Jan 6	19:00	“Wine & Cheese” Local: Lisbon City Museum
Thursday, Jan 7	20:00	“Conference Dinner” Local: Casa do Alentejo
Friday, Jan 8	18:30	“Lisbon by Night” City Tour Meeting point: FCUL
Saturday, Jan 9	14:30	Excursions ( <b>optional</b> ) Meeting point: FCUL

The excursions will be organized by Emara Travel. The registration for the excursions and the purchase of the tickets will take place at the **Registration Desk.** If you will attend the Conference Dinner, please let us know at the **Registration Desk.**

## SCIENTIFIC AND SOCIAL PROGRAM

TUESDAY JANUARY 5

**08:30** Short courses registration

**09:00 Courses - Part I**

- Course on Hyphenated and Multidimensional GC Techniques (GC-MS and GC×GC)  
*Coordinator: Elena Stashenko (Conference Room A)*
  
- Course on Hyphenated and Multidimensional LC Techniques (LC-MS, LC-MS/MS and LC×LC)  
*Coordinator: Fernando Lanças (Conference Room B)*

**11:00** Coffee Break

**13:00** Lunch

**14:30 Courses - Part II**

**16:30** Coffee Break

**18:00** Courses close

**18:30** Congress registration open

**19:00** "Welcome Reception"

Local: **Atrium of Building C3 (FCUL)**

**WEDNESDAY JANUARY 6****Opening Ceremony and Morning Lectures****08:10 Open Ceremony, COLACRO & WARPA Awards (Main Auditorium)**

- ❖ José Nogueira - Chairman of XVI COLACRO & 9ENC  
University of Lisbon, Portugal
- ❖ Fernando Lanças - Chairman of COLACRO  
University of São Paulo, Brazil
- ❖ Alejandro Cifuentes - COLACRO ISC  
National Research Council of Spain, Spain
- ❖ Luigi Mondello - COLACRO ISC  
University of Messina, Italy
- ❖ Elena Stashenko - COLACRO ISC  
Industrial University of Santander, Colombia
- ❖ Eugênia Queiroz - Chairman of WARPA  
University of São Paulo, Brazil
- ❖ Representative of SPQ
- ❖ Representative of FCUL

**Morning Lectures 1 (Main Auditorium)**

Session Chairs: Elena Stashenko - Industrial University of Santander, Colombia

Luigi Mondello - University of Messina, Italy

**08:30 PL-01 COLACRO Thirty Years Later (1986-2016)**

Fernando Lanças

*University of São Paulo, Brazil*

**09:20 KNL-01 Global Warming Related to Organic Pollutant Transport and Its Deposition on Snow Samples from Chilean Andes and Northern Antarctic Peninsula: The case of polycyclic aromatic hydrocarbons (PAHs)**

Francisco Cereceda

*Technical University of Federico Santa María, Chile*

**09:50 KNL-02 Potential of Biological and Biomimetic Tools for the Selective Extraction of Compounds at the Trace Level in Complex Samples**

Valérie Pichon

*University of Paris, France*

**10:20 Coffee Break & Posters Session A**

**Morning Lectures 2 (Main Auditorium)**

Session Chairs: Fábio Augusto - University of Campinas, Brazil

Carmen García-Jares - University of Santiago de Compostela, Spain

**11:20 KNL-03 Bead Injection Technique: Contributions towards automatic sample treatment**

Marcela Segundo

*University of Oporto, Portugal*

**Morning Parallel Sessions 1**

**Oral Communications 1 (Main Auditorium)**

Session Chairs: Fábio Augusto - University of Campinas, Brazil

Carmen García-Jares - University of Santiago de Compostela, Spain

**11:50 OC-01 Solid-Phase Extraction Methods for the Determination of Pesticides, Nitroaromatic and Phenolic Compounds in Water Using HPLC**

Viktoriiia Raks, V. Turchyn and V. Zaitsev

*Taras Shevchenko National University of Kiev, Ukraine*

**12:10 OC-02 Optimization Multivariate for the Dispersive Líquid-Líquid Microextraction in the Extraction of Pesticides in Soil Using HPLC-DAD**

Luciana Bitencourt Oliveira, Walter Nei Lopes dos Santos, Sergio Luis Costa Ferreira, Marta Valéria Almeida Santana de Andrade, Luis Fabrício Santana Santos and Sandro Navickiene

*Federal University of Bahia, Brazil*



## Oral Communications 2 (Conference Room A)

Session Chairs: Eduardo Carasek - Federal University of Santa Catarina, Brazil

### 11:50 OC-03 Determinación de la Presencia del Vino en las Tintas Medievales Valencianas de los Siglos XIII al XVI en el Archivo Municipal de Cocentaina

Gonzalo Fernández Martínez, Gemma M<sup>a</sup> Contreras Zamorano, Miguel Gamón Vila, José Sancenón Buleo and Laura Fuster López

*Generalitat Valenciana, Spain*

### 12:10 OC-04 Smart Strategies Based on Capillary Electrophoresis-Mass Spectrometry for the Monitoring of Residues in Food and Water Samples

Ana M. García-Campaña, David Moreno-González, Francisco J. Lara and Laura Gámiz-Gracia

*University of Granada, Spain*

## Oral Communications 3 (Conference Room B)

Session Chairs: José de Sousa Câmara - University of Madeira, Portugal

### 11:50 OC-05 Analysis of Regulated Synthetic Dyes in Cosmetic and Personal Care Products

Eugénia Guerra, Maria Celeiro, J. Pablo Lamas, Maria Llompart and Carmen Garcia-Jares

*University of Santiago de Compostela, Spain*

### 12:10 OC-06 Development and Validation of a Method for the Detection of Synthetic Forms of Endogenous Anabolic Androgenic Steroids in Urine by GC-C-IRMS

Alexandra Gonçalves, Beatriz Salema, João Ruivo, Sandra Ramos, Susana Luz, Thomas Chapman and Rodrigo Aguilera

*Instituto Português do Desporto e Juventude, Portugal*

### 12:30 Seminar - *Implifying Methods Transfer: Novel Tools for Replicating Your Established Methods on an Acquity Arc System (Main Auditorium)*

Paula Hong and Hélène Boiteux

*Waters Corporation, France*

13:00 Lunch

### Afternoon Lectures 1 (Main Auditorium)

Session Chairs: Elina Caramão - Tiradentes University, Brazil

Cristina Delerue-Matos - School of Engineering Polytechnic of Oporto, Portugal

#### 14:30 PL-02 The Influence of Charge Distribution on the Separation of Biocolloids by Electromigration Techniques

Bogusław Buszewski

*Nicolaus Copernicus University, Poland*

#### 15:20 KNL-04 Chiral Separations Using Nano-Liquid Chromatography

Salvatore Fanali

*National Research Council, Italy*

### Afternoon Parallel Sessions 1

#### Oral Communications 4 (Main Auditorium)

Session Chairs: Elina Caramão - Tiradentes University, Brazil

Cristina Delerue-Matos - School of Engineering Polytechnic of Oporto, Portugal

#### 15:50 OC-07 Cromatografia Gasosa-Espetrometria de Massa no Auxílio ao Combate à Poluição do Mar por Hidrocarbonetos

Ana Catarina C. da Rocha and Palma, C.

*Hydrographic Institute, Portugal*

#### 16:10 OC-08 Degradation of Compounds Present in Cork Boiling Water by Gamma Radiation

Joana Madureira, Lillian Barros, R. Melo, Pedro M.P. Santos, António N. Falcão, Sandra Cabo Verde, Isabel C.F.R. Ferreira and Fernanda M.A. Margaça

*IST, University of Lisbon, Portugal*

#### Oral Communications 5 (Conference Room A)

Session Chairs: João Queiroz - University of Beira Interior, Portugal



**15:50 OC-09 Fractionation and Purification of Grape Seed (*Vitis Vinifera* L.) Proanthocyanidin Oligomers by Centrifugal Partition Chromatography and High-Performance Liquid Chromatography and its Correlation to Salivary Binding Ability in Model Wine**

Wen Ma, Pierre Waffo-Téguo, Michäel Jourdes, Hua Li and Pierre-Louis Teissède  
*Northwest A & F University, China*

**16:10 OC-10 Multimodal Chromatography for the Purification of Monoclonal Antibodies: Towards a High-Throughput Optimization Using Micro-Columns on a Chip**

Inês F. Pinto, R.R.G. Soares, M.R. Aires-Barros, V. Chu, J.P. Conde and A.M. Azevedo  
*IST, University of Lisbon, Portugal*

**Oral Communications 6 (Conference Room B)**

Session Chairs: Sílvia Maria Rocha - University of Aveiro, Portugal

**15:50 OC-11 Phenylboronic Acid Chromatography: A multimodal approach for the capture of monoclonal antibodies**

Ana M. Azevedo, Sara A.S.L. Rosa, Raquel dos Santos and M. Raquel Aires-Barros  
*IST, University of Lisbon, Portugal*

**16:10 OC-12 Versatility of Arginine Monolithic Support in the Purification of Therapeutic DNA Vectors**

Ana Margarida C. V. de Almeida, J.A. Queiroz, F. Sousa and A. Sousa  
*FCS, University of Beira Interior, Portugal*

**16:30 Coffee Break & Posters Session A**

**Afternoon Lectures 2 and Parallel Sessions 2 (Main Auditorium)**

Session Chairs: Marco Gomes da Silva - New University of Lisbon, Portugal

Francisco Cereceda - Technical University of Federico Santa Maria, Chile

**17:30 KNL-05 Opportunities of the New Generations of Flow Analysis for On-line Sorptive (Micro)extraction as a Front End to Column Separation Systems**

Manuel Miró

*University of the Balearic Islands, Spain*

**Oral Communications 7 (Main Auditorium)**

Session Chairs: Marco Gomes da Silva - New University of Lisbon, Portugal

Francisco Cereceda - Technical University of Federico Santa Maria, Chile

**18:00 OC-13 Quechers of Micropollutants: Mission in several matrices**

Nuno Ratola, V. Homem, D. Capela, S. Ramos, J.A. Silva, C. Cunha, E. Silva, I. Magalhães, R. Araújo, L. Santos and A. Alves

*FEUP, University of Oporto, Portugal*

**18:20 OC-14 Reliable Identification of Trace Levels of Compounds in Complex Matrices by Low-Resolution GC-MS**

Ricardo J. N. Bettencourt da Silva

*FCUL, University of Lisbon, Portugal*

**Oral Communications 8 (Conference Room A)**

Session Chairs: José Coelho - School of Engineering Polytechnic of Lisbon, Portugal

**18:00 OC-15 A Selective Chromatographic Method to Determine Phenolic Composition of Quinoa**

Karem Henríquez-Aedo, Darlene Pettersen, Susana Fischer, Rosemarie Wilckens and Mario Aranda

*University of Concepcion, Chile*

**18:20 OC-16 Otimização da Extração de Ergosterol Assistida por Microondas a partir de *Agaricus Bisporus* L., Aplicando a Técnica Estatística de Superfície e Resposta Combinada com a Técnica de HPLC-UV**

Sandrina A. Heleno, M. A. Prieto, Patrícia Diz, Lillian Barros, Alírio E. Rodrigues, Maria Filomena Barreiro and Isabel C.F.R. Ferreira

*Polytechnic Institute of Bragança, Portugal.*



## Oral Communications 9 (Conference Room B)

Session Chairs: Elisabete Lima, University of Azores, Portugal

### 18:00 OC-17 Hydrophilic Interaction Liquid Chromatography-MS Method for the Sensitive Analysis of Low Abundant Sugar Phosphates in the Plant Metabolome

Ana T. Mata, João Ferreira, Maria R. Bronze, Pedro Fevereiro, Diana Branco, Susana Araújo and Carla António

*ITQB, New University of Lisbon, Portugal*

### 18:20 OC18 Porous Graphitic Carbon Stationary Phase for the LC-MS Target Analysis of Raffinose Family Oligosaccharides

Tiago F. Jorge, Maria Helena Florêncio, Ana Ribeiro-Barros and Carla António

*ITQB, New University of Lisbon, Portugal*

### 19:00 "Wine & Cheese"

Local: **Lisbon City Museum**

THURSDAY JANUARY 7

**Morning Lectures 3 (Main Auditorium)**

Session Chairs: Ivone Delgadillo - University of Aveiro, Portugal

Raquel Aires-Barros - University of Lisbon, Portugal

**08:30 PL-03 Isolation and Chromatographic Analysis of Bioactive Compounds from Plants**

Elena Stashenko

*Industrial University of Santander, Colombia*

**09:20 KNL-06 Actual Challenges in the Analysis of Samples in Toxicology**

Eugénia Gallardo

*University of Beira Interior, Portugal*

**09:50 KNL-07 Recent Developments in the Analytical Control of Cosmetics**

Carmen Jares

*University of Santiago de Compostela, Spain*

**10:20 Coffee Break & Posters Session A**

**Morning Lectures 4 (Main Auditorium)**

Session Chairs: Cláudia Zini - Federal University of Rio Grande do Sul, Brazil

Anabela Romano - University of Algarve, Portugal

**11:20 KNL-08 Restricted Access Carbon Nanotubes and Restricted Access Molecularly Imprinted Polymers: Obtention, characterization and use in the extraction of organic compounds directly from biological fluids**

Eduardo Figueiredo

*Federal University of Alfenas, Brazil*



## Morning Parallel Sessions 2

### Oral Communications 10 (Main Auditorium)

Session Chairs: Cláudia Zini - Federal University of Rio Grande do Sul, Brazil

Anabela Romano - University of Algarve, Portugal

#### 11:50 O-19 Synthesis of Polymeric Ionic Liquids and their Application as Coatings for Solid Phase Micro Extraction Fibers

David J. S. Patinha, Liliana C. Tomé, M. Isik, D. Mecerreyes, Armando J. D. Silvestre and Isabel M. Marrucho

