

SCIENTIFIC PROGRAMME

XXVIII Congress of the Analytical Chemistry Division

Sunday 22 September

Zonno Ricevimenti – Molo San Nicola

18.00 – 21.00 Registration

19.00 – 21.00 Get-together party

Monday 23 September

8.00 – 9.00 Registration – *Aula Aldo Moro area*

Aula Aldo Moro and (by streaming) Aula V. Starace

9.00 – 9.45 **Opening address**

9.45-10.30

Lectio Magistralis

HOMO SAPIENS HISTORY AND PERIODIC TABLE OF ELEMENTS: AN INSEPARABLE PAIR

Adriano Zecchina

Professore Emerito Università degli Studi di Torino, Accademico dei Lincei

10.30-11.00

Young Researcher Award Winner lecture

GR

PAPER: A NOVEL MULTI-TASKING RESOURCE IN ANALYTICAL CHEMISTRY

S. Cinti

Dipartimento di Farmacia, Università degli Studi di Napoli "Federico II", Napoli, Italy

11.00 – 11.30

Coffee break (Aula Aldo Moro area)

Chairperson: L. Mondello

11.30–12.15

SOLID PHASE MICROEXTRACTION: QUO VADIS?

PL1

Janusz Pawliszyn

Department of Chemistry, University of Waterloo, Waterloo, Ontario, Canada

12.15 – 12.40

FIRST PILOT STUDY OF SELECTED ION FLOW TUBE-MASS SPECTROMETRY (SIFT-MS) IN HERITAGE SCIENCE: CHARACTERIZATION OF NATURAL AND SYNTHETIC PAINT VARNISHES BY PORTABLE MASS SPECTROMETRY

KN1

F. Modugno¹, J. La Nasa¹, A. Carretta², M.P. Colombini¹, I. Degano¹

¹SCIBEC, Dipartimento di Chimica e Chimica Industriale, Università di Pisa, Italy

²SRA Instruments, Cernusco sul Naviglio, Milano, Italy

12.40 – 13.05

CHEMILUMINESCENCE LIGHTS UP BIOSENSORS FOR SPACE EXPLORATION

KN2

M. Mirasoli¹, M. Zangheri¹, E. Marchegiani¹, A. Porchetta², F. Di Nardo³, P. Simoni⁴, L. Anfossi³, C. Giovannoli³, A. Nascetti⁵, C. Baggiani³, A. Roda¹

¹Department of Chemistry "Giacomo Ciamician", University of Bologna, Bologna, Italy

²Chemistry Department, University of Rome, Tor Vergata, Rome, Italy

³Department of Chemistry, University of Turin, Turin, Italy

⁴Department of Medical and Surgical Sciences, University of Bologna, Bologna, Italy

⁵School of Aerospace Engineering, Sapienza University of Rome, Italy

Salone degli Affreschi area

13.10 – 15.10

Lunch and Poster Session 1 (P1 – P43)

15.15 – 16.30

Parallel sessions

Aula Aldo Moro

Separation Science (SS1)

Chairperson: R. Fuoco

15.15-15.30
O1 SS1

DETERMINATION OF VOLATILE COMPOUNDS IN CANNABIS SATIVA L. USING ELECTRONIC NOSE BASED ON PEPTIDE AND HAIRPIN DNA Vs. SOLID-PHASE MICROEXTRACTION AND GC-MS

S. Gaggiotti, S. Palmieri, F. Della Pelle, A. Ricci, C. Lo Sterzo, M. Mascini, D. Compagnone
Faculty of Bioscience and Technology for Food, Agriculture, and Environment, University of Teramo, Teramo, Italy

15.30-15.45
O2 SS1

DEVELOPMENT OF A NEW ANALYTICAL STRATEGY FOR THE SELECTIVE ENRICHMENT OF PHOSPHO-TYROSINE-PEPTIDES BY MOLECULARLY IMPRINTED POLYMERS.

C.M. Montone¹, A. Incel², B. Sellergren², A.L. Capriotti¹, A. Cerrato¹, A. Laganà^{1,3}
¹Chemistry Department, University La Sapienza, Rome, Italy
²Department of Biomedical Sciences, Faculty of Health and Society, Malmö University, Sweden
³CNR NANOTEC, Campus Ecotekne of the University of Salento, Lecce, Italy

15.45-16.00
O3 SS1

NANOCONFINED ARRAY LIQUID-SOLID MICROEXTRACTION BASED ON CARBON NANOFIBERS

Y. Zou¹, L.-Y. Meng^{1,2}, D. Li¹, W.M.V. Marchesiello⁴, M. Quinto^{1,4}
¹Department of Chemistry, MOE Key Laboratory of Natural Resources of the Changbai Mountain and Functional Molecules, Yanbian University, Yanji, Jilin Province, PR China
²Department of Chemical Engineering, Yanbian University, Yanji, PR China
³Department of Chemistry, BK21 School of Chemical Materials Science, Department of Energy Science and SKKU Advanced Institute of Nanotechnology, Sungkyunkwan University, Suwon, Korea
⁴SAFE — Department of Science of Agriculture, Food and Environment, University of Foggia, Foggia, Italy

16.00-16.15
O4 SS1

THERMALLY CONDENSED HUMIC ACIDS ONTO SILICA AS MIXED-MODE SORBENT FOR MULTICLASS EXTRACTION, CLEANUP AND PRE-CONCENTRATION OF STEROIDS IN HUMAN PLASMA

A. Speltini¹, L. Villani², F. Merlo², F. Maraschi², A. Profumo²
¹Dipartimento di Scienze del Farmaco, Università degli Studi di Pavia, Pavia, Italy
²Dipartimento di Chimica, Università degli Studi di Pavia, Pavia, Italy

16.15-16.30
O5 SS1

NANOMIPS BY SOLID PHASE POLYMERIZATION SYNTHESIS: AN INNOVATIVE APPROACH TOWARDS ARTIFICIAL ANTIBODIES FOR ANALYTICAL APPLICATIONS

C. Baggiani, L. Anfossi, S. Cavallera, F. Di Nardo
Dipartimento di Chimica, Università degli Studi di Torino, Torino, Italy

Aula V. Starace

Sensors and Biosensors (SB1)

Chairperson: A. Roda

15.15-15.30
O1 SB1

ATP SENSING PAPER WITH SMARTPHONE BIOLUMINESCENCE-BASED DETECTION

M.M. Calabretta¹, E. Micheli^{1,2}, R. Álvarez-Díduk³, L. Montali¹, A. Lopreside¹, A. Merkoçi^{3,4}, A. Roda^{1,2}

¹Dipartimento di Chimica "G. Ciamician", Università di Bologna, Bologna, Italy
²INBB, Istituto Nazionale di Biostrutture e Biosistemi, Roma, Italy
³ICN2 - Nanobioelectronics & Biosensors Group, Institut Català de Nanociència i Nanotecnologia, Campus UAB, Bellaterra, Barcelona, Spain
⁴ICREA - Institució Catalana de Recerca i Estudis Avançats, Barcelona, Spain

15.30-15.45
O2 SB1

PNA-FUNCTIONALIZED MAGNETIC MICROBEADS AS SUBSTRATES FOR ENZYME-LABELLED AMPEROMETRIC GENOASSAY FOR GENETICALLY MODIFIED ORGANISM DNA SENSING

M. Giannetto, S. Fortunati, A. Rozzi, R. Corradini, M. Careri
Dipartimento di Scienze Chimiche, della Vita e della Sostenibilità Ambientale, Università di Parma, Parma, Italy

15.45-16.00
O3 SB1

ELECTROSPRAY IONISATION TECHNIQUE IN BIOSENSOR DESIGN: LACCASE AS CASE STUDY

M.C. Castrovilli¹, J. Chiarinelli¹, P. Bolognesi¹, E. Tempesta², P. Calandra³, A. Cartoni^{1,4}, A.

Antonacci⁵, L. Avaldi¹, F. Arduini⁶, V. Scognamiglio⁵

¹Dipartimento di scienze fisiche e tecnologie della materia, Istituto di Struttura della Materia, CNR, Rome, Italy

²Dipartimento di Scienze del Sistema Terra e Tecnologie per l'Ambiente, Istituto di Geologia Ambientale e Geoingegneria, CNR, Rome, Italy

³Dipartimento di scienze chimiche e tecnologie dei materiali, Istituto per lo Studio dei Materiali Nanostrutturati, CNR, Rome, Italy

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⁶Dipartimento di Scienze e Tecnologie Chimiche, Università di Roma "Tor Vergata", Rome, Italy

16.00-16.15

O4 SB1

NANOMATERIAL-BASED SENSORS AND FOOD POLYPHENOLS: AN ANALYTICAL CHALLENGE AND A SOURCE OF USEFUL ELECTROCHEMICAL COMPOUNDS

F. Della Pelle¹, D. Rojas^{1,2}, M. Del Carlo¹, M. Diodato¹, A. Escarpa², D. Compagnone¹

¹Faculty of Bioscience and Technology for Food, Agriculture and Environment University of Teramo, Teramo (Italy).

²Department of Analytical Chemistry, Physical Chemistry and Chemical Engineering, Faculty of Sciences University of Alcalá, Alcalá de Henares, Madrid, Spain.

16.15-16.30

O5 SB1

DNA-BASED RECEPTORS CONTROLLED BY REDOX INPUTS

E. Del Grosso, G. Palleschi, F. Ricci

Dipartimento di Chimica, Università degli Studi di Roma "Tor Vergata", Roma, Italy

Salone degli Affreschi

Cultural Heritage (CH)

Chairperson: M.P. Colombini

15.15-15.30

O1 CH

BPA-FREE EPOXY RESINS FOR STONE CONSERVATION: SYNTHESIS AND NEW ANALYTICAL APPROACH TO OPTIMIZE THEIR CURING

O. Gomez-Laserna¹, P. Irizar¹, G. Lando², F. Crea², L. Kortazar¹, L.A. Fernández¹, I. Martinez-Arkarazo¹, M. Olazabal¹, P. Cardiano²

¹Department of Analytical Chemistry, University of the Basque Country (EHU/UPV), Bilbao, Spain

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15.30-15.45

O2 CH

ISOTOPE RATIO MASS SPECTROMETRY: OLD AND NEW PROXIES IN CULTURAL HERITAGE RESEARCH

G.E. De Benedetto

Laboratory of Analytical and Isotopic Mass Spectrometry, Department of Cultural Heritage, University of Salento, Lecce, Italy

15.45-16.00

O3 CH

AN ANALYTICAL BASELINE FOR RED-COLOURED TEXTILES OF PHARAONIC EGYPT

M. Gulmini¹, P. Davit¹, M. Aceto^{2,3}, M. Borla⁴, V. Turina⁵, C. Oliva⁶, D. Tamburini⁷, J. Dyer⁷, M. Vandenbeusch⁸

¹Dipartimento di Chimica, Università degli Studi di Torino, Torino, Italy

²Dipartimento di Scienze e Innovazione Tecnologica, Università degli Studi del Piemonte Orientale "Amedeo Avogadro", Alessandria, Italy

³Centro Interdisciplinare per lo Studio e la Conservazione dei Beni Culturali, Vercelli, Italy

⁴Soprintendenza archeologia, belle arti e paesaggio della Città Metropolitana di Torino, Torino, Italy

⁵Fondazione Museo Antichità Egizie, Torino, Italy

⁶Oliva Restauri, Torino, Italy

⁷Department of Scientific Research, The British Museum, London, United Kingdom

⁸Department of Ancient Egypt and Sudan, The British Museum, London, United Kingdom

16.15-16.30

O5 CH

A NEW MINIATURIZED NEAR INFRARED SPECTROMETER FOR ON-SITE CULTURAL HERITAGE INVESTIGATIONS

G. Sciutto¹, E. Catelli¹, S. Prati¹, M. Valente¹, L. Gatti¹, E. Genorini², R. Mazzeo¹

¹Microchemistry and Microscopy Art Diagnostic Laboratory, Department of Chemistry, University of Bologna – Ravenna Campus, Ravenna, Italy

²VIAVI Solutions Italia SRL, Monza, Italy

16.30 – 17.00

Coffee break (Aula Aldo Moro & Salone degli Affreschi areas)

17.00 – 18.00

Parallel sessions

Aula Aldo Moro

Environmental Analytical Chemistry (EAC1)

Chairperson: G. Adami

17.00-17.15

O1 EAC1

EMERGING ORGANIC CONTAMINANTS IN INTERIORS

A. Cecinato^{1,2}, C. Balducci¹, M. Perilli¹, P. Romagnoli¹, A. Bacaloni²

¹National Research Council of Italy, Institute of Atmospheric Pollution Research (CNR-IIA)

²Chemistry Department, University La Sapienza, Rome, Italy

17.15-17.30

O2 EAC1

SELF-ORGANIZING MAP AS A SUPPORT FOR DATA FUSION IN MONITORING OF ENVIRONMENTAL PROCESSES

P. Barbieri, S. Licen, G. Adami

Dipartimento di Scienze Chimiche e Farmaceutiche, Università degli Studi di Trieste, Trieste, Italy

17.30-17.45

O3 EAC1

THE DEGRADATION OF REAL SAMPLES OF PLASTIC BOTTLES FROM ADRIATIC MARINE LITTER: VIBRATIONAL SPECTROSCOPY EVALUATION

M.C. Caggiani¹, D. Marchetto¹, M. Baldan¹, E. Pasanisi², V. Bernarello², D. Bojanić³, P. Tutman³, G. Pojana¹

¹Dipartimento di Filosofia e Beni Culturali, Università Ca' Foscari, Venezia, Italy

²ISPRA, Istituto Superiore per la Protezione e la Ricerca Ambientale, Chioggia, Italy

³IOF- Institute of Oceanography and Fisheries, Split, Croatia

17.45-18.00

O4 EAC1

USE OF NANO-STRUCTURAL MATERIALS FOR POLLUTANTS REMOVAL IN WATER TREATMENT

G. Costamagna, S. Mariotti, A. Mariani, M. Turco, C. Cecone, M. Ginepro

Dipartimento di Chimica, Università degli Studi di Torino, Torino, Italy

Aula V. Starace

Bioanalytics (BIO1)

Chairperson: F. Ricci

17.00-17.15

O1 BIO1

LONG-TERM, IN SITU SENSING OF MICRORNAs ENABLED BY NANOCOMPOSITE FIBER NETWORKS SHELTERING DNA MOLECULAR BEACONS

A. Bertucci^{1,2}, J. Zuidema², J. Kang,³ M. J. Sailor², F. Ricci¹

¹Department of Chemical Sciences and Technologies, University of Rome Tor Vergata, Rome, Italy

²Department of Chemistry and Biochemistry, University of California San Diego, La Jolla, CA, United States

³Department of Nanoengineering, University of California San Diego, La Jolla, CA, United States

