

**22nd May 2022**

14:00-15:00

**ZP Bio-sensing Technology Workshop**

The workshop will cover voltammetric biosensors, amperometric biosensors, potentiometric biosensors and impedance biosensors.

The workshop will draw upon the industrial experience of ZP and so will strongly focus on practical biosensing rather than theoretical biosensing.

15:00-17:00

**Registration**

Tramuntana Foyer

08:00-09:00

## Registration

Tramuntana Foyer

09:00-09:15

## Introduction and Welcome

Tramuntana 2&3

09:15-10:40

## Session 1: Novel Biomarkers and bioreceptors

Tramuntana 2&3

Session Chair: Richard Luxton

### 09:15-10:00 [KN01]

#### Biosensors for intensive care

[Mervyn Singer](#)

*University College London, UK*

### 10:00-10:20 [O02]

#### Point-of-care SPR sensor for circulating biomarker p53 using specific plastic antibodies

[Muqsit Pirzada](#)<sup>1</sup>, Michelle Buchholz<sup>1</sup>, Tillmann Utesch<sup>2</sup>, Sunil Choudhary<sup>1</sup>, Zeynep Altintas<sup>1</sup>

<sup>1</sup>Technical University of Berlin, Berlin, Germany. <sup>2</sup>Leibniz Research Institute for Molecular Pharmacology, Berlin, Germany

### 10:20-10:40 [O03]

#### Novel bioreceptors for the detection of marine biotoxins

[Hugo Cunha-Silva](#), Amaia Ereño Artabe, Alejandro Barranco

*AZTI, Food Research, Basque Research and Technology Alliance (BRTA). Parque Tecnológico de Bizkaia, Astondo Bidea, Edificio 609, 48160 Derio, Spain*

10:40-11:40

## Refreshment Break

Tramuntana 1

11:40-12:30

## Session 1 Continued: Novel Biomarkers and bioreceptors

Tramuntana 2&3

Session Chair: Zeynep Altintas

### 11:40-11:50 [RC01]

#### Using Raman spectroscopy and machine learning to differentiate the effects of cytarabine (ara-C) toxicity and crosstalk of leukaemic and bone marrow stromal cells.

[Liana Gynn](#), Kathryn Lamb-Riddell, Timothy Cox, Mark Hansen, Myra Conway, Chloe Pring, Mo Salehan, Jennifer May

*University of the West of England, Bristol, UK*

### 11:50-12:00 [RC02]

#### Aptasensor development and optimisation for rapid, low-cost monitoring of moxifloxacin

[Perrine Lasserre](#)<sup>1</sup>, Banushan Balansethupathy<sup>2</sup>, Damion Corrigan<sup>1</sup>

<sup>1</sup>University of Strathclyde, Glasgow, UK. <sup>2</sup>Aptamer Group, UK

### 12:00-12:10 [RC03]

#### Label-free, point-of-care sensor for early diagnosis of chronic kidney disease

[Kunij Himanshu Vora](#)<sup>1</sup>, Norbert Kordas<sup>1</sup>, Holger Kappert<sup>1</sup>, Nicolas Schierbaum<sup>1</sup>, Karsten Seidl<sup>1,2</sup>

<sup>1</sup>Fraunhofer Institute for Microelectronic Circuits and Systems IMS, Duisburg, Germany. <sup>2</sup>Department of Electronic Components and Circuits and Center for Nanointegration Duisburg- Essen (CENIDE), University of Duisburg-Essen, Germany

### 12:10-12:20 [RC05]

#### The alkaline phosphatase activity in exosomes can be visually detected in paper-based vertical flow assay

[Arnau Pallarès-Rusiño](#)<sup>1,2</sup>, Maria Isabel Pividori<sup>1,2</sup>, Mercè Martí<sup>2</sup>

<sup>1</sup>Autonomous University of Barcelona, Barcelona, Spain. <sup>2</sup>Autonomous University of Barcelona, Institute of Biotechnology and Biomedicine, Bellaterra, Spain

**12:20-12:30 [RC06]**

**Plastic antibodies designed for selective binding to SARS-CoV-2 spike biomarker**

Alex D. Batista<sup>1,2</sup>, [Soumya Rajpal](#)<sup>1,3</sup>, Benedikt Keitel<sup>1</sup>, Sandra Dietl<sup>1</sup>, Beatriz Fresco-Cala<sup>1</sup>, Mehmet Dinc<sup>4</sup>, Rüdiger Groß<sup>1</sup>, Harald Sobek<sup>5</sup>, Jan Münch<sup>1</sup>, Boris Mizaikoff<sup>1,4</sup>