*ITQB, New University of Lisbon, Portugal*

#### 12:10 OC-20 Eco-Friendly SPE-UHPLC-MS/MS Method for Wastewater Monitoring of Micropollutants

Ana R. Ribeiro, Marta Pedrosa, Nuno F.F. Moreira, Manuel F.R. Pereira and Adrián M.T. Silva

*FEUP, University of Oporto, Portugal*

### Oral Communications 11 (Conference Room A)

Session Chairs: Maria João Cabrita - University of Évora, Portugal

#### 11:50 OC-21 Phenolic Compounds Identification by Mass Spectrometry – Creation of a data base

Cristina Sánchez, Maria Helena Florêncio, Maria Luísa Serralheiro and Ana Patrícia Marques

*FCUL, University of Lisbon, Portugal*

#### 12:10 OC-22 How Cooking Process Affects Phenolic Composition in a Portuguese Variety of Common Beans

Elsa Mecha, R. Feliciano, A. Rodriguez-Mateos, M.E. Figueira, M.C. Vaz Patto and M.R. Bronze

*ITQB, New University of Lisbon, Portugal*

**Oral Communications 12 (Conference Room B)**

Session Chairs: Manuel Miró - University of the Balearic Islands, Spain

**11:50 OC-23 GC-MS: A valuable tool in tracking new psychoactive substances**

Cláudio R. Queirós, S. Ciríaco, S. Bronze, A. Matias and H. Gaspar  
*FCUL, University of Lisbon, Portugal*

**12:10 OC-24 Analytical Quality-By-Design (Aqbd) - A powerful strategy for reverse phase liquid chromatography (RP-LC) method development**

Lúcia Volta e Sousa, António Ramos, Ricardo Gonçalves, Rui Loureiro and José C. Menezes  
*Hovione, Portugal*

**12:30 Seminar - Confirming the Nature and the Amount of Dioxins by GC Triple Quad Mass Spectrometry: Analysis of Dioxins According to Commission Regulations (EU) 589/2014 and (EU) 709/2014 (Main Auditorium)**

Miguel Angel Pérez  
*Bruker Application Development Laboratory, Spain*

**13:00 Lunch**

**VII WARPA: VII Workshop on Recent Advances on Sample Preparation**

**Afternoon Lectures 3 (Main Auditorium)**

Session Chairs: Maria Eugênia Queiroz - University of São Paulo, Brazil (coordinator)  
Eduardo Figueiredo - Federal University of Alfenas, Brazil

**14:30 KNL-09 New Trends in Sample Preparation for Drugs in Biological Samples**

Maria Eugênia Queiroz  
*University of São Paulo, Brazil*

**15:00 KNL-10 Novel Analytical Approaches for Microextraction Techniques**

José Nogueira  
*University of Lisbon, Portugal*

**15:30 KNL-11 Sorptive Microextraction: So Simple and Yet So Complex**

Elia Psillakis

*Technical University of Crete, Greece***16:00 Coffee Break****Afternoon Lectures 4 (Main Auditorium)**

Session Chairs: Maria Eugênia Queiroz - University of São Paulo, Brazil (coordinator)

Eduardo Figueiredo - Federal University of Alfenas, Brazil

**17:00 KNL-12 Leaving the Conventional in Microextraction Procedures**

Eduardo Carasek

*Federal University of Santa Catarina, Brazil***17:30 KNL-13 Novel Extractant Phases in Microextraction**

Rafael Lucena

*University of Córdoba, Spain***18:00 KNL-14 Advanced Sol-Gel Materials for Isolation, Preconcentration, and Chromatographic Analysis of Biologically Important Molecules**

Abdul Malik

*University of South Florida, USA***18:30 Chromatography Group Assembly (SPQ)****20:00 Conference Dinner**Local: **Casa do Alentejo**

FRIDAY JANUARY 8

**Morning Lectures 5 (Main Auditorium)**

Session Chairs: Alejandro Cifuentes - National Research Council of Spain, Spain

Maria José Gonzalez - National Research Council of Spain, Spain

**08:30 PL-04 Comprehensive Chromatography Approaches Coupled to Mass Spectrometry for the Analysis of Food Samples**

Luigi Mondello

*University of Messina, Italy*

**09:20 KNL-15 Exploiting Ionic Liquids and Polymeric Ionic Liquids in Multidimensional Gas Chromatography and Sample Preparation**

Jared Anderson

*Iowa State University, USA*

**09:50 KNL-16 Characterization of Sulfur Compounds in Brazilian Petroleum Derivatives using Ionic Liquid Columns and Comprehensive Two-Dimensional Gas Chromatography and Mass Spectrometric Detection**

Cláudia Zini

*Federal University of Rio Grande do Sul, Brazil*

**10:20 Coffee Break & Posters Session B**

**Morning Lectures 6 (Main Auditorium)**

Session Chairs: Salvatore Fanali - National Research Council, Italy

Elena Ibáñez - Spanish National Research Council, Spain

**11:20 KNL-17 New Trends in Multidimensional Chromatographic Techniques: Monitorization and sample characterization potentialities**

Marco Silva

*New University of Lisbon, Portugal*



## Morning Parallel Sessions 3

### Oral Communications 13 (Main Auditorium)

Session Chairs: Salvatore Fanali - National Research Council, Italy

Elena Ibáñez - Spanish National Research Council, Spain

#### 11:50 OC-25 Isolation of Nitrogenated Compounds in Bio-Oil obtained from Energetic Tobacco and Identification by GCxGC/qMS

Bruna Onorevoli, Maria E. Machado, Valeriano Corbelini, Rosângela A. Jacques and Elina B. Caramão

*Federal University of Rio Grande do Sul, Brazil*

#### 12:10 OC-26 Hyphenated and Comprehensive Liquid Chromatography × Gas Chromatography-Mass Spectrometry for the Identification of Mycobacterium Tuberculosis

Marta P. B. Mourão, Ilse Denekamp, Arend H. J. Kolk and Hans-Gerd Janssen

*University of Amsterdam, Netherlands*

### Oral Communications 14 (Conference Room A)

Session Chairs: Rafael Lucena - University of Córdoba, Spain

#### 11:50 OC-27 Influence of Drying Temperature and Oil Extraction Time on the Lipid Fraction Composition of Nut Flour

Joana Santos, Estela Sena-Moreno, Mariana Araújo, José E. Pardo, Manuel Alvarez-Ortí and M. Beatriz P.P.Oliveira

*FFUP, University of Oporto, Portugal*

#### 12:10 OC-28 Ligand Exchange/Size-Exclusion Chromatography and Mass Spectrometry for Characterization of the Oxidation by Hydroxyl Radicals of Amylose and Amylopectin

Joana Simões, Ana S. P. Moreira, Dmitry Evtugin, Fernando M. Nunes, Manuel A. Coimbra and M. Rosário M. Domingues

*University of Aveiro, Portugal*

**Oral Communications 15 (Conference Room B)**

Session Chairs: Marcela Alves Segundo, University of Oporto, Portugal

**11:50 OC-29 Analysis of Pharmaceutical Adulterants in Plant Food Supplements by UHPLC-MS/MS**

Manuela Correia, Paula Paíga, Manuela J.E. Rodrigues, Joana S. Amaral, M. Beatriz P.P. Oliveira and Cristina Delerue-Matos  
*Polytechnic Institute of Oporto, Portugal*

**12:10 OC-30 HPLC to UPLC Transfer: A way to improve both efficiency and productivity in quality control laboratories**

Susana S. Pinto, Joao Pereira, Rita Andrade, Vasco Matos and Constança Cacela  
*Hovione, Portugal*

**12:30 Seminar - New Advances in High Resolution Mass Spectrometry: Orbitrap Mass Spectrometry (Main Auditorium)**

Sílvia Maia, M<sup>a</sup> Rosa Gregorio, André Silva, Baltazar Castro and Víctor  
*Thermo-Unicam, Portugal*

**13:00 Lunch**

**Afternoon Lectures 5 (Main Auditorium)**

Session Chairs: Jared Anderson - Iowa State University, USA  
Manuel Coimbra - University of Aveiro, Portugal

**14:30 PL-05 High-Performance Two-dimension LC Separations**

Peter Schoenmakers  
*University of Amsterdam, Netherlands*

**15:20 KNL-18 Advances and Applications of Comprehensive Bidimensional Chromatography in Bioanalytical, Petroleum and Forensic Chemistry**

Fábio Augusto  
*University of Campinas, Brazil*



## Afternoon Parallel Sessions 5

### Oral Communications 16 (Main Auditorium)

Session Chairs: Jared Anderson - Iowa State University, USA

Manuel Coimbra - University of Aveiro, Portugal

**15:50** OC-31 Chemical Characterization of the Bio-Oil obtained by Hydrothermal Conversion of Giant Duckweed Using Comprehensive Two-Dimensional Gas Chromatography with Time-of-Flight Mass Spectrometry

Pedro José Sanches Filho, Daniele M. Sampaio, Eliane M. Medeiros, Cláudio L. Machado, Maria Elisabete Machado and Elina B. Caramão  
*Federal University of Rio Grande do Sul, Brazil*

**16:10** OC-32 Holistic Screening of Elderflower (*Sambucus Nigra* L.) Bioactive Compounds using 1D- and 2D-GC

Ângelo C. Salvador, Armando J. D. Silvestre and Sílvia M. Rocha  
*University of Aveiro, Portugal*

### Oral Communications 17 (Conference Room A)

Session Chairs: Jordi Ferrero - School of Engineering of the Chemical Institute of Sarrià, Spain

**15:50** OC-33 Optimization of Chromatographic Parameters for the Simultaneous Analysis of Carotenoids and Tocopherols in Tomato

José A. Figueira, Priscilla Porto-Figueira and José S. Câmara  
*University of Madeira, Portugal*

**16:10** OC-34 Determination of Meat-Cooking Carcinogens from Grilled Pork by HPLC: Mitigation by Beer Marinades

Olga Viegas, Olívia Pinho and Isabel M. P. L. V. O. Ferreira  
*FFUP, University of Oporto, Portugal*

**Oral Communications 18 (Conference Room B)**

Session Chairs: Eugénia Gallardo, University of Beira Interior, Portugal

**15:50 OC-35** Aplicação da Microextração em Seringa Empacotada (MEPS) na Determinação de Cocaina e Metoxetamina em Fluidos Biológicos

Tiago A. P. Rosado, F. Santos, A. Gonçalves, C. Margalho, M. Barroso and Eugénia Gallardo

*University of Beira Interior, Portugal*

**16:10 OC-36** Determinação de Etil Glucuronido em Amostras de Cabelo por LC-MS/MS

David Oppolzer, Eugenia Gallardo and Mário Barroso

*National Institute of Legal Medicine and Forensic Sciences, Portugal*

**16:30** Coffee Break & Posters Session B

**Afternoon Lectures 6 and Parallel Sessions 4 (Main Auditorium)**

Session Chairs: Ana M. García-Campaña - University of Granada, Spain

Chiara Carazzone - Los Andes University, Colombia

**17:30 KNL-19** Metabolomics-based GC×GC-ToFMS Technology as the New Avenue to Understanding the Microorganisms Behaviour

Sílvia Rocha

*University of Aveiro, Portugal*

**Oral Communications 19 (Main Auditorium)**

Session Chairs: Ana M. García-Campaña - University of Granada, Spain

Chiara Carazzone - Los Andes University, Colombia

**18:00 OC-37** Pyrolysis of Elephant Grass: Characterization of bio-oil and aqueous phase by GC×GC/qMS

Jaderson K. Schneider, Diego S. Oliveira and Elina B. Caramão

*Federal University of Rio Grande do Sul, Brazil*



**18:20 OC-38 *Saccharomyces Spp.* Metabolomics: Toward a platform based on advanced gas chromatography**

Cátia Martins, Tiago Brandão, Adelaide Almeida and Sílvia M. Rocha  
*University of Aveiro, Portugal.*

**Oral Communications 20 (Conference Room A)**

Session Chairs: Fernando Nunes - University of Trás-os-Montes e Alto Douro, Portugal

**18:00 OC-39 Gas Chromatography as a Tool for Evaluation of *Saccharomyces Pastorianus* Cell Wall Polysaccharides Modifications Due to the Brewing Process**

Rita Bastos, Elisabete Coelho and Manuel A. Coimbra  
*University of Aveiro, Portugal*

**18:20 OC-40 High Resolution Mass Spectrometry Applied to Study Human Metabolism of Olive Oil Phenolic Compounds**

Sandra Diniz da Silva, E. Combet, W. Mullen, M.E. Figueira and M.R. Bronze  
*iBET, New University of Lisbon, Portugal.*

**Oral Communications 21 (Conference Room B)**

Session Chairs: Begonia Jiménez - Spanish National Research Council, Spain

**18:00 OC-41 Functionalized Cryogels for Chromatographic Purification of Plasmid DNA**

A. S. Brito, C. Caramelo-Nunes, P. Almeida and Cândida T. Tomaz  
*University of Beira Interior, Portugal*

**18:20 OC-42 GC-MS as the Gold Standard for Metabolomics: Challenges in plant abiotic stress**

Carla António  
*ITQB, New University of Lisbon, Portugal*

**18:30 “Lisbon by Night” City Tour**

Meeting point: **FCUL, C8 Building**

**SATURDAY JANUARY 9**

**Morning Lectures 7 (Main Auditorium)**

Session Chairs: Peter Schoenmakers - University of Amsterdam, Netherlands  
Abdul Malik - University of South Florida, USA

**08:30 PL-06 Food Ingredients, Cancer and Foodomics**

Alejandro Cifuentes  
*National Research Council of Spain, Spain*

**09:20 KN-20 Analysis of Dechlorane Plus and Related Compounds in Food Samples. Estimation of Daily Intake**

Jordi Ferrero  
*University Ramon Llull, Spain*

**09:50 KN-21 Aqueous Two-Phase Systems for Extraction of Biological Products: From natural products to large biomolecules**

