

# BES 2026 Daily Schedule

**Sunday 21 June 2026**

**Location:       Aula Cossu, Palazzo Ateneo,  
Via Scipione Crisanzio 1, Bari**

|             |                                |
|-------------|--------------------------------|
| 14:00-16:30 | REGISTRATION                   |
| 17:00       | OPENING CEREMONY               |
| 17:30       | Giulio Milazzo Prize Lecture   |
| 18:15       | Luigi Galvani Prize Lecture    |
| 19:00       | Young Researcher Prize Lecture |
| 19:30       | WELCOME RECEPTION              |

# Monday 22 June 2026 – Campus Universitario

|           | Plenary Session (Chair: Prof. Cecilia Cristea)                                                                                                         |
|-----------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
| 9:00-9:50 | <b>PL</b> Kevin W Plaxco<br><i>Electrochemical Aptamer-Based Sensors: A Real-Time, Bioelectronic Window into Molecular Physiology and Pharmacology</i> |

|             | Parallel Session 1 (Chair: Prof. Cecilia Cristea and Dr. Marc Parrilla Pons)                                                                                        |
|-------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 9:55-10:15  | <b>INV</b> Laura Micheli<br><i>Study and optimization of an immunosensor for the determination of Norovirus in water</i>                                            |
| 10:15-10:30 | Dorota Matyszewska<br><i>Surface and Electrochemical Studies of the Synergetic Effect of Anticancer Drugs on Phospholipid Layers as Model Biological Membranes.</i> |
| 10:30-10:45 | Włodzimierz Kutner<br><i>Progress and Potential of Molecularly Imprinted Polymers' Chemosensing of Lysozymes in Food and Clinical Samples</i>                       |
| 10:45-11:00 | Andy Wijten<br><i>Harnessing Nanobodies Towards Point-of-Care Trypanosomiasis Detection via Photoelectrochemical Sensing</i>                                        |

|             | Parallel Session 2 (Chair: Prof. Elisabeth Lojou and Dr. Niklas Ortlieb)                                                   |
|-------------|----------------------------------------------------------------------------------------------------------------------------|
| 9:55-10:15  | <b>INV</b> Felipe Conzuelo<br><i>Photosystem I-Hydrogenase Complexes for PhotoH<sub>2</sub> Production</i>                 |
| 10:15-10:30 | David Cliffe<br><i>Photosystem I Driven Electrochemical and Polymerization Reactions</i>                                   |
| 10:30-10:45 | Linying Shang<br><i>A Multi-Well Biophotoelectrochemical Screening Platform for Light-driven Bioelectricity Generation</i> |
| 10:45-11:00 | Rita Policia<br><i>Plasmonic-Biohybrid Engineered Living Materials for Light-Assisted Hydrogen Evolution</i>               |

|             | Parallel Session 3 (Chair: Dr. Marcos Pita and Dr. Ivgen Mazurenko)                                                                                                    |
|-------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 9:55-10:15  | <b>INV</b> Frank Crespilho<br><i>Redox Proteins as Quantum Conductors</i>                                                                                              |
| 10:15-10:30 | Antonio De Lacey<br><i>Electro-enzymatic N<sub>2</sub> Reduction to NH<sub>3</sub> by Direct Electron Transfer of Nitrogenase coupled to an ATP-regeneration anode</i> |
| 10:30-10:45 | Falk Harnisch<br><i>Lessons learned, hurdles taken and challenges ahead for the electrochemical CO<sub>2</sub>-reduction to feed microbes for biosynthesis</i>         |
| 10:45-11:00 | Petra Hellwig<br><i>Probing the diversity of oxygen reactivity in membrane proteins using nanostructured electrodes</i>                                                |

|             | Parallel Session 1 (Chair: Prof. Keisei Sowa and Dr. Francesca Polli)                                                                                         |
|-------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 11:30-11:45 | Rebeca Miranda-Castro<br><i>Electrochemical On-Surface Recombinase Polymerase Amplification for Relative Quantification of Colon Cancer-Associated lncRNA</i> |
| 11:45-12:00 | Pinar Kara<br><i>Aptamer-Functionalized 3D-Printed Biosensor for Label-Free Detection of Aggressive Triple-Negative Breast Cancer Cells</i>                   |

|             | <b>Parallel Session 1 (Chair: Prof. Keisei Sowa and Dr. Francesca Polli)</b>                                                                                                          |
|-------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 12:00-12:15 | Katarzyna Kurzatowska-Adaszynska<br><i>Engineered Bioelectrochemical Aptamer Interfaces for Selective Impedimetric Detection of Neomycin</i>                                          |
| 12:15-12:30 | Ana Laura Tohme<br><i>Unraveling HlyA Toxicity in Epithelial Monolayers through Electrochemical Impedance Spectroscopy</i>                                                            |
| 12:30-12:45 | Damian Dziubak<br><i>Biomimetic approach to understanding changes in the integrity and polarization of the outer mitochondrial membrane caused by biologically relevant molecules</i> |

|             | <b>Parallel Session 2 (Chair: Prof. Christophe Léger and Dr. Xinxin Chen)</b>                                                                                          |
|-------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 11:30-11:45 | Laura Wey<br><i>Extracellular electron transfer in the model cyanobacterium Synechocystis sp. PCC 6803 is dynamic under different trophic modes</i>                    |
| 11:45-12:00 | Rosa Maria Matteucci<br><i>Mitigating Redox Imbalance in Rhodobacter capsulatus Biohybrid Photoanodes via Au and CeO<sub>2</sub> Nanoparticle Co-Functionalization</i> |
| 12:00-12:15 | Alan Le Goff<br><i>Engineering Metalloenzyme-carbon nanotube Interface for efficient bioelectrocatalytic systems</i>                                                   |
| 12:15-12:30 | Omer Yehezkeli<br><i>Photo-Driven Microbial Fuel Cells- A General Paradigm for Biodegradation, Fine Chemicals, and Fuel Production</i>                                 |
| 12:30-12:45 | Cole Carlson<br><i>Heterologous phenazine production in biotech hosts for bioelectrochemical applications</i>                                                          |

|             | <b>Parallel Session 3 (Chair: Prof. Jenny Zhang and Prof. David Cliffl)</b>                                                     |
|-------------|---------------------------------------------------------------------------------------------------------------------------------|
| 11:30-12:00 | <b>KN</b> Ross Milton<br><i>Simplifying Electroenzymatic Hydrogen Production by [FeFe]-Hydrogenases</i>                         |
| 12:00-12:15 | Philip Danby<br><i>Mechanistic Insights into Direct Electron Transfer of Candida boidinii Formate Dehydrogenase</i>             |
| 12:15-12:30 | Ruoyi Liu<br><i>Fabrication and Modeling of Enzymatic Gas Diffusion Electrodes for Oxygen Reduction in Buffered Electrolyte</i> |
| 12:30-12:45 | Kaizhong Xing<br><i>Enhancing Solar-to-X Conversion: Optimising Redox Polymers for Photosynthetic Biohybrid</i>                 |