<sup>1</sup>Ulm University, Ulm, Germany. <sup>2</sup>Federal University of Uberlandia, UBERLANDIA, Brazil. <sup>3</sup>Indian Institute of Technology Delhi, New Delhi, India. <sup>4</sup>Hahn-Schickard, Ulm, Germany. <sup>5</sup>Labor Dr.Merk & Kollegen GmbH, Germany

12:30-14:15

**Lunch and Poster Session 1**

Posters: Tramuntana 1

Lunch: Restaurant

14:15-16:00

**Session 2: The biosensor surface and nanomaterials**

Tramuntana 2&3

Session Chair: Yildiz Uludag

**14:15-15:00 [KN02]**

**Doped zinc oxide for surface-enhanced Raman scattering applications in biosensing**

[Kristen Dellinger](#), Samuel Adesoye

North Carolina A&T State University, North Carolina, USA

**15:00-15:20 [O04]**

**Electrochemical MIP sensors based on graphene quantum dots and gold nanoparticles for the diagnosis of acute myocardial infraction**

Johana Ng Chen, Gauri Hasabnis, [Zeynep Altintas](#)

Technical University of Berlin, Berlin, Germany

**15:20-15:40 [O05]**

**Electrochemical detection of immobilised neuroblastoma cells and their response to marine neurotoxins**

[Mounira Alkassar](#), Sandra Leonardo, Jorge Diogène, Mònica Campàs

IRTA, Spain

**15:40-16:00 [O06]**

**Development of sialic acid biosensor including oxidase enzyme mimicking MOF structure**

[Yudum Tepeli Büyüksünecı](#), Ülkü Anık

Mugla Sıtkı Koçman University, Turkey

16:00-16:30

**Refreshment Break**

Tramuntana 1

16:30-17:40

**Session 2 Continued: The biosensor surface and nanomaterials**

Tramuntana 2&3

Session Chair: Janice Kiely

**16:30-16:40 [RC07]**

**Upscaling of plasmonically enhanced diagnostics**

[Gerburg Schider](#)<sup>1</sup>, Cindy Schaude<sup>1</sup>, Alexander Wheeldon<sup>2</sup>, Pelin Toren-Ozgun<sup>1</sup>, Christina Wohlrab<sup>3</sup>, Gerhard Hawa<sup>3</sup>, Ingo Katzmayer<sup>4</sup>, Max Sonnleitner<sup>4</sup>, Gerhard J. Mohr<sup>1</sup>, Martin Smolka<sup>1</sup>, Ursula Palfinger<sup>1</sup>, Dieter Nees<sup>1</sup>, Anja Haase<sup>1</sup>, Barbara Stadlober<sup>1</sup>, Jan Hesse<sup>1</sup>

<sup>1</sup>Joanneum Research Society Centre for Surface Technologies and Photonics, Niklasdorf, Austria. <sup>2</sup>Joanneum Research Society Centre for Surface Technologies and Photonics, Austria. <sup>3</sup>Fianostics GmbH, Wiener Neustadt, Austria.

<sup>4</sup>GENSPEED Biotech GmbH, Austria

**16:40-16:50 [RC08]**

**Engineering micro and nano surfaces based on silicon microtechnologies for bio-sensing applications**

[Vuslat B. Juska](#)<sup>1,2</sup>, Alan O'Riordan<sup>1,2</sup>

<sup>1</sup>Tyndall National Institute, Cork, Ireland. <sup>2</sup>University College Cork, Cork, Ireland

**16:50-17:00 [RC09]**

**New Au@MoS2 electrochemical platform for the detection of low concentration of folic acid**

Khouloud Abid<sup>1,2,3,4</sup>, Giovanni Neri<sup>2,3</sup>, Pietro G. Gucciardi<sup>4</sup>, Ramzi Maalej<sup>1</sup>

<sup>1</sup>Georesources Materials Environment and Global Changes Laboratory (GEOGLOB), Faculty of Sciences of Sfax, University of Sfax, Tunisia. <sup>2</sup>INSTM, Research unity of Messina, Italy. <sup>3</sup>Department of Engineering, University of Messina, C.da Di Dio, I-98166 Messina, Italy. <sup>4</sup>CNR IPCF Istituto per i Processi Chimico-Fisici, viale F. Stagno D'Alcontres 37, I-98156 Messina, Italy