Raquel Aires-Barros  
*University of Lisbon, Portugal*

**10:20 Coffee Break & Posters Session B**

**Morning Lectures 8 (Main Auditorium)**

Session Chairs: Fernando Lanças - University of São Paulo, Brazil  
José Nogueira - University of Lisbon, Portugal

**11:20 KN-22 Green Foodomics Applied to the Discovery of New Functional Food Ingredients with Antiproliferative Activity**

Elena Ibañez  
*National Research Council of Spain, Spain*



## Morning Parallel Sessions 4

### Oral Communications 22 (Main Auditorium)

Session Chairs: Fernando Lanças - University of São Paulo, Brazil

José Nogueira - University of Lisbon, Portugal

#### 11:50 OC-43 Characterization of Monoliths for Capillary Liquid Chromatography by Synchrotron Radiation

Carla Grazieli Azevedo da Silva, Carol H. Collins and Carla Beatriz Gespan Bottoli

*University of Campinas, Brazil*

#### 12:10 OC-44 Extracción, Identificación y Cuantificación de Ácidos Grasos Presentes en las Larvas y Pupas del Insecto Comestible Denominado "Ticoco"

Abimael López-Hernández, A.Y. Salazar-Govea, J.M. Pino-Moreno, E.G. González-Mondragón, E. Ríos-Leal and M.P. Santiago-Gómez

*Technical University of the Mixteca, Mexico*

### Oral Communications 23 (Conference Room A)

Session Chairs: Elia Psillakis - Technical University of Crete, Greece

#### 11:50 OC-45 Application of Gas Chromatography to Evaluate the Nutritional Quality of Processed Foods

Tânia Gonçalves Albuquerque, Mafalda Alexandra Silva, M. Beatriz, P.P. Oliveira and Helena S. Costa

*National Institute of Public Health Dr. Ricardo Jorge, Portugal*

#### 12:10 OC-46 Influence of Chromatographic Parameters on Free Polyphenolic Profile of Food Matrices

Priscilla Porto-Figueira, J.A. Figueira, J. Pereira and J.S.Câmara

*University of Madeira, Portugal*

**Oral Communications 24 (Conference Room B)**

Session Chairs: Maria do Rosário Bronze - University of Lisbon, Portugal

**11:50 OC-47 Fatal Intoxication with Methoxetamine: An unprecedented case in Portugal**

Cláudia Margalho, Alice Castanheira, Fernando Castanheira and João Franco  
*National Institute of Legal Medicine and Forensic Sciences, Portugal*

**12:10 OC-48 Bar Adsorptive Microextraction (BA $\mu$ E) for the Determination of Sulfonamides in Water Matrices**

Alessandra H. Ide, S. M. Ahmad, N. R. Neng and J. M. F. Nogueira  
*FCUL, University of Lisbon, Portugal*

**12:30 Closing Ceremony & “Best Presentation” Awards (Main Auditorium)**



## LIST OF POSTERS

### POSTERS SESSION A (6<sup>th</sup> Wednesday - 7<sup>th</sup> Thursday)

**P-001** Gas chromatography analysis of sulfated polysaccharides from marine environments

Ana Rocha<sup>[a]</sup>, Cláudia Nunes<sup>[a]</sup> and Manuel António Coimbra<sup>[a]</sup>

*[a] Universidade de Aveiro, Portugal.*

**P-002** Determination of pharmaceuticals and personal care products (PPCPs) in river water and sediment by solid phase microextraction followed by gas chromatography-mass spectrometry (SPME-GC-MS)

Araceli Peña Álvarez<sup>[a]</sup> and Luis Alejandro Díaz Flores<sup>[a]</sup>

*[a] Facultad de Química, U.N.A.M., México.*

**P-003** Determination of human and veterinary pharmaceuticals in the aquatic environment by SPE-UHPLC-MS/MS

P. Paíga<sup>[a]</sup>, L.H.M.L.M. Santos<sup>[a]</sup> and C. Delerue-Matos<sup>[a]</sup>

*[a] Instituto Superior de Engenharia do Porto, Instituto Politécnico do Porto, Portugal.*

**P-004** Avermectins and milbemycin: analytical problems related to their determination in soil and soil solutions

Fabício de Oliveira Ferreira<sup>[a]</sup>, Andreza Camilotti Dionisio<sup>[a]</sup> and Susanne Rath<sup>[a]</sup>

*[a] Institute of Chemistry, University of Campinas, Brazil.*

**P-005** A method for the determination of residues of avermectins and milbemycin in soils using *on-line* SPE-UHPLC-MS/MS

Fabício de Oliveira Ferreira<sup>[a]</sup>, Caio Rodrigues-Silva<sup>[a]</sup> and Susanne Rath<sup>[a]</sup>

*[a] Institute of Chemistry, University of Campinas, Brazil.*

**P-006** Estudio de compuestos fenólicos específicos en las aguas de proceso de la industria del corcho

F. Javier Yuste-Córdoba<sup>[a]</sup>, Belén Godoy-Cancho<sup>[a]</sup> y Manuel A. Rodríguez-Cañas<sup>[a]</sup>

*[a] Departamento de Tecnología de Recursos Forestales, CICYTEX/IPROCOR, España.*

**P-007 Treatment of cork boiling wastewater: study of specific phenolic compounds**

F. Javier Yuste-Córdoba<sup>[a]</sup>, Belén Godoy-Cancho<sup>[a]</sup> and Manuel A. Martínez-Cañas<sup>[a]</sup>

*[a] Department of Technology for Forest Resources, CICYTEX/IPROCOR, España.*

**P-008 Analytical pyrolysis (Py-GC/MS) and Py compounds specific isotopic analysis (Py-CSIA) as proxy for the characterization of coraloid speleothems from lava tubes**

De la Rosa J.M.<sup>[a]</sup>, Miller A.Z.<sup>[a]</sup>, Jiménez-Morillo N.T.<sup>[a]</sup>, Calaforra J.A.<sup>[b]</sup>, Pereira M.F.C.<sup>[c]</sup>, Saiz-Jiménez C.<sup>[a]</sup> and González-Pérez J.A.<sup>[a]</sup>

*[a] Instituto de Recursos Naturales y Agrobiología de Sevilla (IRNAS-CSIC), Spain [b] Univ. of Almeria, Spain [c] Instituto Superior Técnico, Universidade de Lisboa, Portugal.*

**P-009 Separative methods for analysis of 17- $\beta$ -estradiol and 17- $\alpha$ -ethinylestradiol in environmental and biological samples: state-of-the-art**

Luisa Barreiros<sup>[a,b]</sup>, Luís M. Magalhães<sup>[a]</sup>, José L. F. C. Lima<sup>[a]</sup> and Marcela A. Segundo<sup>[a]</sup>

*[a] Faculdade de Farmácia, Universidade do Porto, Portugal [b] Instituto Politécnico do Porto, Portugal.*

**P-010 Development analytical method for determination of pesticides bifetrin and flumetralin in soil using GC-MS**

Luciana Bitencourt Oliveira<sup>[a]</sup>, Márcio Ricardo Rodrigues Gomes<sup>[b]</sup>, Adalberto Menezes Filho<sup>[a]</sup> and Mirian dos Santos Rodrigues<sup>[a]</sup>

*[a] Instituto Federal de Educação, Ciência e Tecnologia de Sergipe-IFS, Brasil [b] Instituto Federal de Educação, Ciência e Tecnologia de Alagoas, Brasil.*

**P-011 Heterogeneous photocatalysis using TiO<sub>2</sub> monolithic structures. An environmentally friendly process to remove UV filters from waters**

Maria Celeiro<sup>[a]</sup>, Fabiola Vignola Hackbarth<sup>[b]</sup>, Maria Llompart<sup>[a]</sup>, Carmen Garcia-Jares<sup>[a]</sup> and Vitor J.P. Vilar<sup>[b]</sup>

*[a] Faculty of Chemistry, Universidade de Santiago de Compostela, Spain [b] Faculty of Engineering, University of Porto, Portugal.*



**P-012** Headspace trap (HS-Trap)/GC-MS method development and validation for the analysis of volatile hydrocarbons in water samples

Muhammad Ramzan<sup>[a]</sup>, Susana Santosh<sup>[b]</sup> and M.C. Mateus<sup>[c]</sup>

*[a] Faculdade de Ciências e Tecnologia da Universidade do Algarve, Portugal [b] Laboratório – Unidade Laboratorial do Sotavento – Águas do Algarve, S.A., Portugal [c] Faculdade de Ciências e Tecnologia da Universidade do Algarve, Portugal.*

**P-013** Otimização da extração de produtos de cuidado pessoal por SPE

Nogueira, Natália C.<sup>[a]</sup>, De Marchi, Mary R. R.<sup>[a]</sup>, Da Silva, Claudia P.<sup>[a]</sup> e Emídio, Elissandro S.<sup>[a]</sup>

*[a] Universidade Estadual Paulista, Brasil.*

**P-014** Validação da determinação de compostos organoclorados por cromatografia gasosa com detetor de captura de eletrões

Santos, P.C.<sup>[a]</sup>, Rocha, A.C.<sup>[a]</sup> e Palma, C.<sup>[a]</sup>

*[a] Divisão de Química e Poluição do Meio Marinho, Instituto Hidrográfico, Portugal.*

**P-015** Aplicação do método SARA para determinação de HPAs por GC/MS em bio-óleo obtido por pirólise rápida da casca de arroz

Glauco Rasmussen Betemps<sup>[a]</sup>, Lucas Aldrigui Silveira<sup>[a]</sup>, Gissele Oliveira Montenegro<sup>[a]</sup>, Suelen Rodrigues Almeida<sup>[b]</sup>, Elina Bastos Caramão<sup>[c,d]</sup> and Pedro José Sanches Filho<sup>[a]</sup>

*[a] GPCA, IFSUL, Brasil [b] PPGCEM, UFPEL, Brasil [c] PBI, UNIT, Brasil & INCT E&A, Brasil [d] IQ, UFRGS, Brasil.*

**P-016** Adsorption study for pharmaceutical compounds removal by granular activated carbon

R. A. Osawa<sup>[a]</sup>, M. H. Florêncio<sup>[a]</sup>, A. P. Carvalho<sup>[a]</sup> and M. R. Bronze<sup>[b]</sup>

*[a] Faculdade de Ciências, Universidade de Lisboa, Portugal [b] Faculdade de Farmácia, Universidade de Lisboa, Portugal.*

**P-017** Determinação de antipsicóticos em efluentes hospitalares por cromatografia gasosa acoplada a espectrometria de massa em tandem (GC-MS/MS)

F. Logarinho<sup>[a]</sup>, T. Rosado<sup>[a]</sup>, C. Lourenço<sup>[b]</sup>, M. Barroso<sup>[c]</sup>, A. Araujo<sup>[d]</sup> e E. Gallardo<sup>[a]</sup>

*[a] Faculdade de Ciências da Saúde da Universidade da Beira Interior, Portugal [b] Instituto Politécnico da Guarda, Portugal [c] Instituto de Medicina Legal e Ciências Forenses-Delegação do Sul, Portugal [d] Unidade de Investigação para o Desenvolvimento do Interior, Portugal.*

**P-018** Assessment of pyrethroid pesticides contaminated soil in Porto city playgrounds

Idalina Bragança<sup>[a]</sup>, Valentina F. Domingues<sup>[a]</sup>, Paulo C. Lemos<sup>[b]</sup> and Cristina Delerue-Matos<sup>[a]</sup>

*[a] Instituto Politécnico do Porto, Portugal [b] FCT/Universidade Nova de Lisboa, Portugal.*

**P-019** Evaluation of hydrogen sulphide and methylmercaptan by HS-SPME coupled with GC-FPD in biofiltration studies

Raquel F. Vieira<sup>[a]</sup>, Diana C. Lopes<sup>[b]</sup>, Inês R. Baptista<sup>[b]</sup>, Ruben F. Jorge<sup>[b]</sup>, Olga M. Freitas<sup>[a]</sup>, Sónia A. Figueiredo<sup>[a]</sup>, Valentina F. Domingues<sup>[a]</sup> and Cristina M. Delerue-Matos<sup>[a]</sup>

*[a] Instituto Politécnico do Porto, Portugal [b] Wedotech – Companhia de Ideias e Tecnologias, Lda, Portugal.*

**P-020** Determination of emerging pollutants by SPE-GC-MS/MS in brazilian waters

A.H. Ide<sup>[a]</sup> and J. C. R. Azevedo<sup>[a]</sup>

*[a] Universidade Tecnológica Federal do Paraná, Brasil.*

**P-021** Assessment of pharmaceutical and personal care products in Iguazu River, Brazil

A.H. Ide<sup>[a]</sup> and J. C. R. Azevedo<sup>[a]</sup>

*[a] Universidade Tecnológica Federal do Paraná, Brasil.*

**P-022** The edible *Fucus spiralis* life-cycle: GC-MS profile analysis

Ana M. L. Seca<sup>[a, b]</sup>, Nuno F. B. Aguiar<sup>[b]</sup>, Vera L. M. Gouveia<sup>[a]</sup>, Artur M. S. Silva<sup>[b]</sup> and Diana C. G. A. Pinto<sup>[b]</sup>

*[a] University of Azores, Portugal [b] University of Aveiro, Portugal.*

**P-023** *Cystoseira abies-marina* life cycle: comparative study of its polar profile by RP-HPLC-DAD-MS

Ana M. L. Seca<sup>[a, b]</sup>, Diana D. Lopes<sup>[b]</sup>, Vera L. M. Gouveia<sup>[a]</sup>, Artur M. S. Silva<sup>[b]</sup> and Diana C. G. A. Pinto<sup>[b]</sup>

*[a] University of Azores, Portugal [b] University of Aveiro, Portugal.*

**P-024** Convective flow devices for the polishing of monoclonal antibodies

A. Nascimento<sup>[a]</sup>, S.A.S.L. Rosa<sup>[a]</sup>, M. Mateus<sup>[a]</sup> and A.M. Azevedo<sup>[a]</sup>

*[a] Instituto Superior Técnico, University of Lisbon, Portugal.*



**P-025** Monitoring honeybee drone larvae volatile emissions through headspace SPME/GC-MS methodology

Andreia Tomás<sup>[a]</sup>, Soraia I. Falcão<sup>[a]</sup>, A. Sofia Lima<sup>[a,b]</sup> and Miguel Vilas-Boas<sup>[a]</sup>

[a] Instituto Politécnico de Bragança, Portugal [b] Faculdade de Ciências, Universidade de Lisboa, Portugal.

