SCIENTIFIC PROGRAMME

Tuesday, September 6

12.00 Registration of participants

14.00 Welcome addresses
G. Ricciardi
President of Istituto Superiore di Sanità
U. Agrimi
Director of the Department of Food Safety and Veterinary Public Health

14.10 Conference opening and ceremony
G. Giorgi
President of the Division of Mass Spectrometry, Italian Chemical Society
M. Fiori
Istituto Superiore di Sanità, Rome, Italy

14.20 Italian Chemical Society Honorary Membership to Prof. R.M. Caprioli
R. Riccio
President of Italian Chemical Society

Session 1
IMAGING MASS SPCTROMETRY, PROTEOMICS AND METABOLOMICS
Chairpersons: **D. Caruso, G. Giorgi**

14.30 *Imaging Mass Spectrometry: molecular microscopy for biology and medicine*
R.M. Caprioli

15.10 *The application of mass spectrometry to the study of the intact human salivary proteome*
M. Castagnola

15.35 *Mass spectrometry: from research to clinical applications*
G. Mengozzi

15.50 *UHPLC coupled with tandem mass spectrometry applied to Therapeutic Drug Monitoring (TDM) in solid organ transplant*
A. Nonnato

16.05 *Protein analysis by mass spectrometry: from identification to characterization*
S. Camerini

16.20 *Top-down analysis of prolactin-inducible protein and its glycoforms in human saliva*
V. Piras

16.35 *Structural characterization of a new proteoform of the human salivary cystatin D by top-down mass spectrometry*
B. Liori

16.50 *Mass spectrometry-based lipidomics investigations*
S. Granafei

17.05 End of session

TRANSFER TO

Sapienza Università di Roma
Aula A "R. Giuliano", edificio di Chimica Farmaceutica (CU019)
piazzale A. Moro 5 - 00185 Roma

17.30 **DSM Meeting. All are invited!!**

19.00 **Welcome cocktail**

Wednesday, September 7

Session 2
FOOD SAFETY AND ENVIRONMENT

Chairpersons: **M. Fiori, R. Galarini**

9.00 *Analytical options for forbidden substances detection in livestock. Where are we now?*
B. Le Bizec

9.40 *Food safety: optimization of performance in mycotoxins analysis in food*
B. De Santis

9.55 *"Food profiling": new horizons of high-resolution mass spectrometry application*
T. Nardin

10.10 *Analysis of bisphenols and alkylphenols in food by LC-MS/MS*
P. Gallo

10.25 *Mass spectrometry in the chemical control of dietary supplements, novel foods and energy drinks*
L. Giannetti

10.40 Poster session - Coffee break

11.30 *Fast LCMS & GCMS approaches for expanding productivity in multi-residue pesticides analysis*
V. Mainini

1.45 *Illegal administration of dexamethasone in bovines: targeted proteomics as a new tool for an indirect screening?*
G. Biancotto

12.1 *A rapid extraction and screening method for mycotoxins from cereal products using QUECHERS and LC-MS/MS*
A. Gheduzzi

12.15 *Improvement of a multiclass screening method to detect banned substances in bovine urine by LC-HRMS*
R. Rossi

12.30 *Multi-compound and multi-class identification and quantification using high resolution LC-MS/MS*
D. McMillan

12.45 *Measuring dioxins at the attogram level: science or fiction?*
C. Calaprice

13.00 Lunch

14.30 *Cyclic Imines (CIs) in mussels from Middle Adriatic Sea (Italy): LC-MS/MS identification and monitoring*
S. Bacchiocchi

14.45 *Determination of Polychlorobiphenyl (PCB) in water by HS-SPME/GC-MS/MS*
C. Bergamini

15.00 End of session

Session 3

DOPING AND DEPENDENCE

Chairpersons: **E. Gregori, P. Stacchini**

15.00 *Doping analysis: mass spectrometry and beyond*
F. Botrè

15.40 *New trends in chromatography coupled to mass spectrometry applied to psychotropic drugs and doping agents*
E. Marchei

15.55 *Systematic toxicological screening using LC-MS*
S. Donzelli

16.10 *Forensic investigation of keratin matrix: development of a method by turboflow™ HPLC-MS/MS for cannabinoids quantitative analysis*
V. Castelli

16.25 *Rapid miniaturized dispersive liquid/liquid microextraction methods (DLLME) for the determination of drugs of abuse in biological fluids by chromatographic techniques coupled with mass spectrometry detection*
S. Odoardi

16.40 End of session

17.30 Transfer by bus to Ristorante Sa Tanca

18.30 **Instruments and bubbles**
News from instrumentation, methods, technology by Companies