|             | <b>Parallel Session 1 (Chair: Dr. Felipe Conzuelo and Dr. Rebeca Miranda Castro)</b>                                                                                                                                                 |
|-------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 14:00-14:30 | <b>KN</b> Sabine Kuss<br><i>Electrifying Biofilms - Probing Transport and Reactivity by Scanning Gel Electrochemical Microscopy</i>                                                                                                  |
| 14:30-14:45 | Andreas Lesch<br><i>Digitally printed electrochemical platforms for bacterial cell and metabolite sensing</i>                                                                                                                        |
| 14:45-15:00 | Christine Kranz<br><i>Micro(bio)sensors based on Prussian blue for detection and mapping of hydrogen peroxide</i>                                                                                                                    |
| 15:00-15:15 | Alessandro Silvestri<br><i>Merging Advanced Sensor and Biomimetic Cellular Models: A New Frontier in Neurodegenerative Diseases</i>                                                                                                  |
| 15:15-15:30 | Riccarda Antiochia<br><i>Self-templated highly porous gold as antibiofouling strategy in wearable electrochemical biosensing: application in a microneedles-based biosensor for the continuous monitoring of multiple biomarkers</i> |

|             | Parallel Session 2 (Chair: Prof. Laura Wey)                                                                                          |
|-------------|--------------------------------------------------------------------------------------------------------------------------------------|
| 14:00-14:15 | Dario Lacalamita<br><i>Microbial photocathodes for synthesis gas generation</i>                                                      |
| 14:15-14:30 | Vittoria Maria Iris Piro<br><i>Waste to Watts: Sustainable Energy Production from Food Waste Using Soil Microbial Fuel Cells</i>     |
| 14:30-15:00 | <b>KN</b> Federico Tasca<br><i>Modulating Biophotovoltaic Metabolism of Ulva Macroalgae in the Presence of Osmium Redox Mediator</i> |
| 15:00-15:15 | Animut Assefa Molla<br><i>Leveraging Microbial Metabolic Diversity for Lignocellulose Anodic Electrochemical Oxidation</i>           |
| 15:15-15:30 | Ting Xie<br><i>A Miniaturized Bioelectrochemical Platform for Screening Soil Bacterial Consortia for Cathodic Biomass Formation</i>  |

|             | Parallel Session 3 (Chair: Prof. Matteo Grattieri and Dr. Atefeh Shaafat)                                                                                             |
|-------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 14:00-14:15 | Xue Ning<br><i>Valorising Biogenic CO<sub>2</sub> via Microbial Electrosynthesis: Energy and Product Spectrum Analysis from CH<sub>4</sub> to Single-Cell Protein</i> |
| 14:15-14:30 | Keshet Yelin<br><i>Photo-driven valorization of polylactic acid into hydrogen fuel and pyruvate using a biotic-abiotic configuration</i>                              |
| 14:30-14:45 | Umberto Contaldo<br><i>A conserved Copper-Binding site in Multicopper Oxidases regulates the metalation of CueO from Escherichia coli.</i>                            |
| 14:45-15:00 | Matan Meirovich<br><i>Microbial/enzymatic light-induced NADPH regeneration electrochemical cells for continuous electrosynthesis of enantioselective products</i>     |
| 15:00-15:15 | Lingling Zhang<br><i>Deep Learning-Assisted Binding Peptide Engineering for Laccase Oriented Immobilization and Bioelectrocatalysis</i>                               |
| 15:15-15:30 | Niklas Ortlieb<br><i>Bioelectrochemical synthesis of 25-hydroxy-vitamin D<sub>3</sub> by carbon felt – Thauera aromatica biofilm hybrid electrodes</i>                |

|             | Parallel Session 1 (Chair: Prof. Dario Compagnone and Prof. Sabine Kuss)                                                                                             |
|-------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 16:00-16:15 | Elise Daems<br><i>Singlet Oxygen-Based Photoelectrochemistry for Infectious Disease Diagnostics</i>                                                                  |
| 16:15-16:30 | Victor Diculescu<br><i>Hybrid Fiber-Paper Electrochemical Platform with On-Device PCR/LAMP Module for Label-Free DNA Detection</i>                                   |
| 16:30-16:45 | Rebeca Magnolia Torrente Rodríguez<br><i>Addressing Cancer Complexity via Multiplexed Electrochemical Detection of the RNA Epigenetics</i>                           |
| 16:45-17:00 | Bogdan Feier<br><i>Electrochemical sensors for antibiotics detection</i>                                                                                             |
| 17:00-17:15 | Dilsat Ozkan-Ariksoysal<br><i>Gold or carbon nanomaterials-modified biosensors for the for the electroanalysis of aptamer or DNA-based biomolecular interactions</i> |
| 17:15-17:30 | Cesar Gonzalez<br><i>Biosensing of DNA Amplicons at Different Concentrations through Magnetic Induction Spectroscopy – Proof of Concept.</i>                         |
| 17:30-17:45 | <b>FT</b> Alonso Gamero-Quijano<br><i>Electrothermal Mapping of Cytochrome c Conformational Dynamics at a Biomimetic Aqueous Organic Interface</i>                   |

|             | <b>Parallel Session 1 (Chair: Prof. Dario Compagnone and Prof. Sabine Kuss)</b>                                                               |
|-------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| 17:30-17:45 | <b>FT</b> Patrick Severin Sfragano<br><i>PFOA screening using electrochemical sensors based on molecularly imprinted poly(o-PD)</i>           |
| 17:30-17:45 | <b>FT</b> Lucas Alves de Lima<br><i>Bromocresol-like mimetic antibody combined to prussian blue for probe-free detection of serum albumin</i> |

|             | <b>Parallel Session 2 (Chair: Prof. Gabor Mehes and Dr. Rita Policia)</b>                                                                                                             |
|-------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 16:00-16:15 | Rokas Žalnėravičius<br><i>Electrogenicity of bacterial biofilms: detection perspectives and drug assessment</i>                                                                       |
| 16:15-16:30 | Gaia Salvatori<br><i>Insights into the Bioanode Performance of a Microbial Electrolysis Cell fed with Digestate</i>                                                                   |
| 16:30-16:45 | Atefeh Shafaat<br><i>Conducting Polymer Interfaces for Monitoring and Controlling Biofilm-Associated Infections</i>                                                                   |
| 16:45-17:00 | Cesar Vicente-Garcia<br><i>Novel Strategies for Robust, Microalgae-based Bio-photoanode Fabrication and Electron Extraction</i>                                                       |
| 17:00-17:15 | Olivia Gerhard<br><i>Electrically Interconnected Bacterial Biofilms: Toward Bioelectrochemical Networks</i>                                                                           |
| 17:15-17:30 | Oskar Zorc<br><i>Exploring and exploiting stress physiology in Clostridium ljungdahlii</i>                                                                                            |
| 17:30-17:45 | <b>FT</b> Dawit Tedros Filmon<br><i>Turning the [FeFe] - Hydrogenase from Clostridium Beijerinckii into an Efficient H<sub>2</sub> Oxidation Catalyst using a Redox-active Matrix</i> |
| 17:30-17:45 | <b>FT</b> Nia Z. Petrova<br><i>Green algal strains and electron shuttles: optimal pairing increases electric current production</i>                                                   |
| 17:30-17:45 | <b>FT</b> Kashif Shaikh Mohd<br><i>Light induced exoelectrogenesis in highly potential strain Parachlorella kessleri: media engineering and application potential</i>                 |

