

EBEC 2026 - Schedule

Saturday 22 August 2026

15:00-16:30 Registration , *Aula Magna Foyer*

16:30-18:00 Welcome & Peter Mitchell Medal Award , *Aula Magna (A+B)*
Chair: Ville Kaila

- 1 Introduction of awardee: Hartmut Michel (Nobel Prize in Chemistry 1988)
Hartmut Michel;
- 2 O1: Following the Proton: A Journey Through Bioenergetics
Joachim Heberle;

18:00-20:00 Reception , *Aula Magna Foyer*

Sunday 23 August 2026

09:15-10:30 S1. Structure & function of respiratory chain proteins , *Aula Magna A*
Chair: Robert Gennis

- 1 09:15-09:30: In memoriam Rudy Marcus and Richard Cross
Rebecca Oot; Alexei Stuchebrukhov;
- 2 09:30-09:50 - O2: Structures of the intermediates of the catalytic cycle of the bacterial cytochrome c oxidase
Harmut Michel;
- 3 09:50-10:10 - O3: Structural mechanism of proton pumping by ba₃-type cytochrome c oxidase
Gisela Brändén;
- 4 10:10-10:30 - O4: Dissecting the conformational complexity and mechanism of cytochrome bd biogenesis
Shara Safarian;

10:30-11:00 Coffee break , *Aula Magna Foyer*

11:00-12:30 S2. Bioenergetic complexes & supercomplexes , *Aula Magna A*
Chair: Maria Falkenberg

- 2 11:00-11:30 - O5: Mitochondrial bioenergetics through the lens of evolution and disease
Vamsi Mootha;
- 3 11:30-11:50 - O6: The effect of depleting respirasome formation in mice expressing COX7A2L
Nils-Göran Larsson;
- 4 11:50-12:10 - O7: Folate and NAD cofactors at crossroads of metabolic regulation and disease
Anu Wartiovaara;

12:15-14:30 Poster session 1 , *Aula Magna Foyer*

- 2 P2. High Resolution structure of P. denitrificans complex I in detergent micelle
Serhat Dönmez
- 3 P4. Diversity and in situ organization of algal mitochondrial respiratory supercomplexes
Mariia Melnik
- 4 P6. Protonation-linked conformational gating coordinates vectorial proton transfer in respiratory complex I
John Wright
- 5 P8. In situ characterisation of the effect of SCAF1 on mitochondrial respiratory supercomplexes, mitochondrial network and morphology in human embryonic kidney cells
Ines Zouhair
- 6 P10. Deciphering the Deactive to Active transition in bovine Complex I
Ketul Saharan
- 7 P12. Analysing Respiratory Chain Complexes from Corynebacterium glutamicum
Nick Hiatt
- 8 P14. Time-resolved studies of nitric oxide turnover in cytochrome c oxidase
Johan Glerup
- 9 P16. Role of dynamic lipid-protein scaffold in quinone transport by respiratory chain coupling
Oleksii Zdorevskyi
- 10 P18. Mammalian respiratory supercomplexes: Uncovering their role in mitochondrial Bioenergetics
Andy Giovel Dominguez Rodriguez

- 11 P20. Role of COX6A1 in the structural and functional organization of the mitochondrial respiratory chain
Alba Cantalejo
- 12 P22. Structure-function studies of the respiratory supercomplexes of the thermoacidophilic archaeon, *Sulfolobus acidocaldarius*
Paulina Borkowska Borkowska
- 13 P24. Structural and Functional Insights into QrcABCD Mechanism for Energy Conservation
Américo G. Duarte
- 14 P26. Mitochondrial–cytosolic redox crosstalk via the alternative oxidase and lactate dehydrogenase: growth coordination in *Drosophila*
Geovana Garcia
- 15 P28. Native state structure determination of respiratory supercomplexes in mammalian mitochondrial inner membrane
Takahiro Masuya
- 16 P30. FADS2–LSD1 interaction: structural determinants and potential role in Alzheimer's disease
Alessia Nisco
- 17 P32. Deciphering the photosynthetic pathway of *Halorhodospira halophila*
Emmanuella Serwaa
- 18 P34. Traceless cofactor regeneration from formate for CYP450 enzyme cascades
Ping Xiao
- 19 P36. Why Ferredoxins and HiPIPs Favor Different Redox Transitions in [4Fe-4S] Clusters: An Electrostatic Analysis
Maxim Janzen
- 20 P38. The priority of the external NADH dehydrogenase for electron transfer in the respiratory chain of *Saccharomyces cerevisiae* is substrate and electron flux dependent
Corinne Pellon
- 21 P40. Contrasting binding pockets of the two flavins of Bifurcating Electron Transferring Flavoprotein observed through FTIR spectroelectrochemistry
María González-Viegas
- 22 P42. Disentangling the biotic flow of electrons in the continental subsurface
Guillermo Climent Gargallo
- 23 P44. Deciphering the critical mechanistic and regulative elements of *Mycobacterium abscessus* cytochrome bd oxidase
Subha Suvetha Kathalingam
- 24 P46. Spectroscopic Investigation of the O₂ Reduction Intermediates by Cytochrome c Oxidase from *Paracoccus denitrificans*
Muhammad Tahir Hafeez
- 25 P48. Electron distribution in the one-electron reduced E-state of bovine cytochrome c oxidase
Jonatan Johannesson
- 26 P206. Beyond the c-state: are dynamic state changes required for UCP1 proton leak?
Callum Eke
- 27 P208. Spin-Dependent Electronic Reconfiguration and the Stability of the Semiquinone Intermediate at the Qo site of Cytochrome bc₁
Marcin Sarewicz
- 28 P210. Nanopore direct RNA sequencing reveals an essential role for polyadenylation of mitochondrial transcripts
William Carter
- 29 P212. *Enterococcus faecalis* extracellular electron transport
Lars Hederstedt
- 30 P214. Investigating metabolic changes in a citrin-deficient cell model
Joe Carroll

12:30-14:30 Lunch , *Aula Magna Foyer*

14:30-16:00 Aula Magna (A+B): S2. Bioenergetic complexes & supercomplexes , *Aula Magna A*
Chair: Irene Vercellino

- 2 14:30-14:50 - O8: In mitochondrial disease respiratory complex III₂ assembles complex I via toxic intermediate
James Letts;
- 3 14:50-15:10 - O9: Exploring mitochondrial molecular architecture across eukaryotes in situ
Florian Waltz;
- 4 15:10-15:30 - O10: Structural basis for coupling methyl-transfer to sodium pumping in the Mtr complex
Jan Schuller;
- 5 15:30-15:50 - O11: Rebuilding Power: Structural Strategies to Rescue OXPHOS Dysfunction
Cristina Ugalde;

16:00-16:30 Coffee break , *Aula Magna Foyer*

16:30-17:30 S6. ATP synthase and ATPases , *Aula Magna A*

Chair: Christoph von Ballmoos

- 2 16:30-16:50 - O12: Diversification of gear ratio of ATP synthase
Hiroyuki Noji;
- 3 16:50-17:10 - O86: The F1FO ATP synthase Mechanism
Wayne Frasch;
- 4 17:10 - 17:30 - O14: High-resolution cryoEM of mitochondrial ATP synthase and complex
Werner Kühlbrandt;