20.30 **Social dinner**

Thursday, September 8

Session 4
ION SPECTROSCOPY AND INORGANIC ELEMENTS

Chairpersons: **S. Fornarini, G.G. Mellerio**

9.20 *Ion spectroscopy. Structures of silicon ions and clusters: silane ions and doping on the nanoscale*
O. Dopfer

10.00 *Mobility separation and IR characterization of ion isomers using a single and integrated MS/MS set-up*
P. Maitre

10.40 *Exploring ligand substitution mechanisms at the molecular level with IRMPD/MS: the case of cisplatin*
D. Corinti

10.55 Poster session - Coffee break

11.40 *Thallium removal with gas-water mixtures from naturally-contaminated urban drinking water networks: efficacy assessment by ICP-MS*
E. Veschetti

11.55 *Criticalities of determinations of inorganic elements in food by means of ICP-MS: experiences of the Italian National Reference Laboratory*
A.A. Pastorelli

12.10 *Advanced ICP-MS-based methods for the characterization of inorganic nanomaterials and their analytical determination in complex matrixes*
F. Cubadda

12.25 *Simultaneous detection by isotope ratio mass spectrometry and quadrupole mass spectrometry coupled to multidimensional gas chromatography*
D. Sciarrone

12.10 End of session

12.40 Best poster's Award

12.50 Concluding remarks

POSTER COMMUNICATIONS

P1	**Analysis of melamine in food supplements** Eleonora Bafile (a), Alessandra Di Sante (a), Manuel Sergi (b), Patrizia Marini (a) *(a) Sintal Dietetics, Teramo, Italy* *(b) Faculty of Bioscience and Technology for Food, Agriculture and Environment, Università degli Studi, Teramo, Italy*
P2	**Determination of lipophilic marine biotoxins in official control of Lazio and Tuscany regions by liquid chromatography coupled to tandem mass spectrometry** Rossana Claudia Bonanni, Rocco Baccelliere, Daniela Barchi, Laura Spinaci, Erika Romualdi, Francesca Longo, Bruno Neri *Istituto Zooprofilattico Sperimentale del Lazio e della Toscana "M. Aleandri", Rome, Italy*
P3	**Multi-analyte hplc coupled to HRMS method for detection of tropane and pyrrolizidine alkaloids in honey** Alice Borin (a), Marianna Martinello (a), Davide Bovo (b), Roberto Stella (b), Albino Gallina (a,b), Giancarlo Biancotto (b), Franco Mutinelli (a) *(a) National Reference Centre for Beekeeping, Istituto Zooprofilattico Sperimentale delle Venezie, Legnaro, Padova, Italy* *(b) Department of Food Safety, Laboratory of Chemistry, Istituto Zooprofilattico Sperimentale delle Venezie, Legnaro, Padova, Italy*
P4	**Quantitative determination of natural hormones in bovine blood serum by LC-MS/MS: method development and validation** Gian Luca Ferro, Federica Ostorero, Daniela Marchis, Maria Cesarina Abete, Marilena Gili *Istituto Zooprofilattico Sperimentale del Piemonte, Liguria e Valle d'Aosta, Turin, Italy*
P5	**Development of LC-HRMS method and stability study of beta-agonist residues in bovine hair** Luigi Giannetti, Francesco Necci, Elisa Gennuso, Andrea Giorgi, Valentina Gallo, Francesca Marini, Bruno Neri *Istituto Zooprofilattico Sperimentale del Lazio e della Toscana, Rome, Italy*
P6	**Contaminants in paper and board for food contact. GC-MS screening analysis and identification of residues from recycled fibers** Massimo Denaro, Roberta Feliciani, Cinzia Gesumundo, Giorgio Padula, Maria Rosaria Milana *Department of Environment and Primary Prevention, Istituto Superiore di Sanità, Rome, Italy*
P7	**Identification and quantification of migrants from plastic packagings for food contact: GC-MS applications** Giorgio Padula (a), Massimo Denaro (a), Roberta Feliciani (a), Cinzia Gesumundo (a), Silvia Giamberardini (a), Antonino Maggio (b), Veruscka Mannoni (a), Oronzo Panico (b), Maria Rosaria Milana (a) *(a) Department of Environment and Primary Prevention, Istituto Superiore di Sanità, Rome, Italy (b) ON0373 - ORGANISMO NOTIFICATO UNIFICATO 0373, Istituto Superiore di Sanità, Rome, Italy*
P8	**GC-MS analysis of 1,2-and 1,4 isomers of benzen dicarboxylic acid, di-2 ethylhexyl esters used as plasticizers for PVC into contact with foods** Massimo Denaro, Giorgio Padula, Silvia Giamberardini, Claudio Arena, Maria Rosaria Milana *Department of Environment and Primary Prevention, Istituto Superiore di Sanità, Rome, Italy*
P9	**Evaluation of pesticide residues and mycotoxins in dried herbs, tea and spices by LC-MS/MS, GC-MS/MS and HPLC-fluorescence** Dario Lucchetti, Daniela Triolone, Paolo Di Giustino, Marta Mancuso, Katia Russo, Bruno Neri *Direzione Operativa Chimica, Istituto Zooprofilattico Sperimentale del Lazio e della Toscana "M. Aleandri", Rome, Italy*