**17:00-17:10 [RC10]**

**Lab-on-fiber fluorescence sensor for the monitoring of chronic and acute wounds.**

Giorgia Giovannini, Luciano F. Boesel, René Rossi

*Empa, Swiss Federal Laboratories for Materials Science and Technology, St Gallen, Switzerland*

**17:10-17:20 [RC11]**

**Reliable bioassays by means of a combined label-free/fluorescence biosensing platform based on 1D photonic crystals biochips**

Agostino Occhicone<sup>1</sup>, Alberto Sinibaldi<sup>1</sup>, Tommaso Pileri<sup>1</sup>, Norbert Danz<sup>2</sup>, Paola Del Porto<sup>1</sup>, Peter Munzert<sup>2</sup>, Francesco Michelotti<sup>1</sup>

<sup>1</sup>University of Rome La Sapienza, Roma, Italy. <sup>2</sup>Fraunhofer Institute for Applied Optics and Precision Engineering IOF, Jena, Germany

**17:20-17:30 [RC12]**

**Exploring silicon nanowires (SiNWs)-mediated intracellular delivery of target molecules for yeast-based biosensors**

Larisa Gogianu<sup>1,2</sup>, Melania Popescu<sup>3</sup>, Alexandru Salceanu<sup>3,2</sup>, Ileana C. Farcasanu<sup>2</sup>, Monica Simion<sup>1</sup>

<sup>1</sup>National Institute for Research and Development in Microtechnologies, Romania. <sup>2</sup>Doctoral School of Biology, Faculty of Biology, University of Bucharest, Romania. <sup>3</sup>National Institute for Research and Development in Microtechnologies, București, Romania

**17:30-17:40 [RC13]**

**Phage display against a novel two-dimensional metal-organic nanosheet to demonstrate systematically tunable biosensors**

Amelia Wood

*The University of Sheffield, Sheffield, UK*

17:40-19:00

**Welcome Drinks Reception**

Tramuntana 1

09:00-11:05

## Session 3: Novel detection technologies

Tramuntana 2&3

Session Chair: Zeynep Altintas

**09:00-09:45 [KN03]**

**Can Future Wearable Biodiagnostics Exploit the Scent of Disease?**

[Aoife Morrin](#)

*Dublin City University, Ireland*

**09:45-10:05 [O07]**

**Wearable electrochemical sensors based on highly versatile 3D-printed microneedles**

[Marc Parrilla](#), Andres Vanhooydonck, Regan Watts, Karolien De Wael

*University of Antwerp, Antwerpen, Belgium*

**10:05-10:25 [O08]**

**Electrochemical bioassays coupled to LAMP amplification for early cancer diagnostics**

[Martin Bartosik](#)<sup>1</sup>, Ludmila Moranova<sup>1</sup>, Nasim Izadi<sup>2</sup>, Ravery Sebuyoya<sup>1</sup>, Michal Stanik<sup>1</sup>, Milan Anton<sup>2</sup>, Roman Hrstka<sup>1</sup>

<sup>1</sup>Masaryk Memorial Cancer Institute, Czech Republic. <sup>2</sup>University Hospital Brno, Brno, Czech Republic

**10:25-10:45 [O09]**

**New approaches for medical imaging with novel magneto-plasmonic nanoparticles**

[Christian Georg Derntl](#)<sup>1</sup>, Stefan Schrittwieser<sup>1</sup>, Rainer Hainberger<sup>1</sup>, Beatriz Pelaz<sup>2</sup>, Manuel Rodriguez Perez<sup>2</sup>, Katerina Soulantica<sup>3</sup>, Yuanyuan Min<sup>3</sup>, Lukasz Bugyi<sup>4</sup>, Michael Haslinger<sup>5</sup>, Robin Kimmel<sup>6</sup>

<sup>1</sup>AIT Austrian Institute of Technology, Molecular Diagnostics, Vienna, Austria. <sup>2</sup>Centro Singular de Investigación en Química Biológica y Materiales Moleculares (CiQUS). Universidade de Santiago de Compostela. Santiago de Compostela, Spain. <sup>3</sup>Université de Toulouse, UMR 5215 INSA, CNRS, UPS, Laboratoire de Physique et Chimie des Nano-Objets, Toulouse, France. <sup>4</sup>Medical University of Vienna, Center for Medical Physics and Biomedical Engineering, Vienna, Austria. <sup>5</sup>Profactor GmbH, Steyr, Austria. <sup>6</sup>Institute of Molecular Biology/CMBI, University of Innsbruck, Innsbruck, Austria