**P-026** Purification of histidine-tagged human membrane-bound catechol-o-methyltransferase

Augusto Q Pedro<sup>[a]</sup>, Maria J Bonifácio<sup>[b]</sup>, João A Queiroz<sup>[a]</sup> and Luís A Passarinha<sup>[a]</sup>

[a] Universidade da Beira Interior, Portugal [b] Bial - Departamento de Investigação e Desenvolvimento, Portugal.

**P-027** Purification and characterization of a serine protease from *Alternaria alternata*

Santos B. F. <sup>[a]</sup>, Gabriel, M. <sup>[a,b]</sup>, Bicho D. <sup>[a]</sup>, Martinez, J. <sup>[b]</sup> and Tomaz C. <sup>[a]</sup>

[a] University of Beira Interior, Portugal [b] Faculty of Pharmacy and “Lascaray” Research Center, University of the Basque Country, Spain.

**P-028** Colunas capilares monolíticas a base de titânia com poli(metiloctilsiloxano) termicamente imobilizado para uso em cromatografia líquida capilar

Carla Grazieli Azevedo da Silva<sup>[a]</sup>, Carol H. Collins<sup>[a]</sup> e Carla Beatriz Gespan Bottolli<sup>[a]</sup>

[a] Universidade Estadual de Campinas, Brasil.

**P-029** Gas chromatography analysis of biochemical composition of the marine microalgae *Isochrysis galbana* and *Phaedoactylum tricornutum*

Carolina Pandeirada<sup>[a]</sup>, Élia Maricato<sup>[a]</sup>, Cláudia Nunes<sup>[a]</sup> and Manuel A. Coimbra<sup>[a]</sup>

[a] Universidade de Aveiro, Portugal.

**P-030** Optimización de una metodología HPLC – MSN para el estudio de PDIM (dimycocerosato de ftiocerol) como potencial biomarcador de tuberculosis resistente a rifampicin

Edgar Rodriguez Beltran<sup>[a]</sup> and Chiara Carazzone<sup>[a]</sup>

[a] Los Andes University, Colombia.

**P-031** Revealing the chemical composition of deadly venomous caterpillars from the genus *Lonomia* in Colombia

Danny Alejandro Díaz Moscoso<sup>[a]</sup> and Chiara Carazzone<sup>[a]</sup>

*[a] Los Andes University, Colombia.*

**P-032** Rapid chromatographic system for removal of pigments from sugarcane juice

Gislene Roberta Manarim<sup>[a]</sup> and Claudio Lima de Aguiar<sup>[a]</sup>

*[a] University of São Paulo, Brazil.*

**P-033** Valorization of autochthonous halophyte plants through hydrophilic interaction chromatography coupled to q exactive mass spectrometer

Elisabete Maciel<sup>[a]</sup>, Ricardo Calado<sup>[a]</sup>, Ana Lillebø<sup>[a]</sup>, Daniel Etilinc<sup>[b]</sup>, Pedro Domingues<sup>[a]</sup> and Rosário Domingues<sup>[a]</sup>

*[a] University of Aveiro, Portugal [b] Unicam, Sistemas Analíticos Lda, Portugal.*

**P-034** Effect of storage temperature on angiotensin-converting enzyme (ACE) inhibitory activity of methanol extracts from *Fucus spiralis* (linnaeus)

L. Paiva<sup>[a]</sup>, E. Lima<sup>[a]</sup>, A.I. Neto<sup>[a]</sup> and J. Baptista<sup>[a]</sup>

*[a] University of Azores, Portugal.*

**P-035** Determination of angiotensin-converting enzyme (ACE) inhibitory activity from *Fucus spiralis* by HPLC-UV

L. Paiva<sup>[a]</sup>, E. Lima<sup>[a]</sup>, A.I. Neto<sup>[a]</sup> and J. Baptista<sup>[a]</sup>

*[a] University of Azores, Portugal.*

**P-036** Evaluation of the fatty acid profile of sea lamprey muscles

Eloi Martins<sup>[a]</sup>, Maria João Lança<sup>[b]</sup>, Pedro R. Almeida<sup>[b]</sup> and Marco Gomes da Silva<sup>[a]</sup>

*[a] Faculdade de Ciências e Tecnologia, Universidade Nova de Lisboa, Portugal [b] Universidade de Évora, Portugal.*



**P-037** Characterization of two monolithic supports modified with lysine and cadaverine ligands for the supercoiled HPV-16 E6/E7 plasmid DNA vaccine purification

D.G. Carapito<sup>[a]</sup>, L.F.A. Amorim<sup>[a]</sup>, J. A. Queiroz<sup>[a]</sup>, F. Sousa<sup>[a]</sup> and A. Sousa<sup>[a]</sup>

*[a] Universidade da Beira Interior, Portugal.*

**P-038** Minicircle DNA purification – a new methodology using monolithic supports

Diamantino T.<sup>[a]</sup>, Pereira P.<sup>[a]</sup>, Queiroz J. A.<sup>[a]</sup>, Sousa Â.<sup>[a]</sup> and Sousa F.<sup>[a]</sup>

*[a] University of Beira Interior, Portugal.*

**P-039** Supercoiled p53-encoding plasmid purification by amino acids-based affinity chromatography – a comparison

J.F.A. Valente<sup>[a]</sup>, A. Sousa<sup>[a]</sup>, J.A. Queiroz<sup>[a]</sup> and F. Sousa<sup>[a]</sup>

*[a] University of Beira Interior, Portugal.*

**P-040** HPLC-DAD-MS/MS characterization of the phenolic composition of rooibos (*Aspalathus linearis*) Red Espresso<sup>®</sup> of the system Delta Q<sup>®</sup>

M. Conceição Oliveira<sup>[a]</sup>, Catarina Carreira<sup>[a]</sup>, Ana Dias<sup>[a]</sup> and Carla Rodrigues<sup>[b]</sup>

*[a] Instituto Superior Técnico, Universidade de Lisboa, Portugal [b] Diverge Grupo Nabeiro Innovation Centre, R&D Projects, Portugal.*

**P-041** Intra and extracellular PRE-MIR29B purification by an arginine monolithic support

P. Pereira<sup>[a]</sup>, A.Q. Pedro<sup>[a]</sup>, J. Tomás<sup>[a]</sup>, A. Sousa<sup>[a]</sup>, J.A. Queiroz<sup>[a]</sup>, A. Figueiras<sup>[a,b]</sup> and F. Sousa<sup>[a]</sup>

*[a] Universidade da Beira Interior, Portugal [b] Center of Neuroscience and Cell Biology, University of Coimbra, Portugal.*

**P-042** Análisis HPLC-MS/MS de intermediarios de la síntesis *de novo* de pirimidinas en *Solanum lycopersicum*.

Paula L. Galeano<sup>[a,b]</sup> and Chiara Carazzone<sup>[a]</sup>

*[a] Universidad de los Andes, Colombia [b] Facultad de Ciencias Básicas, Universidad de la Amazonia, Colombia.*

**P-043** HPLC-DAD method development for ergosterol quantification as a measure of *Aspergillus oryzae* biomass grown on passion fruit peel

Pedro Ribeiro Fontes<sup>[a]</sup>, Jayanaraian Ferreira Martins<sup>[a]</sup>, Edivaldo Ximenes Ferreira Filho<sup>[b]</sup>, Pérola de Oliveira Magalhães<sup>[a]</sup> and Mauricio Homem-de-Mello<sup>[a]</sup>

*[a] Faculty of Health Sciences, University of Brasília, Brazil [b] Institute of Biological Sciences, University of Brasília, Brazil.*

**P-044** Development of an aqueous two-phase systems based platform for the integration of cell harvest and the downstream processing of monoclonal antibodies

Sara A.S.L. Rosa<sup>[a]</sup>, Cláudia L. da Silva<sup>[a]</sup>, M. Raquel Aires-Barros<sup>[a]</sup> and Ana M. Azevedo<sup>[a]</sup>

*[a] Instituto Superior Técnico, Universidade de Lisboa, Portugal.*

**P-045** Comparison study of LC systems and electrospray sources (ESI and nano-ESI) coupled to orbitrap analyzer

Sílvia Maia<sup>[a]</sup>, M<sup>a</sup> Rosa Gregorio<sup>[b]</sup>, André Silva<sup>[b]</sup>, Baltazar Castro<sup>[b]</sup> and Víctor Freitas<sup>[b]</sup>

*[a] Centro de Materiais da Universidade do Porto, Portugal [b] Faculdade de Ciências, Universidade do Porto, Portugal.*

**P-046** The use of partially methylated alditol acetates for characterization of brewers spent yeast cell wall polysaccharides

Susana Messias<sup>[a]</sup>, João F. Santos<sup>[a]</sup>, Rita Bastos<sup>[a]</sup>, Elisabete Coelho<sup>[a]</sup> and Manuel A. Coimbra<sup>[a]</sup>

*[a] Universidade de Aveiro, Portugal.*

**P-047** Purification of plasmid DNA using a chromatographic support derived from G-quadruplex ligands

Ferreira J.<sup>[a]</sup>, Santos T.A.<sup>[a]</sup>, Carvalho J.<sup>[a]</sup>, Pereira P.<sup>[a]</sup>, Queiroz, J.A.<sup>[a]</sup> and Sousa F.<sup>[a]</sup>, Cruz C.<sup>[a]</sup>

*[a] University of Beira Interior, Portugal.*

**P-048** Purification of supercoiled G-quadruplex pDNA for *in vitro* transcription

Santos T.A.<sup>[a]</sup>, Pereira P.<sup>[a]</sup>, Sousa F.<sup>[a]</sup>, Queiroz J.A.<sup>[a]</sup> and Cruz C.<sup>[a]</sup>

*[a] University of Beira Interior, Portugal.*



**P-049** UPLC-qTOF MS<sup>2</sup> approach to analyze the active ingredient of phytopharmaceutical technical products

Vera Lucia Martins<sup>[a]</sup> and Paulo J. Amorim Madeira<sup>[a]</sup>

*[a] Sapec Agro S.A., Portugal.*

**P-050** Environmentally friendly protocol for the study of rifaximin tablets by LC-MS

Ana Carolina Kogawa<sup>[a]</sup>, Jacqueline Nakau Mendonça<sup>[b]</sup>, Norberto Peporine Lopes<sup>[b]</sup> and Hérica Regina Nunes Salgado<sup>[a]</sup>

*[a] School of Pharmaceutical Sciences of Araraquara, Univ Estadual Paulista, Brazil [b] School of Pharmaceutical Sciences of Ribeirão Preto, Univ de São Paulo, Brazil.*

**P-051** Application of a new analytical approach for the determination of psychoactive cathinones in oral fluid

A.M. Segurado<sup>[a]</sup>, S.M. Ahmad<sup>[a]</sup>, C. Queirós<sup>[a]</sup>, N.R. Neng<sup>[a]</sup>, H. Gaspar and J.M.F. Nogueira<sup>[a]</sup>

*[a] Centro de Química e Bioquímica, Faculdade de Ciências, Universidade de Lisboa, Portugal.*

**P-052** Separation of nadolol stereoisomers by fixed-bed and continuous preparative liquid chromatography using C18 columns

A. Ribeiro<sup>[a]</sup>, R. Arafah<sup>[a]</sup>, A. Rodrigues<sup>[b]</sup>, L. Pais<sup>[a]</sup>

Laboratory of Separation and Reaction Engineering, Associate Laboratory LSRE/LCM

*[a] School of Technology and Management, Polytechnic Institute of Bragança, Portugal [b] Faculty of Engineering, University of Porto, Portugal.*

**P-053** A simple and rapid method for determination of acetone and 2-propanol by GC-FID. Application in *post mortem* cases

Carla Monteiro<sup>[a, b]</sup>, Paula Proença<sup>[a, b]</sup>, Alda Claro<sup>[a]</sup>, João Franco<sup>[a, b]</sup> and Francisco Corte-Real<sup>[a, b, c]</sup>

*[a] National Institute of Legal Medicine and Forensic Sciences, Portugal [b] Forensic Sciences Centre, Portugal [c] Faculty of Medicine, University of Coimbra, Portugal.*

**P-054** Analysis of a group of thirteen volatile compounds by HS-GC-FID. Application in routine

Carla Monteiro<sup>[a, b]</sup>, Catarina Fernandes<sup>[a]</sup>, Paula Proença<sup>[a, b]</sup>, João Franco<sup>[a, b]</sup> and Francisco Corte Real<sup>[a, b, c]</sup>

*[a] National Institute of Legal Medicine and Forensic Sciences, Portugal [b] Forensic Sciences Centre, Portugal [c] Faculty of Medicine, University of Coimbra, Portugal.*

**P-055** Validation of an analytical method for the quantification of opicapone and its metabolites in human plasma

C. Fernandes-Lopes<sup>[a]</sup>, A. I. Loureiro<sup>[a]</sup> and P. Soares-da-Silva<sup>[a, b]</sup>

*[a] Department of Research and Development, BIAL, Portugal [b] Faculty of Medicine, Portugal.*

