10° MS-Pharmaday
Bioindustry Park, Colleretto Giacosa (TO)
24-26 October, 2018

SCIENTIFIC PROGRAMME
The 10th MS Pharmaday
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14:00 – 14:30 Registration and reception

14:30 Welcome addresses

15:00 – 15:45 PL1 - GASTONE GARZIERA, OLIVETTI, “SVILUPPO PROGRAMMA 101”

15:45 1st Session
NATURAL SUBSTANCES
Chairs: Gianluca Giorgi (Università di Siena), Fulvio Ferretti (Bracco)

15:45 – 16:30 PL2 - UNTARGETED PROFILING, TARGETED ANALYSIS OR UNKNOWN COMPOUNDS DISCOVERY? NEW FRONTIERS OF MASS SPECTROMETRY IN NATURAL PRODUCTS ANALYSIS.
P. Montoro
1 Department of Pharmacy, University of Salerno

16:30 – 16:45 OR1 - CHARACTERIZATION OF VACCINIUM MACROCARPON COMPONENTS AND METABOLITES IN HUMAN URINE AND EVALUATION OF THE URINE EX-VIVO EFFECT ON CANDIDA ALBICANS ADHESION
G. Baron1, A. Altomare1, L. Regazzoni2, E. Borghi2, F. Borgo2, E. Ottaviano2, P. Allegri1, P. Morazzoni2, A. Riva3, L. Arnoldi3, M. Carini1, G. Aldini1
1 Department of Pharmaceutical Sciences, Università degli Studi di Milano
2 Department of Health Sciences, Università degli Studi di Milano
3 Indena S.p.A.

16:45 – 17:00 OR2 - MEDICAL CANNABIS: EVALUATION OF THE VARIABILITY IN THC AND CBD CONCENTRATION IN OLIVE OIL PREPARATIONS AND NEW OPPORTUNITIES FOR INDUSTRIAL HEMP IN ITALY
I. Zedda1; M. Simiele1; A. D’Avolio1,2
1 Accademic Spin off CoQua Lab s.r.l, Turin, Italy;
2 Laboratory of Clinical Pharmacology and Pharmacogenetics; Department of Medical Sciences, University of Turin, Amedeo di Savoia Hospital, Turin, Italy;

17:00 – 17:15 OR3 - INTACT, SUBUNIT AND PEPTIDE ANALYSIS OF BIOPHARMACEUTICALS
D. Muñoz
Thermo Fisher Scientific, Dreieich, Germany
17:15 – 17:30 **OR5 - METABOLOMICS OF TANNINS BY LC-HRMS PRECURSOR ION-TYPE APPROACH**

*M. Burico¹, G. Fodaroni², S. Tamimi¹, S. Bedont⁴, E. Flamini³, C. Ancillotti³, C.M. Quintiero³, P. Traldi², L. Mattoli³*

¹Ricerca Fitochimica, Aboca SpA, Italy,  
²Institute for Pediatric Research, City of Hope, Padova, Italy

17:30 – 17:45 **OR6 - DETERMINATION OF PYRROLIZIDINE ALKALOIDS IN PLANT MATERIAL USING ON-LINE SPE COUPLED TO UHPLC-MS/MS**