**10:45-11:05 [O10]**

**Mobile, multianalyte biosensing for decisive results at point-of-need**

[Sanna Auer](#), Anna Spehar, Juha Mäkinen, Lauri Ryyppo, Joni Leinuvuo

*Biomensio Ltd, Finland*

11:05-11:40

## Refreshment Break

Tramuntana 1

11:40-12:40

## Session 3 Continued: Novel detection technologies

Tramuntana 2&3

Session Chair: David Attwood

**11:40-11:50 [RC14]**

**Novel functionalization strategies towards bioselective virus membranes**

Nabila Ghaddar<sup>1</sup>, Muqsit Pirzada<sup>1</sup>, Ekin Sehit<sup>1</sup>, Jakob Trimpert<sup>2</sup>, Zeynep Altintas<sup>1</sup>, [Carmen Andreina Olivares Moreno](#)<sup>3</sup>

<sup>1</sup>Technical University of Berlin, Berlin, Germany. <sup>2</sup>Free University of Berlin, Berlin, Germany. <sup>3</sup>Technical University of Berlin, Germany

**11:50-12:00 [RC15]**

**Continuous biomarker monitoring with single-molecule resolution by measuring free particle motion**

[Alissa Buskermolten](#)<sup>1</sup>, Laura van Smeden<sup>1</sup>, Yu-Ting Lin<sup>2</sup>, Arthur de Jong<sup>1</sup>, Khulan Sergelen<sup>1</sup>, Menno Prins<sup>1,2</sup>

<sup>1</sup>Eindhoven University of Technology, Eindhoven, The Netherlands. <sup>2</sup>Helia Biomonitoring, The Netherlands

**12:00-12:10 [RC16]**

**Label-free detection of SARS-CoV-2 nucleocapsid protein using optical fiber microcavity Mach-Zehnder interferometer**

[Tomasz Gabler](#)<sup>1</sup>, Monika Janik<sup>1</sup>, Marcin Koba<sup>1,2</sup>, Beata Gromadzka<sup>3,4</sup>, Mirosława Panasiuk<sup>3</sup>, Agnieszka Dąbrowska<sup>5</sup>, Antonina Naskalska<sup>5</sup>, Dawid Nidzworski<sup>3</sup>, Krzysztof Pyrc<sup>5</sup>, Mateusz Śmietana<sup>1</sup>

<sup>1</sup>Warsaw University of Technology, Warszawa, Poland. <sup>2</sup>National Institute of Telecommunications, Warszawa, Poland. <sup>3</sup>Institute of Biotechnology and Molecular Medicine, Gdańsk, Poland. <sup>4</sup>NanoExpo, Gdańsk, Poland. <sup>5</sup>Jagiellonian University in Krakow, Krakow, Poland

**12:10-12:20 [RC17]**

**Continuous monitoring of cortisol in blood plasma**

[Laura van Smeden](#)<sup>1</sup>, Junhong Yan<sup>2</sup>, Khulan Sergelen<sup>1</sup>, Menno Prins<sup>1,2</sup>

<sup>1</sup>Eindhoven University of Technology, Eindhoven, The Netherlands. <sup>2</sup>Helia Biomonitoring, The Netherlands

**12:20-12:30 [RC18]**

**Decentralized diagnosis of infectious diseases through an innovative electrochemical detection for Loop Mediated Isothermal Amplification: detection of SARS-CoV-2 and *Streptococcus pneumoniae***

[Pablo Rioboó Legaspí](#)<sup>1</sup>, Andrea González-López<sup>1</sup>, José Francisco Beltrán Sánchez<sup>2</sup>, María del Mar García Suárez<sup>3</sup>, M. Dolores Cima Cabal<sup>3</sup>, Antonio Javier García Sánchez<sup>2</sup>, Toribio Fernández Otero<sup>2</sup>, Joan Garcia-Haro<sup>2</sup>, Estefanía Costarama<sup>1</sup>, M. Teresa Fernández-Abedul<sup>1</sup>