17:30-19:00 Poster session 2 , *Aula Magna Foyer*

- 2 P1. The Na⁺-pumping mechanism driven by redox reactions in the NADH-quinone oxidoreductase from *Vibrio cholerae* relies on dynamic conformational changes
Moe Ishikawa-Fukuda
- 3 P3. Capturing the respiratory chain in action with time-resolved cryo-EM
Kaitlyn Kiernan
- 4 P5. Interdomain bridges and their roles in complex I regulation and catalysis
Daniel Grba
- 5 P7. Mechanistic insights into the DsrMKJOP complex, a central respiratory complex in dissimilatory sulfite reduction
Raquel M Bernardino
- 6 P9. Redox-driven proton-pumping in respiratory alternative complex III, ACIII, from *Rhodothermus marinus*
Catarina Oliveira
- 7 P11. The structure and function of dimeric cytochrome c dependent Nitric Oxide Reductase from *Paracoccus denitrificans*
Finja König
- 8 P13. Integrative mechanistic explorations of the Qo active site of the mycobacterial III₂IV₂ supercomplex
Terezia Kovalova
- 9 P15. Rotatory activity of ATP Synthase tunes membrane elasticity through lateral packing modulation: evidence and implications
Ivan Lopez Montero
- 10 P17. Investigating *Mycobacterium abscessus* cytochrome bcc:aa₃ oxidase QcrB subunit reveals key insights that paves the way to the development of new targeting agents
Emilia Xin Yi Tan
- 11 P19. Structures of *Tetrahymena thermophila* mitochondrial megacomplex integrating the entire respiratory chain
Mengchen Wu
- 12 P21. I₁III₂ supercomplex formation on deletion of a complex IV assembly factor COA1
Monalisa Sarkar
- 13 P23. Probing the supramolecular architecture of the *Drosophila* respiratory supercomplexes
Mayla Gabriela Zanchetta Venancio
- 14 P25. NDUFB7 Dysfunction: Impact on Respirasome Assembly and Mitochondrial Bioenergetics
Paula San Román Ruiz
- 15 P27. Reverse redox loop-driven coupling of fatty acid β-oxidation to CO₂ reduction during syntrophic methane production
Dennis Kosian
- 16 P29. Forward or Reverse? Superoxide Oxidase as a Versatile Player in Bacterial Electron Transport
Yannick Bärtschi
- 17 P31. A putative Nfn soluble transhydrogenase in the bacterial chemolithoautotroph *Aquifex aeolicus*
Marianne Guiral
- 18 P33. Electron bifurcation – a tale of interdependent proton and electron transfer reactions
Frauke Baymann
- 19 P35. Superoxide- and Proton-Coupled Electron Transport Between Redox Proteins of the Respiratory and Photosynthetic Chains
Pau Gorostiza
- 20 P37. CybB and its paralogs contribute to compensation of redox backpressure in *E. coli*
Abbas Abou-Hamdan Abou-Hamdan
- 21 P39. Multiscale Computational Insights into Long-Range Electron Transfer in Hydrogen-dependent CO₂ Reductase
Jonathan Lasham
- 22 P41. Systematic disruption of Tyr/Trp pathways amplifies the ROS formation 25-fold in multicopper oxidase: theoretical predictions of ET pathways and RRDE electrochemical studies
Patrycja Kielb

- 23 P43. High Resolution Structures of Cytochrome c Oxidase Catalytic Intermediates
Daniela Barreiro Barreiro
- 24 P45. Escherichia coli cytochrome bd-II displays significant quinol peroxidase activity
Lucia Heger
- 25 P47. Mechanistic and Functional characterization of Cytochrome bd Oxidases in Mycobacterium smegmatis
Parul Singh
- 26 P49. Cytochrome bd oxidase from Solidesulfovibrio fructosivorans and why its cooler than E. coli's
Mary De La Sayette
- 27 P51. Confirmation and functional characterization of Ni-NTA binding motif in cytochrome bo₃ quinol oxidase from Escherichia coli
Ye Gao
- 28 P205. Uncovering a VDAC1-Associated Mitochondrial Vulnerability in Pediatric B-Cell Acute Lymphoblastic Leukemia
Haripriya Santosh
- 29 P207. The evolution of a Na⁺-sensitive Vibrio cholerae mutant unmasks the moonlighting aminopeptidase PepA as a regulator of nhaB Na⁺/H⁺ antiporter gene expression
Sebastian Herdan
- 30 P209. The EMET (Emergent Electron Transfer) Mechanism of Electron Bifurcation in cytochrome bc₁: A Combined Spectroscopic and Theoretical Study
Anna Wójcik-Augustyn
- 31 P211. Does the δ Subunit of Polytomella parva ATP Synthase Controls its Hydrolytic Activity?
Marcos Ostolga
- 32 P213. VDAC1 as a target of Amyloid-β Oligomers: linking channel dysfunction to mitochondrial bioenergetics in Alzheimer's disease
Salvatore Antonio Maria Cubisino

Monday 24 August 2026

09:00-10:30 S7. Photosynthetic energy conversion, Aula Magna A

Chair: Johannes Messinger

- 2 09:00-09:20 - O15: Complementary approaches for understanding water oxidation reaction in Photosystem II with serial X-ray crystallography and X-ray spectroscopy
Junko Yano;
- 3 09:20-09:40 - O17: Far-Red Photosystem II: Less Energy but New Light
Bill Rutherford;
- 4 09:40-10:00 - O19: Photosynthesis in the far-red: mechanisms and challenges
Roberta Croce;
- 5 10:00-10:20 - O20: ATP Synthase Redox Regulation Couples Dark Bioenergetics to Senescence in Arabidopsis
Felix Buchert;
- 6 10:20-10:40 - O21: Environmental signal integration in Chlamydomonas reinhardtii
Dimitris Petroutsos;

09:00-10:30 S3. Redox enzymes, electron transfer, electron bifurcation, Aula Magna B

Chair: Jan Schuller

- 2 09:00-09:20 - O16: Mechanism of binding of quinone to the catalytic sites of cytochrome bc₁
Artur Osyczka;
- 3 09:20-09:40 - O18: Describing the Coupling of Charge Transfer and Chemical Reactions in Proteins: A Microstate Model Large Enzyme Complexes
Matthias Ullmann;
- 4 09:40-09:50 - P37 Short: CybB and its paralogs contribute to compensation of redox backpressure in E. coli
Abbas Abou-Hamdan;
- 5 09:50-10:00 - P38 Short: The priority of the external NADH dehydrogenase for electron transfer in the respiratory chain of Saccharomyces Cerevisiae is substrate and electron flux dependent
Corinne Pellon;
- 6 10:00-10:10 - P39 Short: Multiscale Computational Insights into Long-Range Electron Transfer in Hydrogen dependent CO₂ Reductase
Jonathan Lasham;
- 7 10:10-10:20 - P40 Short: Contrasting binding pockets of the two flavins of Bifurcating Electron Transferring Flavo-protein observed through FTIR spectroelectrochemistry
María González-Viegas;

- 8 10:20-10:30 - P41 Short: Systematic disruption of Tyr/Trp pathways amplifies the ROS formation 25-fold in multicopper oxidase: theoretical predictions of ET pathways and RRDE electrochemical
Patrycja Kielb;