17.15-17.30

O2 BIO1

ORTHOGONAL REGULATION OF DNA NANOSTRUCTURE SELF- ASSEMBLY AND DISASSEMBLY USING ANTIBODIES

S. Ranallo, D. Sorrentino, G. Palleschi, F. Ricci

Dipartimento di Scienze e Tecnologie Chimiche, Università degli Studi di Roma "Tor Vergata", Roma, Italy

17.30-17.45

O3 BIO1

DEVELOPMENT OF AN INNOVATIVE ANALYTICAL PLATFORM FOR ENRICHMENT AND IDENTIFICATION OF SHORT PEPTIDES IN BODY FLUIDS

A. Cerrato¹, M. Antonelli¹, C.M. Montone¹, A.L. Capriotti¹, S. Piovesana¹, A. Laganà^{1,2}

¹Dipartimento di Chimica, Università di Roma Sapienza, Roma, Italy

²CNR NANOTEC, Campus Ecotekne dell'Università del Salento, Lecce, Italy

17.45-18.00

O4 BIO1

HPLC-HRMS AS A TOOL FOR AUTISM SPECTRUM DISORDER BIOMARKER SEARCH IN BLOOD SAMPLES

G. Ventura¹, C.D. Calvano^{1,2}, V. Porcelli³, L. Palmieri^{3,4}, F. Palmisano^{1,2}, T.R.I. Cataldi^{1,2}

¹Department of Chemistry, University of Bari Aldo Moro, Bari, Italy

²SMART Center, University of Bari Aldo Moro, Bari, Italy

³Department of Biosciences, Biotechnologies and Biopharmaceutics, University of Bari Aldo Moro, Bari, Italy

⁴Institute of Biomembranes and Bioenergetics, CNR, Bari, Italy

Chairperson: M. Vincenti

17.00-17.15

O1 FC

A PRELIMINARY STUDY TOWARDS THE DEVELOPMENT OF AN INNOVATIVE LIQUID CHROMATOGRAPHY-MASS SPECTROMETRY-BASED PROTEOMICS STRATEGY FOR SKIN WOUND AGE ESTIMATION IN FORENSIC MEDICINE

M. Mattarozzi¹, G. Paredi², G. Vignali³, S. Tambuzzi³, M. Milioli⁴, C. Cattaneo³, A. Mozzarelli⁵, M. Careri¹

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³Istituto di Medicina Legale, Dipartimento di Scienze Biomediche per la Salute, Università di Milano, Milano, Italy

⁴Dipartimento di Farmacocinetica, Biochimica e Metabolismo, Area Preclinica, Chiesi Farmaceutici SpA, Parma, Italy

⁵Dipartimento di Scienze degli Alimenti e del Farmaco, Università di Parma, Parma, Italy

17.15-17.30

O2 FC

UPDATING PROCEDURES IN THANATO-CHEMISTRY: A MULTIWAY ANALYTICAL PLATFORM FOR POST MORTEM INTERVAL (PMI) ESTIMATION IN VITREOUS HUMOR

R. Risoluti¹, S. Canepari¹, P. Frati², V. Fineschi², S. Materazzi¹

¹Department of Chemistry, "Sapienza" University of Rome, Rome, Italy

²Department of Anatomical, Histological, Forensic Medicine and Orthopaedic Sciences, "Sapienza" University of Rome, Rome, Italy

17.30-17.45

O3 FC

DETERMINATION OF FENTANYL DERIVATIVES IN ORAL FLUID BY MEANS OF MEPS EXTRACTION FOLLOWED BY UHPLC-HRMS/MS

F. Vincenti^{1,2}, C. Montesano¹, S. Pirau¹, A. Gregori³, M. Sergi⁴, D. Compagnone⁴, R. Curini¹

¹Department of Chemistry, Sapienza University of Rome, Rome, Italy

²Department of Public Health and Infectious Disease, Sapienza University of Rome, Rome, Italy

³Carabinieri, Department of Scientific Investigation (RIS), Rome, Italy

⁴Faculty of Bioscience and Technology for Food, Agriculture and Environment, University of Teramo, Teramo, Italy

17.45-18.00

O4 FC

FACTORS AFFECTING THE VARIABILITY OF BREATH COMPOSITION

T. Lomonaco¹, J. Fusi², F.G. Bellagambi¹, S. Ghimenti¹, D. Biagini¹, F. Franzoni², R. Fuoco¹, F. Di Francesco¹

¹Dipartimento di Chimica e Chimica Industriale, Università di Pisa, Pisa, Italy

²Dipartimento di Medicina Clinica e Sperimentale, Università di Pisa, Pisa, Italy

Aula Aldo Moro

18.00-18.15

EUROPEAN PROTEOMICS INFRASTRUCTURE CONSORTIUM - PROVIDING ACCESS (EPIC-XS): A COMMON EUROPEAN PROTEOMICS INITIATIVE

R. Zenezini Chiozzi^{1,2}, A.J.R. Heck^{1,2}

¹Biomolecular Mass Spectrometry and Proteomics, Bijvoet Center for Biomolecular Research and Utrecht Institute for Pharmaceutical Sciences, University of Utrecht, Utrecht, The Netherlands

²Netherlands Proteomics Center, Utrecht, The Netherlands

18.15 – 20.00

"Assemblea Divisionale" – Awards and Medals of the Analytical Chemistry Division

Tuesday 24 September

Aula Aldo Moro and (by streaming) Aula V. Starace

Chairperson: T. Cataldi

9.00–9.45
PL2

METABOLOMICS BY NUMBERS: LESSONS FROM LARGE-SCALE PHENOTYPING

Roy Goodacre

Department of Biochemistry, Institute of Integrative Biology, University of Liverpool, Liverpool, UK

9.50 – 11.00

Parallel sessions

Aula Aldo Moro

Chemometrics (CHEM1)

Chairperson: F. Marini

9.50-10.15
KN3

REMARKS ON DATA CORRELATION

R. Todeschini, V. Consonni

Milano Chemometrics and QSAR Research Group, Department of Environmental Sciences, University of Milano-Bicocca, Milano, Italy

10.15-10.30
O1 CHEM1

CHARACTERIZATION OF BASE OILS FOR ENGINE LUBRICANTS BY NIR AND FLUORESCENCE SPECTROSCOPIES COUPLED WITH CHEMOMETRICS

M. Casale, M. Hooshyari, C. Malegori, E. Mustorgi, P. Oliveri

Department of Pharmacy, University of Genoa, Genova, Italy

10.30-10.45
O2 CHEM1

LINKING LINGUISTICS AND CHEMISTRY BY CHEMOMETRICS

M. Cocchi¹, N. Cavallini², R. Bro³

¹*Dipartimento di Scienze Chimiche e Geologiche, Università di Modena e Reggio, Modena, Italy*

²*Department of Applied Science and Technology, Politecnico di Torino, Torino Italy*

³*Department of Food Science, University of Copenhagen, Frederiksberg C, Denmark*

10.45-11.00
O3 CHEM1

CHEDDAR CHEESE RIPENING STUDY BY LOW-LEVEL DATA FUSION AND ANOVA-SIMULTANEOUS COMPONENT ANALYSIS

P. Firmani¹, R. Vitale^{2,3}, C. Ruckebusch², F. Marini¹

¹*Dipartimento di Chimica, Università degli Studi di Roma "La Sapienza", Roma, Italy*

²*Université de Lille, LASIR CNRS, Lille, France*

³*KU Leuven, Molecular Imaging and Photonics Unit, Heverlee, Belgium*

Aula V. Starace

Analytical Spectroscopy (AS1)

Chairperson: G. Spoto

9.50-10.15
KN4

QUARTZ-ENHANCED PHOTOACOUSTIC DETECTION OF HYDROCARBONS FOR OIL EXPLORATION AND ENVIRONMENTAL MONITORING

A. Sampaolo¹, M. Giglio¹, A. Zifarelli¹, G. Menduni^{1,2}, A. Elefante¹, V. Passaro², P. Patimisco¹, F.K. Tittel³, V. Spagnolo¹

¹*PolySense Lab - Dipartimento Interateneo di Fisica, Politecnico and University of Bari, CNR-IFN, Bari, Italy*

²*Photonics Research Group, Dipartimento di Ingegneria Elettrica e dell'informazione, Politecnico di Bari, Bari, Italy*

³*Rice University, Department of Electrical and Computer Engineering, Houston, USA*

10.15-10.30
O1 AS1

THE CONTRIBUTION OF XPS TO THE UNDERSTANDING OF THE FUNCTIONAL PROPERTIES OF TITANIUM DIOXIDE

M. Fantauzzi¹, C. Imparato², A. Aronne², L. De Stefano³, G. D'Errico⁴, A. Rossi¹

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³*Istituto per la Microelettronica e Microsistemi, Consiglio Nazionale delle Ricerche, Napoli, Italy*

⁴*Dipartimento di Scienze Chimiche, dei Materiali e della Produzione Industriale, Università di Napoli Federico II, Napoli, Italy*

10.30-10.45
O2 AS1

AN APPLICATION OF PARAFAC ON EXCITATION-EMISSION MATRIX FLUORESCENCE SPECTRA FOR GREEN TEA CHARACTERISATION

E. Mustorgi¹, M. Casale¹, M. Hooshyari¹, P. Oliveri¹, C. Malegori¹, R. Bro², S. Furlanetto³

¹*Department of Pharmacy, University of Genoa, Italy*

²*Department of Food Science, Faculty of Life Sciences University of Copenhagen København Denmark*

³*Department of Chemistry University of Florence, Florence, Italy*

10.45-11.00
O3 AS1

REVERSIBLE COLORIMETRIC ARRAY FOR pH DETERMINATION IN AQUEOUS SOLUTIONS AND IN VAPOURS

R. Biesuz, P. Quadrelli, G. Alberti, L.R. Magnaghi

Dipartimento di Chimica, Università degli Studi di Pavia, Pavia, Italy

Salone degli Affreschi

Separation Science (SS2)

Chairperson: M. Careri

9.50-10.15
KN5

EXPLOITING THE COMPLEXITY OF FOOD AROMA BY COMPREHENSIVE TWO-DIMENSIONAL GAS CHROMATOGRAPHY COUPLED TO TIME OF FLIGHT MASS SPECTROMETRY FEATURING TANDEM IONIZATION

C. Cordero¹, F. Stilo¹, M. Cialiè Rosso¹, E. Liberto¹, P. Rubiolo¹, S.E. Reichenbach^{2,3}, C. Bicchi¹

¹*Dipartimento di Scienza e Tecnologia del Farmaco, Università degli Studi di Torino, Turin, Italy*

²*University of Nebraska, Lincoln NE, USA*

³*GC Image LLC, Lincoln NE, USA*

10.15-10.30
O1 SS2

PREPARATIVE MULTIDIMENSIONAL GAS CHROMATOGRAPHY COUPLED TO SPECTROSCOPIC ANALYSIS AS A POWERFUL APPROACH FOR THE ISOLATION AND CHARACTERIZATION OF UNKNOWN MOLECULES

G. De Grazia¹, D. Sciarrone², L. Mondello^{1,2,3,4}

¹*Chromaleont s.r.l., c/o Department of Chemical, Biological, Pharmaceutical and Environmental Sciences, University of Messina, Messina, Italy*

²*Department of Chemical, Biological, Pharmaceutical and Environmental Sciences, University of Messina, Messina, Italy*

³*Unit of Food Science and Nutrition, Department of Medicine, University Campus Bio-Medico of Rome, Rome, Italy*

⁴*BeSep s.r.l., c/o Department of Chemical, Biological, Pharmaceutical and Environmental Sciences, University of Messina, Messina, Italy*

10.30-10.45
O2 SS2

MOLECULAR FINGERPRINTING OF TRADITIONAL FOOD PRODUCTS BY ULTRA-HIGH RESOLUTION ESI-FT-ICR MASS SPECTROMETRY

A. Onzo¹, G. Bianco¹, R. Pascale¹, P. Iannece², C. Gaeta²

¹*Dipartimento di Scienze, Università degli Studi della Basilicata, Potenza, Italy*

²*Dipartimento di Chimica e Biologia, Università degli Studi di Salerno, Fisciano, Italy*

10.45-11.00
O3 SS2

ADVANCED PREPARATIVE APPROACHES FOR THE COLLECTION AND STRUCTURE ELUCIDATION OF VOLATILE COMPONENTS FROM COMPLEX SAMPLES

D. Sciarrone¹, G. De Grazia², L. Mondello^{1,2,3,4}

¹*Department of Chemistry, Biological, Pharmaceutical and Environmental Sciences, University of Messina, Italy*

²*Chromaleont S.r.l. c/o Department of Chemistry, Biological, Pharmaceutical and Environmental Sciences, University of Messina, Italy*

³*BeSep S.r.l. c/o Department of Chemistry, Biological, Pharmaceutical and Environmental Sciences, University of Messina, Italy*

⁴*Unit of Food Science and Nutrition, Department of Medicine, University Campus Bio-Medico of Rome, Rome, Italy*

11.00 – 11.30

Coffee break (Aula Aldo Moro & Salone degli Affreschi areas)

11.30 – 13.00

Parallel sessions

Aula Aldo Moro

Chemometrics (CHEM2)

Chairperson: R. Todeschini

11.30-11.45

O1 CHEM2

A UNIFIED SIMCA FRAMEWORK FOR SINGLE AND MULTI-BLOCK DATA

F. Marini, A. Biancolillo

Department of Chemistry, University of Rome "La Sapienza", Rome, Italy

11.45-12.00

O2 CHEM2

CHOOSING THE CORRECT CHEMOMETRIC STRATEGY FOR QUALITY CONTROL AND AUTHENTICITY VERIFICATION: CONSOLIDATED APPROACHES AND RECENT TRENDS

P. Oliveri, C. Malegori, M. Casale

Department of Pharmacy (DIFAR), University of Genova, Genova, Italy

12.00-12.15

O3 CHEM2

A SOURCE APPORTIONMENT EXERCISE OF A SMALL DATASET OF PM10 AND PM2.5 USING POSITIVE MATRIX FACTORIZATION IN A RURAL SITE IN SOUTH ITALY

A. Genga¹, G. Delmaire², M. Siciliano¹, T. Siciliano³, C. Malitesta¹, S. Weinbruch⁴, M.M. Scerri^{4,5}

¹*Dipartimento di Scienze e Tecnologie Biologiche ed Ambientali, Università del Salento, Lecce, Italy*

²*Laboratoire d'Informatique Signal et Image de la Côte d'Opale (LISIC), Université du Littoral Côte d'Opale, Calais, France*

³*Dipartimento di Matematica e Fisica, Università del Salento, Lecce, Italy*

⁴*Institute of Applied Geosciences, Technical University Darmstadt, Darmstadt, Germany*

