Scientific Programme

Wednesday, 6 March 2024

13:00 – 14:00	*Registration*
14:00 -14:15	Opening and welcome **Rosa Martinez-Espinosa**, University of Alicante, Spain

Opening session

Chair: **David Richardson**, University of East Anglia, United Kingdom

14:15 – 15:00	**Opening lecture:** Extracellular electron transfer: mechanisms and opportunities **Thomas Clarke**, University of East Anglia, United Kingdom

Session 1: Extracellular and direct interspecies electron transfer

15:00 – 15:20	Interaction of living cable bacteria with carbon electrodes in bioelectrochemical systems **Kartik Aiyer**, Aarhus University, Denmark
15:20 – 15:50	*Coffee break*
15:50 – 16:10	New insights into the mechanism of centimetre-scale electron transport in cable **Filip Meysman**, University of Antwerp, Belgium
16:10 – 16:30	Evolution, distribution and engineering extracellular electron transfer in bacteria **Jeffrey Gralnick**, University of Minnesota, USA
16:30 – 16:50	Periplasmic electron flux is coupled to proton translocation from the cytoplasm onto an extracellular halogenated electron acceptor in *Dehalococcoides mccartyi* **Lorenz Adrian**, Helmholtz Centre for Environmental Research-UFZ, Germany
16:50 – 17:10	Microbial heme-tethered redox strings - a new class of cytochromes revealed by PgcA from *Geobacter sulfurreducens* **Leonor Morgado**, UCIBIO, i4HB-Institute for Health and Bioeconomy, Portugal
17:10 – 17:30	Conductive cytoplasm membrane nanotubes in *Lysinibacillus varians* GY32 **Yonggang Yang**, Foshan University, China
17:30 – 17:50	Characterization of electron transfer chains in *Geobacter sulfurreducens* **Américo G. Duarte**, Universidade NOVA de Lisboa, Portugal
17:50 – 18:10	Understanding the biochemical mechanism of an autoproteolytic delivery pathway for extracellular redox enzymes **Benjamin Nash**, University East Anglia, United Kingdom
18:10 – 18:25	Flash poster presentations
18:25 – 22:00	*Dinner and poster exhibition*

Thursday, 7 March 2024

Session 2: Electron transfer processes in biogeochemical cycles (I)

9:00 – 9:20	Electron bifurcating complexes in energy metabolism and aromatic compound degradation in *Geobacter sp* **Matthias Boll**, Albert Ludwig University of Freiburg, Germany
9:20 – 9:40	Dual control of the *Bradyrhizobium diazoefficiens* RegSR regulatory system on norCBQD gene expression in response to oxygen **María Jesús Delgado**, CSIC, Spain
9:40 – 10:00	The amazing microbiology of the biogeochemical chlorine cycle **John Coates**, University of California, Berkeley, USA
10:00 – 10:20	Interpreting the MopB molybdoenzyme superfamily in the genomic era **Daan Speth**, University of Vienna, Austria
10:20 – 10:40	The mosaicity of flavodiiron proteins: the role of the multiple domains in the intramolecular electron transfer and enzymatic activity **Filipe Folgosa**, ITQB-Universidade Nova de Lisboa, Portugal
10:40 – 10:55	Flash poster presentations
10:55 – 11:30	*Coffee break*
11:30 – 11:50	Is your favourite sulfate reducer capable of sulfide oxidation? **Lea Emile Plum-Jensen**, Aarhus University, Denmark
11:50 – 12:10	Electron competition between reduction pathways in denitrifying bacteria carrying N2O reductase clade II **Alicia Caro-Pascual,** Norwegian University of Life Sciences, Norway
12:10 – 12:30	Architecture of the NADH: ferredoxin oxidoreductase RNF1 from *Azotobacter vinelandii* that drives biological nitrogen fixation **Lin Zhang**, Albert-Ludwigs-Universität Freiburg, Germany
12:30 – 13:30	*Lunch and poster exhibition*

Thursday, 7 March 2024

Session 3: Electron transfer processes in biogeochemical cycles (II)