|             | <b>Parallel Session 3 (Chair: Prof. Falk Harnisch and Prof. Petra Hellwig)</b>                                                                                      |
|-------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 16:00-16:15 | Shabnam Pouresmaeil<br><i>Wood-derived Carbonized Biochar as Self-standing Spherical Electrodes for Hydrogen Evolution Reaction under Biocompatible Conditions</i>  |
| 16:15-16:30 | Marina Tcholakova<br><i>Bioelectrochemical Systems for Denitrification</i>                                                                                          |
| 16:30-16:45 | Yifat Cohen<br><i>Utilization of dairy waste streams for energy generation</i>                                                                                      |
| 16:45-17:00 | Deria Kabova<br><i>Electrifying Carbon Fixation: Engineering Extracellular Electron Transport in Cupriavidus necator for O<sub>2</sub>-Free Electrobiosynthesis</i> |
| 17:00-17:15 | Zhiguang Zhu<br><i>Endowing a NAD<sup>+</sup>-dependent formate dehydrogenase with direct electron transfer-like capability</i>                                     |
| 17:15-17:30 | Camille Scola<br><i>Sustainable Bauxite Red Mud Valorization Using Electroactive Bacteria</i>                                                                       |
| 17:30-17:45 | <b>FT</b> Yuna Bang<br><i>Construction of NADH-Recycling Bioelectrocatalytic Interface via AlphaFold 3-guided Site-Specific Redox Enzyme Co-immobilization</i>      |
| 17:30-17:45 | <b>FT</b> Kelly Lim Trinh<br><i>External Coupling of Enzymatic Redox Reactions</i>                                                                                  |

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| <b>Poster Session (18:00-20:00)</b> |
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| Poster Session (18:00-20:00)                                                                                                                                                                                      |
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| S1P1 — Yuna Bang<br><i>Construction of NADH-Recycling Bioelectrocatalytic Interface via AlphaFold 3-guided Site-Specific Redox Enzyme Co-immobilization</i>                                                       |
| S1P2 — Dawit Tedros Filmon<br><i>Turning the [FeFe] - Hydrogenase from Clostridium Beijerinckii into an Efficient H<sub>2</sub> Oxidation Catalyst using a Redox-active Matrix</i>                                |
| S1P3 — Kelly Lim Trinh<br><i>External Coupling of Enzymatic Redox Reactions</i>                                                                                                                                   |
| S1P4 — Adrià Altayó Sanfeliu<br><i>Far Far Away: Magnetite Nanoparticles Extend Direct Electron Transfer to the Centimeter Scale in Electroactive Biofilms</i>                                                    |
| S1P5 — Ana Clara Bonizol Zani<br><i>An Isolate From a Bioelectrochemical System Can Reduce CO<sub>2</sub> at Low Overpotentials</i>                                                                               |
| S1P6 — Gabriella Caucia<br><i>Harnessing Geothermal Soils for CO<sub>2</sub> Bioelectrochemical Reduction</i>                                                                                                     |
| S1P7 — Sithisak Chanthavong<br><i>Spectroelectrochemical Study of Nitrite Reductases on Ultrathin Film Antimony-Doped Tin Oxide Electrodes</i>                                                                    |
| S1P8 — Roy Cohen<br><i>Synthesis of Renewable Fuel from Butanol Using a Bias-Free and Light-Driven Enzymatic Biofuel Cell</i>                                                                                     |
| S1P9 — Alessandro Digregorio<br><i>Melanin-Inspired Coatings for Enhanced Carbon Photoconversion in Microalgae</i>                                                                                                |
| S2P1 — Lucas A. Lima<br><i>Bromocresol-like mimetic antibody combined to prussian blue for probe-free detection of serum albumin</i>                                                                              |
| S2P2 — Alonso Gamero-Quijano<br><i>Electrothermal Mapping of Cytochrome c Conformational Dynamics at a Biomimetic Aqueous Organic Interface</i>                                                                   |
| S2P3 — Cernat Andreea<br><i>AI-driven electrochemical detection of bacteria markers</i>                                                                                                                           |
| S2P4 — Roberta Maria Banciu<br><i>Exploring the potential of a silver nanoparticle-modified electrode for EC-SERS studies</i>                                                                                     |
| S2P5 — Laura Belcastro<br><i>Tuning Nitrogen-doped Graphene-Prussian Blue hybrid interfaces for enzymatic immobilisation and electrochemical sensing</i>                                                          |
| S2P6 — Paolo Bollella<br><i>Bridging the Gap to Clinical Translation: Standardization and Benchmarking of Wearable Bioelectrochemical Sensors</i>                                                                 |
| S2P7 — Hannah Breuer<br><i>Histamine Degrading Enzymes for Biosensor Applications</i>                                                                                                                             |
| S2P8 — Krittamate Buppasirakul<br><i>A Two-Electrode Ferricyanide-Mediated Electrochemical Method for Immediate Microbial Susceptibility Profile</i>                                                              |
| S2P9 — Agata Checcozzo<br><i>Development of an electrochemical sensor for the monitoring of Heavy metals in wastewater and surface</i>                                                                            |
| S2P10 — Katharina Davoudian<br><i>Electrochemical Biosensing of Lysophosphatidic Acid Enables Early Ovarian Cancer Diagnosis</i>                                                                                  |
| S2P11 — Elifcan Emiroglu Bolukbas<br><i>Minute-scale electrochemical analysis of cancer cell– anticancer drug interactions at an electrode-confined biointerface</i>                                              |
| S2P12 — Ilaria Iacobellis<br><i>Bio-Electronic Sensor for Early Xylella Fastidiosa Detection</i>                                                                                                                  |
| S2P13 — Pinar Kara<br><i>Development of a Prototype Immunosensor for Diagnosis of the Demyelination Biomarker PMP22 in the Peripheral Nervous System and Its Application in Patients with Diabetic Neuropathy</i> |
| S2P14 — Pinar Kara<br><i>Development of a Prototype Nano Immunosensor with Nanomaterial Modified 3D Printed Electrodes</i>                                                                                        |