P10	**Development and validation of LC-MS/MS methods to assess concentrations and ratios of sphingoid bases and their phosphates as fumonisin biomarkers of effect in pigs: the role of sample collection techniques** Sonia Colicchia, Franz Berthiller, Heidi Elisabeth Schwartz-Zimmermann *Christian Doppler Laboratory for Mycotoxin Metabolism and Center for Analytical Chemistry, Department of Agrobiotechnology, IFA-Tulln, University of Natural Resources and Life Sciences, Vienna, BOKU, Tulln, Austria*
P11	**Control activities for pesticides residues on food from non-EU countries** Dario Lucchetti, Marta Mancuso, Paolo Di Giustino, Daniela Triolone, Katia Russo, Bruno Neri *Direzione Operativa Chimica, Istituto Zooprofilattico Sperimentale del Lazio e della Toscana "M. Aleandri", Rome, Italy*
P12	**Semi-untargeted *vs* semi-targeted approach for the determination of more than 400 compounds with high resolution mass spectrometry in food matrices** Simone Moretti (a), Michele Suman (b), Francesca Lambertini (b), Dante Catellani (b), Giorgio Saluti (a), Roberta Galarini (a) *(a) Istituto Zooprofilattico Sperimentale dell'Umbria e delle Marche, Perugia, Italy* *(b) Advanced Laboratory Research, Barilla G. R. F.lli SpA, Parma, Italy*
P13	**Screening of synthetic PDE-5 inhibitors in food supplements by LC–MS/MS** Gabriele Vannutelli(a), Camilla Montesano(a), Roberta Curini(a), Manuel Sergi(b), Francesca Di Ottavio(b), Eleonora Bafile(c) *(a)Department of Chemistry, Sapienza University of Rome, Piazzale A. Moro, 5 – 00185 Roma* *(b)Faculty of Bioscience and Technology for Food, Agriculture and Enviroment, University of Teramo, Via Balzarini 1 – 64100 Teramo* *(c)Sintal Dietetics, Via Tevere,18 – 64020 Castelnuovo Vomano (TE)*
P14	**Development of a method for the determination of amino-glycoside and polypeptide antibiotics in food: preliminary results** Giorgio Saluti (a), Simone Moretti (a), Sara Romanelli (a), Rosanna Rossi (a), Roccaldo Sardella(b), Roberta Galarini(a) (a) *Istituto Zooprofilattico Sperimentale dell'Umbria e delle Marche, Perugia* (b)*University of Perugia, Department of Pharmaceutical Sciences, Perugia, Italy*
P15	**Rapid determination of Tetracyclines and their metabolites in sheep milk by Liquid Chromatography coupled to Orbitrap High Resolution Mass Spectrometry (HRMS)** Nicolino Rubattu, Severyn Salis, Cecilia Testa *Istituto Zooprofilattico Sperimentale della Sardegna - Via Vienna 2 07100 Sassari*
P16	**Monitoring of environmental contaminants in breast milk of the Lazio region** Fabio Busico (a), Alessandro Ubaldi (a), Giuseppina Mattei (a), Sesto Berretta (a) ,Tabita Mauti (a), Guglielmo Salvatori (b), Veronica Pannone (b), Bruno Neri (a) *(a) Istituto Zooprofilattico Sperimentale del Lazio e della Toscana "M. Aleandri", Rome, Italy* *(b) Ospedale Pediatrico Bambino Gesù, Rome, Italy*
P17	**Development of a LC-MS/MS confirmatory method for the determination of 9 thyreostats in muscle and thyroid tissue using a Quechers approach** Simona Pellicciotti, Eros Bozzoni, Mara Gasparini, Valentina Gamba *Istituto Zooprofilattico Sperimentale della Lombardia e dell'Emilia Romagna B. Ubertini, Brescia, Italy*
P18	**Analysis of phytoestrogens by GC-MS/MS: study of the instrumental conditions and derivatization procedure** Barbara Benedetti, Marina Di Carro, Cristiana Mirasole, Emanuele Magi *Department of Chemistry and Industrial Chemistry, Università degli Studi, Genoa, Italy*