13:30 – 13:50	*Streptomyces coelicolor* spore-specific nitrate reductase 1 depends on the oxygen-respiring bcc-aa$_3$-supercomplex for its activity **Gary Sawers**, Martin-Luther University Halle-Wittenberg, Germany
13:50 – 14:10	Molecular basis for the oxygen tolerance of the *Desulfovibrio vulgaris* FdhAB formate dehydrogenase **Inês Cardoso Pereira**, ITQB NOVA, Portugal
14:10 – 14:30	Draw me an oxidoreductase that reacts with menaquinones: the case of the formate dehydrogenase ForCE from *Bacillus subtilis* **Axel Magalon**, Institut de Microbiologie de la Méditerrannée, France
14:30 – 14:50	Architecture of bacterial electron transport chains terminated by clade II nitrous oxide reductases **Jörg Simon**, TU Darmstadt, Germany
14:50 – 15:10	Metalloenzymes from Pathogenic Bacteria **Sofia Pauleta**, Nova University Lisbon, Portugal
15:10 – 15:30	Sulfate-reducing prokaryotes induced corrosion: Electron transfer from element iron to **Jizhou Duan**, Institute of Oceanology, Chinese Acadamy of Sciences, China
15:30 – 16:00	*Coffee break*

Session 4: Handling stress and reactive oxygen and nitrogen species (I)

16:00 – 16:20	sNOR does not function as nitric oxide reductase in ammonia-oxidizing bacteria **Petra Pjevac**, University of Vienna, Austria
16:20 – 16:40	Transmembrane signalling by fumarate sensor kinase DcuS: a piston-driven cytoplasmic PASC hinge **Gottfried Unden**, Johannes Gutenberg University Mainz, Germany
16:40 – 17:00	Multiple roles for the electron transport chains of the enteric pathogen *Campylobacter jejuni* in respiration and detoxification **David Kelly**, University of Sheffield, United Kingdom
17:00 – 17:20	RsuR, from the alpha-proteobacterium *Zymomonas mobilis*, regulates Fe-S cluster biogenesis **Isabel Askenasy**, University of Wisconsin-Madison, USA
17:20 – 17:40	No oxygen, no stress? Exploring oxidative stress in anaerobic environments **Benjamin Ezraty**, Institut de Microbiologie de la Méditerranée, France
17:40 – 18:00	Anaerobic biosynthesis of ubiquinone and O_2-independent hydroxylation **Rodrigo Arias Cartin**, Institut Pasteur, Université Paris-Cité, France

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18:00 – 18:20	The role of AAA-ATPase RavA-ViaA complex in respirator chains **Frédéric Barras**, Institut Pasteur, France
18:20 – 19:30	Poster exhibition
20:00 – 22:30	*Gala dinner and networking evening*

Friday, 8 March 2024

Session 5: Dehydrogenases, oxidases and quinones

9:00 – 9:20	Energy coupling in *Escherichia coli* complex I **Luca Mérono**, Albert-Ludwigs-University, Germany
9:20 – 9:40	Function of the isolated CIV from the obligate respiratory supercomplex (CIII2CIV2SOD2) from *Mycobacterium smegmatis* **Jóhanna Vilhjálmsdóttir**, Stockholm University, Sweden
9:40 – 10:00	Structure, cofactor composition and mechanism of electron and Na^+ transport of the Rnf complex from *Acetobacterium woodii* **Jennifer Roth**, Goethe-Universität Frankfurt, Germany
10:00 – 10:20	Diversity of quinones in *Pseudomonadota*: focus on ubiquinone biosynthesis and physiology of under anaerobic conditions **Fabien Pierrel**, CNRS-Université Grenoble Alpes, France
10:20 – 10:40	Cytochrome c-dependent nitric oxide reductase is activated by a pair of chaperone proteins **Sofia Appelgren**, Stockholm University, Sweden
10:40 – 11:00	Characterization and comparison of the oxidoreductase activity of cytochrome bd-I and bd-II oxidases from *Mycobacterium smegmatis* **Mateusz Janczak**, Stockholm University, Sweden
11:00 – 11:30	*Coffee break*

Session 6: Handling stress and reactive oxygen and nitrogen species (II)

11:30 – 11:50	Transcription circuits that respond to electron transfer stress **Timothy Donohue**, University of Wisconsin-Madison, USA
11:50 – 12:10	L-arginine sensing reprograms the energy metabolism of *P. putida* **Simone Angeli**, Sapienza University of Rome, Italy
12:10 – 12:30	Interactions between G-quadruplex DNA and hemin structures induce staphylococcal biofilm tolerance to hemin toxicity and electroactivity **Obinna Ajnuwa**, Aarhus University, Denmark

Closing session

Chair: **Jeff Cole**, University of Birmingham, United Kingdom

12:30 – 13:15	**Closing lecture:** Dawn is breaking: electron transfer and its regulation during dissimilatory sulfur oxidation **Christiane Dahl**, University of Bonn, Germany
13:15 – 13:30	Closing words **Rosa María Martínez-Espinosa**, University of Alicante, Spain