⁵*Institute of Earth Systems, University of Malta, Msida, Malta*

12.15-12.30

O4 CHEM2

CHEMOMETRICS COMBINED WITH UNTARGETED MASS SPECTROMETRY FOR THE STUDY OF SAFFRON ADULTERATIONS

A. Zappi¹, D. Melucci¹, F. Gottardi², C.M. Tavilla³, A. Tartaglia³, M. Locatelli³

¹*Dipartimento di Chimica "G. Ciamician", Università di Bologna, Bologna, Italy*

²*Coop Italia, Soc. Cooperativa, Casalecchio di Reno, Bologna, Italy*

³*Dipartimento di Farmacia, Università degli Studi "G. D'Annunzio", Chieti, Italy*

12.30-12.45

O5 CHEM2

EFFECTIVE VALIDATION OF CHROMATOGRAPHIC ANALYTICAL METHODS

E. Amante^{1,2}, E. Alladio^{1,2}, F. Seganti², A. Salomone^{1,2}, M. Vincenti^{1,2}, B. Desharnais³

¹*Dipartimento di Chimica, Università degli Studi di Torino, Torino, Italy*

²*Centro Regionale Antidoping "A. Bertinaria", Orbassano (TO), Italy*

³*Laboratoire de sciences judiciaires et de médecine légale, Montréal, Québec, Canada*

12.45-13.00

O6 CHEM2

QUALITY BY DESIGN APPROACH USED IN DEVELOPMENT OF NOVEL CRYSTALLINE FOOD PACKAGING MATERIALS

F. Bianchi^{1,2}, F. Fornari¹, A. Bacchi¹, P. Pelagatti¹, A. Pankajakshan¹, C.S. Cabassi³, S. Orlandini⁴, S. Furlanetto⁴, M. Careri¹

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³*Dipartimento di Scienze Medico-Veterinarie, Università di Parma, Parma, Italy*

⁴*Dipartimento di Chimica 'Ugo Schiff', Università degli Studi di Firenze, Sesto Fiorentino, Italy*

Aula V. Starace

Environmental Analytical Chemistry (EAC2)

Chairperson: C. Dossi

11.30-11.45

O1 EAC2

DEVELOPMENT AND VALIDATION OF A UHPLC-MS/MS METHOD FOR THE IDENTIFICATION OF IRINOTECAN PHOTODEGRADATION PRODUCTS IN WATER SAMPLES

M.H. Belay, F. Gosetti, E. Robotti, E. Marengo

Dipartimento di Scienze e Innovazione Tecnologica, Università degli Studi del Piemonte Orientale "Amedeo Avogadro", Alessandria, Italy

11.45-12.00

O2 EAC2

DEVELOPMENT OF A NEW FRACTIONATION STRATEGY FOR THE ELEMENTAL AND ISOTOPIC ANALYSIS OF ATMOSPHERIC PARTICULATE COLLECTED AT THE ANTARCTIC PLATEAU

S. Bertinetti¹, F. Ardini¹, M. Grotti¹, E. Conca², M. Malandrino², G. Calzolari³, S. Nava^{3,4}

¹*Dipartimento di Chimica e Chimica Industriale, Università degli Studi di Genova, Genova, Italy*

- ²Dipartimento di Chimica, Università degli Studi di Torino, Torino, Italy
³Istituto Nazionale di Fisica Nucleare, Sesto Fiorentino, Firenze, Italy
⁴Dipartimento di Fisica e Astronomia, Università degli Studi di Firenze, Sesto Fiorentino, Firenze, Italy
- 12.00-12.15
03 EAC2
HYDROCARBONS REMOVAL FROM BILGE WATER BY ADSORPTION ONTO ACTIVATED BIOCHAR FROM POSIDONIA OCEANICA
S. Cataldo, F. Giannici, A. Martorana, N. Muratore, A. Pettignano, F. Ursi
 Dipartimento di Fisica e Chimica – Emilio Segrè, Università degli Studi di Palermo, Palermo, Italy
- 12.15-12.30
04 EAC2
ADVANCED OXIDATION PROCESSES (AOPs): INTERESTING SOLUTIONS FOR THE DEGRADATION OF EMERGING CONTAMINANTS IN REAL LIQUID PHASES
L. Foti, G. Bianco, S.A. Bufo, L. Scrano
 Università degli Studi della Basilicata, Potenza, Italy
- 12.30-12.45
05 EAC2
POLYMER INCLUSION MEMBRANES (PIMs) AND SURFACE MODIFIED PIMs: CHARACTERIZATION AND OPTIMIZATION OF THE SEQUESTERING ABILITY TOWARDS Sn(II) BY A MULTI-ANALYTICAL APPROACH
 C. Bretti¹, L. Calabrese², P. Cardiano¹, C. De Stefano¹, C. Foti¹, O. Gomez-Laserna³, D. Iannazzo², G. Lando¹, M.R. Plutino⁴, E. Proverbio²
¹Dipartimento di Scienze Chimiche, Biologiche, Farmaceutiche ed Ambientali, CHIBIOFARAM, Università degli Studi di Messina, Messina, Italy
²Dipartimento di Ingegneria, Università degli Studi di Messina, Messina, Italy
³Department of Analytical Chemistry, University of the Basque Country (EHU/UPV), Bilbao, Spain
⁴Istituto per i Materiali Nanostrutturati, ISMN – CNR, O.U. Palermo, c/o Dipartimento CHIBIOFARAM, Università di Messina, Messina, Italy
- 12.45-13.00
06 EAC2
PORTABLE PHOTOREACTOR FOR A FAST ON-SITE MEASUREMENT OF THE PHOTOCATALYTIC ACTIVITY OF A MATERIAL
F. Pellegrino¹, V. Maurino¹, M. Zangirolami², C. Minero¹
¹Dipartimento di Chimica, Università degli Studi di Torino, Torino, Italy
²Fonderia Mestieri Srl, Alpignano (TO), Italy

Salone degli Affreschi

Sensors and Biosensors (SB2)

Chairperson: P. Ugo

- 11.30-11.45
01 SB2
INNOVATIVE PAPER-BASED ELECTROCHEMICAL SENSOR FOR MONITORING THE STATUS OF STEEL EMBEDDED IN CONCRETE STRUCTURES
 N. Colozza¹, A. Sassolini², E. Papa¹, D. Moscone¹, F. Arduini¹
¹Dipartimento di Ingegneria, Università degli Studi di Roma "Niccolò Cusano", Rome, Italy
²Arpa Lazio, Rieti, Italy
- 11.45-12.00
02 SB2
NOREPINEPHRINE AS NEW FUNCTIONAL MONOMER FOR MOLECULAR IMPRINTED OPTICAL BIOSENSORS: APPLICATIVE STUDY ON HUMAN AND CANINE BIOMARKERS
V. Baldoneschi¹, P. Palladino¹, F. Battaglia², V. Meucci², L. Intorre², F. Bonelli², S. Scarano¹, M. Minunni¹
¹Dipartimento di Chimica "Ugo Schiff", Università degli Studi di Firenze, Firenze, Italy
²Dipartimento di Scienze Veterinarie, Università degli Studi di Pisa, Pisa, Italy
- 12.00-12.15
03 SB2
NANOCELLULOSE AND ELECTROCHEMICAL BIOSENSORS: A NEW TOOL TO REPAIR PAPER ARTWORKS
L. Micheli¹, C. Mazzuca¹, M. Titubante¹, A. Operamolla², F. Di Benedetto⁴, L. Capodici⁴, S. Sotgiu³, S. Iannucelli³
¹Dipartimento di Scienze e Tecnologie Chimiche, Università di Roma Tor Vergata, Rome, Italy
²Dipartimento di Chimica, Università degli Studi di Bari Aldo Moro, Bari, Italy
³Laboratorio di Restauro, Istituto Centrale per il Restauro e la Conservazione del Patrimonio Archivistico e Librario (ICRCPAL), Rome, Italy
⁴ENEA - Italian National Agency for New Technologies, Energy and Sustainable Economic Development, SSPT-PROMAS-MATAS, Brindisi, Italy
- 12.15-12.30
04 SB2
MINIMALLY-INVASIVE MICRONEEDLE-BASED BIOSENSOR ARRAY FOR TRANSDERMAL SIMULTANEOUS LACTATE AND GLUCOSE MONITORING
 P. Bollella¹, S. Sharma², A.E.G. Cass³, R. Antiochia¹
¹Department of Chemistry and Drug Technologies, Sapienza University of Rome, Rome, Italy

²College of Engineering, Swansea University, Swansea, Wales

³Department of Chemistry & Institute of Biomedical Engineering, Imperial College, London, UK

12.30-12.45
O5 SB2

ELECTROANALYTICAL DETERMINATION OF CANNABIDIOL AND CANNABINOL IN AQUEOUS SOLUTION USING AMPEROMETRIC SENSORS

L. Piganì¹, D. López-Iglesias², C. Zanardi¹, F. Vulcano¹, F. Terzi¹, J.J. García-Guzmán², J.M. Palacios-Santander², L. Cubillana-Aguilera²

¹Dipartimento di Scienze Chimiche e Geologiche, Università di Modena e Reggio Emilia, Modena, Italy

²Department of Analytical Chemistry, University of Cadiz, Cadiz, Spain

12.45-13.00
O6 SB2

ELECTROCHEMICAL SENSOR FOR L-ARABITOL BASED ON 3D-GOLD NANO-ELECTRODE ENSEMBLES MODIFIED WITH MOLECULARLY IMPRINTED POLYMERS

N. Karimian¹, M.A. Beluomini^{1,2}, N.R. Stradiotto², A.M. Stortini¹, P. Ugo¹

¹Department of Molecular Sciences and Nanosystems, Ca' Foscari University of Venice, Venice-Mestre, Italy

²Institute of Chemistry, São Paulo State University (UNESP), Araraquara, São Paulo, Brazil

Salone degli Affreschi area

13.10 – 15.10

Lunch and Poster Session 2 (P44 – P86)

16.00

Social Tour

Wednesday 25 September

Aula Aldo Moro and (by streaming) Aula V. Starace

Chairperson: A. Cavazzini

9.00–9.45
PL3

THE QUALITY CONTROL OF THE PHARMACEUTICAL INDUSTRY: THE CONNECTION DEPARTMENT BETWEEN THE PRODUCTION OF THE DRUG AND ITS ARRIVAL ON THE MARKET

Luca Perani
QP/Quality Manager – Roche Spa, Monza, Italy

9.50 – 11.00

Parallel sessions

Aula Aldo Moro

Food and nutraceutical (FN1)

Chairperson: C. Cavaliere

9.50-10.15
KN6

RP-HPLC PHENOLIC COMPOUNDS PROFILE OF OLIVE LEAVES, EXTRA VIRGIN OLIVE OIL AND OLIVE MILL WASTE WATER FROM MOROCCO USING A DESIGN OF EXPERIMENTS (DoE) APPROACH

I. Nicoletti¹, F. Ait Said², N. El-Khdar², F.-E. Idire², D. Corradini¹
¹*Istituto per I Sistemi Biologici del CNR, Montelibretti (Rome), Italy*
²*Agro-pôle Olivier Ecole Nationale d'Agriculture de Meknés, Morocco*

10.15-10.30
O1 FN1

UNVEILING THE COMPLEX KETO-ENOLIC TAUTOMERISM OF OLIVE OIL SECOIRIDIODS THROUGH LIQUID-CHROMATOGRAPHY WITH FOURIER TRANSFORM MASS SPECTROMETRY INTEGRATED BY H/D EXCHANGE

R. Abbattista¹, I. Losito^{1,2}, C. De Ceglie¹, C.D. Calvano^{2,3}, F. Palmisano^{1,2}, T.R.I. Cataldi^{1,2}
¹*Dipartimento di Chimica, Università degli Studi di Bari Aldo Moro, Bari, Italy*
²*Centro di ricerca interdipartimentale SMART, Università degli Studi di Bari Aldo Moro, Bari, Italy*
³*Dipartimento di Farmacia-Scienze del Farmaco, Università degli Studi di Bari Aldo Moro, Bari, Italy*

10.30-10.45
O2 FN1

DETERMINATION OF THE PHENOLIC PROFILE IN BRASSICA JUNCEA OF DIFFERENT SPECIES BY COMPREHENSIVE TWO-DIMENSIONAL LIQUID CHROMATOGRAPHY COUPLED TO MASS SPECTROMETRY

K. Arena¹, F. Cacciola², P. Dugo^{1,3,4}, L. Mondello^{1,3,4,5}
¹*Department of Chemical, Biological, Pharmaceutical and Environmental Sciences, University of Messina, Messina, Italy*
²*Department of Biomedical, Dental, Morphological and Functional Imaging Sciences, University of Messina, Messina, Italy*
³*Chromaleont s.r.l., c/o Department of Chemical, Biological, Pharmaceutical and Environmental Sciences, University of Messina, Messina, Italy*
⁴*Unit of Food Science and Nutrition, Department of Medicine, University Campus Bio-Medico of Rome, Rome, Italy*
⁵*BeSep s.r.l., c/o Department of Chemical, Biological, Pharmaceutical and Environmental Sciences, University of Messina, Messina, Italy*

10.45-11.00
O3 FN1

UNRAVELLING THE BIOACTIVITY POTENTIAL OF COMPLEX MATRICES: FOCUSING ON LIPIDS AND UNUSUAL AMINO ACIDS IN OILS

S. Piovesana¹, M. Antonelli¹, B. Benedetti¹, A. Cerrato¹, C. M. Montone¹, A. Laganà^{1,2}
¹*Dipartimento di Chimica, Università di Roma "La Sapienza", Rome, Italy*
²*CNR, NANOTEC – Campus Ecotekne, Università del Salento, Lecce, Italy*

Chairperson: A. Rossi

9.50-10.15
KN7

ELECTRODEPOSITION AND SURFACE ANALYSIS FOR NEW MATERIALS FOR ENERGY APPLICATIONS

M. Innocenti^{1,2}, M. Passaponti^{1,2}, W. Giurlani^{1,2}, M. Vizza^{1,2}, S. Martinuzzi^{1,2}, L. Sergi^{1,2}, A. Giaccherini³, F. Di Benedetto⁴

¹Department of Chemistry, University of Florence, Sesto Fiorentino (FI), Italy

²National Interuniversity Consortium of Materials Science and Technology (INSTM), Firenze, Italy

³Industrial Engineering Department, University of Florence, Firenze, Italy

⁴University of Florence, Department of Earth Science, Firenze, Italy

10.15-10.30
O1 MAT

SYNTHESIS OF Co BASED LAYERED DOUBLE HYDROXIDES: TOWARD A NOBLE METAL FREE ELECTRO-CATALYSIS AND SENSING

E. Musella¹, I. Gualandi¹, E. Scavetta¹, A. Mullaliu¹, M. Giorgetti¹, A. Rivalta¹, E. Venuti¹, M. Christian², V. Morandi², D. Tonelli¹

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²Istituto per la Microelettronica e i Microsistemi (IMM), Consiglio Nazionale delle Ricerche, Bologna, Italy

10.30-10.45
O2 MAT

GRAPHENE DERIVATIVES: SYNTHESIS, CHARACTERIZATION AND APPLICATION IN GAS SENSING DEVICES. RAMAN STUDY OF THE INTERACTIONS AMONG NO, NO₂ GASEOUS POLLUTANTS, AND THE GRAPHENE GAS SENSITIVE LAYERS

F. Valentini¹, V. Mussi², M. Talamo³, I. Allegrini⁴

¹Dipartimento di Chimica, Università degli Studi di Roma "Tor Vergata", Roma, Italy

²IMM-CNR Istituto of Microelettronica e Microsistemi Area della Ricerca di Tor Vergata, Rome, Italy

³Fondazione Universitaria Inuit, Tor Vergata Università, Rome, Italy

⁴EnvInt S.r.l., Montopoli di Sabina (RI), Italy

10.45-11.00
O3 MAT

SPECTROSCOPY AND MICROSCOPY EVIDENCES OF CANNIBALISM EVENTS IN THE IN-SITU ASSESSMENT OF LONG-TERM BIOFILM-ANTIMICROBIAL INTERACTIONS: A NEW VIEWPOINT ON ANTIMICROBIAL RESISTANCE?