<sup>1</sup>University of Oviedo, Spain. <sup>2</sup>Technical University of Cartagena, Spain. <sup>3</sup>International University of La Rioja, Spain

**12:30-12:40 [RC19]**

**Nanosensor-based real-time monitoring of stress biomarkers in human saliva using a portable measurement system**

Stephanie Klinghammer<sup>1</sup>, Tetiana Voitsehivska<sup>2</sup>, Nadia Licciardello<sup>1</sup>, Kihyun Kim<sup>3</sup>, Chang-Ki Baek<sup>3</sup>, Hyeonsu Cho<sup>3</sup>, Klaus-Jürgen Wolter<sup>1</sup>, Clemens Kirschbaum<sup>1</sup>, Gianarelio Cuniberti<sup>1</sup>, [Larysa Baraban](#)<sup>2</sup>

<sup>1</sup>TU Dresden, Germany. <sup>2</sup>Helmholtz Center Dresden Rossendorf, Germany. <sup>3</sup>POSTECH, Republic of Korea

12:40-14:15

**Lunch and Poster Session 2**

Posters: Tramuntana 1

Lunch: Restaurant

14:15-15:40

**Session 4: Modelling and instrumentation**

Tramuntana 2&3

Session Chair: Janice Kiely

**14:15-15:00 [KN04]**

**From Synthesis to Method Development that Make Supramolecular Systems Applicable for Small-Molecule Diagnostics in Biofluids.**

[Frank Biedermann](#)

Karlsruhe Institute of Technology, Karlsruhe, Germany

**15:00-15:20 [O11]**

**Real-time data analysis for continuous biosensing with single molecule resolution**

[Max Bergkamp](#), Leo van IJzendoorn, Menno Prins

Eindhoven University of Technology, Eindhoven, The Netherlands

**15:20-15:40 [O13]**

**Investigation of SARS-CoV-2 spike protein and specific antibody monolayers formation kinetics by combined spectroscopic ellipsometry and quartz crystal microbalance method**

[Saulius Balevicius](#)<sup>1,2</sup>, Vincentas Maciulis<sup>1,2</sup>, Silvija Juciute<sup>1</sup>, Ieva Plikusiene<sup>1</sup>, Vilius Vertelis<sup>2,3</sup>, Arunas Ramanavicius<sup>1</sup>, Almira Ramanaviciene<sup>1</sup>

<sup>1</sup>Vilnius University, Vilnius, Lithuania. <sup>2</sup>State Research Institute Center for Physical Sciences and Technology, Vilnius, Lithuania. <sup>3</sup>Vilnius Gediminas Technical University, Vilnius, Lithuania

15:40-16:30

**Refreshment Break**

Tramuntana 1

16:30-17:40

**Session 4 Continued: Modelling and instrumentation**

Tramuntana 2&3

Session Chair: Yildiz Uludag

**16:30-16:40 [RC20]**

**Double-nanofilm Fabry-Perot optical fiber interferometer discriminating between refractive index changes and biofilm binding**

[Dariusz Burnat](#)<sup>1</sup>, Norbert Kwietniewski<sup>1</sup>, Jakub Warszewski<sup>1</sup>, Ewa Rożniecka<sup>2</sup>, Monika Janik<sup>1</sup>, Marcin Koba<sup>1,3</sup>, Joanna Niedziółka-Jönsson<sup>2</sup>, Mateusz Śmietana<sup>1</sup>

<sup>1</sup>Warsaw University of Technology Institute of Microelectronics and Optoelectronics, Warszawa, Poland. <sup>2</sup>Institute of Physical Chemistry Polish Academy of Sciences, Warszawa, Poland. <sup>3</sup>National Institute of Telecommunications, Warszawa, Poland

**16:40-16:50 [RC21]**

**Lab on a chip-based electrochemical sensor system for the detection of beta-amyloid biomarkers**

Sri Ramulu Torati, Krishna C S B Kasturi, Yunji Eom, CheolGi Kim

*Daegu Gyeongbuk Institute of Science and Technology, Daegu, Republic of Korea*

**16:50-17:00 [RC22]**

**Machine learning for analysis of measurement signals of a biophotonic sensor designed for cervical cancer identification**

Monika Kosowska<sup>1</sup>, Michał Kruczkowski<sup>1</sup>, Anna Marciniak<sup>2</sup>, Martyna Tarczewska<sup>1</sup>, Anna Drabik-Kruczkowska<sup>2</sup>, Katarzyna Jurec<sup>3</sup>, Małgorzata Szczerska<sup>3</sup>