*C. Ghilardi*

Shimadzu Italy

18:00 *Welcome Cocktail*
<table>
<thead>
<tr>
<th>Time</th>
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<th>Title</th>
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<tr>
<td>9:00</td>
<td>2nd</td>
<td><strong>METABOLOMICS AND BIOMARKERS</strong></td>
<td><strong>Chairs:</strong> Donatella Caruso (Università degli Studi di Milano), Luisa Mattoli (Aboca)</td>
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<td>9:00 – 9:45</td>
<td>PL3</td>
<td><strong>METABOLOMIC APPROACH TO VALIDATE A NOVEL MITOCHONDRIAL REGULATOR</strong></td>
<td>N. Mitro, M. Audano, S. Pedretti, M. Crestani, E. De Fabiani and D. Caruso</td>
<td>Department of Pharmacological and Biomolecular Sciences (DiSFeB), Università degli Studi di Milano, Italy.</td>
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<tr>
<td>9:45 – 10:05</td>
<td>KN1</td>
<td><strong>NON-INVASIVE ANALYSIS OF ANCIENT OBJECTS THROUGH MASS SPECTROMETRY</strong></td>
<td>M. Manfredi, E. Barberis, E. Marengo</td>
<td>Department of Sciences and Technological Innovation, University of Piemonte Orientale, Alessandria, Italy</td>
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<td>10:05 – 10:20</td>
<td>OR7</td>
<td><strong>ANALYSIS OF HYDROXY-COCAINE METABOLITES AS EVIDENCE OF COCAINE CONSUMPTION: IDENTIFICATION BY PARENT ION SEARCH AND QUANTITATION BY LIQUID CHROMATOGRAPHY-TANDEM MASS SPECTROMETRY IN HAIR SAMPLE</strong></td>
<td>M. Minoli, S. Casati, I. Angeli, A. Ravelli, P. Rota, P. Allevi, M. Orioli</td>
<td>Laboratory of Forensic Toxicology, Department of Biomedical, Surgical and Dental Science, Università degli Studi di Milano.</td>
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<td>10:20 – 10:35</td>
<td>OR8</td>
<td><strong>ADME INVESTIGATION IN DEVELOPMENT OF NOVEL TRIAZOLE-BASED INHIBITORS OF NICOTINAMIDE PHOSPHORIBOSYLTRANSFERASE (NAMPT)</strong></td>
<td>S. Aprile, C. Travelli, E. Del Grosso, A.A. Genazzani, G.C. Tron, G. Grosa, U. Galli</td>
<td>Department of Pharmaceutical Sciences - Università del Piemonte Orientale, Novara, Italy</td>
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<td>11:30 – 12:00</td>
<td>OR9</td>
<td><strong>IDENTIFICATION AND ABSOLUTE QUANTIFICATION OF INDIVIDUAL HOST CELL PROTEINS (HCP’S) USING SWATH MASS SPECTROMETRY.</strong></td>
<td>T. Kofoed</td>
<td>Alphalyse A/S, Odense, Denmark</td>
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<td>11:30</td>
<td>3rd</td>
<td><strong>MS SUPPORT TO DRUG RESEARCH AND DEVELOPMENT</strong></td>
<td><strong>Chairs:</strong> Giancarlo Aldini (Università degli Studi di Milano), Barbara Valsasina (Nerviano Medical Sciences)</td>
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<td>11:30 – 11:45</td>
<td>OR10</td>
<td><strong>QUANTIFICATION OF AP4 AND OTHER ANALYTES RELATED TO NICOTINAMIDE PHOSPHORIBOSYLTRANSFERASE (NAMPT) IN MELANOMA CELLS AND MOUSE PLASMA BY LC-ESI-MS^n</strong></td>
<td>M. Bianchi², A.A. Grolla¹, G. Orsomando², S. Aprile¹, G. Grosa¹, E. Del Grosso¹</td>
<td>Department of Pharmaceutical Sciences, Università del Piemonte Orientale, Novara, Italy; Department of Clinical Sciences, Section of Biochemistry, Polytechnic University of Marche, Ancona, Italy.</td>
<td>University del Piemonte Orientale, Novara, Italy; Polytechnic University of Marche, Ancona, Italy.</td>
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12:00 – 12:15 **OR11 - A LC-MS METHOD FOR THE DETERMINATION OF ACTIVITY AND INHIBITION OF ANOPHELES GAMBIAE 3-HYDROXYKYNURENINE TRANSAMINASE**  
*R. Canavesi, R. Miggiano, U. Galli, F. Rossi, E. Del Grosso*  
Department of Pharmaceutical Sciences, Università del Piemonte Orientale, Largo Donegani 2, 28100 Novara, Italy.

12:15 – 12:30 **OR12 - MEGLUMINE IMPURITY PROFILING BY HIGH PERFORMANCE LIQUID CHROMATOGRAPHY - MASS SPECTROMETRY**  
*F. Ferretti*  
Bracco Imaging S.p.A., Bracco Research Center, Colleretto Giacosa (TO), Italy

12:30 – 12:45 **OR13 - A STABLE CARnosine DERIVATIVE CONFIRMS THE MECHANISM OF ACTION OF HISTIDINE DIPEPTIDES AS CARBONYL STRESS MITIGATORS**  
*E. Gilardoni, G. Vistoli, M. Carini, G. Aldini, L. Regazzoni*  
Department of Pharmaceutical Science, Università degli Studi di Milano, Italy