| Poster Session (18:00-20:00)                                                                                                                                                                        |
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| S2P15 — Rene Kizek<br><i>Analysis of metallothionein in the blood serum of patients with malignant tumors</i>                                                                                       |
| S2P16 — Rene Kizek<br><i>Bioelectrochemical analysis of myxovirus resistance protein A</i>                                                                                                          |
| S2P17 — Katarzyna Kurzatowska-Adaszynska<br><i>Magnetic Nanoparticle-Based Dual Aptasensor for Multiplex Electrochemical Detection of Aminoglycosides</i>                                           |
| S3P1 — Daniel Baron Diaz<br><i>Characterisation of mediated electron transfer for anodic respiration in bioelectrochemical systems</i>                                                              |
| S3P2 — Monica Brachi<br><i>Unveiling exoelectrogenesis in cyanobacteria by pulse voltammetry</i>                                                                                                    |
| S3P3 — Rosa Pia Di Fonzo<br><i>Carbon dots-functionalized intact purple bacteria for enhancing biophotoelectrodes performance</i>                                                                   |
| S3P4 — Eleonora Hubenova<br><i>Dyes-enriched wastewater removal by microbial electrochemical snorkel</i>                                                                                            |
| S3P5 — Simone Russo<br><i>Carbon Nanodots as Multifunctional Electrode Modifiers for Microbial Fuel Cells</i>                                                                                       |
| S4P1 — Filipe Camargo Dalmatti Alves Lima<br><i>Turning STM Conductance Maps into Electron-Transfer Kinetics in Redox Proteins: a Landauer–Marcus Route</i>                                         |
| S4P2 — Scharbach Carla<br><i>Aromatic Tyr/Trp Networks Prevent Oxidative Damage in Multicopper Oxidases: Quantifying ROS Formation by RRDE upon Systematic Pathway Disruption</i>                   |
| S4P3 — Gulsum Ece Meraki<br><i>Unraveling the Interaction Between Lansoprazole and Serum Albumin Using Spectroscopic and Electrochemical Methods</i>                                                |
| S4P4 — Selenay Sadak<br><i>Apta-MIP Based Electrochemical Sensor for the Detection of L-citrulline</i>                                                                                              |
| S4P5 — Bengi Uslu<br><i>Development of a Molecularly Imprinted Polymer- and Aptamer-Based Electrochemical Diagnostic Kit for the Detection of Monocyte Chemoattractant Protein-1 (MCP-1)</i>        |
| S5P1 — Patrick Severin Sfragano<br><i>PFOA screening using electrochemical sensors based on molecularly imprinted poly(o-PD)</i>                                                                    |
| S5P2 — Andreea-Iuliana Ftodiev<br><i>Rapid determination of pesticide levels from vegetables surface using the inhibition of aldehyde dehydrogenase from Flavobacterium PL002 coupled with SERS</i> |
| S5P3 — Serena Laschi<br><i>Smart Prototyping Applied to Electrochemical Monitoring of Environmental Relevant Pollutants</i>                                                                         |
| S5P4 — Barbara Palys<br><i>Studies of the Graphene Oxide – Gold Nanoparticles Interaction for Highly Sensitive Enzyme Free H<sub>2</sub>O<sub>2</sub> Detection</i>                                 |
| S6P1 — Nia Z. Petrova<br><i>Green algal strains and electron shuttles: optimal pairing increases electric current production</i>                                                                    |
| S6P2 — Kashif Shaikh Mohd<br><i>Light induced exoelectrogenesis in highly potential strain Parachlorella kessleri: media engineering and application potential</i>                                  |
| S6P3 — Matteo Grattieri<br><i>Engineering Photosynthetic Bacteria-based Bioelectrochemical Systems for Solar Fuels, Current Generation, and Self-Powered Biosensors</i>                             |
| S6P4 — Pierluigi Lasala<br><i>Engineering gold nanoparticle-bacteria interfaces for enhanced extracellular electron transfer</i>                                                                    |
| S7P1 — Lukasz Poltorak<br><i>Biomimetic liquid-liquid interface for bioelectrochemical applications</i>                                                                                             |

## Tuesday 23 June 2026 – Campus Universitario

|           | Plenary Session (Chair: Prof. Nicolas Plumeré)                                              |
|-----------|---------------------------------------------------------------------------------------------|
| 9:00-9:50 | <b>PL</b> Elisabeth Lojou<br><i>Electrocatalysis: from fuel cells to copper homeostasis</i> |

|             | Parallel Session 1 (Chair: Prof. Dónal Leech and Dr. Rebeca Torrente-Rodriguez)                                                                       |
|-------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
| 9:55-10:15  | <b>INV</b> Marc Parrilla<br><i>Microneedle-based Electrochemical Sensors for Human Health and Plant Monitoring</i>                                    |
| 10:15-10:30 | Stamatis Argyroudis<br><i>Design and Mechanical Validation of Bio-inspired Microneedle Architectures for Enhanced Wearable Applications</i>           |
| 10:30-10:45 | Andrea Idili<br><i>Rational Design of Programmable Aptamer-Based Nanoarchitectures</i>                                                                |
| 10:45-11:00 | Abdelkader Zebda<br><i>Long-Term Stability of Enzymatic Wearable Biosensors for Sweat Analysis Enabled by Enzyme Engineering and Machine Learning</i> |

|             | Parallel Session 2 (Chair: Prof. Rafael Davalos and Prof. Julita Kulbacka)                                                                                         |
|-------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 9:55-10:15  | <b>INV</b> Antoni Ivorra<br><i>Delivering High-Magnitude Electric Currents: From Tissue Ablation by Electroporation to Powering Injectable Electronic Implants</i> |
| 10:15-10:30 | Aracelys Garcia-Moreno<br><i>Experimental Platform to Study U87 Proliferation Under Alternating Fields and Mild Hyperthermic Conditions</i>                        |
| 10:30-10:45 | Jiri Ehlich<br><i>Electrochemistry of Neuro-Stimulation</i>                                                                                                        |
| 10:45-11:00 | Francesco Tadini-Buoninsegni<br><i>Ion Transport by P-type ATPases Investigated on a Solid Supported Membrane</i>                                                  |

|             | Parallel Session 1 (Chair: Prof. Kevin Plaxco and Dr. Alejandro Valverde)                                                                                                                      |
|-------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 11:30-12:00 | <b>KN</b> Seiya Tsujimura<br><i>High-Performance Enzyme Electrodes Based on MOF-Assisted Mediator Immobilization</i>                                                                           |
| 12:00-12:15 | Mirella Di Lorenzo<br><i>Nanostructured Catalytic Electrodes for Abiotic Fuel Cells to Power the Next-Generation of Bioelectronics</i>                                                         |
| 12:15-12:30 | Navendu Paul<br><i>High Direct H<sub>2</sub> Oxidation Activity with Enhanced H<sub>2</sub> Production Bias on Nanostructured Gold Electrode Using Ni-Fe Hydrogenase from Aquifex aeolicus</i> |
| 12:30-13:30 | <b>BES GENERAL ASSEMBLY</b>                                                                                                                                                                    |

|             | Parallel Session 2 (Chair: Prof. Renata Bilewicz and Prof. Antoni Ivorra)                                               |
|-------------|-------------------------------------------------------------------------------------------------------------------------|
| 11:30-11:45 | Julita Kulbacka<br><i>Protein Corona Controlled Dendrimer Drug Delivery: In Vitro Evaluation for Anticancer Therapy</i> |
| 11:45-12:15 | <b>KN</b> Rafael Davalos<br><i>Pulsed Field Ablation for Non-thermal Tumor Ablation</i>                                 |