**P-056** “New drugs”, legislation and internet: a “game” without rules

Cláudia Margalho<sup>[a]</sup>, Alice Castanheira<sup>[a]</sup>, Fernando Castanheira<sup>[a]</sup>, João Franco<sup>[a]</sup> and Francisco Corte Real<sup>[a, b]</sup>

*[a] Instituto Nacional de Medicina Legal e Ciências Forenses, Serviço de Química e Toxicologia Forenses do Centro, Portugal [b] Faculdade de Medicina, Universidade de Coimbra, Portugal.*

**P-057** Terbutaline analysis by capillary electrophoresis-tandem mass spectrometry (CE-MS/MS)

Daniela Danie<sup>[a, b]</sup>, Claudimir L. do Lago<sup>[b]</sup>, Fabiana S. Felix<sup>[b]</sup> and Lúcio Angnes<sup>[b]</sup>

*[a] Agilent Technologies, Brazil [b] Instituto de Química, Universidade de São Paulo, Brazil.*

**P-058** Challenges in HPLC analysis of pharmaceuticals: co-eluted peaks and isomerism

Pedro Serôdio<sup>[a]</sup>, João Pereira<sup>[a]</sup>, Susana Campos<sup>[a]</sup> and Constança Cacela<sup>[a]</sup>

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**P-059** Tutorial and spreadsheet for designing valid least-squares calibrations

Ricardo J. N. Bettencourt da Silva<sup>[a]</sup>

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**P-060** A rapid isocratic RP-HPLC method for the determination of vitamins A and E in human serum

Ana Lima<sup>[a]</sup>, Rita Ferin<sup>[a]</sup>, M.L. Pavão<sup>[a]</sup> and José Baptista<sup>[a]</sup>

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**P-061** Simultaneous determination of ascorbic and uric acids in plasma of patients with coronary artery disease by a novel ion-exclusion HPLC-UV methodology

Rita Ferin<sup>[a]</sup>, Ana Lima<sup>[a]</sup>, Maria Leonor Pavão<sup>[a]</sup> and José Baptista<sup>[a]</sup>

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**P-062** Development of a chromatographic method for determination of 5-fluorouracil and salicylic acid in dual-loaded nanocarriers

Sara S. Marques<sup>[a]</sup>, Inês I. Ramos<sup>[a]</sup>, Luisa Barreiros<sup>[a,b]</sup>, Luís M. Magalhães<sup>[a]</sup>, Hana Sklenářová<sup>[c]</sup>, Salette Reis<sup>[a]</sup> and Marcela A. Segundo<sup>[a]</sup>

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**P-063** An approach to the identification of unknown GC peaks

Sílvia Santos<sup>[a]</sup>, Constança Cacela<sup>[a]</sup> and Alexandra Silva<sup>[a]</sup>

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**P-064** Otimização e validação do método LC-MS/MS para determinação de fármacos em amostras de plasma

Vinicius R. A. Junior<sup>[a]</sup>, Diego S. Domingues<sup>[a]</sup>, Maria E. C. Queiroz<sup>[a]</sup>

*[a] Faculdade de Filosofia, Ciências e Letras de Ribeirão Preto, Universidade de São Paulo, Brasil.*

**P-065** Comparison of core-shell and fully porous columns for analysis of drugs in plasma samples by UHPLC-MS/MS

Vinicius R. A. Junior<sup>[a]</sup> and Maria E. C. Queiroz<sup>[a]</sup>

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**P-066** Improved recovery, reproducibility and matrix effects with an advanced technology in solid phase extraction (SPE)

Xin Zhang<sup>[a]</sup>, Jonathan Danaceau<sup>[a]</sup> and Erin Chambers<sup>[a]</sup>

*[a] Waters Corporation, Milford.*

**P-067** Novel technologies for sample preparation using the green analytical chemistry principles

A. H. Ide<sup>[a]</sup>, A. M. Segurado<sup>[a]</sup>, A. M. S. Fernandes<sup>[a]</sup>, S. M. Ahmad<sup>[a]</sup>, N. R. Neng<sup>[a]</sup>, J. M. F. Nogueira<sup>[a]</sup>

*[a] Faculdade de Ciências, Universidade de Lisboa, Portugal.*

**P-068** A new strategy for the analysis of benzimidazole residues in water samples based on capillary electrochromatography and dispersive liquid-liquid microextraction

Ana M. García-Campaña<sup>[a]</sup>, Carmen Tejada-Casado<sup>[a]</sup>, Maykel Hernández-Mesa<sup>[a]</sup> and Monsalud del Olmo-Iruela<sup>[a]</sup>

*[a] Faculty of Sciences, University of Granada, Spain.*

**P-069** Disposable pipette extraction of dexamethasone in synovial fluids

Francielle Q. Soares<sup>[a]</sup>, Bruna Alvarenga<sup>[a]</sup>, Marçal A. Rugiero <sup>[b]</sup>, Monise C. C. Coltro<sup>[a]</sup>, Eliana M. Lima<sup>[c]</sup>, Denilson Rabelo<sup>[a]</sup> and Andréa R. Chaves<sup>[a]</sup>

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**P-070** Sample preparation and liquid chromatography approaches for profiling anthocyanin and non-anthocyanin phenolic compounds in grape pomaces

Ariel R. Fontana<sup>[a]</sup>, Andrea Antonioli<sup>[a]</sup>, Agustina D´Amario Fernández<sup>[a]</sup> and Rubén Bottini<sup>[a]</sup>

*[a] Instituto de Biología Agrícola de Mendoza, Universidad Nacional de Cuyo, Argentina.*

**P-071** Improved microextraction of selected triazines from orange juices using polymer monoliths modified with carboxylated multi-walled carbon nanotubes

B. Fresco-Cala<sup>[a]</sup>, S. Cárdenas<sup>[a]</sup> and M. Valcárcel<sup>[a]</sup>

*[a] Institute of Fine Chemistry and Nanochemistry, University of Córdoba, Spain.*

**P-072** Determination of steroid sex hormones in real matrices by bar adsorptive microextraction (BA $\mu$ E)

C. Almeida<sup>[a]</sup> and J.M.F. Nogueira <sup>[a]</sup>

*[a] University of Lisbon, Faculty of Sciences, Portugal.*

**P-073** Analysis of UV filters in water by ultrasound-assisted emulsification microextraction and gas chromatography–mass spectrometry and gas chromatography–tandem mass spectrometry

Carmen Garcia-Jares<sup>[a]</sup>, Marlene Vila<sup>[a]</sup>, J. Pablo Lamas<sup>[a]</sup>, Thierry Dagnac<sup>[b]</sup> and Maria Llompart<sup>[a]</sup>

*[a] Universidade de Santiago de Compostela, Faculty of Chemistry, Spain [b] Agricultural and Agronomic Research Centre, Unit of Organic Contaminants,, Spain.*



**P-074** Desenvolvimento de método por SPME-GC-MS/MS para determinação de PCPs em água

Claudia Pereira da Silva<sup>[a]</sup>, Elissandro Soares Emídio<sup>[a]</sup>, Natália Cordano Nogueira<sup>[a]</sup> e Mary Rosa Rodrigues de Marchi<sup>[a]</sup>.

*[a] Universidade Estadual Paulista, Brasil.*

**P-075** Characterization of polyphenols extracted from apple pomace by QuEChERS

Sara Ramos<sup>[a]</sup>, Manuela M. Moreira<sup>[a]</sup>, Ana P. Carvalho<sup>[a]</sup>, M. Fátima Barroso<sup>[a]</sup>, M. J. Ramalhosa<sup>[a]</sup> and Cristina Delerue-Matos<sup>[a]</sup>

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**P-076** Uso do modo direto e headspace em um único procedimento de SPME para a determinação de compostos com diferentes volatilidades

Eduardo Carasek<sup>[a]</sup>, Naysla Paulo Reiner<sup>[a]</sup> e Josias Merib<sup>[a]</sup>

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**P-077** Determinação de desreguladores endócrinos em matrizes de aquosas por extração com HF-MMLLE e detecção por HPLC-DAD

Eduardo Carasek<sup>[a]</sup>, Anderson Luiz Oenning<sup>[a]</sup>, Sarah Prass<sup>[a]</sup>, Daniela Lopes<sup>[a]</sup> e Adriana Neves Dias<sup>[a]</sup>

*[a] Universidade Federal de Santa Catarina, Brasil.*

**P-078** Determinação de contaminantes emergentes em matrizes de água subterrânea por MMLLE-DLLME e detecção por HPLC-DAD

Eduardo Carasek<sup>[a]</sup>, Daniela Lopes<sup>[a]</sup>, Adriana Neves Dias<sup>[a]</sup> e Vanessa Simão<sup>[a]</sup>

*[a] Universidade Federal de Santa Catarina, Brasil.*

**P-079** Cortiça como fase extratora para a técnica de TFME/SPME em sistema de 96-well plate para a extração de contaminantes emergentes de amostras de água

Adriana Neves Dias<sup>[a]</sup>, Lucas Morés<sup>[a]</sup>, Ana Cristine da Silva<sup>[a]</sup> e Eduardo Carasek<sup>[a]</sup>

*[a] Universidade Federal de Santa Catarina, Brasil.*

**P-080** Restricted access molecularly imprinted polymers obtained by bovine serum albumin and/or hydrophilic monomers external layers: a comparison related to physical and chemical properties

Mariane Gonçalves Santos<sup>[a]</sup>, Gabriel Oliveira Moraes<sup>[a]</sup>, Mauricio Nakamura<sup>[a]</sup>, Álvaro José dos Santos Neto<sup>[b]</sup> and Eduardo Costa Figueiredo<sup>[a]</sup>

*[a] Faculty of Pharmaceutical Sciences, Federal University of Alfenas, Brazil [b] Institute of Chemistry of São Carlos, University of São Paulo, Brazil.*

**P-081** Green analytical method for estrogenic mycotoxins determination in river water using IL-DLLME *in situ* followed by HPLC/FLD with ethanol-water used as mobile phase

Elissandro S. Emídio<sup>[a]</sup>, Vítor Renan P. V. e Silva<sup>[a]</sup>, Claudia P. da Silva<sup>[a]</sup> and Mary Rosa R. de Marchi<sup>[a]</sup>

*[a] Chemistry Institute, São Paulo State University, Brazil.*

**P-082** Determination of 16 EPA-PAHs in residential wood combustion samples using accelerated solvent extraction followed by GC-MS

F. Guerrero<sup>[a]</sup>, K. Yañez<sup>[a]</sup>, P. Carmona<sup>[a]</sup>, F. Placencia<sup>[a]</sup>, V. Vidal<sup>[a,b]</sup>, F. Cereceda-Balic<sup>[a,b]</sup>

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**P-083** Determination of triazines in corn matrices by bar adsorptive microextraction with a molecularly imprinted polymer

Felipe N. Andrade<sup>[a]</sup>, Alessandra H. Ide<sup>[b]</sup>, Nuno R. Neng<sup>[b]</sup>, Fernando M. Lanças<sup>[a]</sup>, José M. F. Nogueira<sup>[b]</sup>

*[a] Universidade de São Paulo, Instituto de Química de São Carlos, Brasil [b] Faculdade de Ciências, Universidade de Lisboa, Portugal.*

**P-084** Molecularly imprinted polymer sorbent for analysis of sulphonylureas by BAμE-HPLC-DAD

Felipe N. Andrade<sup>[a]</sup>, Alessandra H. Ide<sup>[b]</sup>, Nuno R. Neng<sup>[b]</sup>, Fernando M. Lanças<sup>[a]</sup> and José M. F. Nogueira<sup>[b]</sup>

*[a] Universidade de São Paulo, Instituto de Química de São Carlos, Brasil [b] Faculdade de Ciências, Universidade de Lisboa, Portugal.*



**P-085** Quantification of risperidone, clozapine and their active metabolites in human urine by MEPs/UHPLC-PDA methodology

João L. Gonçalves<sup>[a,b]</sup>, Vera L. Alves<sup>[a,b]</sup>, Carlota Conceição<sup>[a]</sup>, Helena M. Teixeira<sup>[b,c]</sup> and José S. Câmara<sup>[a,d]</sup>

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**P-086** A powerful and ultrafast methodology based on MEPs/UHPLC-PDA for analysis of antidepressants in urine samples

Vera Alves<sup>[a,b]</sup>, Carlota Conceição<sup>[a]</sup>, João Gonçalves<sup>[a,b]</sup>, Helena M. Teixeira<sup>[b,c]</sup> and José S. Câmara<sup>[a,d]</sup>

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**P-087** Aminoglycosides antibiotics residues analysis in bovine milk and bovine, swine and poultry muscle by LC-MS/MS and LC-qTOF-MS: a simple and fast non SPE method

Juliana Bazzan Arsand<sup>[a,b]</sup>, Louíse Jank<sup>[a,b]</sup>, Magda Targa Martins<sup>[a]</sup>, Rodrigo Barcellos Hoff<sup>[a]</sup>, Fabiano Barreto<sup>[a]</sup>, Tânia Mara Pizzolato<sup>[b]</sup> and Carla Sirtori<sup>[b]</sup>

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**P-088** Microextraction techniques applied to the analysis of oxidative hair dyes

Eugenia Guerra<sup>[a]</sup>, J. Pablo Lamas<sup>[a]</sup>, Maria Llompарт<sup>[a]</sup> and Carmen Garcia-Jares<sup>[a]</sup>

*[a] Faculty of Chemistry, Universidade de Santiago de Compostela, Spain.*

**P-089** Desenvolvimento da fase extratora RAM (C<sub>18</sub> - monômeros hidrofílicos) para extração DPX de fármacos em amostras de plasma e análise por LC-MS/MS