10:30-11:00 Coffee break , Aula Magna Foyer

11:00-12:30 S14. Mitochondrial physiology , Aula Magna A

Chair: Nils-Göran Larsson

- 2 11:00-11:20 - O22: Deciphering thermogenic functionality of UCP1 by evolutionary reconstruction
Martin Jastroch;
- 3 11:20-11:40 - O24: Allosteric activation of DNA polymerase gamma as a therapeutic strategy in POLG-related mitochondrial disease
Maria Falkenberg;
- 4 11:40-12:00 - O26: A crucial role for liver mitochondria in thermogenesis in complex III-deficient mice
Jukka Kallijärvi;
- 6 12:00-12:10 - P189: Short: Loss of CHCHD2 and CHCHD10 causes tissue-specific bioenergetic failure and severe myopathy driven by impaired postnatal myogenesis
Roberta Filograna;
- 7 12:10-12:30 - O28: Subcellularly targeted AMPfret nanosensors reveal spatiotemporal propagation of energy stress and discriminate physiological from toxic responses
Uwe Schlatter;

11:00-12:30 S4. Terminal oxidases , Aula Magna B

Chair: Amandine Marechal

- 2 11:00-11:20 - O24: The two cytochrome bds in the respiratory chain of Mycobacterium smegmatis
Pia Ådelroth;
- 3 11:20-11:40 - O25: High-energy" metastable (O_h) and "as isolated"(O) states of the oxidized bovine cytochrome c oxidase
Daniel Jancura;
- 4 11:40-12:00 - O27: Heme redox potentials and cooperative interactions in the obligate CIII₂CIV₂ supercomplex from Mycobacterium smegmatis
Frederic Melin;
- 5 12:00-12:10 - P204 Short: Dynamic modulation of complex IV excess capacity by a redox-dependent uncoupling mechanism in a metabolically active bean beetle line
Clément J. L. Chevret;
- 6 12:10-12:30 - P133: Biochemistry and physiology of ubiquinone biosynthesis under anaerobic conditions
Fabien Pierrel;

12:30-13:30 Lunch , Aula Magna Foyer

13:00-14:30 Poster session 3 , Aula Magna Foyer

- 1 P52. Inhibition of mitochondrial transcription activates fatty acid oxidation via transcript-level sensing prior to decrease of OXPHOS capacity
Taolin Yuan
- 2 P53. Proton exit routes in complex I explored with MD simulations and free energy calculations
Amiel Abettan
- 3 P54. Conformational dynamics in the terminal Complex I membrane subunit Nqo12
Jobst Liebau
- 4 P55. Cryo-EM structure of a novel type of complex I homologue (NDH) from Sulfolobus acidocaldarius
Hanna Pryputniewicz
- 5 P56. Investigations into proton transfer pathways in respiratory complex I from Paracoccus denitrificans by mutagenesis
Robert Waddell
- 6 P57. Structural elucidation of the mechanism for inhibitor resistance in the Na⁺-translocating NADH-ubiquinone oxidoreductase from Vibrio cholerae
Masatoshi Murai
- 7 P58. Dynamics and energetics of a tyrosine gate in respiratory complex I
Jasmine Aaltonen
- 8 P59. Zn²⁺ disrupts proton-translocation pathways in respiratory complex I
Valentin Datcu
- 9 P60. Structural basis of complex I biogenesis
Neele Manik
- 10 P61. Cryo-EM structure of a complex I assembly intermediate reveals the function of assembly factors
Janet Vonck
- 11 P62. Hydration of proton pathways in E. coli complex I hampers energy conversion
Maximilian Weiß

- 12 P63. Mutation of highly conserved residues in MrpA-like subunit NuoL of E. coli respiratory complex I
Thilo Seifermann
- 13 P64. Redox chemistry of the FMN-cofactor in respiratory complex I
Lars Vollmer
- 14 P65. Deprotonation of a conserved histidine residue enables energy conversion in respiratory complex I
Jonas Hentschel
- 15 P66. Characterization of the Antiporter-Like Subunit Nqo14 of Respiratory Complex I
Sofia Bilancioni
- 16 P67. Characterizing redox-driven proton pumping of the bacterial Complex I in mini-respiratory chains
Eric Mattiuz
- 17 P68. Investigation of a kinetic gate controlling the proton-coupled electron transfer in Complex I
Mariona Martínez Salvador
- 18 P69. Mechanistic Insights into Conformational Switching Network of Complex I
Pauline van Beers
- 19 P70. Electron transfer energetics in yeast respiratory complex I
Ido Dan
- 20 P71. Reconstitution of mammalian complex I into proteoliposomes for structural and functional studies in a native-like membrane environment
Aleksandra Kulikova
- 21 P72. Toward Highly Efficient Artificial Respiratory Chains: Integrating Tunable Membranes and Complex I
Stefan Täuber
- 22 P74. *Paracoccus denitrificans* complex I: A complete and fully integrated model platform for respiratory complex I
Bozhidar Ivanov
- 23 P75. Molecular Principles Underlying Quinone Binding and Proton-Coupled Electron Transfer in Complex I
Ana P. Gamiz-Hernandez
- 24 P76. Disease mutation perturbs long-range charge transfer reactions in the respiratory Complex I
Patricia Saura
- 25 P77. An ancient carbon monoxide-driven respiratory system composed of a CODH nanowire and a basal complex-I
Anuj Kumar
- 26 P78. Beyond assembly: ACAD9 stabilizes a novel extended conformation of mitochondrial complex I
Christian Buratto
- 27 P79. Biophysical characterization of engineered modules of respiratory Complex I
Sofia Badolato
- 28 P80. From Simulations to Experiments: Relating Redox Chemistry to Proton Transfer in Complex I
Niklas Leif Hoja
- 29 P81. Integrative investigations of the quinone-triggered proton translocation mechanism of E. coli Complex I
Adel Beghiah
- 30 P82. Modulation of F1FO-ATPase kinetics and mitochondrial respiration by the redox-active antioxidants N-acetylcysteine and sodium ascorbate
Salvatore Nesci
- 31 P83. Structural analysis of ATP synthase embedded in lipid bilayer vesicles
Ken Yokoyama
- 32 P84. pH determination at mitochondrial ATP synthase subunit e via local pH sensors
Greta Bussmann
- 33 P85. The *Mycobacterium abscessus* F-ATP synthase and its druggability
Tuck Choy Fong
- 34 P86. The C-terminus of subunit e is essential to switch the ATP synthase into the mitochondrial permeability transition pore
Federica Boscolo Nata
- 35 P87. Cryo-EM structure of the chloroplast ATP synthase from *Chlamydomonas reinhardtii*
Katarzyna Lorencik
- 36 P88. Rewiring of Mitochondrial ATP Synthesis Upon Synaptic Stimulation
Othman Abu Shelbayeh
- 37 P89. Small Subunit, Big Impact: DAPIT's Role in ATP Synthase
Marie-Therese Borowski
- 38 P90. Functional analysis of novel wing domain subunits in the *Toxoplasma gondii* ATP synthase complex
Monika Singh