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|             | <b>Parallel Session 2 (Chair: Prof. Renata Bilewicz and Prof. Antoni Ivorra)</b>                                                            |
| 12:15-12:30 | Anna Choromańska<br><i>Engineering EGFR-Targeted Exosomes for Lung Adenocarcinoma Therapy via Stable Genetic Modification of 293T Cells</i> |

## Wednesday 24 June 2026 – Campus Universitario

|            | Plenary Session (Chair: Dr. Antonio López De Lacey)                                                                                           |
|------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| 9:30-10:20 | <b>PL</b> Caroline Ajo-Franklin<br><i>From Evolution to Bioelectronics: Deciphering and Harnessing Electron Transfer for Advanced Sensing</i> |

|             | Parallel Session 1 (Chair: Prof. Federico Tasca and Prof. David Hickey)                                       |
|-------------|---------------------------------------------------------------------------------------------------------------|
| 10:25-10:45 | <b>INV</b> Vincent Fourmond<br><i>Electrochemical studies of the gas channel of the NiFe CO dehydrogenase</i> |
| 10:45-11:00 | Alina Sekretareva<br><i>Modeling Electrodriven H<sub>2</sub> Production in E. coli</i>                        |

|             | Parallel Session 2 (Chair: Prof. Omer Yehezkeli and Dr. Yolina Hubenova)                                                                                                               |
|-------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 10:25-10:45 | <b>INV</b> Pierangela Cristiani<br><i>Electrochemical Impedance Spectroscopy Characterization of a Bioelectrolysis Pilot System Operating with a Microbial Pool Enriched From Soil</i> |
| 10:45-11:00 | Hannah Feinsilber<br><i>Nitrate and Proton Electrochemical Reduction Catalyzed by Iron and Nickel Sulfides</i>                                                                         |

|             | Parallel Session 3 (Chair: Prof. Alan le Goff and Dr. Cohen Roy)                                                                                  |
|-------------|---------------------------------------------------------------------------------------------------------------------------------------------------|
| 10:25-10:45 | <b>INV</b> Keisei Sowa<br><i>Structure-Guided Insights and Engineering of Membrane-Bound Dehydrogenases for Enhanced Direct Electron Transfer</i> |
| 10:45-11:00 | Mislav Sušac<br><i>Nanoporous Gold as a Modular Matrix for Stable Enzyme Immobilization: Lactate Biosensor Study</i>                              |

|             | Parallel Session 1 (Chair: Prof. Ross Milton and Dr. Vincent Fourmond)                                                                               |
|-------------|------------------------------------------------------------------------------------------------------------------------------------------------------|
| 11:30-11:45 | Audrey Gossard<br><i>Efficient Impedance Computation in Micro-Electrode Systems</i>                                                                  |
| 11:45-12:00 | Ievgen Mazurenko<br><i>Quantifying Local pH Gradients in Enzymatic Microelectrodes via Coupled FEM Modeling and Confocal Fluorescence Microscopy</i> |
| 12:00-12:15 | Christophe Léger<br><i>Learning about the determinants of hydrogenase catalytic bias by studying functional biomimetic Ni complexes</i>              |
| 12:15-12:30 | Irene Díaz Moreno<br><i>Phosphorylation disrupts long-distance electron transport in cytochrome c</i>                                                |
| 12:30-12:45 | David P. Hickey<br><i>Accelerating the Design of Electrochemically Regenerable NADH Mimics with Automation and Machine Learning</i>                  |

|             | Parallel Session 2 (Chair: Prof. Seyia Tsujimura and Prof. Elisabetta Fanizza)                             |
|-------------|------------------------------------------------------------------------------------------------------------|
| 11:30-11:45 | Ricardo Leote<br><i>Polymeric Photoelectrodes Based on Conjugated Polymers for Biophotovoltaic Devices</i> |
| 11:45-12:00 | Paola Mastrovito<br><i>Hybrid catalysis for CO<sub>2</sub> conversion</i>                                  |

|             | Parallel Session 2 (Chair: Prof. Seyia Tsujimura and Prof. Elisabetta Fanizza)                                                                                                                         |
|-------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 12:00-12:15 | Antonella Marone<br><i>Boosting in situ Biogas to Biomethane Conversion via Microbial Electrolysis Cells: Comparative Strategies and Insights</i>                                                      |
| 12:15-12:45 | <b>KN</b> Marcos Pita<br><i>Bioelectrocatalytic Reduction of CO<sub>2</sub> with Different Formate Dehydrogenase Enzymes: Studying Direct Electron Transfer, Mediators to Overcome NADH Dependence</i> |

|             | Parallel Session 3 (Chair: Prof. Mirella Di Lorenzo and Dr. Valdepenas-Montiel)                                                                           |
|-------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|
| 11:30-12:00 | <b>KN</b> Lital Alfonta<br><i>Enzymatic Strategies for Amino Acid Biosensing: Approaches and Challenges</i>                                               |
| 12:00-12:15 | Luca Fiore<br><i>Smart paper-based electrochemical sensor for real-time monitoring of carvacrol release from functionalized porous materials</i>          |
| 12:15-12:30 | Krzysztof Stolarczyk<br><i>Molecularly Imprinted Polymer Sensor for the Determination of 1-Methyl-4-nitrosopiperazine in Antituberculosis Antibiotics</i> |
| 12:30-12:45 | Onur Parlak<br><i>Transdermal Sensors for Medical Diagnostics</i>                                                                                         |

|             | Plenary Session (Chair: Prof. Fred Lisdat)                                            |
|-------------|---------------------------------------------------------------------------------------|
| 14:00-14:50 | <b>PL</b> Eleni Stavrinidou<br><i>Plant Bioelectronics and Sustainable Biohybrids</i> |