<sup>1</sup>UTP University of Science and Technology, Bydgoszcz, Poland. <sup>2</sup>Nicolaus Copernicus University in Toruń Ludwik Rydygier Collegium Medicum in Bydgoszcz, Bydgoszcz, Poland. <sup>3</sup>Gdańsk University of Technology, Gdansk, Poland

**17:00-17:10 [RC23]**

**Computational screening and design of novel oligonucleotide biosensors**

Jack Goodman

*University of the West of England, UK*

**17:10-17:20 [RC24]**

**Loss-engineering for highly sensitive integrated photonic biosensors**

Samuel Marko Hörmann<sup>1,2</sup>, Jakob Wilhelm Hinum-Wagner<sup>1,2</sup>, Anton Buchberger<sup>1</sup>, Joni Mellin<sup>3</sup>, Alexander Bergmann<sup>2</sup>

<sup>1</sup>ams OSRAM, Austria. <sup>2</sup>Graz University of Technology, Graz, Austria. <sup>3</sup>ams OSRAM, Graz, Austria

**17:20-17:30 [RC25]**

**Compressive sensing for ECG signal analysis and connected healthcare**

Sri Krishnan

*Ryerson University Department of Electrical Computer and Biomedical Engineering, Toronto, ON, Canada*

**17:30-17:40 [RC26]**

**5-PAHSA as a potential therapeutic agent in diabetes - research using the fully functional Islet-on-chip model.**

Patrycja Sokołowska<sup>1,2</sup>, Elzbieta Jastrzebska<sup>1</sup>, Agnieszka Dobrzyń<sup>2</sup>, Zbigniew Brzozka<sup>1</sup>

<sup>1</sup>Warsaw University of Technology, Warszawa, Poland. <sup>2</sup>Nencki Institute of Experimental Biology, Warszawa, Poland

18:30-22:30

**Conference Dinner – Ticketed Event**

Mirador de les caves, Sitges

09:20-11:05

**Session 5: Application of bio-sensing technology in the real world**

Tramuntana 2&3

Session Chair: David Attwood

**09:20-10:05 [KN05]**

**Pushing paper-based nanobiosensing technology toward reassured criteria**

Arben Merkoci

*Catalan Institute of Nanoscience and Nanotechnology (ICN2), Spain. CSIC and The Barcelona Institute of Science and Technology, Spain. ICREA - Institutio Catalana de Recerca i Estudis Avançats, Spain*

**10:05-10:25 [O14]**

**Improving the accessibility of blood coagulation testing using paper-based diagnostic technologies**

Jerro Saïdykhan<sup>1</sup>, Laura Selevic<sup>1</sup>, Jo White<sup>1</sup>, Stefano Cinti<sup>2</sup>, Jennifer E. May<sup>1</sup>, Anthony J. Killard<sup>1</sup>

<sup>1</sup>University of the West of England, Bristol, UK. <sup>2</sup>University of Naples Federico II, Napoli, Italy

**10:25-10:45 [O15]**

**A chip-sized lens-less microscope based on a LED micro-display with resolution of 1µm**

Sergio Moreno

*University of Barcelona, Barcelona, Spain*

**10:45-11:05 [O16]**

**Inexpensive point-of-care Smartphone-based total internal reflection fluorescence microscope with DNA nanostructures assay**

Morgane Loretan<sup>1</sup>, Ivana Domljanovic<sup>2</sup>, Curzio Rüegg<sup>2</sup>, Guillermo Acuna<sup>1</sup>

<sup>1</sup>University of Fribourg Department of Physics, Fribourg, Switzerland. <sup>2</sup>University of Fribourg Department of Medicine, Fribourg, Switzerland

11:05-11:40

**Refreshment Break**

Tramuntana 1

11:40-12:40

**Session 5 Continued: Application of bio-sensing technology in the real world**

Tramuntana 2&3

Session Chair: Richard Luxton

**11:40-11:50 [RC27]**

**Quantitative detection of circulating NFL and GFAP during the follow-up of stroke patients for the prediction of clinical outcome**