P19	**Determination of twenty-one cyanotoxins in Italian drinking water chain by LC-MS/MS analysis** Luca Lucentini, Emanuele Ferretti, Valentina Fuscoletti, Federica Nigro Di Gregorio, Enrico Veschetti *Department of Environment and Primary Prevention, Section of Inland Water Hygiene, Istituto Superiore di Sanità, Rome, Italy.*
P20	**Screening of preservatives by HPLC-PDA-ESI/MS: a focus on both allowed and recently forbidden compounds in the new EU cosmetics regulation** Raffaele Lecce (a), Luca Regazzoni (b), Carlo Mustazza (a) , Giampaolo Incarnato (a), Rita Porrà (a), Alessia Panusa (a) *(a) Department of Therapeutic Research and Medicines Evaluation, Istituto Superiore di Sanità, Rome, Italy* *(b) Department of Pharmaceutical Sciences, University of Milan, Milan, Italy*
P21	**Phytochemicals in fermented cereals typical of Sub-Saharan Africa and Tuscan tradition: identification by HPLC-ESI-MSn and time-of-flight mass spectrometry** Maria Bellumori (a), Marzia Innocenti (a), L. Pucci (b), V. Longo (b), P. Lionetti (c), M. Di Paola (c), Nadia Mulinacci (a) *(a) Department of NEUROFARBA, Division of Pharmaceutical and Nutraceutical Sciences, Università degli Studi, Sesto Fiorentino, Florence, Italy* *(b) Institute of Agricultural Biology and Biotechnology, Consiglio Nazionale delle Ricerche, Pisa, Italy* *(c) Department of NEUROFARBA, Section of Children's Health, Università degli Studi, Ospedale Pediatrico Meyer, Florence, Italy*
P22	**Antioxidant capacity of phenolic component of different cultivar of tunisian olive leaf extracts** Cinzia Benincasa (a), Hanen Essafi Rhouma (b), Mokhtar Zarrouk (b), Enzo Perri (a) *(a) Consiglio per la ricerca in agricoltura e l'analisi dell'economia agraria - Centro di ricerca per l'olivicoltura e l'industria olearia, C.da Li Rocchi, 87036, Rende (CS), Italy* *(b) Université Tunis El Manar, Faculté des sciences de Tunis, Centre de Biotechnologie de Borj Cedria, Laboratoire Caractérisation et Qualité de l'Huile d'Olive, BP 901, 2050 Hammam-Lif, Tunisia*
P23	**Is coffee silverskin actually a suitable source of either food supplements or additives? UPLC-PDA-ESI-TOF/MS metabolic profiling of aqueous extracts: natural antioxidants *vs* phytotoxins** Alessia Panusa (a), Antonio Zuorro (b), Roberto Lavecchia (b), Giancarlo Marrosu (c), Rita Petrucci (c) *(a) Department of Therapeutic Research and Medicines Evaluation, Istituto Superiore di Sanità, Rome, Italy (b) Department of Chemical Materials, Environmental Engineering, Sapienza University of Rome, Rome, Italy (c) Department of Basic and Applied Sciences for Engineering (SBAI), Sapienza University of Rome, Rome, Italy*
P24	**Characterization of different Tuscan honeys by HPLC-DAD-TOF-MS and HS-SPME-GC-MS to identify molecules responsible for anti-diabetic effect of honey** Lorenzo Cecchi (a), Paolo Paoli (b), Fabrizio Melani (a), Niccolò Francini (a), Luca Calamai (c), Nadia Mulinacci (a) *(a) Department of NEUROFARBA and Multidisciplinary Centre of Research on Food Science (MCRFS-Ce.R.A.), Università degli Studi, Florence, Italy* *(b) Department of Experimental and Clinical Biomedical Sciences, Università degli Studi, Florence, Italy* *(c) Department of Agriculture, Food and Environmental Science, Università degli Studi, Florence, Italy*