12:45 – 13:00 **OR14 - COMPREHENSIVE TWO DIMENSIONAL LIQUID CHROMATOGRAPHY COUPLED TO TANDEM MASS SPECTROMETRY (LC × LC-MS/MS) FOR THE CHARACTERIZATION OF COMPLEX NUTRACEUTICAL MATRICES**  
*Eduardo Sommella, Emanuela Salviati, Etto Novellino, Pietro Campiglia*  
1Department of Pharmacy, University of Salerno, Fisciano, SA, Italy  
2PhD Program in Drug Discovery and Development, University of Salerno, Fisciano, SA, Italy  
3Department of Pharmacy, University of Naples Federico II, Naples, Italy

13:00 – 13:15 **OR15 - A HPLC-ESI-MS/MS APPROACH FOR EVALUATION OF QUERCETIN GLYCOsIDES AS NUTRACEUTICALS FOR HEATH USE IN SUN-DRIED PEPERONE DISISE FRUIT (CAPSICUM ANNUUM L.)**  
1Scuola di Ingegneria, 2Dipartimento di Scienze, 3Scuola di Scienze Agrarie Forestali Alimentari e Ambientali, Università degli Studi della Basilicata, Potenza, Italy. 4Dipartimento di Chimica, Università degli studi di Bari Aldo Moro, Bari, Italy

13:45 – 14:30 *Lunch break*
**SHOTGUN POSTER PRESENTATION**

**PO1 - DEVELOPMENT OF A LC-MS/MS CONFIRMATORY METHOD FOR THE DETECTION OF TETRACYCLINES IN PAPS.**

Sara Morello¹, Giuseppina Amato¹, Marta Leporati¹, Luciano Ceppa¹, Marilena Gili², Daniela Marchis¹

¹ Istituto Zooprofilattico Sperimentale del Piemonte, Liguria e Valle d’Aosta Italian National Reference Laboratory of animal proteins in feed

**PO2 - SINGLE-USE BIOBAG EXTRACTABLE ANALYSIS USING UHPLC-HRMS**

Igor Fochi¹; Kate Comstock¹; Colin Barry²

¹ Thermo Fisher Scientific, San Jose, CA, USA
² Alliance Pharma, Malvern, PA, USA

**PO3 - PROGRESS IN CLINICAL APPLICATIONS FOR THE MALDI-IMAGING ANALYSIS OF THYROID BIOPSIES: EVALUATION OF PROTEOMIC STABILITY IN PRESERVATIVE SOLUTIONS**

Isabella Piga¹², Giulia Capitoli³, Silvia Tettamanti³, Vanna Denti¹, Andrew Smith¹, Clizia Chinello¹, Martina Stella¹, Davide Lent¹, Mattia Garancini³, Stefania Galimberti³, Fulvio Magni³ and Fabio Pagni²

¹ Department of Medicine and Surgery, University of Milano-Bicocca, Clinical Proteomics and Metabolomics Unit, Vedano al Lambro, Italy
² Department of Medicine and Surgery, University of Milano-Bicocca, Section of Pathology, Monza, Italy
³ Department of Medicine and Surgery, University of Milano-Bicocca, Centre of Biostatistics for Clinical Epidemiology, Monza, Italy

**PO4 - SIMULTANEOUS DETERMINATION OF NATURAL STEROIDS RESIDUES IN BLOOD SERUM BY LC-MS/MS**

G.L. Ferro³, E. Torres¹, A. Veronesi¹, F. Ostorero¹, M. Leporati¹, D. Marchis³, M. Gili¹

¹ Istituto Zooprofiliattico Sperimentale del Piemonte, Liguria e Valle d’Aosta Italian National Reference Laboratory of animal proteins in feed

**PO5 - DIRECT INFUSION FT-ICR BASED METABOLIC PROFILE OF HAIR FOLLICLES TREATED WITH ANNURCA APPLE EXTRACT REVEALS INCREASED KERATINE PRODUCTION THROUGH INHIBITION OF PENTOSE PHOSPHATE PATHWAY AND AMINO ACID OXIDATION**

E. Salvati¹², E. Sommella¹, N. Badolati³, M. Stornaiuolo³, E. Novellino³, P. Campiglia¹

¹ Department of Pharmacy, University of Salerno
² PhD Program in Drug Discovery and Development, University of Salerno
³ Department of Pharmacy, University of Naples Federico II
**4th Session**  
**PROTEOMICS IN PHARMACEUTICALS I**  
*Chair: Giuliana Bianco (Università della Basilicata), Federico Riccardi Sirtori (Merck)*