Mônia Apa. L. Pinto<sup>[a]</sup>, Israel D. de Souza<sup>[b]</sup>, Vinícius R. A. Junior<sup>[b]</sup> e Maria Eugênia C. Queiroz<sup>[b]</sup>

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**P-090** Determination of organochlorine pesticides in black tea and tobacco by bar adsorptive microextraction

S.M. Ahmad<sup>[a]</sup>, M.I. Gomes<sup>[a]</sup>, N.R. Neng<sup>[a]</sup> and J.M.F. Nogueira<sup>[a]</sup>

*[a] Faculdade de Ciências, Universidade de Lisboa, Portugal.*

**P-091** Determination of phenol and metabolites in urine matrices by bar adsorptive microextraction and high performance liquid chromatography analysis

N.R. Neng<sup>[a]</sup> and J.M.F. Nogueira<sup>[a]</sup>

*[a] Faculdade de Ciências, Universidade de Lisboa, Portugal.*

**P-092** The impact of instrument design characteristics on reversed-phase HPLC and UHPLC methods transfer

Paula Hong<sup>[a]</sup>, Jennifer Simeone<sup>[a]</sup> and Patricia R. McConville<sup>[a]</sup>

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**P-093** Trace analysis of deltamethrin in olive oil samples: seeking a route to enhance selectivity using MIPs-based sorbents

Nuno Martins<sup>[a]</sup>, Elisabete P. Carreiro<sup>[b]</sup>, Maria João Cabrita<sup>[c]</sup>, Abel Locati<sup>[b]</sup>, João P. Prates Ramalho<sup>[b,c]</sup>, Anthony J. Burke<sup>[b,c]</sup> and Raquel Garcia<sup>[a,\*]</sup>

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**P-094** Hydrochars as new coating material for bar adsorptive microextraction for the determination of pharmaceuticals and personal care products in aqueous matrices

S.M. Ahmad<sup>[a]</sup>, A.S. Mestre<sup>[a]</sup>, N.R. Neng<sup>[a]</sup>, A.P. Carvalho<sup>[a]</sup> and J.M.F. Nogueira<sup>[a]</sup>

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**P-095** Bar adsorptive microextraction (BA $\mu$ E) coated with mixed sorbent phases – determination of non-steroidal anti-inflammatory drugs in aqueous matrices

S.M. Ahmad<sup>[a]</sup>, C. Almeida<sup>[a]</sup>, N.R. Neng<sup>[a]</sup> and J.M.F. Nogueira<sup>[a]</sup>

*[a] Faculdade de Ciências, Universidade de Lisboa, Portugal.*



**P-096** Application of bar adsorptive microextraction for trace level analysis of water pollutants included in the “European Union water framework directive’s ‘watch list’ for priority substances”

S.M. Ahmad<sup>[a]</sup>, N.R. Neng<sup>[a]</sup> and J.M.F. Nogueira<sup>[a]</sup>

*[a] Faculdade de Ciências, Universidade de Lisboa, Portugal.*

**P-097** Selective extraction of *Bactrocera oleae* sexual pheromone from olive oil by magnetic solid phase extraction using a molecularly imprinted composite

M.C. Alcudia-León<sup>[a]</sup>, R. Lucena<sup>[a]</sup>, S. Cárdenas<sup>[a]</sup> and M. Valcárcel<sup>[a]</sup>

*[a] Institute of Fine Chemistry and Nanochemistry, University of Cordoba, Spain.*

**P-098** Ionic liquid coated magnetic nanoparticles for the extraction of endocrine disrupting compounds from waters

F. Casado-Carmona<sup>[a]</sup>, M.C. Alcudia-León<sup>[a]</sup>, R. Lucena<sup>[a]</sup>, S. Cárdenas<sup>[a]</sup> and M. Valcárcel<sup>[a]</sup>

*[a] Institute of Fine Chemistry and Nanochemistry, University of Cordoba, Spain.*

**P-099** Electric field assisted matrix solid phase dispersion in the determination of sulfonamides and fluoroquinolones in soils

Natália Fernanda Tetzner<sup>[a]</sup>, Livia Manieiro Peruchi<sup>[a]</sup>, Ricardo Mathias Orlando<sup>[b]</sup> and Susanne Rath<sup>[a]</sup>

*[a] Institute of Chemistry, University of Campinas, Brazil [b] Department of Chemistry- ICEx- University of Minas Gerais, Brazil.*

**P-100** On-line SPE-UHPLC-MS/MS as a powerful technique for the determination of residues of sulfonamides in soils

Natália Fernanda Tetzner<sup>[a]</sup>, Milena Guedes Maniero<sup>[b]</sup> and Susanne Rath<sup>[a]</sup>

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**P-101** A rapid method for the quantification of polycyclic aromatic hydrocarbons in electrical transformer oils

Joana Abreu<sup>[a]</sup>, Maria Cristina Ferreira<sup>[a]</sup>, Sara Organista<sup>[b]</sup>, Teresa Oliva-Teles<sup>[b]</sup> and Cristina Delerue-Matos<sup>[b]</sup>

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POSTERS SESSION B (8<sup>th</sup> Friday - 9<sup>th</sup> Saturday)**P-102** HPLC-MS/MS method validation for the detection of carbadox and olaquinox in poultry and porcine feedingstuffs

Wagner Lutero Souza Dibai<sup>[a]</sup>, Juarez Fabiano de Alkimin Filho<sup>[a]</sup> and Silvana de Vasconcelos Cançado<sup>[b]</sup>

*[a] Laboratório Nacional Agropecuário, Brasil [b] Escola de Veterinária, Universidade Federal de Minas Gerais, Brasil.*

**P-103** Polyphenols and anthocyanins identification of the second racking wine lees generated in the Merlot wine production by HPLC-DAD-ESI-MS

Alexandre Giacobbo<sup>[a]</sup>, Bruna Bernar Dias<sup>[b]</sup>, Bruna Onorevoli<sup>[b]</sup>, Anai Loreiro dos Santos<sup>[b]</sup>, Eliseu Rodrigues<sup>[c]</sup>, Andréa Moura Bernardes<sup>[a]</sup>, Maria Norberta de Pinho<sup>[d]</sup>, Rosângela Assis Jacques<sup>[b]</sup> and Elina Bastos Caramão<sup>[b,e,f]</sup>

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**P-104** Analysis of patulin and 5-hydroxymethylfurfural in fruit juices by in-port derivatization and GC-MS/MS

Alexis Marsol Vall<sup>[a]</sup>, Mercè Balcells<sup>[a]</sup>, Jordi Eras<sup>[a]</sup> and Ramon Canela-Garayoa<sup>[a]</sup>

*[a] University of Lleida and Lleida-Agrotecnio Center, Spain.*

**P-105** Volatile compounds from portuguese monovarietal virgin olive oils

Ana Maria Carvalho Partidário<sup>[a]</sup>

*[a] Instituto Nacional de Investigação Agrária e Veterinária, Portugal.*

**P-106** LC/DAD/ESI-MS<sup>n</sup> phenolic profile as a tool for quality assessment of portuguese lavender honeys

Andreia Tomás<sup>[a]</sup>, Soraia Falcão<sup>[a]</sup> and Miguel Vilas-Boas<sup>[a]</sup>

*[a] Instituto Politécnico de Bragança, Portugal.*

**P-107** Chromatographic determination of fatty acids profiles in regionally-produced portuguese goat cheese along curing

Ângela Fernandes<sup>[a]</sup>, Sandra Gomes<sup>[a]</sup>, Lillian Barros<sup>[a]</sup>, Fernando Ruivo de Sousa<sup>[a]</sup>, Álvaro Mendonça<sup>[a]</sup> and Isabel C.F.R. Ferreira<sup>[a]</sup>

*[a] Instituto Politécnico de Bragança, Portugal.*

**P-108** Determination of nifursol in feeds by HPLC - development and validation

Clara Cruz<sup>[a]</sup>, Sara Moura<sup>[a]</sup>, Rita Barbosa<sup>[a]</sup> and Gabriela Assis<sup>[a]</sup>

*[a] UEISTSA – LCAA, INIAV, IP, Portugal.*

**P-109** Análise cromatográfica de um extrato fenólico de funcho utilizado no desenvolvimento de requeijões com propriedades funcionais

Cristina Caleja<sup>[a,b]</sup>, Lillian Barros<sup>[a]</sup>, Amilcar L. Antonio<sup>[a]</sup>, Ana Ciric<sup>[c]</sup>, Marina Sokovic<sup>[c]</sup>, M. Beatriz P.P. Oliveira<sup>[b]</sup>, Celestino Santos-Buelga<sup>[d]</sup> and Isabel C.F.R. Ferreira<sup>[a]</sup>

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**P-110** Perfil cromatográfico de ácidos gordos e açúcares em requeijões funcionalizados com extratos de plantas livres e microencapsulados

Cristina Caleja<sup>[a,b]</sup>, Lillian Barros<sup>[a]</sup>, M. Beatriz P.P. Oliveira<sup>[b]</sup>,

Maria Filomena Barreiro<sup>[c]</sup>, Isabel C.F.R. Ferreira<sup>[a]</sup>

*[a] Polytechnic Institute of Bragança, Portugal [b] Faculty of Pharmacy, University of Porto, Portugal [c] Laboratory of Separation and Reaction Engineering, Associate Laboratory LSRE/LCM, IPB, Portugal.*

**P-111** Fast screening and quantification of pesticide residues in baby food using GC orbitrap MS technology

Daniel Ettlin<sup>[a]</sup>, Cristian Cojocariu<sup>[c]</sup>, Richard Fussell<sup>[b]</sup>, Mike Hetmanski<sup>[b]</sup>, Inge de Dobbeleer<sup>[c]</sup>, Dominic Roberts<sup>[c]</sup>, Paul Silcock<sup>[c]</sup> and Jason Cole<sup>[d]</sup>

*[a] Unicam Sistemas Analíticos, Portugal [b] The Food & Environment Research Agency, Sand Hutton, UK [c] Thermo Fisher Scientific, Runcorn, UK [d] Thermo Fisher Scientific, Austin, TX.*

**P-112** Análise dos compostos secundários de aguardente de mandioca por cromatografia gasosa

Daniela Castilho Orsi<sup>[a]</sup> and Igor Albuquerque de Souza<sup>[b]</sup>

*[a] Universidade de Brasília Brasil [b] Faculdade de Ceilândia, Universidade de Brasília, Brasil.*

**P-113** Raw and stored olive pomace: Comparing tocochromanol's profile

M. Antónia Nunes<sup>[a]</sup>, Filipa B. Pimentel<sup>[a]</sup>, Anabela S.G. Costa<sup>[a]</sup> and Maria Beatriz P.P. Oliveira<sup>[a]</sup>

*[a] Faculty of Pharmacy, University of Porto, Portugal.*

**P-114** Determination of melamine in bottled water by UPLC-MS/MS

Georgina Sarmiento<sup>[a]</sup> and Ana Fernandes<sup>[a]</sup>

*[a] Instituto Superior Técnico, Universidade de Lisboa, Portugal.*

**P-115** Determinação de ácidos haloacéticos em amostras de água para consumo humano por UPLC-MS-MS

Georgina Sarmiento<sup>[a]</sup>, Ana Fernandes<sup>[a]</sup> e Paula Rosa<sup>[a]</sup>

*[a] Instituto Superior Técnico, Universidade de Lisboa, Portugal.*

**P-116** Perfil de ácidos gordos de hambúrgueres e sandes comercializados em cadeias de “fast-food”

Mafalda Alexandra Silva<sup>[a]</sup>, Tânia Gonçalves Albuquerque<sup>[a,b]</sup>, M. Beatriz P.P. Oliveira<sup>[b]</sup>, Helena S. Costa<sup>[a,b]</sup>

*[a] Instituto Nacional de Saúde Doutor Ricardo Jorge, Portugal [b] Faculdade de Farmácia da Universidade do Porto, Portugal.*

**P-117** Qualidade nutricional de refeições prontas a comer com base no seu perfil de ácidos gordos

Mafalda Alexandra Silva<sup>[a]</sup>, Tânia Gonçalves Albuquerque<sup>[a,b]</sup>, M. Beatriz P.P. Oliveira<sup>[b]</sup> and Helena S. Costa<sup>[a,b]</sup>

*[a] Instituto Nacional de Saúde Doutor Ricardo Jorge, Portugal [b] Faculdade de Farmácia da Universidade do Porto, Portugal.*

**P-118** Tempero de salada enriquecidas em ácidos graxos essenciais e com reduzida razão n-6/n-3

Helena Teixeira Godoy<sup>[a]</sup>, Adriana Dillenburg Meinhart<sup>[a]</sup>, Tayse Ferreira Ferreira<sup>[a]</sup>, Mateus Petrarca<sup>[a]</sup>, Leonardo Henrique Silva<sup>[a]</sup>, Maria Rosa de Moraes<sup>[a]</sup>, Cristiano Augusto Ballus<sup>[a]</sup>, Patrícia Oliveira de Souza<sup>[a]</sup> Thais Souza<sup>[a]</sup>, Roger Wagner<sup>[b]</sup>, Helena Maria André Bolini<sup>[a]</sup>; Juliana Teixeira Godoy<sup>[a]</sup>, Roy Edward Bruns<sup>[c]</sup> e José Teixeira Filho<sup>[d]</sup>

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**P-119** C<sub>13</sub>-norisprenoids in brazilian Chardonnay wines by HS-SPME-GC-MS/MS

Helena Teixeira Godoy<sup>[a]</sup>, Adriana Teixeira Godoy<sup>[b]</sup> and Sabrina de Bona Sartor<sup>[a]</sup>

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**P-120** Evaluating the aroma of red wines produced from grapes harvested at different stages of ripeness employing gas chromatography coupled to mass spectrometry (GC/MS) and olfactometry detection (GC-OSME)