|             | Parallel Session 1 (Chair: Dr. Marcos Pita and Dr. Elise Daems)                                                                                   |
|-------------|---------------------------------------------------------------------------------------------------------------------------------------------------|
| 15:00-15:15 | Eleonora Macchia<br><i>Immuno-FET Potentiometric Biosensors</i>                                                                                   |
| 15:15-15:30 | Scott Keene<br><i>Miniaturization of Electrochemical Aptamer-Based Sensors Using Organic Electrochemical Transistors for Onsite Amplification</i> |

|             | Parallel Session 2 (Chair: Prof. A. Zebda and Dr. Verdiana Marchianò)                                              |
|-------------|--------------------------------------------------------------------------------------------------------------------|
| 15:00-15:15 | Yuhao Xie<br><i>Electrochemical Interaction between <i>S. oneidensis</i> MR-1 and Poly(benzodifurandione) Film</i> |
| 15:15-15:30 | Taras Max<br><i>A New Method to Prepare Electrode for Protein Film Electrochemistry – Aryl Diazonium Grafting</i>  |

|             | Parallel Session 3 (Chair: Prof. Laura Micheli and Dr. Alessandro Silvestri)                                            |
|-------------|-------------------------------------------------------------------------------------------------------------------------|
| 15:00-15:15 | Cecilia Cristea<br><i>Wearable sensors for personalized diagnostics</i>                                                 |
| 15:15-15:30 | Gabor Mehes<br><i>A plant-insertable multi-enzyme biosensor for the real-time monitoring of stomatal sucrose uptake</i> |

|             | Parallel Session 1 (Chair: Prof. Eleonora Macchia and Prof. Giovanni Valenti)                                                               |
|-------------|---------------------------------------------------------------------------------------------------------------------------------------------|
| 16:00-16:30 | <b>KN</b> Tsuyoshi Minami<br><i>Real-Sample Analysis Based on Organic Field-Effect Transistors Functionalized with Artificial Receptors</i> |

|             | Parallel Session 1 (Chair: Prof. Eleonora Macchia and Prof. Giovanni Valenti)                                                                                            |
|-------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 16:30-16:45 | Pawel Kryszinski<br><i>Electrical polarization effects on nanostructured bilayer lipid membranes modified with selected channel proteins, peptides, and cannabinoids</i> |
| 16:45-17:00 | Kimia Zarean Mousaabadi<br><i>Computational Raman Spectroscopy of Conductive Molecular Motifs in Cable Bacteria</i>                                                      |
| 17:00-17:15 | Matteo Sensi<br><i>Monitoring Food Freshness with Sensors Based on Electrolyte-Gated Transistors</i>                                                                     |
| 17:15-17:30 | Yusheng Wang<br><i>Exploring Extracellular Electron Transfer in Lactobacilli for Increased Fitness within the Vaginal Ecosystem</i>                                      |
| 17:30-17:45 | <b>FT</b> Moritz Bätcher<br><i>Surface Immobilization and Electrochemical Probing of Flavin Cofactor in Cryptochrome 4a</i>                                              |
| 17:30-17:45 | <b>FT</b> Alessandra Cimino<br><i>Development of Amperometric Biosensors as Analytical Tools for Glucose Detection in Industrial Settings</i>                            |
| 17:30-17:45 | <b>FT</b> Ella Reid<br><i>Electrochemical Interrogation of Nitroimidazole Resistance Gene A (NimA) from Massilimicrobiota Timonensis</i>                                 |

|             | Parallel Session 2 (Chair: Prof. Victor Diclescu and Prof. Christine Kranz)                                                                                                          |
|-------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 16:00-16:15 | Dharshini Raghavan<br><i>An electrochemical signal-on strategy for CRISPR diagnostics using magnetic beads</i>                                                                       |
| 16:15-16:30 | Flavio Della Pelle<br><i>Benchtop Technologies for Manufacturing Paper-based and 3D-Printed Bioelectrochemical Devices Integrating Laser-Nanostructured Graphenic Films</i>          |
| 16:30-16:45 | Emil Riis Wolfhagen<br><i>Dextran Based Hydrogel for Mediated Bioelectrochemistry</i>                                                                                                |
| 16:45-17:00 | Francesca Polli<br><i>Systematic Investigation and Optimization of Gold Electrodeposition Techniques on 3D-Printed Conductive Architectures for Enhanced Electrochemical Sensing</i> |
| 17:00-17:15 | Celia Toyos Rodríguez<br><i>Fe aerogels as high-performance nanozymes for dopamine detection in artificial urine samples</i>                                                         |
| 17:15-17:30 | Loris Marcel<br><i>Extracellular Electron Transfer by the Dinoflagellate Symbiodinium microadriaticum and its Uses in Coral Diagnostics</i>                                          |
| 17:30-17:45 | <b>FT</b> Angelika Banaś<br><i>Microporous Cu-BTC/ERGO Hybrid Electrodes for Enhanced Electron Transfer and Non-Enzymatic Detection of Hydrogen Peroxide</i>                         |
| 17:30-17:45 | <b>FT</b> Davide Paolini<br><i>3D-Printed integrated devices for bioelectroanalytical diagnostics and sensing</i>                                                                    |
| 17:30-17:45 | <b>FT</b> Aman Singh<br><i>Nanocarriers Interaction with Multi-Component Lipid Membranes</i>                                                                                         |

|             | Parallel Session 3 (Chair: Prof. Ilaria Palchetti and Dr. Noemi Colozza)                                                            |
|-------------|-------------------------------------------------------------------------------------------------------------------------------------|
| 16:00-16:15 | Fred Lisdat<br><i>Exploiting plasmonic effects for improved photoelectrochemical sensing</i>                                        |
| 16:15-16:30 | Alejandro Valverde<br><i>Clamp the LAMP: a photoelectrochemical platform for KRAS mutation detection with wild-type suppression</i> |

|             | Parallel Session 3 (Chair: Prof. Ilaria Palchetti and Dr. Noemi Colozza)                                                                                                                     |
|-------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 16:30-16:45 | Victor Ruiz-Valdepeñas Montiel<br><i>Next Generation Multipurpose Platform Integrating Electrochemical and Proteomic Technologies for Plasmatic Nucleosome Analysis in Colorectal Cancer</i> |
| 16:45-17:00 | Hassan Hamidi<br><i>Integrated Glucose Biosensors and Flexible Potentiostats for Sustainable Textile-Based Health Monitoring</i>                                                             |
| 17:00-17:15 | Opeyemi Temitope Otemoye<br><i>Mediator-Free Multi-Step Chronoamperometry Method for Rapid Detection of Early Biofilm Formation</i>                                                          |
| 17:15-17:30 | Haowen Sun<br><i>Electrochemical Devices for Controlled Release of Therapeutic Drugs</i>                                                                                                     |
| 17:30-17:45 | <b>FT</b> Raquel Guillén Palomares<br><i>Aptamers-Based Electrochemical Sensors Towards BCMA: Computational Optimization and Electrochemical Characterization</i>                            |
| 17:30-17:45 | <b>FT</b> Alice Hewson<br><i>Utilising emerging triazabutadiene molecules and Fourier transformed alternating current voltammetry in electrochemical biosensing</i>                          |
| 17:30-17:45 | <b>FT</b> Aarti Sharma<br><i>Influence of Hypersaline Conditions and Applied Potential on Methane and Acetate Production in Microbial Electrosynthesis</i>                                   |