**15:00 – 15:45**  
**PL4 - MASS SPECTROMETRY APPLICATIONS IN THE BIOTHERAPEUTIC FIELD: THE ANTIBODY DRUG CONJUGATES (ADCS) CASE STUDY**  
*B. Valsasina*  
Nerviano Medical Sciences, Nerviano (MI), Italy

**15:45 – 16:00**  
**OR16 - DEVELOPMENT OF SHORT-BED TRYPsin-REACTORS FOR THE AUTOMATED AND HIGH EFFICIENT PROTEIN DIGESTION AND ANALYSIS**  
*M. Naldi*, *U. Černigoj*, *A. Štrancar*, *M. Bartolini*  
1Department of Pharmacy and Biotechnology, Alma Mater Studiorum - University of Bologna, Italy.  
2Center for Applied Biomedical Research (C.R.B.A.), S. Orsola-Malpighi Hospital, Bologna, Italy.  
3Bia Separations d.o.o., Mirce 21, 5270 Ajdovščina, Slovenia.

**16:00 – 16:15**  
**OR17 - MALDI-TOF MS AS A QUALITY CONTROL TEST TO CLASSIFY PLATELET DERIVED MEDIUM ADDITIVES FOR CELL EXPANSION PROCEDURES**  
*F. Agostini*, *M. Ruzza*, *D. Corpillo*, *L. Biondi*, *E. Acquadro*, *B. Canepa*, *A. Viale*, *M. Battiston*, *F. Serra*, *S. Aime*, *M. Mazzucato*  
1Stem Cell Unit, Department of Translational Research, CRO Aviano National Cancer Institute, Aviano (PN), Italy.  
2GEMFORLAB Srl, Colleretto Giacosa (TO), Italy.  
3BRACCO Imaging Italia Srl, Milano, Italy.  
4Molecular Imaging Center, Department of Molecular Biotechnologies & Health Sciences, University of Torino, Torino, Italy,  
5Clinical and Experimental Onco-Hematology Unit, Department of Translational Research, CRO Aviano National Cancer Institute, Aviano (PN), Italy

**16:15 – 16:30**  
**OR18 - MULTIMODAL MALDI-MSI AND NLC-MS/MS OF N-GLYCANS AND PROTEINS**  
*M. Stella*, *I. Piga*, *A. Smith*, *M. Grasso*, *G. Bovo*, *B. Heijs*, *F. Magni*  
1University of Milano-Bicocca, Dept. of Medicine and Surgery, Proteomics and Metabolomics Unit, Monza, Italy  
2Urology Unit, San Gerardo Hospital, Monza, Italy  
3Pathology Unit, Vimercate Hospital, Vimercate, Italy  
4Leiden University Medical Center, Center for Proteomics and Metabolomic, Leiden, The Netherlands

**16:30 – 16:45**  
**OR19 - BIOPHARMA COMPASS SOFTWARE: FOR CHARACTERIZATION OF BIOPHARMACEUTICALS WITH QTOFS AND MALDI-TOFS**  
*D. Suckau*  
Bruker Daltonics, Bremen (Germany)

**16:45 – 17:05**  
**KN02 - BIOPHARMACEUTICALS CHARACTERIZATION: HOW TO COMPOSE THE IDENTITY CARD OF PROTEINS**  
*M. Melchiorre*, *A. Palme*, *M. Rossi*  
1Structural Characterization Lab., Protein Chemistry Dept., Merck, Guidonia Montecelio (Rome), Italy  
2Dept. Head Protein Chemistry, Merck, Guidonia Montecelio (Rome), Italy
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<tr>
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<tr>
<td>17:15</td>
<td><strong>Bus to Ivrea Center</strong></td>
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<td>18:00</td>
<td><strong>Guided Tour “Via Jervis e l’Architettura Olivettiana” Marco Peroni</strong></td>
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<td>21:00</td>
<td><strong>Social Dinner, Castello di Pavone</strong></td>
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**Friday, October 26th, 2018**