- 39 P91. The structural insights for the rotary mechanism of prokaryotic ATP synthase driven by proton motive force
Jun-ichi Kishikawa
- 40 P92. Running in Reverse: Does ATP Synthase lose its Oligomeric Organization?
Nico Marx
- 41 P93. Electric field effects drive protonation dynamics and c-ring rotation of ATP synthase
Sarah Christina Rossmann
- 42 P94. Cryo-EM structure of the Rhodobacter sphaeroides ATP synthase
Hannah Takahashi
- 43 P95. ATP-synthase subunits e.g do not shape rims of narrow cristae but determine cristae inflation and MICOS-SAM connections in INS-1E cells
Petr Jezek
- 44 P96. Mitochondrial Resilience Mechanisms Across Species: Structure-Function Studies of Drosophila melanogaster ATP Synthase
Louis Betz
- 45 P97. Uncovering the link between ATP synthase and the TCA cycle by crosslinking mass spectrometry
Jelena Misic
- 46 P98. Structural studies of the human V-ATPase containing the $\alpha 2$ -isoform
Stuti Sharma
- 47 P99. Analysis of Kinetic Experiments Suggest a Localized Model of Energy Coupling in ATP Synthase
Sunil Nath
- 48 P100. V-ATPase Regulation by TLDc proteins: from Yeast to Neurodegenerative Disease
Rebecca Oot
- 49 P135. Comparative Analysis of Quinone-Reducing Enzymes from Staphylococcus aureus and Pseudomonas aeruginosa
Patrícia Pires
- 50 P136. ATP synthase architecture controls cristae formation and bioenergetic remodeling in T. brucei
Alena Zíková
- 51 P215. Electron transfer in Streptococcus pneumoniae NADPH Oxidase (SpNOX)
Nadja Bircher
- 52 P216. High-resolution in situ structures of plant photosystem supercomplexes
Jiao Li
- 53 P217. Glutamine Transport Regulates Lysine Catabolism and mTOR Signaling in Cancer Cells
Putu Yustiantara
- 54 P218. Targeting Parkinson-linked complex I deficiency: A small molecule compound enhances mitochondrial respiratory chain function in SH-SY5Y cells
Kunwar Jung K C
- 55 P219. Photosynthetic hydrogen production in cyanobacteria
Kirstin Gutekunst
- 56 P220. Characterization of GLUT8 as a Key
Yunlong Qiu
- 57 P221. Membrane curvature modulates voltage-sensing domain coupling in the sperm-specific Na^+/H^+ exchanger SLC9C1
Hang Li
- 58 P222. Complex I: An Electrostatic Coulomb Pump Model Similar to Cytochrome c Oxidase
Alexei Stuchebrukhov

14:30-16:00 S9. Transporters and channels , Aula Magna A

Chair: Bruno Miroux

- 2 14:30-14:50 - O29 Stepwise ATP translocation into the endoplasmic reticulum by human SLC35B1
David Drew;
- 3 14:50-15:10 - O31: Molecular basis of substrate recognition and transport by the human mitochondrial citrate carrier SLC25A1
Edmund Kunji;
- 4 15:10-15:30 - O33: Mechanism of loosely coupled transport by EmrE and its functional impact in vitro and in bacteria
Katie Henzler-Madison;
- 5 15:30-15:50 - O35: Role of the MmpS5L5 Efflux Pump in Potentiating the Evolution of Untreatable Multi-Drug-Resistant Strains of Mycobacterium tuberculosis
Greg Cook;
- 6 15:50-16:00 - P122 Short: Human and mouse UCP1: bioenergetic similarities and discrepancies
Jan Nedergaard;

14:30-16:00 Bioenergetic machines / Light Energy Conversion , Aula Magna B

Chair: Rob Burnap

- 1 14:30-14:50 - O30: Structure of giant kelp Photosystem I-FCP uncovers drivers of antenna evolution across the red lineage
María Maldonado;
- 2 14:50-15:10 O32: Directionality of electron and proton transfers in Type II reaction centers
Marilyn Gunner;
- 3 15:10-15:30 - Thylakoid-wide loss of protein segregation upon state transitions in *Chlamydomonas reinhardtii*
Wojciech Nawrocki;
- 4 15:30-15:40 - P216: High-resolution in situ structures of plant photosystem supercomplexes
Jiao Li;
- 5 15:40-16:00 - P222: Complex I: An Electrostatic Coulomb Pump Model Similar to Cytochrome c Oxidase
Alexei Stuchebrukhov;

16:00-16:30 Coffee break , Aula Magna Foyer

16:30-17:30 S10. Prokaryotic bioenergetics, microbial drug targets , Aula Magna A

Chair: Tony Moore

- 2 16:30-16:50 - O37: Roles of reactive oxygen species in bacterial bioenergetics
Christoph von Ballmoos;
- 3 16:50-17:10 - O38: Understanding the powerhouse of Gram-positive and -negative pathogens to identify and design new targets and leads
Gerhard Grüber;
- 4 17:10-17:30 - O39: Tubular respiratory architectures redefine quinone interaction in prokaryotic bioenergetics
Axel Magalon;

16:30-17:30 Short talks on Complex I and related systems , Aula Magna B

Chair: Judy Hirst

- 2 16:30-16:40 - P202 Short: Functional diversification of respiratory complex I in anaerobic bacteria through exchangeable electron input modules
Mirjam Odermatt;
- 3 16:40-16:50 - P75 Short: Molecular Principles Underlying Quinone Binding and Proton-Coupled Electron Transfer in Complex I
Ana Gamiz-Hernandez;
- 4 16:50-17:00 - P79 Short: Biophysical characterization of engineered modules of respiratory Complex I
Sofia Badolato;
- 5 17:00-17:10 - P198 Short: Loss of dGTP in postmitotic tissues due to respiratory complex I instability
Janne Purhonen;
- 6 17:10-17:20 - P80 Short: From Simulations to Experiments: Relating Redox Chemistry to Proton Transfer in Complex I
Niklas Hoja;
- 7 17:20-17:30 - P16 Short: Role of dynamic lipid-protein scaffold in quinone transport by respiratory chain coupling proteins
Oleksii Zdorevskyi;

20:00-00:00 Dinner at the Vasa museum , Vasa museum

Tuesday 25 August 2026

09:00-10:30 S9. Channels and Transporters , Aula Magna A

Chair: David Drew

- 2 09:00-09:20 - O40: UCP3 couples branched-chain amino acid metabolism to fatty acid oxidation and glucose sparing
Giuseppe Fiermonte;
- 3 09:20-09:40 - O42: VDAC structure in mitochondrial connectivity and modulation
Vito Nicola de Pinto;
- 4 09:40-10:00 - O44: A novel mechanism of regulation of UCP1 mediated respiratory uncoupling
Bruno Miroux;
- 5 10:00-10:20 - O46: Acyl-CoA binds directly to UCP1 to interplay with nucleotide and fatty acid regulation of its uncoupling activity
Paul Crichton;

- 6 10:20-10:30 - P123 Short: Structural Insights into the Twin-Arginine Translocase (Tat) Receptor and Its Substrate Recognition Mechanism
Ziyu Zhao;