P25	**Regional features of northern Italian sparkling wines, identified using solid-phase micro extraction and comprehensive two-dimensional gas chromatography coupled with time-of-flight mass spectrometry** Silvia Carlin(a), Urska Vrhovsek(a), Pietro Franceschi(a), Cesare Lotti(a), Luana Bontempo(a), Federica Camin(a), David Toubiana(b), Fabio Zottele(a), Giambattista Toller(a), Aaron Fait(b), Fulvio Mattivi(a) (a)*Fondazione Edmund Mach (FEM), Via E. Mach 1, 38010 San Michele all'Adige, TN, Italy* (b)*The Jacob Blaustein Institutes for Desert Research, Ben-Gurion University of the Negev, Sede Boqer, Israel*
P26	**Multi-omic approach to understand resistance in grapevine against *Plasmopara viticola*** Giulia Chitarrini (a), Luca Zulini (a), Marco Stefanini (a), Alessandro Cestaro (a), Antonella Vecchione (a), Massimo Pindo (a), Gabriele Di Gaspero (b), Vladimir Shulaev (c) and Urska Vrhovsek (a) *(a) Research and Innovation Centre, Fondazione Edmund Mach (FEM), San Michele all'Adige, Italy)* *(b) Institute of Applied Genomics, Udine, Italy* *(c) Department of Biological Sciences, University of North Texas, Denton, TX 76203, USA*
P27	**Mass spectrometry-based metabolic screening of kale seeds and sprouts** Edoardo Cherubini (a, b), Lucia Giorgetti (c), Clara della Croce (c), Vincenzo Longo (c), Lorenza Bellani (c, d) *(a) Department of Biotechnology, Chemistry and Pharmacy, Università degli Studi, Siena, Italy* *(b) VisMederi Life Sciences srl, Siena, Italy* *(c) Institute of Agricultural Biology and Biotechnology, National Research Council (CNR), Pisa, Italy* *(d) Department of Life Sciences, Università degli Studi, Siena, Italy*
P28	**Metabolic fingerprinting of myrtle berries by LC-ESI-Orbitrap-MS: novel markers for discrimination of geographic origin** Gilda D'Urso (a), Giorgia Sarais (b), Carla Lai (b), Cosimo Pizza (a), Sonia Piacente (a), Paola Montoro (a) *(a) Department of Pharmacy, Università degli Studi di Salerno, Fisciano, Salerno, Italy* *(b)Department of Life and Environmental Sciences, Università degli Studi, Cagliari, Italy*
P29	**LC-ESI-LIT-Orbitrap-MS/MS based metabolomics in analysis of *Myrtus communis* L. leaves** Paola Montoro (a), Gilda D'Urso (a), Carla Lai (b), Cosimo Pizza (a), Sonia Piacente (a), Giorgia Sarais (b) *(a) Department of Pharmacy, University of Salerno, Fisciano (SA), Italy* *(b) Department of Life and Environmental Sciences, University of Cagliari, Cagliari, Italy*
P30	**Basil phenolic acids identification: MSPD extraction and UHPLC-MS/MS characterization** Marika Pellegrini (a), Maria Chiara Simeoni (a), Antonella Ricci (a), Manuel Sergi (a), Claudio Lo Sterzo (a), Carla Di Mattia (a). *(a) Faculty of Biosciences and Technologies for Agriculture, Food and Environment - University of Teramo*
P31	**Plant bioactive compounds: antioxidant activity and chemical characterization** Marika Pellegrini (a), Antonella Ricci (a), Marco Chiarini (a), Claudio Lo Sterzo (a). *(a) Faculty of Biosciences and Technologies for Agriculture, Food and Environment - University of Teramo*