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<tr>
<th>Time</th>
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<tr>
<td>9:00</td>
<td>5th Session PROTEOMICS IN PHARMACEUTICALS II</td>
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<td><strong>Chairs:</strong> Fulvio Magni (Università di Milano-Bicocca), Simona Riva (Merck)**</td>
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<td>9:00 – 9:45</td>
<td><strong>PL05 - STRUCTURAL MASS SPECTROMETRY IN VACCINE DEVELOPMENT</strong></td>
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<td>N. Norais(^1)</td>
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<td>GSK Vaccines, Siena, Italy</td>
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<td>9:45 – 10:00</td>
<td><strong>OR20 - FUNCTIONAL QUANTITATIVE PROTEOMICS: APPLICATIONS IN MEDICINAL CHEMISTRY</strong></td>
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<td>A. D’Amato, M. Carini, G. Aldini</td>
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<td>Pharmaceutical Department, Università degli Studi di Milano, Italy.</td>
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<td>10:00 – 10:15</td>
<td><strong>OR21 - INTEGRATED LC-HRMS WORKFLOWS FOR MAB CHARACTERIZATION AND MONITORING</strong></td>
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<td>A. Rudella</td>
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<td>Waters, Italy</td>
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<td>10:15 – 10:30</td>
<td><strong>OR22 - IN-DEPTH CHARACTERIZATION OF A BIOPHARMACEUTICAL GLYCOSYLATION PROFILE BY ADVANCED MASS SPECTROMETRY AND ENZYMATIC APPROACHES</strong></td>
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<td>M. Sassi(^1), A. Capolupo(^1), E. Galano(^1), N. Sepe(^1), A. Palmese(^1), M. Rossi(^2)</td>
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<td>(^1)Structural Characterization Lab., Protein Chemistry Dept., Merck, Guidonia Montecelio (Rome), Italy</td>
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<td>(^2)Dept. Head Protein Chemistry, Merck, Guidonia Montecelio (Rome), Italy</td>
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<td>10:30 – 10:45</td>
<td><strong>OR23 - VC1-PULL-DOWN ASSAY AS A TOOL FOR THE IDENTIFICATION AND CHARACTERIZATION OF MOLECULAR INTERACTORS OF THE RECEPTOR FOR ADVANCED GLYCATION END PRODUCTS</strong></td>
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<td>G. Degani(^1), M. Mol(^2), G. Vistoli(^2), A. Raucci(^2), M. Carini(^2), L. Popolo(^1), G. Aldini(^2), A. Altomare(^2)</td>
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<td>(^1)Department of Biosciences, Università degli Studi di Milano, Italy</td>
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<td>(^2)Department of Pharmaceutical Sciences, Università degli Studi di Milano, Italy</td>
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<td>(^3)Unit of Cardiovascular Regeneration and Aging, Centro Cardiologico Monzino-IRCCS, Milan, Italy</td>
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<td>10:45 – 11:15</td>
<td><strong>Coffee break</strong></td>
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<td>11:15 – 11:30</td>
<td><strong>OR24 - DEVELOPMENT OF A HYBRID LC-MS/MS METHOD FOR THE QUANTIFICATION OF ANTIBODY-CONJUGATED PAYLOAD IN IN-VIVO AND IN-VITRO ADC SAMPLES</strong></td>
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<td>I. De Salve(^1), F. Riccardi Sirtori(^2), E. Bertotti(^2), A. Ariaudo(^2), F. Molinaro(^1), R. Mastroianni(^2), L. Barbero(^1), S. Kumar(^2), S. Riva(^2), T. Goletz(^2)</td>
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<td>QPD – NBE Drug Disposition:</td>
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<td>(^1)Merck RBM S.p.A. Ivrea, Italy,</td>
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<td>(^2)EMD Serono Research and Development Institute, Inc., Billerica, MA. (USA)</td>
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11:30 – 11:45  OR25 - A MULTI-METHODOLOGICAL APPROACH FOR THE INVESTIGATION OF B-AMYLOID-CORMS INTERACTION: AN LC-ESI/MS AND CIRCULAR DICHROISM STUDY.

A. De Simone1; M. Naldi2;3; D. Tedesco2; M. Bartolini2; V. Andrisano1

1Department for Life Quality Studies, Alma Mater Studiorum-University of Bologna, Rimini, Italy
2Department of Pharmacy and Biotechnology, Alma Mater Studiorum-University of Bologna, Italy
3Center for Applied Biomedical Research (C.R.B.A.), S. Orsola-Malpighi Hospital, Bologna, Italy

11:45 – 12:30  PL6 - CLOSING LECTURE: DATA INTEGRITY ASPECTS IN A GLP/GCP BIOANALYTICAL ENVIRONMENT

Marco Michi

Aptuit, an Evotec Company, Verona, Italy

12:30  Concluding remarks