09:00-10:30 S7. Photosynthetic energy conversion, Aula Magna B

Chair: Bill Rutherford

- 2 09:00-09:20 - O41: Role of respiratory oxidases in photosynthetic electron transport in *Synechococcus elongatus* PCC 7942
Stefania Viola;
- 3 09:20-09:40 - O43: Atomic resolution structure of spinach rubisco reveals protons and dynamics
Johannes Messinger;
- 4 09:40-10:00 - O45: Deciphering far-red pigment absorption in chlorophyll-f-containing Photosystem II
Ho Fong (Marco) Leong;
- 5 10:00-10:20 - O47: Uncovering the role of Flv3 in nitrogen metabolism in *Synechocystis* spp. PCC 6803
Samuele Perin;
- 6 10:20-10:30 - P106: Structural Basis of Redox-Coupled CO₂ hydration by the Cyanobacterial NDH-1MS' complex
Yat Kei Lo;

10:30-11:00 Coffee break, Aula Magna Foyer

11:00-12:30 S5. Complex I and related systems I, Aula Magna A

Chair: Thorsten Friedrich

- 2 11:00-11:20 - O48: Redox-Driven CO₂ Hydration by NDH-1: Long-Range Coupling in a Divergent Complex I System
Rob Burnap;
- 3 11:20-11:30 - P81 Short: Integrative investigations of the quinone-triggered proton translocation mechanism of *E. coli* Complex I
Adel Beghiah;
- 4 11:30-11:50 - O51: Computer simulations of molecular gates and switches in the membrane domain of respiratory complex I
Vivek Sharma;
- 5 11:50-12:00 - P76 Short: Disease mutation perturbs long-range charge transfer reactions in the respiratory Complex I
Patricia Saura;
- 6 12:00-12:20 - O53: Protonation states defining quinone binding and catalysis in respiratory complex I
Guilherme Arantes;
- 7 12:20-12:30 - P77 Short: An ancient carbon monoxide-driven respiratory system composed of a CODH nanowire and a basal complex-I
Anuj Kumar;

11:00-12:30 S12. Protein assembly and function, organelle dynamics, Aula Magna B

Chair: Cristina Ugalde

- 2 11:00-11:20 - O49: Aralar couples metabolic state to mitochondrial cristae organization through Opa1
Luca Scorrano;
- 3 11:20-11:40 - O50: Evolutionary incremental complexity in the formation of the cytochrome c oxidase catalytic center
Erika Fernandez-Vizarra;
- 4 11:40-12:00 - O52: From Damage to Recovery: Stress-Dependent Maintenance Turnover of Mitochondrial OXPHOS Complexes
Ilka Wittig;
- 5 12:00-12:10 - P25 Short: NDUFb7 Dysfunction: Impact on Respirasome Assembly and Mitochondrial Bioenergetics
Paula San Román Ruiz;
- 6 12:10-12:20 - P143 Short: Complexome profiling reveals novel links between mitochondrial genome maintenance and OXPHOS assembly
Esperanza López-Merino;
- 7 12:20-12:30 - P78 Short: Beyond assembly: ACAD9 stabilizes a novel extended conformation of mitochondrial complex I
Christian Buratto;

12:30-13:30 Lunch, Aula Magna Foyer

12:30-14:30 EBEC Business meeting, Aula Magna Foyer

13:00-14:30 Poster session 4, Aula Magna Foyer

- 1 P102. QM/MM refinement of cryo-EM structural data reveal protonation states of bioenergetics protein complexes
Hao Jiang Jiang
- 2 P104. Local Thylakoid Unstacking Underlies State Transitions
Sofie van Dorst
- 3 P106. Structural Basis of Redox-Coupled CO₂ hydration by the Cyanobacterial NDH-1MS' complex
Yat Kei Lo
- 4 P108. ATP-dependent potassium channel of the native mitochondrial inner membrane: electrophysiological and pharmacological characterization
Yevheniia Kravenska
- 5 P110. Structure and mechanism of substrate discrimination of the human mitochondrial citrate carrier SLC25A1
Jianhui Li
- 6 P112. A novel mechanism of regulation of UCP1-mediated respiratory uncoupling
François Gellé
- 7 P114. Kinetics of UCP1 Inhibition: Guanine vs. Adenine Nucleotides in Functional Brown-Fat Mitochondria
Celso P. B. Sousa-Filho
- 8 P116. Characterisation of proposed pathogenic mutations in SLC25A20 associated with carnitine-acylcarnitine translocase deficiency
Titus Mashilo
- 9 P118. The SLC7A10 amino acid transporter: new molecular insights into trafficking to plasma membrane and regulation by cholesterol
Cesare Indiveri
- 10 P120. Oxygen-dependent regulation of ion fluxes and intracellular pH in *Saccharomyces cerevisiae* exposed to acetic acid
Anahit Shirvanyan
- 11 P122. Human and mouse UCP1: bioenergetic similarities and discrepancies
Jan Nedergaard
- 12 P124. Measurement of basal proton leak through Uncoupling Protein 1
Himanshu Khandelia
- 13 P126. Role of FocA and FocB formate channels in proton flux of *Escherichia coli* during mixed-carbon fermentation at pH 5.5
Anush Babayan
- 14 P128. Interplay Between FocA-Mediated Formate Transport and FoF₁-ATPase in Regulating Proton Flux in *Escherichia coli*
Lilit Grigoryan
- 15 P130. Anion and cation fluxes in *Escherichia coli* during glucose fermentation and implications for bioenergetic coupling
Liana Vanyan
- 16 P132. The role of Gad acid resistance system in the proton/potassium fluxes in *Escherichia coli* during fermentation
Heghine Gevorgyan
- 17 P134. Hydrothermal origin of metabolic phosphorylation
Manon L. Schlikker
- 18 P138. Insights into the assembly of yeast mitochondrial respiratory complex III
Jorge Jimenez-Niebla
- 19 P140. Reshaping mitochondria: AOX drives cristae ultrastructural remodeling in *Drosophila melanogaster*
Murilo Othonicar
- 20 P142. ATP1F1 preserves mitochondrial ultrastructure and β -cell integrity under stress conditions
Andrea Dlasková
- 21 P144. Intermediate stages in the origin of metabolism at a phosphorylating hydrothermal vent
Nadja K. Hoffmann
- 22 P146. Investigating the diversity and origins of ubiquinone biosynthesis across eukaryotes
Emma Bouvet
- 23 P148. Dynamic evolution of quinone pathways and quinone repertoires in Bacteria
Sophie Abby
- 24 P150. Decreased proton cost for mitochondrial ATP production emerged in early metazoans
Malte Marquardt
- 25 P152. Using structural phylogenetics to map and root the evolutionary history of respiration
Sofia Appelgren
- 26 P154. Mitochondrial NME4 deletion rewires kinase signaling and identifies FLT1/VEGFR1 as a link between mitochondrial dysfunction and cancer progression
Malgorzata-Tokarska Schlattner

- 27 P156. Role of NDUF4 and its isoforms in regulation of cytochrome c oxidase
Michal Kněžů
- 28 P158. No UCP1 in the kidney
Natasa Petrovic
- 29 P160. Flavin cofactor supplementation rescues the activity and thermal stability of the most common pathogenic variant of medium-chain acyl-CoA dehydrogenase
Joao Vicente
- 30 P162. Protonmotive force drives circuit-like signaling networks between mitochondria under metabolic stress
Nada Ahmed Selim

14:30-16:00 S16. Recent methodological developments in bioenergetics, Aula Magna A