M.C. Sportelli¹, R. Quarto¹, E. Tütüncü², R.A. Picca¹, A. Valentini³, H. Barth⁴, B. Mizaikoff², C. Kranz², N. Cioffi¹

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²Institute of Analytical and Bioanalytical Chemistry, Ulm University, Ulm, Germany

³Physics Department, University of Bari Aldo Moro, Bari, Italy

⁴Institute of Pharmacology and Toxicology, University of Ulm Medical Center, Ulm, Germany

Chairperson: M. Quinto

9.50-10.15
KN8

ON-LINE COUPLED LIQUID CHROMATOGRAPHY – COMPREHENSIVE TWO DIMENSIONAL GAS CHROMATOGRAPHY WITH DUAL DETECTION FOR THE ANALYSIS OF MINERAL OIL IN COSMETICS

M. Zoccali¹, P.Q. Tranchida¹, L. Mondello^{1,2,3,4}

¹Department of Chemistry, Biological, Pharmaceutical and Environmental Sciences, University of Messina, Messina, Italy

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³BeSep S.r.l. c/o Department of Chemistry, Biological, Pharmaceutical and Environmental Sciences, University of Messina, Messina, Italy

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

10.15-10.30
O1 SS3

RAPID SOLID LIQUID DYNAMIC EXTRACTION IS A FORERUNNER TECHNIQUE IN GREEN CHEMISTRY FOR THE SOLID-LIQUID EXTRACTION SECTOR. TWENTY YEARS REPORT

D. Naviglio¹, M. Ciaravolo¹, P. Scarano², M.M. Salvatore¹, R. Mozzillo¹, F. De Paola¹, A. Andolfi¹, G. De Tommaso¹, M. Gallo³

¹Dipartimento di Scienze Chimiche - Università degli Studi di Napoli Federico II, Napoli, Italy

²Dipartimento di Scienze e Tecnologie, Università del Sannio, Benevento, Italy

³Dipartimento di Medicina Molecolare e Biotecnologie Mediche, Università degli Studi di

Napoli Federico II, Napoli, Italy

10.30-10.45
O2 SS3

CHARACTERIZATION, SIZE DISTRIBUTION AND TIME-EVOLUTION ANALYSIS OF ENDOGENOUS NANOPARTICLES IN ITALIAN RED WINES

V. Marassi^{1,2}, B. Roda^{1,2}, A. Zattoni^{1,2}, M. Marangon³, A. Curioni³, P. Reschiglian^{1,2}

¹Dipartimento di Chimica G. Ciamician, Università di Bologna, Bologna, Italy

²byFlow s.r.l., Bologna, Italy

³Dipartimento Agronomia Animali Alimenti Risorse Naturali e Ambiente (DAFNAE), Università di Padova, Padova, Italy

10.45-11.00
O3 SS3

OPTIMIZATION OF A RAPID AND GREEN ANALYTICAL METHOD FOR THE DETERMINATION OF PERFLUOROALKYL ACIDS IN FRUITS IRRIGATED WITH RECLAIMED WASTEWATER

C.V.A. Scordo¹, L. Renai¹, M.C. Bruzzoniti², D. Fibbi³, S. Orlandini¹, S. Furlanetto¹, M. Del Bubba¹

¹Department of Chemistry "Ugo Schiff", University of Florence, Sesto Fiorentino, Italy

²Department of Chemistry, University of Turin, Turin, Italy

³GIDA S.p.A., Prato, Italy

11.00 – 11.30

Coffee break (Aula Aldo Moro & Salone degli Affreschi areas)

11.30 - 12.45

Parallel sessions

Aula Aldo Moro

Food and nutraceutical (FN2)

Chairperson: I. Losito

11.30-11.45

O1 FN2

POSSIBLE EFFECTS OF CULTIVAR, GEOGRAPHICAL ORIGIN AND TECHNOLOGY ON THE SECOIRIDOID CONTENT OF ITALIAN EXTRA-VIRGIN OLIVE OILS (EVOOs): AN INVESTIGATION BASED ON LIQUID CHROMATOGRAPHY WITH ELECTROSPRAY IONIZATION AND FOURIER TRANSFORM MASS SPECTROMETRY

C. De Ceglie¹, R. Abbattista¹, I. Losito^{1,2}, A. Castellana¹, C.D. Calvano^{2,3}, F. Palmisano^{1,2}, T.R.I. Cataldi^{1,2}

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³Dipartimento di Farmacia-Scienze del Farmaco, Università degli Studi di Bari Aldo Moro, Bari, Italy

11.45-12.00

O2 FN2

ANTIOXIDANTS AND NEW PRODUCTS FROM *OLEA EUROPAEA L.*

G. Tamasi^{1,2}, A. Pardini^{1,2}, C. Bonechi^{1,2}, A. Magnani¹, M. Consumi¹, M.C. Baratto^{1,2}, C. Rossi^{1,2,3}

¹Department of Biotechnology, Chemistry and Pharmacy, University of Siena, Italy

²Centre for Colloid and Surface Science (CSGI), University of Florence, Sesto Fiorentino, Italy

³Operative Unit, University of Siena, Calabria, Italy

12.00-12.15

O3 FN2

A RAPID MALDI MS/MS BASED METHOD FOR ASSESSING SAFFRON (*Crocus sativus L.*) ADULTERATION

D. Aiello¹, C. Siciliano², F. Mazzotti¹, L. Di Donna¹, C.M. Athanassopoulos³, A. Napoli¹

¹Department of Chemistry and Chemical Technologies, University of Calabria, Italy

²Department of Pharmacy, Health and Nutritional Sciences, University of Calabria, Italy

³Department of Chemistry, University of Patras, Patras, Greece

12.15-12.30

O4 FN2

RETRIEVAL AND CHARACTERISATION OF BIOACTIVE PEPTIDES FROM TUNA PROCESSING WASTE BY MEANS OF UHPLC-MS

P. Arena¹, P. Donato², D. Donnarumma³, P. Dugo^{1,3,4,5}, L. Mondello^{1,3,4,5}

¹Department of Chemistry, Biological, Pharmaceutical and Environmental Sciences, University of Messina, Messina, Italy

²Department of Biomedical, Dental, Morphological and Functional Imaging Sciences, University of Messina, Messina, Italy

³Chromaleont S.r.l. c/o Department of Chemistry, Biological, Pharmaceutical and Environmental Sciences, University of Messina, Messina, Italy

⁴BeSep S.r.l. c/o Department of Chemistry, Biological, Pharmaceutical and Environmental Sciences, University of Messina, Messina, Italy

⁵Unit of Food Science and Nutrition, Department of Medicine, University Campus Bio-Medico of Rome, Rome, Italy

- 12.30-12.45
O5 FN2
- TRACE ELEMENTS IN WILD AND FARMED ATLANTIC BLUEFIN TUNA (*THUNNUS THYNNUS L.*) FILLET**
F. Girolametti¹, A. Annibaldi¹, C. Truzzi¹, O. Carnevali¹, P. Pignalosa², G. Scarponi¹, S. Illuminati¹
¹Dipartimento di Scienze della Vita e dell'Ambiente, Università Politecnica delle Marche, Ancona, Italy
²Oceansis s.r.l., Ercolano, Naples, Italy

Aula V. Starace

Environmental Analytical Chemistry (EAC3)

Chairperson: A. Pozzi

- 11.30-11.45
O1 EAC3
- SPECIATION ANALYSIS OF THALLIUM BY SIZE EXCLUSION/ION EXCHANGE LIQUID CHROMATOGRAPHY INDUCTIVELY COUPLED PLASMA MASS SPECTROMETRY**
M. Le Donne^{1,2}, E. Veschetti¹, C. Sette^{1,2}, L. Lucentini¹, G. Favero²
¹Department of Environment and Health, Istituto Superiore di Sanità, Rome, Italy
²Department of Chemistry and Drug Technologies, SAPIENZA University of Rome, Rome, Italy
- 11.45-12.00
O2 EAC3
- CHARACTERIZATION OF VOLATILE ORGANIC COMPOUNDS OF ESSENTIAL OILS PRODUCED IN TRIESTE KARST AREA BY HS-SPME-GC-MS AND COMPARISON WITH AN ELECTRONIC NOSE DISCRIMINATION POTENTIAL FOR QUALITY CONTROL PURPOSES**
S. Licen¹, P. Bianchini¹, S. Gransinigh¹, C. Da Val¹, S. Cozzutto², P. Barbieri¹
¹Department of Chemical and Pharmaceutical Sciences, University of Trieste, Trieste, Italy
²ARCO SolutionS s.r.l., spin-off company of the Dept. of Chemical and Pharmaceutical Sciences, University of Trieste, Trieste, Italy
- 12.00-12.15
O3 EAC3
- INTER-COMPARISON OF CARBON CONTENT IN PM₁₀ AND PM_{2.5} MEASURED WITH TWO THERMO-OPTICAL PROTOCOLS IN A MEDITERRANEAN SITE**
E. Merico¹, D. Cesari^{1,2}, A. Dinoi¹, A. Gambaro^{2,3}, E. Barbaro^{2,3}, M.R. Guascito^{1,4}, L.C. Giannossa⁵, A. Mangone⁵, D. Contini¹
¹Istituto di Scienze dell'Atmosfera e del Clima, ISAC-CNR, Lecce, Italy
²Istituto per la Dinamica dei Processi Ambientali, IDPA-CNR, Venezia-Mestre, Italy
³Dipartimento di Scienze Ambientali, Informatica e Statistica, DAIS, Università Ca' Foscari di Venezia, Venezia-Mestre, Italy
⁴Dipartimento di Scienze e Tecnologie Biologiche e Ambientali, DiSTeBA, Università del Salento, Lecce, Italy
⁵Dipartimento di Chimica, Università degli Studi di Bari Aldo Moro, Bari, Italy
- 12.15-12.30
O4 EAC3
- TRACE ELEMENTS IN LIGHT FUELS: DETERMINATION BY TOTAL REFLECTION X-RAY FLUORESCENCE AND COMPARISON WITH ICP-MS**
D. Monticelli¹, G. Siviero², A. Cinosi², R. Furlan³, C. Dossi⁴
¹Dipartimento di Scienza e Alta Tecnologia, Università degli Studi dell'Insubria, Como, Italy
²GNR S.r.l., Agrate Conturbia (NO), Italy
³AmSpec Italia S.r.l., Oriago di Mira (VE), Italy
⁴Dipartimento di Scienze Teoriche e Applicate, Università degli Studi dell'Insubria, Varese, Italy
- 12.30-12.45
O5 EAC3
- APPLICATION OF A CHEMOMETRIC APPROACH TO A PRELIMINARY GEOCHEMICAL CHARACTERISATION OF THE TIMAVO/REKA RIVER MOUTH**
E. Pavoni^{1,2}, M. Crosera¹, E. Petranich², S. Covelli², J. Faganeli³, A. Acquavita⁴, P. Oliveri⁵, G. Adami¹
¹Dipartimento di Scienze Chimiche e Farmaceutiche, Università degli Studi di Trieste, Trieste, Italy
²Dipartimento di Matematica e Geoscienze, Università degli Studi di Trieste, Trieste, Italy
³NIB-MBS – National Institute of Biology, Marine Biology Station, Piran, Slovenia
⁴ARPA FVG – Agenzia Regionale per la Protezione Ambientale del Friuli Venezia Giulia, Palmanova, Italy
⁵Dipartimento di Farmacia, Università degli Studi di Genova, Genova, Italy

Chairperson: D. Corradini

- 11.30-11.45
O1 SS4 **CHARACTERIZATION OF SPIRULINA MICROALGAE POLAR LIPIDS PROFILE COMPARED TO ENRICHED EXTRACT AND COMPREHENSIVE IDENTIFICATION WITH LIPOSTAR**
M. Antonelli¹, S.E. Aita¹, B. Benedetti¹, A. Cerrato¹, G. La Barbera, C.M. Montone¹, A. Laganà^{1,2}
¹Dipartimento di Chimica, Università "La Sapienza", Rome, Italy
²CNR, NANOTEC – Campus Ecotekne of the University of Salento, Lecce, Italy
- 11.45-12.00
O2 SS4 **IMPACT OF HIGH POROSITY SILICA ON ZWITTERIONIC TEICOPLANIN-BASED COLUMNS FOR ULTRA-HIGH PERFORMANCE CHROMATOGRAPHY**
O.H. Ismail¹, M. Catani¹, S. Felletti¹, M. Ye³, A. Cavazzini¹, F. Gasparrini²
¹Dipartimento di Scienze Chimiche e Farmaceutiche, Università di Ferrara, Ferrara, Italy
²Dipartimento di Chimica e Tecnologie del Farmaco, "Sapienza" Università di Roma, Roma, Italy
³Sigma-Aldrich/Supelco, Bellefonte, United States
- 12.00-12.15
O3 SS4 **FLUORESCENCE LABELLING FOR THE STUDY OF PHENOLIC GROUPS DISTRIBUTION IN TECHNICAL LIGNIN AS A FUNCTION OF THE MOLECULAR WEIGHT**
A. Salanti, L. Zoia, M. Orlandi
Department of Earth and Environmental Sciences, University of Milano-Bicocca, Milano, Italy
- 12.15-12.30
O4 SS4 **POTENTIAL OF ON-LINE LC-FTIR HYPHENATED TECNIQUE AS A RELIABLE TOOL FOR IDENTIFICATION**
T.M.G. Salerno¹, P. Donato², L. Mondello^{1,3,4,5}
¹BeSep s.r.l., c/o Department of Chemical, Biological, Pharmaceutical and Environmental Sciences, University of Messina, Messina, Italy
²Department of Biomedical, Dental, Morphological and Functional Imaging Sciences, University of Messina, Messina, Italy
³Department of Chemical, Biological, Pharmaceutical and Environmental Sciences, University of Messina, Messina, Italy
⁴Chromaleont s.r.l., c/o Department of Chemical, Biological, Pharmaceutical and Environmental Sciences, University of Messina, Messina, Italy
⁵Unit of Food Science and Nutrition, Department of Medicine, University Campus Bio-Medico of Rome, Rome, Italy
- 12.30-12.45
O5 SS4 **A NOVEL MOLECULARLY IMPRINTED MAGNETIC MATERIAL FOR THE ACCURATE DETERMINATION OF ZEARALENONE MICOTOXIN IN COMMERCIAL FLOUR SAMPLES BY HPLC-MS/MS**
B. Benedetti¹, V. Gianotti², S. Piovesana¹, K. Sparnacci², M. Laus², A. Laganà^{1,3}
¹Dipartimento di Chimica, Università degli Studi di Roma "La Sapienza", Rome, Italy
²Dipartimento di Scienze e Innovazione Tecnologica, Università Degli Studi Del Piemonte Orientale, Alessandria, Italy
³CNR NANOTEC, Campus Ecotekne of the University of Salento, Lecce, Italy