P32	**Comparison of analytical techniques to produce data for multivariate analysis: the case study of *Arbutus unedo* antioxidant extracts with HPTLC and HR LC-MS** Mariateresa Maldini (a), Gilda D'Urso (b), Giordana Pagliuca (c), Giacomo L. Petretto (a), Marzia Foddai (a), Francesca Romana Gallo (c), Giuseppina Multari (c), Donatella Caruso (d), Paola Montoro (b), Giorgio Pintore (a) *(a) Department of Chemistry and Pharmacy, University of Sassari, Sassari, Italy* *(b) Department of Pharmacy, Università degli Studi di Salerno, Fisciano (SA), Italy* *(c) Department of Therapeutic Research and Medicines Evaluation, Istituto Superiore di Sanità, Rome, Italy.* *(d) Department of Pharmacological and Biomolecular Sciences, University of Milan, Italy*
P33	**Isotopic pattern analysis applied to MS-based labelling experiments in metabolomics** Ruggero Ferrazza (a,b,c), Julian L Griffin (c,d), Graziano Guella (a), Pietro Franceschi (e) *(a) Bioorganic Chemistry Laboratory, Department of Physics, Università degli Studi, Povo, Trento, Italy* *(b) Centre for Integrative Biology (CIBIO), Università degli Studi, Povo, Trento, Italy* *(c) Department of Biochemistry, University of Cambridge, Cambridge, United Kingdom* *(d) Medical Research Council (MRC) Human Nutrition Research (HNR), Cambridge, United Kingdom* *(e) Edmund Mach Foundation, Research and Innovation Centre, Biostatistics and Data Management, San Michele All'Adige, Trento, Italy*
P34	**In silico prediction of 4,4'-DMAR metabolism and in vivo confirmation in rats by high resolution mass spectrometry** Alice Passoni (a), Jacopo Lucchetti (b), Claudio M. Marzo (c), Luigi Cervo (c), Marco Gobbi (b), Renzo Bagnati (a) (a) *Department of Environmental Health Sciences* (b) *Department of Biochemistry and Molecular Pharmacology* (c) *Department of Neuroscience IRCCS - Istituto di Ricerche Farmacologiche Mario Negri, Milan, Italy*
P35	**A new high-performance liquid chromatography–tandem mass spectrometry method for the determination of paclitaxel and 6α-hydroxy-Paclitaxel in human plasma: development, validation and application in a clinical pharmacokinetic study** Luciana Giodini, Bianca Posocco, Andrea Follegot, Mauro Buzzo, Elena Marangon, Giuseppe Toffoli *Experimental and Clinical Pharmacology, CRO - National Cancer Institute, Aviano, Pordenone, Italy*
P36	**Combining mass spectrometry and pull-down techniques to identify molecular targets of an antimicrobial peptide active towards gram-negative bacteria** Angela Giovannelli (a), Daniela Delfino (a), Valeria Marzano (a) Massimo Castagnola (a,b) Irene Messana (b) Tecla Ciociola (c) Stefania Conti (c) Alberto Vitali (b) *(a) Biochemistry and Clinical Biochemistry Institute, Catholic University of Rome, Rome, Italy* *(b) Institute of Chemistry of the Molecular Recognition, National Research Council (CNR), Rome, Italy* *(c) Department of Biomedical, Biotechnological and Translational Sciences, Microbiology and Virology Unit, University of Parma, Parma, Italy*
P37	**Salivary proteomic analysis in the evaluation of the efficacy of *Lactobacillus brevis* CD2 lozenges in preventing oral mucositis by high-dose chemotherapy with autologous hematopoietic stem cell transplantation** Federica Iavarone (a), Federica Marini (a), Sabrina Giammarco (b), Elisabetta Metafuni (b), Simona Sica (b), Alessia Di Giovanni (b), Patrizia Chiusolo (b), Massimo Castagnola (a,c) *(a) Biochemistry and Clinical Biochemistry Institute, Catholic University of Rome, Rome, Italy* *(b) Institute of Hematology, Catholic University of Rome, Rome, Italy* *(c) Institute of Chemistry of the Molecular Recognition, National Research Council (CNR), Rome, Italy*