Barbará, J. A.<sup>[a]</sup>; Marques, A. T. B.<sup>[b]</sup>; Nicolli, K. P.<sup>[a]</sup>, Souza-Silva E.A. <sup>[a]</sup>; Caramão<sup>[d,e]</sup>, E. B; Welke, J. E <sup>[c]</sup> and Zini, C. A.<sup>[a,e]</sup>

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**P-121** Liquid chromatography study of the phenolic composition of Syrah wines from submiddle São Francisco river valley produced from grapes harvested at different stages of ripeness

Barbará, J.A.<sup>[a]</sup>, Marques, A.T.B.<sup>[b]</sup>, Souza-Silva E.A.<sup>[a]</sup>, Correa, L.C.<sup>[b]</sup>, Caramão<sup>[d,e]</sup>, E.B; Welke, J.E<sup>[c]</sup>, Zini, C.A.<sup>[a,e]</sup>

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**P-122** LC-MS/MS method for determination of albendazole in fish feed

Jonas Augusto Rizzato Paschoal<sup>[a]</sup>, Zenaís Busatto<sup>[a]</sup>, Agnaldo Fernando Baldo da Silva<sup>[a]</sup> and Osvaldo de Freitas<sup>[a]</sup>

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**P-123** Evaluation of the volatile profile of *Vaccinium padifolium* at different ripening stages using HS-SPME coupled with GC-qMS

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**P-124** Identification and relative quantification of fatty acids in SCCO<sub>2</sub> rice bran oil from portuguese varieties

José P. Coelho<sup>[a,b]</sup>, Bruna Pires<sup>[b]</sup>, Tania Pinto<sup>[b]</sup>, Nuno R. Neng<sup>[c]</sup>, José M. Nogueira<sup>[c]</sup>, José Sardinha<sup>[b]</sup>

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**P-125** Compound specific isotopic analysis, new applications using analytical pyrolysis (Py-GC-C/TC-IRMS)

N.T. Jiménez-Morillo<sup>[a]</sup>, J.M. De la Rosa<sup>[a]</sup>, F.J. González-Vila<sup>[a]</sup> and J.A. González-Pérez<sup>[a]</sup>

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**P-126** Validation and application of a fast and simple liquid-liquid extraction-gas chromatography-mass spectrometry method for quantitative analysis of 4-ethylphenol and 4-ethylguaiacol in red wine

Juliana Milheiro<sup>[a]</sup>, Luís Filipe-Ribeiro<sup>[a]</sup>, Fernanda Cosme<sup>[a]</sup> and Fernando M. Nunes<sup>[a]</sup>

*[a] University of Trás-os-Montes and Alto Douro, School of Life Sciences and Environment, Portugal.*

**P-127** Fast and selective determination of capsaicinoids in chili peppers by high performance liquid chromatography with fluorescence and mass spectrometry detection

Karem Henríquez-Aedo<sup>[a]</sup>, Jessy Pavon<sup>[a]</sup>, Patricia Gómez<sup>[a]</sup> and Mario Aranda<sup>[a]</sup>

*[a] Faculty of Pharmacy, University of Concepcion, Chile.*

**P-128** Simultaneous determination of biogenic amines and their amino acid precursors during wine vinification by liquid chromatography with fluorescence detection

Karem Henríquez-Aedo<sup>[a]</sup> and Mario Aranda<sup>[a]</sup>

*[a] Faculty of Pharmacy, University of Concepcion, Chile.*

**P-129** Evaluation of antioxidant properties from agricultural by-products

Manuela Correia<sup>[a]</sup>, Beatriz Santos<sup>[a,b]</sup>, Mariah Fonseca<sup>[a,b]</sup>, Cristina Soares<sup>[a]</sup>, Manuela M. Moreira<sup>[a]</sup>, M. Fátima Barroso<sup>[a]</sup>, M. J. Ramalhosa<sup>[a]</sup> and Cristina Delerue-Matos<sup>[a]</sup>

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**P-130** Phenolic profile and antioxidant capacity from 56 brazilian dehydrated bee-pollen

Adriane Alexandre Machado De-Melo<sup>[a,b,c]</sup>, Maria Leticia Miranda Fernandes Estevinho<sup>[b]</sup>, Manuela M. Moreira<sup>[c]</sup>, Cristina Delerue-Matos<sup>[c]</sup> and Ligia Bicudo de Almeida-Muradian<sup>[a]</sup>

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**P-131** Characterization of phenolic composition and antioxidant properties from apple bark and core

Manuela M. Moreira<sup>[a]</sup>, Matthias Van Autreve<sup>[a,b]</sup>, M. Fátima Barroso<sup>[a]</sup>, Annick Boeykens<sup>[b]</sup>, Hannes Withouck<sup>[b]</sup>, Simone Morais<sup>[a]</sup> and Cristina Delerue-Matos<sup>[a]</sup>

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**P-132** Occurrence of biogenic amines in beers from chilean market

Mario Aranda<sup>[a]</sup>, Javier Pradenas<sup>[a]</sup>, Oscar Galarce-Bustos<sup>[a]</sup>, Karem Henríquez-Aedo<sup>[a]</sup> and Carlos Peña-Farfal<sup>[a]</sup>

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**P-133** Chromatographic analysis of hazardous compounds in frying oils

Tânia Gonçalves Albuquerque<sup>[a,b]</sup>, M. Beatriz P.P. Oliveira<sup>[b]</sup>, and Helena S. Costa<sup>[a,b]</sup>

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**P-134** Determination of micropollutants in drinking water by SPE-UHPLC-MS/MS

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**P-135** Avaliação do teor de ftalatos em águas engarrafadas

Norberto Parracho<sup>[a]</sup>, Luísa P. Cruz-Lopes<sup>[a]</sup> e Isabel Brás<sup>[a]</sup>

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**P-136** Preliminary evaluation of the volatiles from Azores pineapple fruits at different maturation stages

N. Rainha<sup>[a,b]</sup>, V. P. Medeiros<sup>[a]</sup>, A. C. Rodrigues<sup>[a]</sup>, S. Lopes<sup>[a]</sup>, F. Teixeira<sup>[a]</sup>, R. Cordeiro<sup>[a]</sup>, C. Cruz<sup>[b]</sup>, A. Silva<sup>[c]</sup> and A. C. Figueiredo<sup>[d]</sup>

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**P-137** Quantification of sugars from malt by liquid chromatography and refractive index detection

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**P-138** The highthroughput potential of chromatography on food authenticity establishment. The case study of sugarcane honey

Pedro Silva<sup>[a]</sup>, Jorge Freitas<sup>[a]</sup>, Rosa Perestrelo<sup>[a]</sup>, Catarina L. Silva<sup>[a]</sup> and José S. Câmara<sup>[a, b]</sup>

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**P-139** Furanic profile of sugarcane honey as an effective tool to evaluate quality and prevent adulteration

Pedro Silva<sup>[a]</sup>, Jorge Freitas<sup>[a]</sup>, Rosa Perestrelo<sup>[a]</sup>, Catarina L. Silva<sup>[a]</sup> and José S. Câmara<sup>[a,b]</sup>

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**P-140** GC-MS on profiling passion fruit volatiles: an effective tool to discriminate between species and varieties

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**P-141** Estudo de compostos maioritários de óleos essenciais por UHPLC-DAD visando a sua aplicação a embalagens alimentares ativas

Regiane Ribeiro–Santos<sup>[a,b]</sup>, Nathália Ramos de Melo<sup>[b,c]</sup>, Helena S. Costa<sup>[a,d]</sup> e Ana Sanches-Silva<sup>[a,e]</sup>

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**P-142** Aplicação de óleos essenciais a embalagens ativas alimentares

Regiane Ribeiro–Santos<sup>[a,b]</sup>, Mariana Alvoco Andrade<sup>[a,c]</sup>, Nathália Ramos de Melo<sup>[b,d]</sup>, Helena S. Costa<sup>[a,e]</sup> e Ana Sanches-Silva<sup>[a,f]</sup>

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**P-143** LC-MS metabolic targeted approach to characterize the phenolic fraction of argentinean olive oil

Romina P. Monasterio<sup>[a]</sup>, Lucía Olmo-García<sup>[b]</sup>, Aadil Bajoub<sup>[b]</sup>, Elena Hurtado-Fernández<sup>[b]</sup>, Alberto Fernández-Gutiérrez<sup>[b]</sup> and Alegría Carrasco Pancorbo<sup>[b]</sup>

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**P-144** Experimental design of reversed-phase high performance liquid chromatographic conditions for simultaneous determination of caffeine, allura red, ponceau 4R and carmoisine

Şule Dinç Zor<sup>[a]</sup>, Bürge Aşçı<sup>[a]</sup> and Özlem Aksu Dönmez<sup>[a]</sup>

[a] Faculty of Science and Arts, Yıldız Technical University, Turkey.

**P-145** Pre-column chelation liquid chromatographic determination of trace copper, zinc, nickel, cobalt, iron and mercury in fish samples

Güzin Alpdoğan<sup>[a]</sup> and Şule Dinç Zor<sup>[a]</sup>

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**P-146** Caracterização por GCxGC-ToFMS da fração orgânica do bio-óleo obtido por pirólise rápida da lentilha d'água

Pedro José Sanches Filho<sup>[a]</sup>, Eliane Freitas de Medeiros<sup>[a]</sup>, Daniele Martin Sampaio<sup>[a]</sup>, Glauco Rasmussem Betemps<sup>[a]</sup>, Maria Elisabete Machado<sup>[b]</sup> e Elina Bastos Caramão<sup>[c]</sup>

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**P-147** Comprehensive two-dimensional gas chromatography coupled to time of flight mass spectrometry as a tool to study the metabolome of a metal-challenged rhizobacteria

Paulo Cardoso<sup>[a]</sup>, Magda Santos<sup>[a]</sup>, Rosa Freitas<sup>[a]</sup>, Etelvina Figueira<sup>[a]</sup> and Sílvia M. Rocha<sup>[a]</sup>

[a] Universidade de Aveiro, Portugal.

**P-148** Characterization of jambu (*Spilanthesoleracea*) essential oil by comprehensive two-dimensional gas chromatography (GC×GC/qMS)

Allan dos S. Polidoro<sup>[a]</sup>, Caroline Saucier<sup>[a]</sup>, Luciana da S. Borges<sup>[b]</sup>, Giuseppina P. P. Lima<sup>[b]</sup>, Jaderson K. Schneider<sup>[a]</sup>, Elina B. Caramão<sup>[a,c]</sup> and Rosângela A. Jacques<sup>[a]</sup>

[a] IQ, UFRGS, Brasil [b] FCAB, UNESP, Brasil [c] PBI, UNIT, Brasil & INCT E&A, Brasil.

**P-149** Volatile profiling of espresso coffee brew by GC×GC–ToFMS for understanding consumer perception

Andreia S. Ferreira<sup>[a]</sup>, Guido R. Lopes<sup>[a]</sup>, Mariana Pinto<sup>[a]</sup>, Cláudia P. Passos<sup>[a]</sup>, Elisabete Coelho<sup>[a]</sup>, Manuel A. Coimbra<sup>[a]</sup> and Sílvia M. Rocha<sup>[a]</sup>

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**P-150** Pyrolysis of industrial waste of green coffee and characterization of bio-oil by GC×GC/qMS

Ariel Oliveira Celestino<sup>[a]</sup>, Carina Kelly de França Ferreira<sup>[a]</sup>, Anne Raquel Teixeira Cardoso<sup>[a]</sup>, Jaderson Kleveston Schneider<sup>[b]</sup>, Maria Elisabete Machado<sup>[b]</sup>, Mozart Daltro Bispo<sup>[a]</sup>, Laiza Canielas Krause<sup>[a]</sup> and Elina Bastos Caramão<sup>[a,b,c]</sup>

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**P-151** Targeted metabolites of *Candida albicans* through comprehensive two dimensional gas chromatography

Catarina Ferreira<sup>[a]</sup>, Carina P. Costa<sup>[a]</sup>, Adelaide Almeida<sup>[a]</sup>, Sílvia M. Rocha<sup>[a]</sup>

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**P-152** Developing a multidimensional method with heart-cutting: MD-GC/MS

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**P-153** Bio-oils from brazilian coconut fibers: characterization by GC×GC/ToFMS and comparison of two pyrolysis processes

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**P-154** Restrict access carbon nanotubes for online extraction of tetracyclines from bovine milk samples by multidimensional liquid chromatography

Henrique Dipe de Faria<sup>[a]</sup>, Mariana Azevedo Rosa<sup>[a]</sup>, Alberto Thalison Silveira<sup>[a]</sup> and Eduardo Costa de Figueiredo<sup>[a]</sup>

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**P-155** Chromatographic characterization of bio-oil from the pyrolysis of rice husk

Enelise Scapin<sup>[a]</sup>, Eliane Lazzari<sup>[a]</sup>, Allan dos Santos Polidoro<sup>[a]</sup>, Carmem Tatiane Primaz<sup>[a]</sup>, Mateus Schien<sup>[a]</sup>, Pedro José Sanches Filho<sup>[b]</sup>, Rosângela Assis Jacques<sup>[a]</sup>, Elina Bastos Caramão<sup>[a,c]</sup>

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**P-156** Screening of volatile metabolites from *myrothecium sp.* by HS-SPME combined to GC×GC-qMS

Fabio Augusto<sup>[a]</sup>, Paula F. Lima<sup>[a]</sup> and Mayra F. Furlan<sup>[a]</sup>

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**P-157** Characterization of crude oils by GC×GC combined to multivariate chemometric tools

Fabio Augusto<sup>[a]</sup>, Guilherme L. Alexandrino<sup>[a]</sup>, Noroska G. S. Mogollón<sup>[a]</sup> and Paloma S. Prata<sup>[a]</sup>

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**P-158 GC×GC-MS/MS: a novel tool for detection and identification of biomarkers in crude oils**