Salone degli Affreschi area

12.45 – 15.15 **Lunch and Poster Session 3 (P87 – P130)**

15.15 – 16.30 **Parallel sessions**

Aula Aldo Moro

Electroanalytical chemistry (EC)

Chairperson: P.R. Mussini

- 15.15-15.30
O1 EC **LABORATORY AND FIELD PROCEDURES FOR THE DETERMINATION AND SPECIATION OF MERCURY BY ANODIC STRIPPING VOLTAMMETRY**
O. Abollino¹, M. Malandrino¹, M.C. Abete², S. Squadrone², R. Caligiuri¹, A. Giacomino³
¹Dipartimento di Chimica, Università degli Studi di Torino, Torino, Italy
²Istituto Zooprofilattico Sperimentale del Piemonte, Liguria e Valle d'Aosta (IZSPLV), Torino, Italy
³Dip.to di Scienza e Tecnologia del Farmaco, Università degli Studi di Torino, Torino, Italy

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| 15.30-15.45 O2 EC | ELECTROCHEMISTRY OF, AND ELECTROANALYSIS IN, CHIRAL AND INHERENTLY CHIRAL IONIC LIQUID MEDIA <u>S. Arnaboldi</u> ¹ , P.R. Mussini ¹ , S. Grecchi ¹ , M. Longhi ¹ , S. Rizzo ² , E. Licandro ¹ , S. Cauteruccio ¹ , R. Cirilli ³ , L. Guazzelli ⁴ , C. Chiappe ⁴ ¹ <i>Università degli Studi di Milano, Dipartimento di Chimica, Milano, Italy</i> ² <i>CNR ISTM, Milano, Italy</i> ³ <i>Istituto Superiore di Sanità, Roma, Italy</i> ⁴ <i>Università degli Studi di Pisa, Dipartimento di Farmacia, Pisa, Italy</i> |
| 15.45-16.00 O3 EC | ELECTROANALYTICAL CHARACTERISATION OF NITROSAMINES FOR THEIR POST-COLUMN AMPEROMETRIC DETECTION A. Mentana ¹ , <u>C. Palermo</u> ¹ , M. Iammarino ² , E. Chiaravalle ² , D. Centonze ¹ ¹ <i>Dipartimento di Scienze Agrarie, degli alimenti e dell'ambiente, Università degli Studi di Foggia, Foggia, Italy</i> ² <i>Istituto Zooprofilattico Sperimentale della Puglia e della Basilicata, Foggia, Italy</i> |
| 16.00-16.15 O4 EC | CHEMICAL AND ELECTROCHEMICAL PROPERTIES OF HYDROPHOBIC DEEP EUTECTIC SOLVENTS <u>F. Poletti</u> ¹ , S. Ruggeri ¹ , C. Zanardi ¹ , L. Pigani ¹ , B. Zangroni ¹ , E. Corsi ¹ , N. Dossi ² , M. Salomäki ³ , H. Kivelä ³ , J. Lukkari ³ , F. Terzi ¹ ¹ <i>Department of Chemical and Geological Sciences, University of Modena and Reggio Emilia, Modena, Italy</i> ² <i>Department of Agrifood, Environmental and Animal Science, University of Udine, Udine, Italy</i> ³ <i>Department of Chemistry, University of Turku, Turku, Finland</i> |
| 16.15-16.30 O5 EC | POTENTIOMETRY REVEALS THE INSTANTANEOUS PHOTOCATALYTIC RATE <u>F. Sordello</u> , C. Minero <i>Dipartimento di Chimica, Università degli Studi di Torino, Torino, Italy</i> |

Aula V. Starace

Solution Equilibria and Speciation (SES1)

Chairperson: G. Arena

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| 15.15-15.30 O1 SES1 | FRONTAL CHROMATOGRAPHY-ICP-MS: A NOVEL METHOD FOR FAST INORGANIC AS(III) AND AS(V) SPECIATION <u>D. Spanu</u> , C. Dossi, D. Monticelli, S. Recchia <i>Dipartimento di Scienza e Alta Tecnologia, Università degli Studi dell'Insubria, Como, Italy</i> |
| 15.30-15.45 O2 SES1 | ADSORPTION OF CALIXARENE-BASED SUPRAMPHIPHILES AT THE SOLID-LIQUID INTERFACE MONITORED BY QCM-D <u>G.I. Grasso</u> , R. Migliore, P. Milana, G. Arena, C. Sgarlata <i>Dipartimento di Scienze Chimiche, Università degli Studi di Catania, Catania, Italy</i> |
| 15.45-16.00 O3 SES1 | ACID-BASE PROPERTIES AND BINDING ABILITY OF AN ASPARTIC ACID DERIVATIVE OF 3-HYDROXY-4-PYRIDINONE TOWARDS BIOLOGICAL RELEVANT METAL CATIONS <u>A. Irto</u> ¹ , P. Cardiano ¹ , K. Chand ² , R.M. Cigala ¹ , F. Crea ¹ , C. De Stefano ¹ , S. Sammartano ¹ , M. A. Santos ² ¹ <i>Dipartimento di Scienze Chimiche, Biologiche, Farmaceutiche e Ambientali, Università di Messina, Messina, Italy</i> ² <i>Centro de Química Estrutural, Instituto Superior Técnico, Universidade de Lisboa, Lisboa, Portugal</i> |
| 16.00-16.15 O4 SES1 | SUPRAMOLECULAR AMPHIPHILES: FROM HOST-GUEST COMPLEXES TO CATIONIC MIXTURES <u>R. Migliore</u> ¹ , C. Sgarlata ¹ , G. Arena ¹ , M. Gradzielski ² ¹ <i>Dipartimento di Scienze Chimiche, Università degli Studi di Catania, Catania, Italy</i> ² <i>Stranski-Laboratorium für Physikalische Chemie und Theoretische Chemie, Institut für Chemie, TU Berlin, Berlin, Germany</i> |
| 16.15-16.30 O5 SES1 | SELECTIVE CHELETORS TO COPPER (II): A THERMODYNAMIC APPROACH <u>E. Furia</u> , A. Beneduci <i>Dipartimento di Chimica e Tecnologie Chimiche, Università della Calabria, Rende, Italy</i> |

Chairperson: A. Napoli

15.15-15.30

O1 OMS1

A COMPREHENSIVE PEPTIDOMIC APPROACH TO CHARACTERIZE THE PROTEOMIC PROFILE OF SELECTED DURUM WHEAT GENOTYPES AND ITS IMPLICATION FOR COELIAC DISEASE AND WHEAT ALLERGY

R. Pilolli¹, A. Gadaleta^{1,2}, G. Mamone³, E. De Angelis¹, A. Lamonaca¹, L. Monaci¹

¹*Institute of Sciences of Food Production, CNR, Bari, Italy*

²*DiSAAT, Università degli Studi di Bari Aldo Moro, Bari, Italy*

³*Institute of Food Sciences, CNR, Avellino, Italy*

15.30-15.45

O2 OMS1

UHPLC-QqTOF UNTARGETED METABOLOMICS OF NATIVE PHENOLIC COMPOUNDS IN DIFFERENT RASPBERRY SAMPLES (*RUBUS IDAEUS L.* AND *RUBUS OCCIDENTALIS L.*)

L. Renai¹, C.V.A. Scordo¹, C. Caprini¹, U. Chiuminatto², M. Del Bubba¹

¹*Department of Chemistry, University of Florence, Sesto Fiorentino, Florence, Italy*

²*Sciex Europe, Darmstadt, Germany*

15.45-16.00

O3 OMS1

EICOSANOIDS AND ISOEICOSANOIDS ANALYSIS IN DRIED BLOOD SPOTS AND ORAL FLUID SAMPLES: A FASCINATING BIOANALYTICAL CHALLENGE

D. Biagini¹, S. Antoni¹, T. Lomonaco¹, S. Ghimenti¹, F.G. Bellagambi¹, A. Cuttano², M. Marzilli³ (retired), F. Di Francesco¹, R. Fuoco¹

¹*Dipartimento di Chimica e Chimica Industriale, Università di Pisa, Pisa, Italy*

²*Reparto di Neonatologia, Ospedale Santa Chiara, Università di Pisa, Pisa, Italy*

³*Dipartimento di Patologia Chirurgica, Medica, Molecolare e dell'Area Critica, Università di Pisa, Pisa, Italy*

16.00-16.15

O4 OMS1

INVESTIGATING THE PROTEOMIC PROFILE OF HT-29 COLON CANCER CELLS AFTER *LACTOBACILLUS KEFIRI* SGL 13 EXPOSURE USING THE SWATH METHOD

J. Brandi¹, C. Di Carlo¹, M. Manfredi^{2,3}, F. Federici⁵, A. Bazaj⁶, E. Rizzi⁵, G. Cornaglia⁶, L. Manna⁵, E. Marengo³, D. Cecconi¹

¹*Department of Biotechnology, Proteomics and Mass Spectrometry Laboratory, University of Verona, Verona, Italy*

²*Department of Translational Medicine, University of Eastern Piedmont, Novara, Italy*

³*Department of Sciences and Technological Innovation, University of Eastern Piedmont, Alessandria, Italy*

⁵*Sintal Dietetics s.r.l.; Castelnuovo Vomano, Teramo, Italy*

⁶*Department of Diagnostics and Public Health, University of Verona, Verona*

16.15-16.30

O5 OMS1

ADVANCED LC-MS-BASED APPROACHES FOR THE INVESTIGATION OF PEPTIDES AND PROTEINS

P. Donato¹, D. Sciarrone², P. Arena², P. Dugo^{2,3,4,5}, L. Mondello^{2,3,4,5}

¹*Department of Biomedical, Dental, Morphological and Functional Imaging Sciences, University of Messina, Messina, Italy*

²*Department of Chemistry, Biological, Pharmaceutical and Environmental Sciences, University of Messina, Messina, Italy*

³*Chromaleont S.r.l. c/o Department of Chemistry, Biological, Pharmaceutical and Environmental Sciences, University of Messina, Messina, Italy*

⁴*BeSep S.r.l. c/o Department of Chemistry, Biological, Pharmaceutical and Environmental Sciences, University of Messina, Messina, Italy*

⁵*Unit of Food Science and Nutrition, Department of Medicine, University Campus Bio-Medico of Rome, Rome, Italy*

16.30 – 17.00

Coffee break (Aula Aldo Moro & Salone degli Affreschi areas)

17.00 – 17.45

Parallel sessions

Aula Aldo Moro

Food and Nutraceuticals (FN3)

Chairperson: D. Centonze

17.00-17.15
O1 FN3

GRAPHENE-BASED ELECTROCHEMICAL SENSOR FOR THE DETERMINATION OF VITAMIN C IN FOOD AND FORMULAE FOR INFANTS AND YOUNG CHILDREN

I. Palchetti¹, F. Bettazzi¹, C. Ingrosso², L. Curri², L. Falciola³, V. Pifferi³

¹Dipartimento di Chimica, Università degli Studi di Firenze, Firenze, Italy

²CNR-IPCF S. Bari, c/o Department of Chemistry, University of Bari Aldo Moro, Bari, Italy

³Dipartimento di Chimica, Università degli Studi di Milano, Milano, Italy

17.15-17.30
O2 FN3

THE PRICKLY PEAR PEEL (OPUNTIA FICUS-INDICA (L.) MILL.): AN EXAMPLE OF SOURCE OF A BIOACTIVE COMPOUNDS OBTAINED USING AN ECO-INNOVATIVE EXTRACTION TECHNOLOGY, EXTRACTOR NAVIGLIO®

P. Scarano¹, A. Prigioniero¹, R. Sciarrillo¹, C. Guarino¹, D. Naviglio², M. Gallo³

¹Department of Science and Technology, University of Sannio, Benevento, Italy

²Department of Chemical Science, University of Naples 'Federico II', Napoli, Italy

³Department of Molecular Medicine and Medical Biotechnology, University of Naples 'Federico II', Napoli, Italy

17.30-17.45
O3 FN3

NEW VALUABLE RESOURCES FROM AGROINDUSTRIAL BY-PRODUCTS FOR A MULTITUDE OF APPLICATIONS IN PACKAGING AND BIOTECHNOLOGY FIELDS

A. Cavazza^{1,2}, M. Grimaldi¹, P. Ornaghi³, C. Corradini^{1,2}

¹Dipartimento di Scienze Chimiche, della Vita e della Sostenibilità Ambientale, Università di Parma, Parma, Italy

²CIPACK, Interdepartmental Center on Packaging, Parco Area delle Scienze, Parma, Italy

³Velp Scientifica, Usmate (MB), Italy

Aula V. Starace

Solution Equilibria and Speciation (SES2)

Chairperson: C. De Stefano

17.00-17.15
O1 SES2

STUDY ON THE COORDINATION CAPABILITY OF KOJIC ACID DERIVATIVES TOWARDS OXOVANADIUM(IV)

S. Berto¹, E. Alladio¹, P.G. Daniele¹, E. Laurenti¹, A. Bono¹, C. Sgarlata², G. Valora², R. Cappai³, J.I. Lachowicz⁴, V.M. Nurchi³

¹Dipartimento di Chimica, Università di Torino, Torino, Italy

²Dipartimento di Scienze Chimiche, Università degli Studi di Catania, Catania, Italy

³Dipartimento di Scienze della Vita e dell'Ambiente, Università di Cagliari, Cagliari, Italy

⁴Dipartimento di Scienze Chimiche e Geologiche, Università di Cagliari, Cagliari, Italy

17.15-17.30
O2 SES2

NATURAL AND SYNTHETIC POLYMERS: CHARACTERIZATION OF ACID-BASE BEHAVIOUR AND BINDING PROPERTIES

R.M. Cigala, C. Bretti, F. Crea, A. Irto, G. Lando, D. Milea, C. De Stefano, S. Sammartano

Dipartimento di Scienze Chimiche, Biologiche, Farmaceutiche ed Ambientali, Università degli Studi di Messina, Messina, Italy