| Poster Session (18:00-20:00)                                                                                                                                                       |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| S1P10 — Celine Imanuel Hermanto<br><i>NAD(H) Regeneration-Driven Enzymatic Cascade for One-Pot Direct Electron Transfer Bioelectrocatalysis</i>                                    |
| S1P11 — Nuno Machado<br><i>Harnessing Nitratidesulfovibrio vulgaris strains for Sustainable Electrosynthesis of Hydrogen and Formate.</i>                                          |
| S1P12 — Francesca Rizzo<br><i>Electrochemical characterizations of the W-dependent formate dehydrogenase FdhAB from Desulfovibrio vulgaris Hildenborough</i>                       |
| S1P13 — Yixuan Song<br><i>Optimizing Light and Electrode-Driven Acetoin Reduction in a Newly Bioengineered Shewanella oneidensis Strain</i>                                        |
| S1P14 — Ramya Veerubhotla<br><i>Electrode-driven Diazotrophy by Rhizosphere Microbiomes</i>                                                                                        |
| S2P18 — Angelika Banaś<br><i>Microporous Cu-BTC/ERGO Hybrid Electrodes for Enhanced Electron Transfer and Non-Enzymatic Detection of Hydrogen Peroxide</i>                         |
| S2P19 — Alessandra Cimino<br><i>Development of Amperometric Biosensors as Analytical Tools for Glucose Detection in Industrial Settings</i>                                        |
| S2P20 — Raquel Guillén Palomares<br><i>Aptamers-Based Electrochemical Sensors Towards BCMA: Computational Optimization and Electrochemical Characterization</i>                    |
| S2P21 — Alice Hewson<br><i>Utilising emerging triazabutadiene molecules and Fourier transformed alternating current voltammetry in electrochemical biosensing</i>                  |
| S2P22 — Aman Singh<br><i>Nanocarriers Interaction with Multi-Component Lipid Membranes</i>                                                                                         |
| S2P23 — Zofia Jeleniewska<br><i>Multidimensional Electrochemical Fingerprinting of Vancomycin using an Aptamer-Based Sensor via Dynamic Electrochemical Impedance Spectroscopy</i> |
| S2P24 — Giorgia Leotta<br><i>Electrochemical Sensor for White Blood Cell Quantification toward a Point-of-Care Device for Orthopedic Applications</i>                              |
| S2P25 — Keerthi Booshan Manikandan Vanitha<br><i>Approaches to anchoring and crosslinking scaffolds for enzyme and mediator immobilization on electrodes</i>                       |

| Poster Session (18:00-20:00)                                                                                                                                                                      |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| S2P26 — Verdiana Marchianò<br><i>Mussel-Inspired Edible Hydrogels: A New Frontier in Gastrointestinal Glucose Sensing</i>                                                                         |
| S2P27 — Valentina Mongelli<br><i>Advancing Single-Molecule-with-a-Large-Transistor (SiMoT) Platform Stability with Multivariate PCA-Driven Quality Control</i>                                    |
| S2P28 — Valentina Morciano<br><i>Insights into bio-modified interfaces for single-molecule bioelectronic sensors</i>                                                                              |
| S2P29 — Bogdan Nicola<br><i>Development of Hydrogenase-Based Biosensor for Hydrogen</i>                                                                                                           |
| S2P30 — Anna Pifczyk<br><i>Impact of the Lipid Membrane on the Conformational Stability of Lysozyme and <math>\alpha</math>-Synuclein</i>                                                         |
| S2P31 — Víctor Ruiz-Valdepeñas Montiel<br><i>Bioelectroanalytical Strategies for Decoding Non-Canonical DNA G-Quadruplex: Towards Accessible and Precision Cancer Diagnosis</i>                   |
| S2P32 — Sandro Spagnolo<br><i>Electrochemical characterization of antifouling gold interfaces for aptamer-based detection of myelin basic protein</i>                                             |
| S2P33 — Adélèyè Chogolou<br><i>Towards a Wearable Biocompatible Sensor for Dialysis Monitoring</i>                                                                                                |
| S2P34 — Adélèyè Chogolou<br><i>Towards a Wearable Biocompatible Sensor for Dialysis Monitoring</i>                                                                                                |
| S2P35 — Angelo Tricase<br><i>Boolean Logic Gate Network Biosensor for Wine Adulteration Detection</i>                                                                                             |
| S2P36 — Sofiia Tvorynska<br><i>Unlocking the potential of an immobilized enzyme reactor-based flow-injection bioassay method with electrochemical detection: A case of pyruvate determination</i> |
| S3P6 — Aarti Sharma<br><i>Influence of Hypersaline Conditions and Applied Potential on Methane and Acetate Production in Microbial Electrosynthesis</i>                                           |
| S3P7 — Rinki<br><i>Biomass-Derived Doped Carbon Electrocatalyst from Arjuna Bark Waste for Application in Single-Chamber Microbial Fuel Cells</i>                                                 |
| S3P8 — Carlo Santoro<br><i>Comparable performance in microbial fuel cells with wastewater-derived microbial consortia from different locations</i>                                                |
| S3P9 — Francesca Soavi<br><i>An Electrochemical Impedance Spectroscopy Study of Electroactive Bacterial Biofilms</i>                                                                              |
| S3P10 — MENG WU<br><i>Design of a Three-Strain Synergistic System to Enhance Power Generation in Microbial Fuel Cells</i>                                                                         |
| S3P11 — Claudia Zonno<br><i>Polydopamine-Based Biointerfaces for Enhanced Electron Transfer with Photosynthetic Bacteria</i>                                                                      |
| S4P6 — Moritz Bätcher<br><i>Surface Immobilization and Electrochemical Probing of Flavin Cofactor in Cryptochrome 4a</i>                                                                          |
| S4P7 — Ella Reid<br><i>Electrochemical Interrogation of Nitroimidazole Resistance Gene A (NimA) from Massilimicrobiota Timonensis</i>                                                             |
| S4P8 — Michele Catacchio<br><i>Electric Field Cycling Enhances Stability and Reduces Polarization Dispersion in Physisorbed Antibody Biolayers</i>                                                |
| S4P9 — Montserrat Sales Mateo<br><i>Role of the Copper Ion and Protons in the Activity of the Redox Protein Plastocyanin Studied by Voltammetry and Impedance Spectroscopy</i>                    |
| S4P10 — Elena Suprun<br><i>Electrochemistry of Histidine and Histidine-Containing Peptides</i>                                                                                                    |
| S5P5 — Davide Paolini<br><i>3D-Printed integrated devices for bioelectroanalytical diagnostics and sensing</i>                                                                                    |