Fabio Augusto<sup>[a]</sup>, Noroska G.S. Mogollón<sup>[a]</sup>, Paloma S. Prata<sup>[a]</sup> and Jadson Z. dos Reis<sup>[a]</sup>

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**P-159 Assessment of floral and geographic markers in honey by HS-SPME-GC×GC-MS/MS**

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**P-160 Removal of indole and carbazole from commercial diesel using activated carbon obtained from rice husk pyrolysis**

Gabriela P. S. Maciel<sup>[a]</sup>, Samir M. Ahmad<sup>[b]</sup>, Ana P. Carvalho<sup>[b]</sup>, José M. F. Nogueira<sup>[b]</sup> and Elina B. Caramão<sup>[a,c,d]</sup>

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**P-161 GC×GC-ToFMS as a powerful tool for in-depth analysis of single-dose espresso coffee capsules powder volatile compounds**

Guido R. Lopes<sup>[a]</sup>, Andreia S. Ferreira<sup>[a]</sup>, Mariana Pinto<sup>[a]</sup>, Cláudia P. Passos<sup>[a]</sup>, Elisabete Coelho<sup>[a]</sup>, Manuel A. Coimbra<sup>[a]</sup> and Sílvia M. Rocha<sup>[a]</sup>

*[a] University of Aveiro, Portugal.*

**P-162 Simultaneous quantitative determination of four toxic compounds of Syrah wines by comprehensive two-dimensional gas chromatography**

Karine P. Nicollj<sup>[a]</sup>, Laura O. Lago<sup>[a]</sup>, Janaína A. Barbara<sup>[a]</sup>, Aline C. T. B. Marques<sup>[b]</sup>, Elina B. Caramão<sup>[d,e]</sup> Juliane E. Welke<sup>[c]</sup> and Claudia A. Zini <sup>[a,e]</sup>

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**P-163** Characterization of volatile and sensory profile of Cabernet Sauvignon and Merlot wines produced in the Campanha Gaúcha region

Karine P. Nicoll<sup>[a]</sup>, Laura O. Lago<sup>[a]</sup>, Aline T. B. Marques<sup>[b]</sup>, Celito C. Guerra<sup>[c]</sup>, Henrique P. dos Santos<sup>[c]</sup>, Elina B. Caramão<sup>[e,f]</sup>, Juliane E. Welke<sup>[d]</sup> and Cláudia A. Zini<sup>[a,f]</sup>

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**P-164** Fisher ratio and parafac to evaluate GCxGC-qMS data of dark chocolates samples

Luciana F. Oliveira<sup>[a]</sup>, Soraia C. G. N. Braga<sup>[a]</sup>, Fabio Augusto<sup>[a]</sup> and Ronei Jesus Popp<sup>[a]</sup>

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**P-165** Optimización y validación de un método SARA para crudos y derivados por TLC/FID. Estudio comparativo con HPLC y la norma ASTM 6560 aplicada a la fracción de asfaltenos

Wilinton Hernández<sup>[a]</sup>

*[a] Instituto Tecnológico Venezolano del Petróleo, Venezuela.*

**P-166** Carbonyl determination by HPLC of biodiesel blends emissions in an EURO 5 vehicle

Fabian Placencia<sup>[a]</sup>, Karen Yáñez<sup>[b]</sup>, Julio Acuña<sup>[b]</sup>, Víctor Vidal<sup>[a,b]</sup>, Ximena Fadic<sup>[b]</sup>, Mauricio Osses<sup>[a]</sup> and Francisco Cereceda-Balic<sup>[a,b]</sup>.

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**P-167** Diferenciação de crudes através de índices entre sesquiterpanos

Rocha, A.C.<sup>[a]</sup> e Palma, C.<sup>[a]</sup>

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**P-168** Desarrollo de un método de análisis de compuestos azufrados en gasóleo de vacío (VGO) por cromatografía de gases con detector específico por quimiluminiscencia

Pazo César<sup>[a]</sup>, Fernández Luis<sup>[b]</sup> y Negrín Juan<sup>[a]</sup>

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**P-169** From the raw material to your headache

Sónia Amaral

*[a] Hovione, Sete Casas 2674-506 Loures, Portugal*

**P-170** Are you confident about your chromatographic result?

Sónia Amaral

*[a] Hovione, Sete Casas 2674-506 Loures, Portugal*

**P-171** Phenolic composition and antioxidant activity of extracts from three mediterranean Asteraceae species

Sandra Gonçalves<sup>[a]</sup>, Elsa Moreira<sup>[a]</sup>, Clara Grosso<sup>[b]</sup>, Paula B. Andrade<sup>[b]</sup>, Patrícia Valentão<sup>[b]</sup> and Anabela Romano<sup>[a]</sup>

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**P-172** Fig spirits: Differentiation between fresh and dried figs

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**P-173** Ultrasound-assisted extraction applied to recover of bioactive compounds from industrial coffee by-products

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**P-174** Chromatographic analysis of antioxidant and related compounds in *Polyporus squamosus* from different origins

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**P-175** Scale-up process for separation and isolation of bioactive compounds of red propolis

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**P-176** Hidroalcoholic extraction for derivatives of caffeoylquinic acids in artichoke leaves (*Cynara scolymus* L.) and characterization by HPLC-DAD/ESI-MS

Bruna Bernar Dias<sup>[a]</sup>, Allan dos Santos Polidoro<sup>[a]</sup>, Anaí Loreiro dos Santos<sup>[a]</sup>, Eliseu Rodrigues<sup>[b]</sup>, Elina Bastos Caramão<sup>[a,c]</sup> and Rosângela Assis Jacques<sup>[a]</sup>

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**P-177** Phenolic profile and antimicrobial activity of dietary supplements based on *Cochlospermum angolensis* Welw.

Carla Pereira<sup>[a]</sup>, Lillian Barros<sup>[a]</sup>, Maria José Alves<sup>[b]</sup>, Celestino Santos-Buelga<sup>[b]</sup> and Isabel C.F.R. Ferreira<sup>[a]</sup>

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**P-178** Analysis of phenolic compounds in *Cynara scolymus* L. and *Silybum marianum* (L.) Gaertn. by HPLC-DAD-ESI/MS

Carla Pereira<sup>[a,b]</sup>, Lillian Barros<sup>[a]</sup>, Celestino Santos-Buelga<sup>[b]</sup> and Isabel C.F.R. Ferreira<sup>[a]</sup>

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**P-179** Extraction and determination of bioactives in *garcinia brasiliensis* by high-performance liquid chromatography photo-diode array (HPLC-PDA)

Claudinei Alves da Silva<sup>[a]</sup>, Isael Aparecido Rosa<sup>[b]</sup>, Thiago de Souza Correa<sup>[c]</sup> and Marcelo Henrique dos Santos<sup>[d]</sup>

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**P-180** Antioxidant activity, LC-ESI-MS and GC-MS analyses of *Lippia organoides* (thymol and phellandrene chemotypes) and *Turnera diffusa* extracts and essential oils

Elena E. Stashenko<sup>[a]</sup>, Yuri Córdoba<sup>[a]</sup>, Anderson J. Arias<sup>[a]</sup> and Jairo R. Martínez<sup>[a]</sup>

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**P-181** GC-MS and LC-MS identification of secondary metabolites isolated from tropical flowers

Elena E. Stashenko<sup>[a]</sup>, Lady J. Sierra<sup>[a]</sup>, Jesica J. Mejía<sup>[a]</sup>, Luis M. Díaz<sup>[a]</sup> and Jairo R. Martínez<sup>[a]</sup>

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**P-182** Chromatographic methods to obtain the biomolecules profile of some aromatic plants irradiated with electron beam

Eliana Pereira<sup>[a]</sup>, Amílcar L. Antonio<sup>[a]</sup>, João C.M. Barreira<sup>[a]</sup>, Lillian Barros<sup>[a]</sup>, Albino Bento<sup>[a]</sup> and Isabel C.F.R. Ferreira<sup>[a]</sup>

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**P-183** Aplicação de radiação gama a *Ginkgo biloba* L. e avaliação da sua composição química através de técnicas cromatográficas

Eliana Pereira<sup>[a]</sup>, Lillian Barros<sup>[a]</sup>, Amílcar L. Antonio<sup>[a,b]</sup>, Albino Bento<sup>[a]</sup> e Isabel C.F.R. Ferreira<sup>[a]</sup>

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**P-184** *Undaria pinnatifida* (wakame) and *Porphyra tenera* (nori): HPLC/DAD/FLD screening of vitamin E profile

Catarina G. Costa<sup>[a,b]</sup>, Filipa B. Pimentel<sup>[a]</sup>, Anabela S.G. Costa<sup>[a]</sup>, Rita C. Alves<sup>[a]</sup>, Arminda Alves<sup>[b]</sup> and Maria Beatriz P.P. Oliveira<sup>[a]</sup>

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**P-185** Chromatographic techniques to obtain the biomolecules profile of wild *Suillus granulatus*

Filipa S. Reis<sup>[a,b,c,d]</sup>, Lillian Barros<sup>[a]</sup>, Anabela Martins<sup>[a]</sup>, M. Helena Vasconcelos<sup>[c,d,e]</sup>, Patricia Morales<sup>[b]</sup> and Isabel C.F.R. Ferreira<sup>[a]</sup>

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**P-186** Bioactivity and chromatographic analysis of nutrients and non-nutrients of two *Leccinum* species

Filipa S. Reis<sup>[a,b,c,d]</sup>, Lillian Barros<sup>[a]</sup>, Anabela Martins<sup>[a]</sup>, M. Helena Vasconcelos<sup>[c,d,e]</sup>, Patricia Morales<sup>[b]</sup> and Isabel C.F.R. Ferreira<sup>[a]</sup>

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**P-187** Determination of phytosterols profile of native Brazilian seeds by a HPLC-ELSD method

Joana Santos<sup>[a]</sup>, Mariana O. Barbosa<sup>[b]</sup>, António F. M. Oliveira<sup>[b]</sup>, M. Beatriz P. P. Oliveira<sup>[a]</sup>

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**P-188** Phenolic compounds in *Coleostephus myconis* (L.) Rchb.f.: characterization by HPLC-DAD-ESI/MS and phenology effects

João C.M. Barreira<sup>[a,b]</sup>, Sílvia M.F. Bessada<sup>[b]</sup>, Lillian Barros<sup>[a]</sup>, M. Beatriz P.P. Oliveira<sup>[b]</sup>, Isabel C.F.R. Ferreira<sup>[a]</sup>

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**P-189** Effects of gamma and electron-beam irradiation on the individual phenolics of *Viola tricolor* L. edible flowers

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**P-190** Postharvest changes in profiles of sugars, organic acids and tocopherols in leafy vegetables monitored by chromatographic techniques

José Pinela<sup>[a,b]</sup>, Lillian Barros<sup>[a]</sup>, Ana Maria Carvalho<sup>[a]</sup>, M. Beatriz P.P. Oliveira<sup>[b]</sup>, and Isabel C.F.R. Ferreira<sup>[a]</sup>

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**P-191** HPLC-DAD-ESI/MS analysis of phenolic compounds in four tomato varieties and evaluation of the antioxidant capacity

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**P-192** Desrepliação de extrato de *Mimosa caesalpiniiifolia* pela técnica hifenada HPLC-PDA-ESI-IT-MS/MS

Marcelo José Dias Silva<sup>[a]</sup>, Ana Maria S. Morales<sup>[b]</sup>, Francisco Antonio M. Dominguez<sup>[b]</sup>, Marcelo Ap. da Silva<sup>[c]</sup> e Wagner Vilegas<sup>[a]</sup>

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**P-193** Perfil fenólico individual e potencial antioxidante de partes vegetativas de *Fragaria vesca* L.

Maria Inês Dias<sup>[a,b]</sup>, Lillian Barros<sup>[a]</sup>, M. Beatriz P.P. Oliveira<sup>[b]</sup>, Celestino Santos-Buelga<sup>[c]</sup> e Isabel C.F.R. Ferreira<sup>[a]</sup>

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**P-194** Caracterização cromatográfica de moléculas bioativas em frutos silvestres de *Fragaria vesca* L.

Maria Inês Dias<sup>[a,b,c]</sup>, Lillian Barros<sup>[a]</sup>, M. Beatriz P.P. Oliveira<sup>[b]</sup>, Patricia Morales<sup>[c]</sup>, María Cortes Sánchez-Mata<sup>[c]</sup> e Isabel C.F.R. Ferreira<sup>[a]</sup>

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**P-195** UPLC fingerprinting associated with chemometric analysis to evaluate the polymorphism of *Chrysobalanus icaco* L. (Chrysobalanaceae)

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**P-196** Searching for bioactive compounds in brown algae

Catarina Vizetto-Duarte<sup>[a]</sup>, Luísa Custódio<sup>[a]</sup>, Nuno Neng<sup>[b]</sup>, José Manuel Florêncio Nogueira<sup>[b]</sup>, João Henrique G. Lago<sup>[c]</sup>, Thiago R. Morais<sup>[c]</sup>, Carolina Bruno de Sousa<sup>[a]</sup>, Luísa Barreira<sup>[a]</sup>, Fernando Albericio<sup>[d]</sup>, Amélia Pilar Rauter<sup>[b]</sup> and João Varela<sup>[a]</sup>

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**P-197** Assessment of the volatile profile of wood species for oenological purposes by Py-GC/MS

Raquel Garcia<sup>[a]</sup>, Sérgio Martins<sup>[b]</sup>, Ana Manhita<sup>[b]</sup>, Cristina Barrocas Dias<sup>[b]</sup> and Maria João Cabrita<sup>[c]</sup>

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**P-198** Influência da radiação por feixe de elétrões no perfil cromatográfico de *Bauhinia variegata* var *candida*: flor comestível proveniente do Brasil

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