17.30-17.45
O3 SES2

INTERACTION OF BERYLLIUM (II) ION WITH GLUTATHIONE IN AQUEOUS SOLUTION

E. Bottari¹, G. De Tommaso², M.R. Festa¹, M. Iuliano², G. Zennaro¹

¹Dipartimento di Chimica, Università degli Studi di Roma "La Sapienza", Roma, Italy

²Dipartimento di Scienze Chimiche, Università degli Studi di Napoli "Federico II", Napoli, Italy

Salone degli Affreschi

Omics and Mass Spectrometry (OMS2)

Chairperson: P. Donato

17.00-17.15
O1 OMS2

WATER-ASSISTED TRAP FOCUSING FOR ULTRA-LARGE VOLUME INJECTION IN REVERSED-PHASE NANO-LIQUID CHROMATOGRAPHY-ELECTRON IONIZATION MASS-SPECTROMETRY

V. Termopoli¹, G. Famigliani¹, P. Vocale², P. Palma¹, G.L. Morini³, S. Mansoor⁴, S. Perry⁴, A. Cappiello¹

¹Dipartimento di Scienze Pure ed Applicate, Università degli Studi di Urbino "Carlo Bo", Urbino, Italy

17.15-17.30
O2 OMS2

²Dipartimento di Ingegneria e Architettura, Università degli Studi di Parma, Parma, Italy

³Dipartimento di Ingegneria, Università degli Studi di Bologna, Bologna, Italy

⁴Syngenta Jealott's Hill International Research Center, Bracknell, UK

REIMS, A NOVEL AMBIENT MASS SPECTROMETRY METHOD FOR THE REAL-TIME IDENTIFICATION OF FOOD SAMPLES

F. Rigano¹, D. Mangraviti², P. Dugo^{1,2,3}, L. Mondello^{1,2,3,4}

¹Chromaleont s.r.l., c/o Department of Chemical, Biological, Pharmaceutical and Environmental Sciences, University of Messina, Messina, Italy

²Department of Chemical, Biological, Pharmaceutical and Environmental Sciences, University of Messina, Messina, Italy

³Unit of Food Science and Nutrition, Department of Medicine, University Campus Bio-Medico of Rome, Rome, Italy

⁴BeSep s.r.l., c/o Department of Chemical, Biological, Pharmaceutical and Environmental Sciences, University of Messina, Messina, Italy

17.30-17.45
O3 OMS2

UNTARGETED LC-HRMSⁿ VERSUS TARGETED LC-MS/MS AND PRE-COX-LC-FLD FOR DETERMINATION OF PARALYTIC SHELLFISH POISONING TOXINS AND TETRODOTOXIN IN SEAWATER AND SHELLFISH

C. Dell'Aversano^{1,2}, L. Tartaglione^{1,2}, A. Turner³, M.G. Giacobbe⁴, A. Penna^{2,5}

¹Dipartimento di Farmacia, Università degli Studi di Napoli Federico II, Napoli, Italy

²CoNISMa, Italian Interuniversity Consortium on Marine Sciences, Roma, Italy

³Centre for Environment, Fisheries and Aquaculture Science, Weymouth, United Kingdom

⁴Istituto per le Risorse Biologiche e le Biotecnologie Marine, CNR, Messina, Italy

⁵Dipartimento di Scienze Biomolecolari, Università di Urbino, Pesaro, Italy

Salone degli Affreschi - Aula Aldo Moro - Aula V. Starace

17.50 – 19.00

Divisional and Interdivisional Group Meetings

20.30

**Gala Dinner and Awards* for Best Presentations
Zonno Ricevimenti – Molo San Nicola**

*Sponsored by ACS Omega, Analytical and Bioanalytical Chemistry and Antibiotics journals

Thursday 26 September

Aula Aldo Moro and (by streaming) Aula V. Starace

Chairperson: L. Torsi

9.00–9.45
PL4

BIO-SENSING: OPTICAL OR BY ELECTRONICS?
Wolfgang Knoll
AIT Austrian Institute of Technology, Vienna, Austria

9.50 – 11.00

Parallel sessions

Aula Aldo Moro

Sensors and Biosensors (SB3)

Chairperson: D. Moscone

9.50-10.15
KN9

ENGINEERING NUCLEIC ACID-BASED PLATFORMS FOR ELECTROCHEMICAL DETECTION OF CLINICALLY RELEVANT ANTIBODIES

A. Porchetta, M. Rossetti, F. Ricci

Dipartimento di Chimica, Università di Roma Tor Vergata, Rome, Italy

10.15-10.30
O1 SB3

DEVELOPMENT OF CHEMILUMINESCENT SPLIT G-QUADRUPLEX BIOSENSOR FOR ANTIBODY DETECTION

E. Marchegiani¹, A. Porchetta², M. Mirasoli¹, M. Zangheri¹, A. Roda¹

¹*Dipartimento di Chimica "G. Ciamician", Università degli Studi di Bologna "Alma Mater Studiorum", Bologna, Italy*

²*Dipartimento di Chimica, Università degli Studi di Roma "Tor Vergata", Roma, Italy*

10.30-10.45
O2 SB3

A PRINTED POTENTIOMETRIC WEARABLE SENSOR FOR pH MONITORING IN SWEAT

V. Mazzaracchio¹, S. Nappi², L. Fiore¹, D. Moscone¹, G. Marrocco², F. Arduini¹

¹*Dipartimento di Scienze e Tecnologie Chimiche, Università degli Studi di Roma "Tor Vergata", Roma, Italy*

²*Dipartimento di Ingegneria Civile e Ingegneria Informatica, Università degli Studi di Roma "Tor Vergata", Roma, Italy*

10.45-11.00
O3 SB3

GET INSPIRED BY NATURE WITH BIOLUMINESCENT BIOSENSORS: "PRENDERE LUCCIOLE PER LANTERNE"

E. Michelin^{1,2}, M.M. Calabretta¹, A. Lopreside¹, L. Montali¹, A. Roda^{1,2}

¹*Department of Chemistry "G. Ciamician", University of Bologna, Bologna, Italy*

²*INBB, Istituto Nazionale di Biostrutture e Biosistemi, Roma, Italy*

Aula V. Starace

Bioanalytics (BIO2)

Chairperson: D. Compagnone

9.50-10.15
KN10

DETERMINATION OF OXIDATIVE STRESS MARKERS IN BIOLOGICAL MATRICES BY MEANS OF UHPLC-MS/MS

M. Sergi¹, F. Fanti¹, A. Pepe¹, F. Vincenti², R. Curini², M. Serafini¹, D. Compagnone¹

¹*Faculty of Bioscience and Technology for Food, Agriculture and Environment, University of Teramo, Teramo, Italy*

²*Sapienza University of Rome, Department of Chemistry, Rome, Italy*

10.15-10.30
O1 BIO2

SALIVA AS A TOOL FOR MONITORING OXIDATIVE STRESS IN SWIMMERS ATHLETES PERFORMING A VO₂ CYCLE ERGOMETER TEST

T. Lomonaco¹, J. Fusi², S. Ghimentì¹, D. Biagini¹, E. Cerri², F. Franzoni², F. De Angelis¹, F.G. Bellagambi¹, F. Di Francesco¹, R. Fuoco¹

¹*Dipartimento di Chimica e Chimica Industriale, Università di Pisa, Pisa, Italy*

²*Dipartimento di Medicina Clinica e Sperimentale, Università di Pisa, Pisa, Italy*

10.30-10.45
O2 BIO2

DROPLET MICROFLUIDICS FOR THE EFFECTIVE DETECTION OF MICRORNA

N. Bellassai¹, G. Spoto^{1,2}

¹*Dipartimento di Scienze Chimiche, Università degli Studi di Catania, Catania, Italy*

²*Istituto Nazionale di Biostrutture e Biosistemi, Università degli Studi di Catania, Catania, Italy*

10.45-11.00
O3 BIO2 **FLUORESCENT SENSORY CORE-SHELL PARTICLES FOR SELECTIVE DETECTION OF SPHINGOSINE 1-PHOSPHATE AND PHOSPHATIDIC ACID**
G. Grasso^{1,2,3}, Q. Li³, S. Shinde³, C. Crescenzi¹, B. Sellergren³
¹Department of Pharmacy, University of Salerno, Fisciano (SA), Italy
²PhD Program in "Drug Discovery and Development", University of Salerno, Fisciano (SA), Italy
³Biofilms-Research Center for Biointerfaces, Department of Biomedical Sciences, Malmö University, Malmö, Sweden

Salone degli Affreschi

Environmental Analytical Chemistry (EAC4)

Chairperson: A. Bianco Prevot

9.50-10.15
KN11 **HUMIC ACID COATED MAGNETIC PARTICLES AS HIGHLY EFFICIENT HETEROGENEOUS PHOTO-FENTON MATERIALS FOR WASTEWATER TREATMENTS**
M. Minella¹, N.P.F. Gonçalves¹, D. Fabbri¹, P. Calza¹, C. Malitesta², E. Mazzotta², C. Minero², A. Bianco Prevot¹

¹Dipartimento di Chimica, Università degli Studi di Torino, Torino, Italy

²Dipartimento di Scienze e Tecnologie Biologiche ed Ambientali, Università del Salento, Lecce, Italy

10.15-10.30
O1 EAC4 **REVIEW OF AMBIENT PARTICULATE MATTER OXIDATIVE POTENTIAL MEASURED IN ITALY WITH ACELLULAR ASSAYS**

M. Russo, E. Zagatti, M.C. Pietrogrande

Department of Chemical and Pharmaceutical Sciences, University of Ferrara, Ferrara, Italy

10.30-10.45
O2 EAC4 **SIMULTANEOUS MULTICLASS PRE-CONCENTRATION AND HPLC-MS/MS QUANTIFICATION OF ALGAL TOXINS IN ENVIRONMENTAL WATERS**

F. Merlo¹, D. Piparo¹, F. Maraschi¹, A. Speltini², A. Profumo¹

¹Dipartimento di Chimica, Università degli Studi di Pavia, Pavia, Italy

²Dipartimento di Scienze del Farmaco, Università degli Studi di Pavia, Pavia, Italy

10.45-11.00
O3 EAC4 **DEVELOPMENT OF AN ULTRA PERFORMANCE LIQUID CHROMATOGRAPHY COUPLED WITH HIGH RESOLUTION MASS SPECTROMETRY METHOD FOR THE SCREENING OF CIANOTOXINS CONTENT IN DRINKING WATER SAMPLES**

G. Di Pofi^{1,2}, G. Favero², F. Nigro di Gregorio¹, E. Ferretti¹, L. Lucentini¹

¹Italian National Health Institute, Department of Environment and Health - Section of Water and Health, Rome, Italy

²Department of Chemistry and Drug Technologies, SAPIENZA University of Rome, Rome, Italy

11.00 – 11.30

Coffee break (Aula Aldo Moro & Salone degli Affreschi areas)

11.30 – 13.00

Parallel sessions

Aula Aldo Moro

Sensors and Biosensors (SB4)

Chairperson: C. Malitesta

11.30-11.45
O1 SB4 **SENSING OF FURFURAL BY MOLECULARLY IMPRINTED POLYMERS WITH ELECTROCHEMICAL TRANSDUCTION**

M. Pesavento, R. Biesuz, G. Alberti, A. Profumo, D. Merli

Department of Chemistry, Università degli Studi di Pavia, Pavia, Italy

11.45-12.00
O2 SB4 **EXPANDING THE CAPABILITIES OF WASH-FREE, ELECTROCHEMICAL DNA SWITCHES FOR THE DETECTION OF DIAGNOSTIC ANTIBODIES IN AUTHENTIC HUMAN SAMPLES**

C. Parolo^{1,2}, A. Merkoçi^{1,3}, K. Plaxco²

¹Catalan Institute of Nanoscience and Nanotechnology

²Department of Chemistry and Biochemistry, University of California – Santa Barbara

³ICREA - Institució Catalana de Recerca i Estudis Avançats

12.00-12.15
O3 SB4 **AMPEROMETRIC BIOSENSOR BASED ON LACCASE PHYSICALLY ENTRAPPED ON A POLYTHIOPHENE-MODIFIED SCREEN PRINTED ELECTRODE FOR RAPID DETECTION OF TOTAL POLYPHENOL CONTENT IN FOOD MATRIX**

L. Ciogli, S. D'Onofrio, C. Tortolini, F. Mazzei, G. Favero

Dipartimento di Chimica e Tecnologie del Farmaco, Sapienza Università di Roma, Roma, Italy

- 12.15-12.30
O4 SB4 **AN ENZYME-LINKED OLIGONUCLEOTIDE ARRAY FOR THE ELECTROCHEMICAL DETECTION OF AFLATOXIN B₁**
G. Selvolini¹, M. Lettieri¹, G. Marrazza^{1,2}
¹Dipartimento di Chimica "Ugo Schiff", Università degli Studi di Firenze, Sesto Fiorentino (FI), Italy
²INBB – Istituto Nazionale Biostrutture e Biosistemi, Rome, Italy
- 12.30-12.45
O5 SB4 **MINIATURIZED ALL-INCLUSIVE BIOSENSOR BASED ON CHEMILUMINESCENT LATERAL FLOW IMMUNOASSAY FOR FECAL HEMOGLOBIN DETECTION: A HOME-MADE TEST FOR COLORECTAL CANCER SCREENING**
M. Zangheri¹, M. Mirasoli¹, C. Caliceti¹, D. Calabria¹, E. Marchegiani¹, F. Di Nardo², P. Simoni³, L. Anfossi², C. Giovannoli², C. Baggiani², A. Roda¹
¹Dipartimento di Chimica "Giacomo Ciamician", Alma Mater Studiorum-Università di Bologna, Bologna, Italy
²Dipartimento di Chimica, Università di Torino, Torino, Italy
³Dipartimento di Medicina e Scienze Chirurgiche, Alma Mater Studiorum-Università di Bologna, Bologna, Italy
- 12.45-13.00
O6 SB4 **STAPHYLOCOCCAL PROTEIN A AS POWERFUL AND VERSATILE KEY PLAYER FOR PAPER-BASED BIOSENSORS DEVELOPMENT**
F. Di Nardo, L. Anfossi, S. Cavalera, C. Baggiani
Dipartimento di Chimica, Università degli Studi di Torino, Torino, Italy

Aula V. Starace

Bioanalytics (BIO3)