| Poster Session (18:00-20:00)                                                                                                                                                                                              |
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| <p>S5P6 — Noemi Colozza<br/> <i>Highly stable electrochemical sensors based on green-synthesised, water-soluble phthalocyanines for sustainable, low-cost, in situ monitoring of industrial wastewater pollutants</i></p> |
| <p>S5P7 — Muhammad Saad<br/> <i>Carbon Nanotube Buckypaper-Based Hollow-Cavity FAD-GDH/PLQ Bioanodes for Enzymatic Fuel Cells: Composition Tuning and Optimization</i></p>                                                |
| <p>S5P8 — Mihaela Tertis<br/> <i>Liquid Biopsy-Based Electrochemical Aptasensor for Sensitive Detection of Lipocalin-2 in Breast Cancer</i></p>                                                                           |
| <p>S5P9 — Beril Ustunkaya<br/> <i>Wearable Nanoporous Gold-Based Sensor for Potassium Monitoring in Plants</i></p>                                                                                                        |
| <p>S6P5 — Fred Lisdat<br/> <i>Highly transparent 3D electrodes for photobiovoltaic application based on photosystem I</i></p>                                                                                             |
| <p>S6P6 — Umberto Mattia<br/> <i>Advanced Biohybrid Architectures Based on Purple Bacteria-Nanomaterials Integration for Sustainable Energy Conversion</i></p>                                                            |
| <p>S7P2 — Szymon Smółka<br/> <i>Active Neurotransmitter Delivery: GABA-loaded PEDOT Coatings for the Modulation of Neurons and Glial Cells</i></p>                                                                        |
| <p>S7P3 — Nunzio Giorgio G. Carducci<br/> <i>Comparison of Biosynthesized and Ex-Situ Synthesized Gold Nanoparticles Effects on Purple Bacteria Biophotoelectrodes</i></p>                                                |

## Thursday 25 June 2026 – Campus Universitario

|             | Parallel Session 1 (Chair: Prof. Lital Alfonta and Dr. Matteo Sensi)                                                                                                           |
|-------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 9:00-9:30   | <b>KN</b> Nicolas Plumeré<br><i>A universal oxygen scavenger for oxidase-based biosensors</i>                                                                                  |
| 9:30-9:50   | <b>INV</b> Ann-Sofie Cans<br><i>Ultrafast Nanoparticle-Modified Enzyme Microelectrodes and Nanotip Biosensors for Single-Cell Glutamate and Acetylcholine Release Dynamics</i> |
| 9:50-10:05  | Barbara Jachimska<br><i>Impact of Interface Charge Density on Changes in <math>\alpha</math>-Synuclein Structure</i>                                                           |
| 10:05-10:20 | Erika Castrignanò<br><i>A Front-Line Portable Enzymatic Biosensor As A Point-Of-Collection Tool For Drug Screening In Forensic Investigations</i>                              |
| 10:20-10:35 | Ankita Sinha<br><i>E-DNA Biosensor for Detection of Circulating Therapeutic Monoclonal Antibodies</i>                                                                          |
| 10:35-10:50 | Patrycja Kielb<br><i>Aromatic Tyr/Trp networks prevent oxidative damage in multicopper oxidase: quantifying ROS formation by RRDE upon systematic pathway disruption</i>       |

|             | Parallel Session 2 (Chair: Prof. Sofiene Abdellaoui and Dr. Matteo Tucci)                                                                              |
|-------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
| 9:00-9:30   | <b>KN</b> Shelley Minter<br><i>Transitioning Bioelectrocatalysis from Analytical Applications to Electrification of the Chemical Industry</i>          |
| 9:30-9:50   | <b>INV</b> Yolina Hubenova<br><i>Electrochemical activity of Gram-positive bacteria <i>Lactobacillus delbrueckii</i> subsp. <i>bulgaricus</i> 1132</i> |
| 9:50-10:05  | Paulo Rocha<br><i>Electroactive polymer biohybrids for microbial energy harvesting and productivity monitoring</i>                                     |
| 10:05-10:20 | Xinxin Chen<br><i>Hydrogel for enzyme immobilization: towards electrochemical enzymatic membrane reactors</i>                                          |
| 10:20-10:35 | Remy Ratajczak<br><i>Cable Bacteria – Electrifying Living Electrical Networks</i>                                                                      |
| 10:35-10:50 | Mikhail Petrov<br><i>Toward H<sub>2</sub>-free biomethanation: screening redox mediators as sole electron donors in methanogenic enrichments</i>       |

|             | Parallel Session 1 (Chair: Prof. Paolo Bollella and Dr. Hassan Hamidi)                                                                         |
|-------------|------------------------------------------------------------------------------------------------------------------------------------------------|
| 11:20-11:35 | Giovanni Valenti<br><i>Stimuli-Responsive Luminophore Drives Mechanism Switch for Highly Efficient Electrochemiluminescence Immunosensing</i>  |
| 11:35-11:50 | Mattea Carmen Castrovilli<br><i>Sustainable ESD-enzyme based biosensors for detection of pollutants</i>                                        |
| 11:50-12:05 | Ehtisham Wahid<br><i>A Web-Integrated prototype Yeast-based electrochemical biosensor for Environmental Monitoring</i>                         |
| 12:05-12:20 | Blanca Maria Iolanda Cassano<br><i>Scalable fabrication of glucose biosensors via one-step co-deposition of enzymes and conductive polymer</i> |
| 12:30-12:50 | <b>CLOSING CEREMONY</b>                                                                                                                        |

|  | Parallel Session 2 (Chair: Prof. Shelley Minter and Dr. Dario Lacalamita) |
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|             | <b>Parallel Session 2 (Chair: Prof. Shelley Minter and Dr. Dario Lacalamita)</b>                                                                  |
| 11:20-11:35 | Marco Zeppilli<br><i>Utilisation of Sludge derived Ligno-Humic-Like Compounds as Electrocatalytic Booster for Bioelectrochemical applications</i> |
| 11:35-11:50 | Shenghan Gu<br><i>Addressing Cancer Complexity via Multiplexed Electrochemical Detection of the RNA Epigenetics</i>                               |
| 11:50-12:05 | Kiran S. Sontakke<br><i>Development of a DNA Aptamer-Based Electrochemical Biosensors for Detection of Oxytetracycline and Penicillin G</i>       |
| 12:05-12:20 | Shella Willyam<br><i>Stabilizing Quinone Mediators in Biological and Electrochemical Systems Using Redox Helpers</i>                              |