Chair: Joachim Heberle

- 2 14:30-14:50 - O54: The Dynamics of Proton Transport Processes on the Surface of Biological Membranes
Nadav Amdursky;
- 3 14:50-15:10 - O56: ComplexomA: a user-friendly R/Shiny platform for comprehensive analysis and visualization of complexome profiling data
Alfredo Cabrera-Orefice;
- 4 15:10-15:30 - O58: Ultrastructural mapping of an anaerobic microbial eukaryote lacking a canonical FeS biogenesis system
Princess Cabotaje;
- 5 15:30-15:50 - O60: Toward Mechanistic Resolution of Nonequilibrium Transport in Coupled Bioenergetic Complexes
Jessica Swanson;
- 6 15:50-16:00 - P197 Short: Microfluidic Encapsulation of ATP-Producing Liposomes in GUVs: Toward Synthetic Mitochondria
Larissa Henke;

14:30-16:00 S6. ATP synthase and ATPases, Aula Magna B

Chair: Werner Kühlbrandt

- 2 14:30-14:50 - O55: Cryo-EM reveals the gating mechanism of ATP synthase leak channel and its role in mitochondrial permeability transition
Nelli Mnatsakanyan;
- 3 14:50-15:10 - O57: Analysis of proton transport in E. coli and Pseudomonas aeruginosa ATP synthases
ryan Steed;
- 4 15:10-15:30 - O59: Monitoring subunit rotation in a single FoF1-ATP synthase by quantum sensing
Michael Börsch;
- 6 15:30-15:40 - P136: Short: ATP synthase architecture controls cristae formation and bioenergetic remodeling in T. brucei
Alena Zíková;

16:00-16:30 Coffee break, Aula Magna Foyer

16:30-17:30 S2. Terminal oxidases., Aula Magna A

Chair: Pia Ädelroth

- 2 16:30-16:50 - O62: Nuclear isoforms and higher-order organisation of cytochrome c oxidase
Amandine Marechal;
- 3 16:50-17:10 - O63: Molecular Determinants of Oxygen Reactivity in Bacterial Terminal Oxidases: Functional Roles of Acidic Residues in Cytochrome bd
Petra Hellwig;
- 4 17:10-17:30 - O64: UV-Visible Raman of the Nitric Oxide Reductase and Heme-Copper Oxidase/NO Reactions
Constantinos Varotsis;

16:30-17:30 Short talks, Aula Magna B

Chair: Jessica Swanson

- 2 16:30-16:40 - P42 Short: Disentangling the biotic flow of electrons in the continental subsurface
Guillermo Climent Gargallo;
- 3 16:40-16:50 - P152 Short: Using structural phylogenetics to map and root the evolutionary history of respiration
Sofia Appelgren;
- 4 16:50-17:00 - P203 Short: High-Turnover Redox-Coupled Proton Pumping of the Bacterial Complex I in Proteoliposomes
Vladana Susic;
- 5 17:00-17:10 - P124 Short: Measurement of basal proton leak through Uncoupling Protein 1
Himanshu Khandelja;

- 6 17:10-17:20 - P100 Short: V-ATPase Regulation by TLDc proteins: from Yeast to Neurodegenerative Disease

Rebecca Oot;

- 7 17:20-17:30 - P98 Short: Structural studies of the human V-ATPase containing the $\alpha 2$ -isoform

Stuti Sharma;

17:30-19:00 Poster session 5 , Aula Magna Foyer

- 2 P101. Elucidation of a Mechanism for Photosynthetic CO₂ Capture in *Synechococcus elongatus*
Eve Giovannetti
- 3 P103. Cyanobacteria bioenergetics
Edwin Ortega Arzola
- 4 P105. Time-Resolved Infrared Investigation of the Chloride-Ion Pump NmHR Influenced by Solvent Salt and Detergent Concentration
Celina Wittenzellner
- 5 P107. Functional Characterization of GFY Proteins in Acetate Metabolism in *Chlamydomonas reinhardtii*
Keqing Liu
- 6 P109. Using Cryo-EM to Reveal How Calcium Controls the Mitochondrial ATP-Mg/Phosphate Carrier
Anna Ceesay
- 7 P111. Dynamical Insights on the Ion-capturing Function of the S-layer Protein
Erik Endres
- 8 P113. Structural and functional analyses of plasma membrane sodium-proton transporters
Lukas Kmetsch
- 9 P115. Mechanism and Structure of human Mitochondrial Phosphate Carrier (SLC25A3)
Jiayue Su
- 10 P117. Structural Changes during Turnover of the Human Mitochondrial Transporter ABCB10 Revealed by FTIR Difference Spectroscopy
Corinna Strothenke
- 11 P119. Bacterial production of human SLC transporters in a soluble functional state by chaperone co-expression
Michele Galluccio
- 12 P121. Analyses of gene structure and protein sequences shed light on the evolution of the mitochondrial carrier family
Magnus Monné
- 13 P123. Structural Insights into the Twin-Arginine Translocase (Tat) Receptor and Its Substrate Recognition Mechanism
Ziyu Zhao
- 14 P125. Hnd, an electron-bifurcating hydrogenase, is involved in bacterial motility in *Solidesulfovibrio fructosivorans*
Myriam Brugna
- 15 P127. Structural and Functional Characterization of MdaB from *Helicobacter pylori*
Arkadiusz Borek
- 16 P129. Glucose availability and CRP regulation shape redox balance and proton flux in fermenting *Escherichia coli*
Karen Trchounian
- 17 P131. Regulation of growth and O₂-tolerant [NiFe]-hydrogenase activity by the proton motive force and FoF₁-ATP synthase in *Cupriavidus necator* H16
Anna Poladyan Poladyan
- 18 P133. Biochemistry and physiology of ubiquinone biosynthesis under anaerobic conditions
Fabien Pierrel
- 20 P137. Factors affecting the allotopic expression of subunit II (Cox2) of yeast cytochrome c oxidase
Diego Gonzalez-Halphen
- 21 P139. Repair and Modular Turnover Dynamics of Mitochondrial Complex I: Differential Responses to Loss of the High-Turnover Subunits NDUFA6 and NDUFA7
Paulina Castañeda-Tamez
- 22 P141. Effects of Cyclophilin D N-terminal cleavage: a dynamical perspective
Gabriele Coluccino
- 23 P143. Complexome profiling reveals novel links between mitochondrial genome maintenance and OXPHOS assembly
Esperanza López-Merino
- 24 P145. Origin of Heterodisulfide Reductases
Mustafa Rasim Törer
- 25 P147. Coevolution in action: how the endosymbiont regulates the energy metabolism of *Angomonas deanei*
Azul Barrinha Dos Santos Junior

- 26 P149. The bioenergetic origins and evolutionary persistence of cytoplasmic potassium dominance
Nikolay Korolev
- 27 P151. The many survival strategies of the poly-extremotolerant yeast *Rhodotorula mucilaginosa*. Control of its mitochondrial metabolism
Salvador Uribe Carvajal
- 28 P153. Activity and quantity of Complex I together with low ROS efflux during anoxia-reoxygenation suggest depressed reverse electron transport (RET) in mitochondria isolated from an invertebr
Steven Hand
- 29 P155. Mitochondrial redox signaling links branched-chain α -ketoacid and fatty acid metabolism to β -cell insulin secretion
Martin Jaburek
- 30 P157. Regulation of mitochondrial proteostasis by the ribosome-associated quality control in mammals: molecular bases and physiopathological relevance
Giovanni Benard
- 31 P159. A new conception of the existence of the Closed 9-Stepped Cycle of Proton Conductance
Ambaga Miyegombo
- 32 P161. Hypomagnetic fields modulate lifespan, physical ability and mitochondrial metabolism in a Pink1 model of neurodegeneration
Lisa Chakrabarti