Chairperson: M. Minunni

- 11.30-11.45
O1 BIO3 **INNOVATIVE USES OF POLYDOPAMINE (PDA) IN THE FIELD OF (BIO)ANALYTICAL CHEMISTRY**
P. Palladino, F. Torrini, V. Baldoneschi, S. Scarano, M. Minunni
Dipartimento di Chimica "Ugo Schiff", Università degli Studi di Firenze, Italy
- 11.45-12.00
O2 BIO3 **HIGH-FREQUENCY, REAL-TIME MEASUREMENTS OF PLASMA PHENYLALANINE IN SITU IN THE BODIES OF LIVE RATS USING AN ELECTROCHEMICAL APTAMER-BASED SENSOR**
A. Idili^{1,2}, J. Gerson³, G. Ortega^{1,2}, K.P. Ploense^{1,2}, T. Kippin^{3,4,5}, K.W. Plaxco^{1,2}
¹Department of Chemistry and Biochemistry, University of California Santa Barbara, Santa Barbara, USA
²Center for Bioengineering, University of California Santa Barbara, Santa Barbara, USA
³Department of Psychological and Brain Sciences, University of California Santa Barbara, Santa Barbara, USA
⁴Department of Molecular Cellular and Developmental Biology, University of California Santa Barbara, Santa Barbara, USA
⁵Department of Neuroscience Research Institute, University of California Santa Barbara, Santa Barbara, USA
- 12.00-12.15
O3 BIO3 **WHOLE CELL BIOSENSORS vs CELL-FREE BIOSENSORS FOR BIOANALYTICAL APPLICATIONS: A SIDE BY SIDE COMPARISON**
A. Lopreside¹, E. Michelini¹, M.M. Calabretta¹, L. Montali¹, X. Wan², B. Wang², A. Roda¹
¹Department of Chemistry "Giacomo Ciamician", University of Bologna, Bologna, Italy
²School of Biological Sciences, University of Edinburgh, Edinburgh, UK
- 12.15-12.30
O4 BIO3 **TURN-ON CHEMILUMINESCENCE BIOASSAY FOR RAPID AND SENSITIVE QUANTIFICATION OF INTRACELLULAR H₂O₂ AND FOR ANTIOXIDANT SCREENING IN HUMAN LIVING CELL**
D. Calabria¹, M. Guardigli¹, M. Mirasoli¹, P. Simoni², M. Zangheri¹, E. Pagnotta³, C. Caliceti¹, A. Roda¹
¹Dipartimento di Chimica "G. Ciamician", Università di Bologna, Bologna, Italy
²Dipartimento di Scienze Mediche e Chirurgiche, Università di Bologna, Bologna, Italy
³Consiglio per la ricerca in agricoltura e l'analisi dell'economia agraria- CREA, Bologna, Italy
- 12.30-12.45
O5 BIO3 **MOLECULARLY IMPRINTED NANOGELS COMBINED TO PLASTIC OPTICAL FIBRE FOR THE ULTRALOW DETECTION OF PROTEINS**
R. Tatti¹, N. Cennamo², L. Zeni², A.M. Bossi¹
²Dipartimento di Biotecnologie, Università di Verona, Verona, Italy
²Dipartimento di ingegneria, Università della Campania Luigi Vanvitelli, Aversa, Italy

12.45-13.00
O6 BIO3

QUALITY CONTROL OF RESIDENT STEM CELL BY HIGH PRESSURE LIQUID CHROMATOGRAPHY AND MASS SPECTROMETRY

F. Dal Bello, L. Silengo, V. Fonsato, C. Medana

Dipartimento di Biotecnologie Molecolari e Scienze per la Salute, Università degli Studi di Torino, Torino, Italy

Salone degli Affreschi

Analytical Spectroscopy (AS2)

Chairperson: N. Cioffi

11.30-11.45
O1 AS2

NIR HYPERSPECTRAL IMAGING AND MULTIVARIATE IMAGE ANALYSIS FOR THE DETERMINATION OF THE RIND PERCENTAGE IN GRATED PARMIGIANO REGGIANO CHEESE

R. Calvini¹, S. Michelini², G. Ligabue², A. Ulrici¹

¹*Centro Interdipartimentale BIOGEST-SITEIA, Università di Modena e Reggio Emilia, Reggio Emilia, Italy*

²*Consorzio del Formaggio Parmigiano Reggiano, Reggio Emilia, Italy*

11.45-12.00
O2 AS2

NANOPARTICLE ENHANCED LASER ABLATION INDUCTIVELY COUPLED PLASMA MASS SPECTROMETRY (NELA-ICPMS)

L.C. Giannossa¹, F. Mastrococco¹, C. Roca¹, M. Dell'Aglio², F. Fanelli², R. Comparelli³, A. De Giacomo¹, A. Mangone¹

¹*Department of Chemistry, University of Bari Aldo Moro, Bari, Italy*

²*CNR-NANOTEC, c/o Dipartimento di Chimica, Bari, Italy*

³*CNR-IPCF, c/o Dipartimento di Chimica, Bari, Italy*

12.00-12.15
O3 AS2

SURFACE AND INTERFACES CHARACTERIZATION BY XPS OF THE LAYERED GC/Be/Pt ELECTRODE DEVELOPED AS ELECTROCHEMICAL SENSOR FOR BIOMOLECULES DETECTION

D. Coviello, G. Bianco, R. Ciriello, M. Contursi, F. Langerame, A.M. Salvi

Dipartimento di Scienze, Università degli Studi della Basilicata, Potenza, Italy

12.15-12.30
O4 AS2

MULTI METAL-NANOPARTICLES FUNCTIONALIZED OPTICAL POLYMERIC PLATFORMS AS NEW USEFUL ANALYTICAL TOOL FOR FOOD ANALYSIS

A. Scroccarello¹, F. Della Pelle¹, P. Palladino², S. Scarano², D. Compagnone¹

¹*Faculty of Bioscience and Technology for Food, Agriculture and Environment, University of Teramo, Teramo, Italy*

²*Department of Chemistry 'Ugo Schiff', University of Florence, Sesto Fiorentino, Italy*

12.30-12.45
O5 AS2

EFFECT OF CONCENTRATION AND IONIC STRENGTH ON LEAD REMOVAL FROM AQUEOUS SOLUTIONS BY CALCIUM CARBONATE POWDERS

E. Fiorito, G.E. Porcedda, D. Atzei, M. Fantauzzi, A. Rossi

Dipartimento di Scienze Chimiche e Geologiche, Università di Cagliari, Monserrato, Cagliari, Italy

12.45-13.00
O6 AS2

ELECTRODECORATION AND ANALYTICAL CHARACTERIZATION OF IRON OXIDE NANOPARTICLES WITH BIOACTIVE NANOPHASES FOR TARGETED ANTIMICROBIAL MATERIALS

N. Ditaranto¹, M. Salvador^{2,3}, A. Moyano⁴, V. Marchianò¹, M. Sportella¹, J.C. Martínez-García², M. Rivas², M.C. Blanco-López⁴, N. Cioffi¹

¹*Dipartimento di Chimica, Università degli Studi di Bari Aldo Moro, Bari, Italy*

²*Department of Physics, IUTA, University of Oviedo, Gijón, Spain*

³*Istituto di Struttura della Materia, CNR, Monterotondo Scalo, Italy*

⁴*Department of Physical and Analytical Chemistry, University of Oviedo, Oviedo, Spain*

Aula Aldo Moro

13.10

Closing remarks

Poster Session 1

Monday 23 September – Salone degli Affreschi area

POSTERS P1-P43

P1. URINARY GC-MS UNTARGETED STEROIDOMICS FOR THE PREDICTION OF BUBBLING RISK IN DIVERS. PRELIMINARY RESULTS

E. Amante^{1,2}, N. Cavallini³, A. Salomone^{1,2}, M. Vincenti^{1,2}

¹Dipartimento di Chimica, Università degli Studi di Torino, Torino, Italy

²Centro Regionale Antidoping "A. Bertinaria", Orbassano (TO), Italy

³Dipartimento di Scienza Applicata e Tecnologia (DISAT), Politecnico di Torino, Torino, Italy

P2. CHARACTERIZATION OF GLYCOSPHINGOLIPIDS IN LUPINUS LUTEUS BEANS BY REVERSE PHASE LIQUID CHROMATOGRAPHY COUPLED WITH ESI-MS

M. Bianco¹, C.D. Calvano^{1,2}, G. Ventura¹, A. Viola¹, I. Losito^{1,2}, F. Palmisano^{1,2}, T.R.I. Cataldi^{1,2}

¹Dipartimento di Chimica, Università degli Studi di Bari Aldo Moro, Bari, Italy

²Centro Interdipartimentale SMART, Università degli Studi di Bari Aldo Moro, Bari, Italy

P3. LC-ESI-MS AND TANDEM MS ANALYSIS OF SULFOQUINOVOSYL MONO- AND DIACYLGLYCEROLS IN EDIBLE ALGAE EXTRACTS

D. Coniglio¹, C.D. Calvano^{1,2}, E.P. D'Alesio¹, I. Losito¹, F. Palmisano¹, T.R.I. Cataldi¹

¹Dipartimento di Chimica, Università degli Studi di Bari Aldo Moro, Bari, Italy

²Centro interdipartimentale SMART Università degli Studi di Bari Aldo Moro, Bari, Italy

P4. VERTEBRATE ODORANT BINDING PROTEIN: BACTERIOSTATIC AND FUNGISTATIC AGENT AGAINST PATHOGENIC MICROORGANISMS

F. Bianchi¹, N. Riboni¹, C.S. Cabassi², R. Ramoni², F. Casoli³, L. Nasi³, M. Careri¹

¹Dipartimento di Scienze Chimiche, della Vita e della Sostenibilità Ambientale, Università di Parma, Parma, Italy

²Dipartimento di Scienze Medico-Veterinarie, Università di Parma, Parma, Italy

³Istituto dei materiali per l'elettronica ed il magnetismo, Parma, Italy

P5. DETERMINATION BY GC-MS OF ORGANIC POLLUTANTS IN ETNA VOLCANIC ASHES

R.O. Bua, B. Galizia, A. Giuffrida

Dipartimento di Scienze Chimiche, Università degli Studi di Catania, Catania, Italy

P6. DEVELOPMENT OF AN ANALYTICAL STRATEGY FOR THE METAPROTEOMIC CHARACTERIZATION OF ATMOSPHERIC BIOAEROSOL IN WORKING ENVIRONMENTAL SAMPLE

A.L. Capriotti¹, S. Aita¹, M. Antonelli¹, B. Benedetti¹, A. Cerrato¹, G. La Barbera¹, A. Laganà^{1,2}

¹Dipartimento di Chimica, Università degli Studi di Roma "La Sapienza", Roma, Italy

²CNR NANOTEC, Campus Ecotekne Università del Salento, Lecce, Italy

P7. COMPREHENSIVE TWO-DIMENSIONAL GAS CHROMATOGRAPHY COUPLED TO TIME OF FLIGHT MASS SPECTROMETRY FEATURING TANDEM IONIZATION: ADDING AN EXTRA-DIMENSIONS TO HAZELNUTS (*Corylus avellana* L.) PRIMARY METABOLOME FINGERPRINTING

M. Cialità Rosso, C. Cagliero, E. Liberto, P. Rubiolo, B. Sgorbini, C. Bicchi, C. Cordero

Dipartimento di Scienza e Tecnologia del Farmaco, Università degli Studi di Torino, Turin, Italy

P8. MICROFLUIDIC OPEN INTERFACE WITH LIQUID ELECTRON IONIZATION MASS SPECTROMETRY: RAPID MEASUREMENT OF THC IN DIFFERENT MATRICES

G. Famigliani¹, A. Cappiello¹, P. Palma¹, V. Termopoli¹, P. Rocío-Bautista¹, E. Nazdrajić², J. Pawliszyn²

¹University of Urbino, Urbino, Italy

²University of Waterloo, Waterloo, ON, Canada

P9. OPTIMIZATION BY RESPONSE SURFACE METHODOLOGY OF A DISPERSIVE MAGNETIC SOLID PHASE EXTRACTION EXPLOITING MAGNETIC GRAPHENE NANOCOMPOSITE COUPLED WITH UHPLC-PDA FOR SIMULTANEOUS DETERMINATION OF NEW ORAL ANTICOAGULANTS (NOAs) IN HUMAN PLASMA

V. Ferrone¹, A. Tartaglia¹, M. Locatelli¹, M. Carlucci², A. Fontana¹, E. Milanetti³, G. Carlucci¹

¹Dipartimento di Farmacia, Università degli Studi "G. D'Annunzio" Chieti-Pescara

²Dipartimento di Scienze Mediche Orali e Biotecnologiche - Università degli Studi "G. D'Annunzio" Chieti-Pescara

³Dipartimento di Fisica - Università degli Studi "La Sapienza"

- P10. USING LABELLED INTERNAL STANDARDS TO IMPROVE NEEDLE TRAP MICRO-EXTRACTION TECHNIQUE PRIOR TO GAS CHROMATOGRAPHY/MASS SPECTROMETRY**
S. Ghimenti¹, D. Biagini¹, T. Lomonaco¹, M. Onor², F.G. Bellagambi¹, P. Salvo³, F. Di Francesco¹, R. Fuoco¹
¹Dipartimento di Chimica e Chimica Industriale, Università di Pisa, Italy
²Istituto di Chimica dei Composti Organometallici, CNR, Pisa, Italy
³Istituto di Fisiologia Clinica, CNR, Pisa, Italy
- P11. ELECTROSTATIC ATTRACTION-REPULSION MODEL WITH CINCHONA ALKALOID-BASED ZWITTERIONIC CHIRAL STATIONARY PHASES**
F. Ianni¹, V. Mimini^{2,3}, F. Marini¹, H. Hettegger³, R. Sardella¹, W. Lindner², B. Natalini¹
¹University of Perugia, Department of Pharmaceutical Sciences, Perugia, Italy
²University of Vienna, Department of Analytical Chemistry, Vienna, Austria
³University of Natural Resources and Life Sciences, Department of Chemistry, Tulln, Austria
- P12. ADVANCED CHARACTERIZATION OF ARCHAEOLOGICAL BEESWAX AND RESINOUS MATERIALS BY HIGH RESOLUTION MASS SPECTROMETRY**
J. La Nasa, F. Nardella, L. Andrei, M. Giani, M.P. Colombini, E. Ribechini
Department of chemistry and industrial chemistry, University of Pisa, Italy
- P13. USE OF AN INTELLIGENT SAMPLING DEVICE (I KNIFE), COUPLED TO RAPID EVAPORATIVE IONISATION MASS SPECTROMETRY TECHNOLOGY, FOR AUTHENTICITY ASSESSMENT IN PISTACHIO SAMPLES**
R. La Tella^{1,2}, F. Rigano¹, D. Mangraviti², P. Dugo^{1,2,3}, L. Mondello^{1,2,3,4}
¹Chromaleont s.r.l., c/o Dipartimento di Scienze Chimiche, Biologiche, Farmaceutiche ed Ambientali - Università degli Studi di Messina, Messina, Italy
²Dipartimento di Scienze Chimiche, Biologiche, Farmaceutiche ed Ambientali - Università degli Studi di Messina, Messina, Italy
³Scienze dell'Alimentazione e della Nutrizione Umana, Dipartimento di Medicina, Università Campus Bio-Medico, Roma, Italy
⁴BeSep s.r.l., c/o Dipartimento di Scienze Chimiche, Biologiche, Farmaceutiche ed Ambientali - Università degli Studi di Messina, Messina, Italy
- P14. RAPID AND RELIABLE IDENTIFICATION OF SEMI-VOLATILE COMPOUNDS BY SUPERCRITICAL FLUID CHROMATOGRAPHY COUPLED TO ELECTRON IONIZATION MASS SPECTROMETRY DETECTION**
R. La Tella^{1,2}, F. Rigano¹, P. Dugo^{1,2,3}, L. Mondello^{1,2,3,4}
¹Chromaleont s.r.l., c/o Dipartimento di Scienze Chimiche, Biologiche, Farmaceutiche ed Ambientali - Università degli Studi di Messina, Messina, Italy
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³Scienze dell'Alimentazione e della Nutrizione Umana, Dipartimento di Medicina, Università Campus Bio-Medico, Roma, Italy
⁴BeSep s.r.l., c/o Dipartimento di Scienze Chimiche, Biologiche, Farmaceutiche ed Ambientali - Università degli Studi di Messina, Messina, Italy
- P15. SIMULTANEOUS DETERMINATION OF EPERISONE HYDROCHLORIDE, PARACETAMOL, AND THEIR METABOLITES IN MOUSE URINE SAMPLES USING HPLC-PDA**
V. Ferrone¹, A. Tartaglia¹, M. Locatelli^{1,2}, L. Di Marzio¹, C. Celia¹, M. Fresta³, G. Carlucci¹
¹Department of Pharmacy, University of Chieti-Pescara "G. d'Annunzio", Chieti, Italy
²Interuniversity Consortium of Structural and Systems Biology INBB, Roma, Italy
³Department of Health Sciences, University of Catanzaro "Magna Graecia", Catanzaro, Italy
- P16. CHARACTERISATION OF VOCs EMITTED BY MICROPLASTICS DURING DEGRADATION: A COMPARATIVE STUDY BETWEEN DYNAMIC HEADSPACE NEEDLE TRAP DEVICE COUPLED TO GAS-CHROMATOGRAPHY-MASS SPECTROMETRY (DHS-NTD-GC-MS) AND SELECTED ION FLOW TUBE-MASS SPECTROMETRY (SIFT-MS)**
E. Manco, J. La Nasa, T. Lomonaco, F. Modugno, R. Fuoco, V. Castelvetro, A. Corti
Dipartimento di Chimica e Chimica Industriale, Università di Pisa, Italy
- P17. DEVELOPMENT AND VALIDATION OF TWO ORTHOGONAL HPLC METHODS FOR THE STUDY OF THE ACCELERATED STABILITY ASSESSMENT PROGRAM (ASAP) OF ACETYLSALICYL ACID**
G. Marrubini¹, P. Appelblad^{2,3}, A. Speltini¹
¹Dipartimento di Scienze del Farmaco, Università degli Studi di Pavia, Pavia, Italy
²Department of Pharmacology, Umea University, Umea, Sweden
³Merck Chemicals and Life Science AB, Solna, Sweden