P38	**Top-down/bottom-up LC-MS integrated proteomic platforms for molecular fingerprinting of adamantinomatous craniopharyngioma pediatric brain tumor** Claudia Martelli (a), Ilaria Inserra (a), Riccardo Serra (b), Federica Iavarone (a), Federica Vincenzoni (a), Luca Massimi (b), Luca D'Angelo (a), Gianpiero Tamburrini (b), Massimo Caldarelli (b), Massimo Castagnola (a,c), Claudia Desiderio (c) *(a) Biochemistry and Clinical Biochemistry Institute, Catholic University of Rome, Rome, Italy* *(b)Unità Operativa Complessa di Neurochirurgia Infantile, Fondazione Policlinico Universitario "A. Gemelli", Rome, Italy* *(c) Institute of Chemistry of the Molecular Recognition, National Research Council (CNR), Rome, Italy*
P39	**Proteomic analysis of CNF1 impurities by nanoflow liquid-chromatography coupled with an Orbitrap-mass spectrometer** Alessia Panusa (a), Luca Regazzoni (b), Marco Guidotti (c), Alessia Fabbri (a), Marina Carini (b), Carla Fiorentini (a) *(a) Department of Therapeutic Research and Medicines Evaluation, Istituto Superiore di Sanità, Rome, Italy* *(b) Department of Pharmaceutical Sciences, University of Milan, Milan, Italy* *(c) Department of Food Safety and Veterinary Public Health, Istituto Superiore di Sanità, Rome, Italy*
P40	**New LC-MS/MS method for the determination of methylmalonic acid (MMA) in dried blood spot** Silvia Santagata (a), Emanuele Di Carlo (b), Antonio Angeloni (b), Claudia Carducci (a) *(a) Department of Experimental Medicine, Sapienza University of Rome, Rome, Italy* *(b) Department of Molecular Medicine, Sapienza University of Rome, Rome, Italy*
P41	**Role of endogenous fatty acid synthesis in peripheral nerve structure and function** Roberto Spezzano (a), Gaia Cermenati (a), Matteo Audano (a), Silvia Giatti (a), Maurizio D'Antonio (b), Emma De Fabiani (a), Maurizio Crestani (a), Enrique Saez (c), Iñigo Azcoitia (d), Guido Cavaletti (e), Luis Miguel Garcia-Segura (f), Roberto C. Melcangi (a), Nico Mitro (a), Donatella Caruso (a) *(a) Dipartimento di Scienze Farmacologiche e Biomolecolari, Università degli Studi di Milano, Milano, Italy.* *(b) Division of Genetics and Cell Biology, IRCCS San Raffaele Scientific Institute, Milano, Italy.* *(c) Department of Chemical Physiology, The Scripps Research Institute, La Jolla, USA.* *(d) Departamento de Biología Celular, Facultad de Biología, Universidad Complutense de Madrid, Madrid, Spain.* *(e) Experimental Neurology Unit, Department of Surgery and Translational Medicine, Università degli Studi Milano-Bicocca, Monza, Italy.* *(f) Instituto Cajal, C.S.I.C., Madrid, Spain.*
P42	**Histology-directed hydrogel mediated on-tissue quantitative proteomics** Domenico Taverna (a), Chiara Mignogna (b), Caterina Gabriele (a), Gianluca Santise (c), Giuseppe Donato (b), Giovanni Cuda (a) and Marco Gaspari (a) *(a) Research Center for Advanced Biochemistry and Molecular Biology, Department of Experimental and Clinical Medicine, Magna Graecia University of Catanzaro, Italy* *(b) Department of Health Science, Magna Graecia University of Catanzaro, Italy* *(c) Cardiothoracic Surgery Unit, Sant'Anna Hospital, Via Pio X, 111, Catanzaro, Italy*
P43	**Natural and modified bacteriochlorophylls: from preparation to MALDI-TOF/TOF mass spectra interpretation** T. R. I. Cataldi (a,b), G. Ventura (a), C. D. Calvano (a,b), M. Trotta(c), F. Palmisano (a,b) *(a) Centro Interdipartimentale SMART,* *(b) Dipartimento di Chimica, Università degli Studi di Bari Aldo Moro, Bari, Italy* *(c) National Research Council (CNR), Istituto per i Processi Chimico-Fisici, Bari, Italy*

P44	**Distinction between Cyanidin 3-O-glucoside and Cyanidin 3-O-galactoside by mass spectrometry combined with IRMPD spectroscopy** Davide Corinti, Maria Elisa Crestoni, Simonetta Fornarini and Barbara Chiavarino *Dipartimento di Chimica e Tecnologia del Farmaco, Sapienza Università di Roma, Rome, Italy*
P45	**Synthesis and MALDI MS/MS characterization of a *cis*-diaminocyclohexyl Pt(II)-vitamin B_{12} complex potentially useful for targeted drug delivering** G. Ventura1, C. D. Calvano1,2, F. Greco1, S. Granafei1, I. Losito1,2, F. Arnesano1,2, F. Palmisano1,2, T. R. I. Cataldi1,2 *1Dipartimento di Chimica, 2Centro Interdipartimentale SMART, Università degli Studi di Bari Aldo Moro, Bari, Italy*
P46	**Gas phase basicity and proton affinity of Vitamin C** Andreina Ricci (a), Federico Pepi (b), Paola Cimino (c), Anna Troiani (b), Stefania Garzoli (b), Chiara Salvitti (b), Brunella Di Rienzo (c), Vincenzo Barone (d) *(a) Department of Math and Phys, Second University of Naples, Caserta, Italy* *(b) Department of Chemistry and Technology of Drugs, Sapienza University of Rome, Rome, Italy* *(c) Department of Pharmaceutical Science, University of Salerno, Fisciano (SA), Italy* *(d) Scuola Normale Superiore, Pisa, Italy*
P47	**Galactosamine in the gas phase. Unveiling features of the conformers existing in a mixture of the interconverting anomers** Caterina Fraschetti (a), Laura Guarcini (a), Costantino Zazza (a), Luisa Mannina (a), Antonello Filippi (a) *(a) Dipartimento di Chimica e Tecnologie Farmaceutiche, Sapienza-Università di Roma, p.le Aldo Moro 5, 00185, Roma*
P48	**Mass spectrometry dissects the role of disulfide bonds in protein structure and function** Marialuisa Casella (a), Marco Crescenzi (a) , Egidio Iorio (a), Alessio Metere (a), Maurizio Minetti (a), Marialetizia Motta (b), Donatella Pietraforte (a), Rosa Salvioli (b), Giuseppe Scorza (a), Marco Tartaglia (b), Massimo Tatti (b), Paola Torreri (c), Serena Camerini (a) *(a) Department of Cell Biology and Neurosciences, Istituto Superiore di Sanità, Rome, Italy* *(b) Department of Haematology, Oncology and Molecular Medicine, Istituto Superiore di Sanità, Rome, Italy* *(c) National Center for Rare Diseases, Istituto Superiore di Sanità, Rome, Italy*
P49	**Resolving mixtures of isobaric compounds using energy resolved MS/MS experiments and the LEDA post-processing algorithm tool** Marta Menicatti (a), Luca Guandalini (a), Silvia Dei (a), Elisa Floriddia (a), Elisabetta Teodori (a), Pietro Traldi (b), Gianluca Bartolucci (a) *(a) NEUROFARBA - Department of Neurosciences, Psychology, Drug Research and Child Health, Section of Pharmaceutical and Nutraceutical Sciences,University of Florence, Via U. Schiff, 6 50019 Sesto Fiorentino (FI), Italy* *(b) Istituto di Ricerca Pediatrica Città della Speranza, Corso Stati Uniti 4, 35100 Padova, Italy*
P50	**Evaluation of the possible effects of synthetic isoflavonoids on the activity of CYP19: implication in anti-doping analysis** Michele Iannone (a,b), Francesco Botrè (b,c), Nicoletta Cardillo (b), Xavier de la Torre (b). *(a) Department of Chemistry and Technology of Drug, Sapienza Università di Roma, Rome, Italy* *(b) Antidoping Laboratory, Federazione Medico Sportiva Italiana, Rome, Italy* *(c) Department of Experimental Medicine, Sapienza Università di Roma, Rome, Italy*