Wednesday 26 August 2026

09:00-10:30 S13. Early bioenergetics / Origin of Life / Evolution, Aula Magna A

Chair: Axel Magalon

- 2 09:00-09:20 - O65: Geochemical origin of bioenergetics: Aqueous phosphorylation with substrates, catalysts and conditions of serpentinizing hydrothermal vents
Bill Martin;
- 3 09:20-09:40 - O66: The evolution of flavin based electron bifurcation in the origin of methanogenesis
Georg Hochberg;
- 4 09:40-10:00 - O67: Reconstructing Early Bioenergetics: Evolution of Heme and Quinone Biosyntheses
Filipa Sousa;
- 5 10:00-10:20 - O68: Unraveling the molecular mystery of the catalytic specificities of Mo-bis PGD enzymes, the workhorse of bioenergetics: mission impossible?
Barbara Schoepp-Cothenet;
- 6 10:20-10:30 - P134: Short: Hydrothermal origin of metabolic phosphorylation
Manon L. Schlikker;

10:30-11:00 Coffee break , Aula Magna Foyer

11:00-12:30 S1. Bioenergetics in health and disease & Mitochondrial Physiology, Aula Magna A

Chair: Vamsi Mootha

- 1 11:00-11:20 - O69: Rescuing Ischemic Brain Injury by Rewiring Mitochondrial Electron Flow
Alexander Galkin;
- 2 11:20-11:40 - O70: Nicotinamide nucleotide transhydrogenase is part of a supercomplex and plays opposite roles during mitochondrial oxidative and energy stress conditions
Werner Koopman;
- 3 11:40-12:00 - O71: ATP Synthase and IMM Rewiring in Senescent Cardiomyocytes
Karin Busch;
- 4 12:00-12:10 - P97 Short: Uncovering the link between ATP synthase and the TCA cycle by crosslinking mass spectrometry
Jelena Misic;
- 5 12:10-12:20 - P162 Short: Protonmotive force drives circuit-like signaling networks between mitochondria under metabolic stress
Nada Ahmed Selim;
- 6 12:20-12:30 - P188 Short: A PDK1–PDHA1–SCAF1 axis regulates mitochondrial respiratory chain organization during metabolic rewiring in cancer cells
Sandra López-Calcerrada;

12:30-13:30 Lunch , Aula Magna Foyer

13:00-14:30 Poster session 6 , Aula Magna Foyer

- 1 P164. A Strategy for Precise Detection of High-Risk Chronic Liver Disease using Nano-Diamond Quantum Sensing
Lisa Chakrabarti

- 2 P166. LACTB is a novel marker for human type I skeletal muscle fibers and is decreased in rhabdomyosarcoma
Kirsi-Marja Alanen
- 3 P168. The creatine/creatine kinase system in rat adipose tissue
Orane Lerouley
- 4 P170. Quercetin ameliorates the damage induced by atomoxetine in SH-SY5Y cells by enhancing mitochondrial function and reducing ROS production
Juan Carlos Corona
- 5 P172. Bilirubin Phototherapy Triggers Carbon Monoxide Release, Superoxide Production, and Mitochondrial Respiratory Decline In Vitro
Ales Dvorak
- 6 P174. Bioenergetic Impairment and CoQ10 Deficiency in Phenylketonuria: Metabolic Insights and Therapeutic Strategies
Martina Salmi
- 7 P176. Combined pyruvate, coenzyme Q10, and vitamin B3 supplementation supports mitochondrial function and neuroprotection under metabolic stress
Luca Pincigher
- 8 P178. Extracellular vesicles from *Klebsiella pneumoniae* facilitate bacterial pneumonia in intubated patients via metabolic reprogramming of alveolar macrophages
Mohammad Estiri
- 9 P180. VDAC1-Targeted NHK1 Peptide Recovers Mitochondrial Dysfunction in ALS primary fibroblasts
Angela Anna Messina
- 10 P182. CagriSema-induced weight loss in obese rats depends on preservation of mitochondrial proton leak in skeletal muscle
Ida Blom
- 11 P184. Interrogating the role of c-MYC in mitochondrial complex III deficiency-induced liver disease
Oliver Ros
- 12 P186. Cardioprotection Against Ischemia-Reperfusion Induced by Caloric Restriction Is Mediated by NCLX/TMEM65-Dependent Mitochondrial Calcium Extrusion
Maiara Queiroz
- 13 P188. A PDK1–PDHA1–SCAF1 axis regulates mitochondrial respiratory chain organization during metabolic rewiring in cancer cells
Sandra López-Calcerrada
- 14 P190. From Childhood Trauma to Immunocellular Health: Unveiling the Link Between Childhood Maltreatment and Mitochondrial Health
Margareta Scherr
- 15 P192. Impact of caloric restriction on Δ QCR6-dependent mitochondrial function
Dylan Arias Gordillo
- 16 P194. Streamlining the biolistic method for faster mitochondrial genome editing in yeast
Marcel Vieira-Lara
- 17 P196. Bioenergetic and functional characterization of fresh and cryopreserved mitochondria for cardiac transplantation
Elisa Zamprogno
- 18 P198. Loss of dGTP in postmitotic tissues due to respiratory complex I instability
Janne Purhonen
- 19 P200. Structural investigation on cytochrome c maturation system II
Céline Moog
- 20 P202. Functional diversification of respiratory complex I in anaerobic bacteria through exchangeable electron input modules
Mirjam Odermatt
- 21 P204. Dynamic modulation of complex IV excess capacity by a redox-dependent uncoupling mechanism in a metabolically active bean beetle line
Clément Chevret
- 23 P224 – Unfolding Without Inactivation: Probing the Link Between Global Stability and Redox Cofactor Integrity in Cpl
Kilian Zuchan
- 24 P226 – Mechanistic insights into UCP1 inhibition by nucleotides
Zhi Wei Zeng
- 25 P228 – Towards a computational characterization of proton coupling in Xyle
Claudia Alleva
- 26 P230 – Oxidative stress-induced upregulation of riboflavin transporter 1 (SLC52A1) in human SH-SY5Y neuronal cell model: putative role of ATF4 and NRF2 in its transcriptional regulation
Martina Tripicchio

- 27 P232. Hypoxia and Reoxygenation Induce Higher-Order Respiratory Supercomplex Assembly in Cardiac Mitochondria
Shannon Khan
- 28 P234. Dual human brain barrier organoids reveal compartment-specific bioenergetic dysfunction in GLUT1 deficiency syndrome
Rekha Tripathi
- 29 P236. Testing the Heat Pump Hypothesis: An Experimental Strategy to Resolve the Hot Mitochondria Paradox
Tamara Wied
- 30 P238. Vibrational spectroscopy of fluoros systems
Ruben Cruz