- P18. FOURIER TRANSFORM ION CYCLOTRON RESONANCE MASS SPECTROMETRY (FT-ICR-MS) FOR HIGH-RESOLUTION ANALYSIS OF FENNEL PROTEINS**
M.T. Melfi¹, D. Nardiello¹, B. Kanawati², L. Macchia³, P. Schmitt-Kopplin², D. Centonze¹
¹*Dipartimento di Scienze Agrarie, degli Alimenti e dell'Ambiente, Università degli Studi di Foggia, Foggia, Italy*
²*Department of Environmental Sciences, Research Unit Analytical BioGeoChemistry (BGC), Neuherberg, Germany*
³*Dipartimento di Allergologia ed Immunologia Clinica, Azienda Ospedaliero-Universitaria Policlinico di Bari, Bari, Italy*
- P19. SIMULTANEOUS DETERMINATION OF PSYCHOACTIVE SUBSTANCES IN URBAN WATERS BY MEANS OF dLLME EXTRACTION FOLLOWED BY HPLC-MS/MS ANALYSIS**
C. Montesano¹, F. Vincenti^{1,2}, C. Minotti¹, M. Sergi³, R. Curini¹
¹*Chemistry Department, University La Sapienza, Rome, Italy*
²*Public Health and Infectious Disease Department, University La Sapienza, Rome, Italy*
³*University of Teramo, Faculty of Bioscience and Technology for Food, Agriculture and Environment, Teramo, Italy*
- P20. AN INTEGRATED MULTIDISCIPLINARY APPROACH TO INVESTIGATE TRACE ELEMENTS SOURCES IN A MOUNTAIN WATERSHED**
G. Binda¹, A. Pozzi², C. Dossi¹
¹*Dipartimento di scienze teoriche e applicate, Università degli studi dell'Insubria, Varese, Italy*
²*Dipartimento di scienza e alta tecnologia, Università degli studi dell'Insubria, Como, Italy*
- P21. SCREENING ANALYTICAL METHOD FOR THE DETERMINATION OF NON DIOXIN-LIKE POLYCHLORINATED BIPHENYLS IN CHICKEN EGGS BY GAS CHROMATOGRAPHY AND ELECTRON CAPTURE DETECTION**
V. Nardelli¹, V. D'Amico¹, F. Casamassima¹, G. Gesualdo¹, D. Li², W.M.V. Marchesiello³, D. Nardiello³, M. Quinto^{2,3}
¹*Istituto Zooprofilattico Sperimentale della Puglia e della Basilicata, Foggia, Italy*
²*Key Laboratory of Natural Resources of the Changbai Mountain and Functional Molecules, Yanbian University, Yanji, China*
³*Dipartimento di Scienze Agrarie, degli Alimenti e dell'Ambiente, Università degli Studi di Foggia, Foggia, Italy*
- P22. A NEW SPME DEVICE BASED ON A PENCIL-TYPE COATED CARBON FIBERS: FAST ON-FIBER DERIVATIZATION AND GC/MS ANALYSIS OF PHYTOHORMONES IN WHEAT**
Y. Zou¹, L.-Y. Meng^{1,2}, J. Kim³, H.-B. Shang¹, D. Li¹, W.M.V. Marchesiello⁴, M. Quinto^{1,4}
¹*Department of Chemistry, MOE Key Laboratory of Natural Resources of the Changbai Mountain and Functional Molecules, Yanbian University, Yanji, Jilin Province, PR China*
²*Department of Chemical Engineering, Yanbian University, Yanji, PR China*
³*Department of Chemistry, BK21 School of Chemical Materials Science, Department of Energy Science and SKKU Advanced Institute of Nanotechnology, Sungkyunkwan University, Suwon, Korea*
⁴*SAFE — Department of Science of Agriculture, Food and Environment, University of Foggia, Foggia, Italy*
- P23. AUTOMATED SAMPLE PREPARATION WORKSTATIONS COUPLED ONLINE TO LIQUID CHROMATOGRAPHY – TANDEM MASS SPECTROMETRY FOR A COMPREHENSIVE ELUCIDATION OF LIPID PROFILE**
F. Rigano¹, D. Mangraviti², P. Dugo^{1,2,3}, L. Mondello^{1,2,3,4}
¹*Chromaleont s.r.l., c/o Department of Chemical, Biological, Pharmaceutical and Environmental Sciences, University of Messina, Messina, Italy*
²*Department of Chemical, Biological, Pharmaceutical and Environmental Sciences, University of Messina, Messina, Italy*
³*Unit of Food Science and Nutrition, Department of Medicine, University Campus Bio-Medico of Rome, Rome, Italy*
⁴*BeSep s.r.l., c/o Department of Chemical, Biological, Pharmaceutical and Environmental Sciences, University of Messina, Messina, Italy*
- P24. LINEAR RETENTION INDEX SYSTEM APPLIED TO LIQUID CHROMATOGRAPHY AS NEW APPROACH FOR THE QUALITY CONTROL OF OXYGEN HETEROCYCLIC COMPOUNDS IN ESSENCES, COSMETICS AND FOOD**
A. Arigò¹, F. Rigano², P. Dugo^{1,2,3}, L. Mondello^{1,2,3,4}
¹*Department of Chemical, Biological, Pharmaceutical and Environmental Sciences, University of Messina, Messina, Italy*
²*Chromaleont s.r.l., c/o Department of Chemical, Biological, Pharmaceutical and Environmental Sciences, University of Messina, Messina, Italy*
³*Unit of Food Science and Nutrition, Department of Medicine, University Campus Bio-Medico of Rome, Rome, Italy*
⁴*BeSep s.r.l., c/o Department of Chemical, Biological, Pharmaceutical and Environmental Sciences, University of Messina, Messina, Italy*
- P25. IDENTIFICATION OF EXTRACELLULAR POLYMERIC SUBSTANCES IN EAST ANTARCTIC PACK ICE SAMPLES BY A HPLC-MS/MS METHOD**
P. Rivaro¹, F. Ardini¹, M. Grotti¹, D. Vivado¹, G. Damonte², A. Salis³
¹*Dipartimento di Chimica e Chimica Industriale, Università degli Studi di Genova, Genova, Italy*

²Dipartimento di Medicina Sperimentale, Università degli Studi di Genova, Genova, Italy

³Centre of Excellence for Biomedical Research (CEBR), Genova, Italy

P26. DISCLOSING THE COMPLEX MULTIMATERIALITY OF FELLINI'S STAGE COSTUMES EXPLOITING MASS SPECTROMETRIC TECHNIQUES

F. Sabatini, J. La Nasa, C. Guerrini, I. Degano, M.P. Colombini

Dipartimento di Chimica e Chimica Industriale, Università di Pisa, Pisa, Italy

P27. ANALYTICAL CHARACTERIZATION OF ANTICANCER PLATINUM (IV) PRODRUGS OXALIPLATIN ANALOGUES

K. Micoli, N. Ditaranto, A. Barbanente, G. Natile, N. Margiotta

Dipartimento di Chimica, Università degli Studi di Bari Aldo Moro, Bari, Italy

P28. FPSE-HPLC-PDA ANALYSIS OF SEVEN PARABEN RESIDUES IN HUMAN WHOLE BLOOD, PLASMA, AND URINE

A. Tartaglia¹, A. Kabir², S. Ulusoy³, E. Sperandio¹, S. Piccolantonio¹, H.I. Ulusoy³, K.G. Furton², M. Locatelli¹

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²Department of Chemistry and Biochemistry, International Forensic Research Institute, Florida International University, Miami, USA

³Department of Analytical Chemistry, Faculty of Pharmacy, Cumhuriyet University, Sivas, Turkey

P29. COMPARISON BETWEEN EXHAUSTIVE AND EQUILIBRIUM EXTRACTION USING DIFFERENT SPE SORBENTS AND SOL-GEL CARBOWAX 20M COATED FPSE MEDIA

A. Tartaglia¹, A. Kabir², K.G. Furton², D. Macerola¹, E. Sperandio¹, S. Piccolantonio¹, H.I. Ulusoy³, F. Maroni¹, P. Bruni¹, F. Croce¹, V.F. Samanidou⁴, M. Locatelli¹

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⁴Laboratory of Analytical Chemistry, Department of Chemistry, Aristotle University of Thessaloniki, Thessaloniki, Greece

P30. USE OF A NOVEL CONSUMABLE-FREE THERMAL MODULATOR WITHIN THE CONTEXT OF COMPREHENSIVE TWO-DIMENSIONAL GAS CHROMATOGRAPHY: GAS FLOW OPTIMIZATION ASPECTS

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A.R. Piergiovanni, L. Lioi
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A. Onzo¹, G. Bianco¹, J. Gubitosa², V. Rizzi³, P. Fini², A. Laurenzana⁴, G. Fibbi⁴, C. Veiga-Villauriz^{2,3}, F. Fanelli⁵, F. Fracassi^{3,5,6}, C. Gaeta⁷, A. Agostiano^{2,3}, P. Cosma^{2,3}, A. Guerrieri¹

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R.A. Picca¹, D. Blasi², E. Macchia^{1,3}, K. Manoli¹, C. Di Franco⁴, G. Scamarcio^{4,5}, F. Torricelli⁶, A. Zurutuza⁷, I. Napol⁷, A. Centeno⁷, L. Torsi^{1,2,3}

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V. Caratelli, J. Guiducci, D. Moscone, F. Arduini

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²Dipartimento di Scienza e Tecnologia del Farmaco, Università degli Studi di Torino, Torino, Italy
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T. Di Giulio¹, C. Malitesta¹, S. Mariani², L.M. Strambini², G. Barillaro², E. Mazzotta¹
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F.G. Bellagambi^{1,2}, S. Ghimenti¹, T. Lomonaco¹, P. Salvo³, D. Biagini¹, F. Di Francesco¹, E. Errachid², R. Fuoco¹
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A. Cavazza^{1,2}, F. Bigi¹, N. González-Ballesteros³, M. Grimaldi¹, L. Nasi⁴, M.C. Rodríguez-Argüelles³, C. Corradini^{1,2}
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 S. Cometa¹, M.A. Bonifacio^{1,2}, G. Cerqueni³, M. Mattioli-Belmonte³, E. De Giglio²
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C. Sette^{1,2}, E. Veschetti¹, M. Le Donne^{1,2}, G. Favero², L. Lucentini¹
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M. Passaponti^{1,2}, W. Giurlani^{1,2}, E. Salvietti^{1,2}, S. Martinuzzi^{1,2}, L. Sergi^{1,2}, M. Vizza^{1,2}, V. Dell'Aquila^{1,2}, M. Innocenti^{1,2}
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G. Conta¹, M.E. Di Cocco¹, F. Sciubba¹, F. Marini^{1,2}, A. Tomassini¹, G. Capuani¹, G. Giorgi³, W. Aureli³, A. Miccheli^{2,4}
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M. Foschi¹, L. Rossi¹, M.A. Maggi², F. Ruggieri¹, A.A. D'Archivio¹
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A. Bianco Prevot¹, N.P.F. Gonçalves¹, P. Calza¹, M. Minella¹, D. Fabbri¹, M. Brigante², G. Mailhot²

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M. Ginepro, G. Costamagna, S. Mariotti, C. Bezzi

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F. Gosetti, M.H. Belay, E. Robotti, E. Marengo

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S. Illuminati¹, A. Annibaldi¹, S. Bau², D.V. Vione³, F. Girolametti¹, M. Antonucci¹, A. Iaccarino⁴, V. Ciardini⁴, C. Scarchilli⁴, G. Scarponi¹, C. Truzzi¹

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Department of Chemistry "G. Ciamician", University of Bologna, Bologna, Italy

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M. Barbera¹, F. Saiano¹, A. Abita², V. Giudice², S. Messina², N. Tirone²
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C. Cavaliere¹, M. Antonelli¹, B. Benedetti¹, G. La Barbera¹, C.M. Montone¹, A. Laganà^{1,2}
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Chemistry Department, Rome University "La Sapienza", Rome, Italy
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P128. A NOVEL PROCEDURE FOR THE FAST IRON SPECIATION IN SEAWATER

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P130. SILVER NANOPARTICLES PLASMONIC SENSOR FOR THE DETECTION OF MERCURY IONS (Hg²⁺) IN AQUEOUS MEDIUM

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