P51	**Evaluation of pharmacokinetic profile of the "new psychoactive substance" AH-7921 and analysis of its *in vivo* metabolism, by high resolution mass spectrometry** Jacopo Lucchetti (a), Alice Passoni (b), Claudio M. Marzo (c), Luigi Cervo (c), Renzo Bagnati (b), Marco Gobbi (a) *(a) Department of Biochemistry and Molecular Pharmacology* *(b) Department of Environmental Health Sciences* *(c) Department of Neuroscience IRCCS Istituto di Ricerche Farmacologiche Mario Negri, Milan, Italy*
P52	**Multi-class analysis of new psychoactive substances and metabolites in hair by pressurized liquid extraction coupled to HPLC-HRMS** Carla Montesano (a), Gabriele Vannutelli (a), Adolfo Gregori (b), Luigi Ripani (b), Dario Compagnone (c), Manuel Sergi (c), Roberta Curini (a) *(a) Department of Chemistry, Sapienza University of Rome, Rome, Italy* *(b) Department of Scientific Investigation (RIS-ROMA), Carabinieri, Rome, Italy* *(c) Faculty of Bioscience and Technology for Food, Agriculture and Enviroment, University of Teramo, Teramo, Italy*
P53	**Screening of novel psychoactive substances in plasma by LC-HRMS and post-run library matching** Gabriele Vannutelli (a), Camilla Montesano (a), Adolfo Gregori (b), Luigi Ripani (b), Dario Compagnone (c), Manuel Sergi (c), Roberta Curini (a) *(a) Department of Chemistry, Sapienza University of Rome, Rome, Italy* *(b) Department of Scientific Investigation (RIS-ROMA), Carabinieri, Rome, Italy* *(c) Faculty of Bioscience and Technology for Food, Agriculture and Enviroment, University of Teramo, Teramo, Italy*
P54	**Effects of different zeolite amendments on soil microbial biomass** Giacomo Ferretti (a), Katharina Maria Keiblinger (b), Claudio Natali (a), Dario Di Giuseppe (a), Barbara Faccini (a), Nicolò Colombani (c), Gianluca Bianchini (a), Sophie Zechmeister-Boltenstern (b), Massimo Coltorti (a), Axel Mentler (b), Micòl Mastrocicco (d) *(a) Department of Physics and Earth Sciences, Università degli Studi, Ferrara, Italy* *(b) Department of Forest and Soil Sciences, Institute of Soil Research, University of Natural Resources and Life Sciences (BOKU), Vienna, Austria.* *(c) Department of Earth Sciences, Sapienza Università di Roma, Rome, Italy.* *(d) Department of Environmental, Biological and Pharmaceutical Sciences and Technologies. Seconda Università di Napoli, Caserta, Italy*
P55	**Mercury speciation: HPLC-ICP-MS method validation and preliminary results** Francesco Griffoni, Francesca Marchegiani, Paolo Palombo, Arianna Piersanti *Istituto Zooprofilattico Sperimentale dell'Umbria e delle Marche, Perugia, Italy*