Marta Truffi<sup>1</sup>, Daniela Rossi<sup>1</sup>, Alessandra Ricciardi<sup>1</sup>, Carlo Morasso<sup>1</sup>, Federica Ferrari<sup>2,3</sup>, Liliana Brambilla<sup>1</sup>, Anna Cavallini<sup>2</sup>, Renzo Vanna<sup>1</sup>, Chiara Fassio<sup>1</sup>, Claudio Lisi<sup>4</sup>, Antonio Nardone<sup>4</sup>, Fabio Corsi<sup>5</sup>

<sup>1</sup>Maugeri Clinical Research Institutes IRCCS Pavia, Pavia, Italy. <sup>2</sup>Foundation National Neurological Institute C Mondino Institute for Hospitalization and Care Scientific, Pavia, Italy. <sup>3</sup>University of Pavia, Pavia, Italy. <sup>4</sup>Foundation IRCCS Polyclinic San Matteo, Pavia, Italy. <sup>5</sup>Maugeri Clinical Research Institutes IRCCS, Pavia, Italy

**11:50-12:00 [RC28]**

**Fast quantification of extracellular vesicles levels in early breast cancer patients by Single Molecule Detection Assay (SiMoA)**

Alessandra Ricciardi<sup>1</sup>, Carlo Morasso<sup>1</sup>, Daisy Sproviero<sup>2</sup>, Marta Truffi<sup>1</sup>, Sara Albasini<sup>1</sup>, Francesca Piccotti<sup>1</sup>, Federico Sottotetti<sup>1</sup>, Ludovica Mollica<sup>1</sup>, Cristina Cereda<sup>2</sup>, Fabio Corsi<sup>1,3</sup>

<sup>1</sup>Maugeri Clinical Research Institutes IRCCS Pavia, Pavia, Italy. <sup>2</sup>Foundation National Neurological Institute C Mondino Institute for Hospitalization and Care Scientific, Pavia, Italy. <sup>3</sup>University of Milan, Milano, Italy

**12:00-12:10 [RC29]**

**Enhanced enrichment of collected airborne coronavirus and influenza virus samples via a ConA-coated microfluidic chip for PCR detection**

Amin Piri, Kyung-A Hyun, Hyo-Il Jung, Jung-ho Hwang

*Yonsei University, Seodaemun-gu, Republic of Korea*

**12:10-12:20 [RC30]**

**Development of a rapid, point-of-use test for the detection of tapeworm.**

David Attwood<sup>1</sup>, Kathryn Lamb-Riddell<sup>1</sup>, Jeff Davey<sup>1</sup>, Eoin Sharkey<sup>2</sup>

<sup>1</sup>University of the West of England, Bristol, UK. <sup>2</sup>Biofactory, UK



12:20-12:30 [RC31]

**Dual detection of circulating PD-L1 specific extracellular vesicles and microRNAs for prediction of immunotherapeutic response in breast cancer**

Sunyoung Park<sup>1</sup>, Hyorim Jeong<sup>2</sup>, Kyung-A Hyun<sup>1</sup>, Nilsu Donmez<sup>1</sup>, Minwoo Kim<sup>3</sup>, Seung Il Kim<sup>3</sup>, Hyo-Il Jung<sup>4,2</sup>

<sup>1</sup>Department of Mechanical Engineering, Yonsei University, Republic of Korea. <sup>2</sup>TheDABOM corporation, Republic of Korea. <sup>3</sup>College of Medicine, Yonsei University, Republic of Korea. <sup>4</sup>Department of Mechanical Engineering, Republic of Korea

12:30-12:40 [RC32]

**Fluorescent peptide immunoarray to detect human IgG response after SARS-CoV-2 infection**

Julian Guercetti<sup>1,2</sup>, Luciano Sappia<sup>1,2</sup>, Roger Galve<sup>1,2</sup>, Miriam Royo<sup>3,2</sup>, Macarena Durán<sup>3,2</sup>, Daniel Pulido<sup>3,2</sup>, Ginevra Berardi<sup>3,2</sup>, Delia Recalde<sup>4</sup>, Claudia Mendoza<sup>5</sup>, Alicia Lacombe<sup>6,7</sup>, Eduardo Padilla<sup>8</sup>, Juan P. Horcajada<sup>9</sup>, Agustín Gutierrez-Galvez<sup>10,11</sup>, Santiago Marco<sup>10,11</sup>, J.-Pablo Salvador<sup>1,2</sup>, M.-Pilar Marco<sup>1,2</sup>

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12:40-13:00

**Awards and Conference Close**

Tramuntana 1