14:30-16:00 S2. Bioenergetic complexes & supercomplexes , Aula Magna A

Chair: James Letts

- 2 14:30-14:50 - O72: Environmental structural biology: Exploring the molecular architecture of bioenergetic organelles
Ben Engel;
- 3 14:50-15:10 - O73: Mechanistic and bioenergetic aspects of the core sulfate reduction pathway
Bonnie Murphy;
- 4 15:10-15:30 - O74: A novel oxidative phosphorylation supercomplex shapes the mitochondrial cristae
Long Zhou;
- 5 15:30-15:50 - O75: Structure of a photosynthesome supercomplex from purple phototrophic bacteria
Sebastian Pintscher;
- 6 15:50-16:00 - P24 Short: Structural and Functional Insights into QrcABCD Mechanism for Energy Conservation
Américo Duarte;

16:00-16:30 Coffee break , Aula Magna Foyer

16:30-18:00 Poster session 7 , Aula Magna Foyer

- 2 P163. The role of mitochondria in antipsychotic-induced metabolic syndrome
Lisa Chakrabarti
- 3 P165. A redox cyclor-based therapy against mitochondrial diseases
Davide Fontana
- 4 P167. Differential Modulation of Forward and Reverse Electron Flow at Complex I by Metformin Enables Selective Inhibition of Reverse Electron Transport and Protects Against Ischemia–Reperfusion
Heberty Tf Facundo
- 5 P169. Elucidating the role of mitochondrial protein NDUFA4L2 in pulmonary arterial smooth muscle cells exposed to chronic hypoxia and pulmonary hypertension
Sandipan Jash
- 6 P171. Mitochondrial Nicotinamide Nucleotide Transhydrogenase (NNT) is part of a supercomplex
Weiwei Li
- 7 P173. Mutant Spartin causes defects in mitochondrial protein import process and cellular bioenergetics
Nicola Rizzardì
- 8 P175. In diet-induced fatty liver, ectopically expressed human UCP1 induces regulated mitochondrial uncoupling and lipid-droplet-associated remodeling
Irina Shabalina
- 9 P177. Statin-Induced Metabolic Remodeling in Astrocytes: Impact on Coenzyme Q Homeostasis and the Bioenergetic Effects of CoQ10 Supplementation
Wiesława Jarmuszkiewicz
- 10 P179. Mitochondrial dysfunction rewires proton homeostasis and redox regulation under variable pH and glucose conditions in *Saccharomyces cerevisiae*
Liana Anikyan
- 11 P181. NAD(P)⁺ Transhydrogenase Is Essential for Maintaining Mitochondrial Redox Homeostasis in Cardiac and Skeletal Muscle During Aging
Roger Castilho
- 12 P183. Energetic cost adjusted defense strategies enables stratified oxidative stress tolerance
Amitesh Anand
- 13 P185. Fibrinoid microclot complexes, Long COVID, and ischaemic stroke
Douglas Kell
- 14 P187. Altered mitochondrial morphology and Ca²⁺ handling in hiPSC-derived astrocytes in the context of LRRK2- and PRKN-related Parkinson's Disease
Giovanna Cavalcante

- 15 P189. Loss of CHCHD2 and CHCHD10 causes tissue-specific bioenergetic failure and severe myopathy driven by impaired postnatal myogenesis
Roberta Filograna
- 16 P191. Beyond Pairwise Attractions: Density-Dependent Dry Coarse-Grained Models for Biomolecular Organization
Alexander Jussupow
- 17 P193. Mitochondrial Function During Aging in *Saccharomyces cerevisiae*: Role of Caloric Restriction and Sirtuin2
Carolina Ricardez García
- 18 P195. Real-time mapping of metabolofunction in human neuronal networks
Julian van Reede
- 19 P197. Microfluidic Encapsulation of ATP-Producing Liposomes in GUVs: Toward Synthetic Mitochondria
Larissa Henke
- 20 P199. The molecular mechanism of mitochondrial complex I inhibition by the hydrophilic biguanide metformin
Yiqi Hu
- 21 P201. Production of intact UCP2 in higher eukaryotic expression systems
Mehmethan Aris
- 22 P203. High-Turnover Redox-Coupled Proton Pumping of the Bacterial Complex I in Proteoliposomes
Vladana Sušić
- 32 P223 – A mouse model of ATP β overexpression causes cell differentiation, lipid biogenesis, and behavioral performance changes
Rongmin Chen
- 33 P225 – ADP-inhibition of ATP synthase as a membrane-potential stabilizer?
Boris Feniouk
- 34 P227 – A novel Fus mutation causes protein mislocalization and late onset motor dysfunction in zebrafish
Christina Toumpa
- 35 P229 – Dynamics of Cytosolic and Mitochondrial ATP Pools in baker's yeast
Anna Lapashina
- 36 P231: Acyl-CoA binds directly to UCP1 to interplay with nucleotide and fatty acid regulation of its uncoupling activity
Danielle Copeman
- 37 P233. Compartmentalized Oxygen Generation from Hydrogen Peroxide Enables Anaerobic Oxidative Phosphorylation
Stefan Moning
- 38 P235. Longitudinal quantification of ATP-related metabolic fluxes in single *Saccharomyces cerevisiae* cells
Carmine Ceraolo
- 39 P237. Title: Bioluminescence as a possible light source for marine photosynthesis during the polar night
Joshua Margand

Thursday 27 August 2026

09:30-10:30 **S12. Protein assembly and function, organelle dynamics**, *Aula Magna (A+B)*

Chair: Erika Fernandez-Vizarra

- 2 09:30-09:50 - O76 Insights into the biogenesis of complex I and the molecular mechanism of tafazzin
Volker Zickermann;
- 3 09:50-10:10 - O77: A novel and widespread mechanism of membrane-coupling drives microbial respiration
Ashleigh Kropp;
- 4 10:10-10:30 - O78: The structure-based assembly mechanism of the mitochondrial respiratory chain
Irene Vercellino;

10:30-11:00 **Coffee break**, *Aula Magna Foyer*

11:00-12:30 **S5. Complex I and related systems**, *Aula Magna (A+B)*

Chair: Volker Zickermann

- 2 11:00-11:20 - O79: Substrate binding by respiratory complex I
Thorsten Friedrich;
- 3 11:20-11:40 - O80: Complex I mechanism
Leonid Sazanov;
- 4 11:40-12:00 - O81: Towards the Molecular Mechanism Underlying Long-Range Energy Transduction in Complex I
Ville Kaila;

- 5 12:00-12:20 - O82: How does complex I pump protons? Defining the proton-wiring diagram and identifying proton-transfer gates and control points in the membrane domain

Judy Hirst;

12:30-14:30 Lunch , *Aula Magna Foyer*

14:30-15:30 S11. Bioenergetics of pathogens and parasites , *Aula Magna (A+B)*

Chair: Greg Cook

- 2 14:30-14:50 - O83: Alternative oxidases: mechanisms, functions and therapeutic opportunities

Tony Moore;

- 3 14:50-15:10 - O84: New insights from divergent organisms: convergent evolution of supercomplexes and a complex III natural inhibitor

Lilach Sheiner;

- 4 15:10-15:30 - O85: NMVB lecture: Pathogen induced formation of a nascent organelle derived from mitochondria

Lena Pernas;

15:30-16:30 Closing session, poster and talk awards , *Aula Magna A*

19:00-21:00 Stockholm City Hall Reception , *Stockholm City Hall*