

The 45th FEBS Virtual Congress / 3-8 July 2021

Saturday, 2021/7/3

17:30 - 18:00 Kocka Hall

Opening Ceremony

Social Program

Chair: Janko Kos, Congress Chair & President of Slovenian

17:30 - 17:40 Janko Kos, Congress Chair & President of Slovenian Biochemical Society

17:40 - 17:45 Jerka Dumic, Congress Co-chair & President of Croatia Society of Biochemistry and Molecular Biology

17:45 - 17:50 Vaclav Paces, Secretary General of FEBS

17:50 - 17:55 Borut Pahor, President of the Republic of Slovenia (video presentation)

17:55 - 18:00 Music – life Giovanni Masi: Silvijs Weiss – Fantasia guitar

18:00 - 19:00 Kocka Hall

Opening Plenary Lecture

Plenary Lectures

Chair: Janko Kos (SI)

18:00 - 19:00 The Nobel Laureate campaign supporting GMOs

Roberts, Richard (United States of America)

19:00 - 20:30 Other location

Welcome from Ljubljana

Social Program

Sunday, 2021/7/4

08:00 - 08:45 Gallery Hall

Early Bird Session I: NGS is Everywhere

Early Bird Sessions

Chairs: Tadeja Režen (SI) Nino Sinčić (CR)

08:00 - 08:10 Changes in DNA methylation and gene expression of zinc finger 714: a possible blood biomarker of suicidal behaviour

Kouter, Katarina (Slovenia)

08:10 - 08:20 NGS in diagnostics of neurological disorders

Gotovac Jerčić, Kristina (Croatia)

08:20 - 08:30 Non-coding RNA of Extracellular vesicles in type 1 diabetes

Tesovnik, Tine (Slovenia)

08:30 - 08:40 cfDNA methylation as a stable diagnostic biomarker

Krasić, Jure (Croatia)

09:00 - 11:00 Kocka Hall

Autophagy and Protein Recycling

Symposia

Chairs: Patrizia Agostinis (BE) Nektarios Tavernarakis (GR)

09:00 - 09:30 Autophagy in lymphangiogenesis

Agostinis, Patrizia (Belgium)

09:30 - 10:00 Autophagic quality control in the nervous system: Physiology and pathology

Tavernarakis, Nektarios (Greece)

10:00 - 10:30 Organelle degradation by autophagy and autophagy-related pathways

Mizushima, Noboru (Japan)

10:30 - 10:45 Mitophagy is downregulated upon thermogenic stimulus in human beige adipocytes

Shaw, Abhirup (Hungary)

10:45 - 11:00 Lipid droplets and autophagy cooperate in the protection of cancer cells against metabolic stress

Špela Koren (Slovenia)

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09:00 - 11:00 Marmorna Hall A

Genome Structure and Regulation

Symposia

Chair: Fernando Azorín (ES)

- 09:00 - 09:30 **DNA methylation, satellite repeats and genome stability: challenges and perspectives from rare genetic disorders**
Francastel, Claire (France)
- 09:00 - 09:30 **Epigenetic regulation of chromatin structure and function: the role of linker histones**
Azorin, Fernando (Spain)
- 10:00 - 10:15 **New insights into direct functions of BET proteins in transcription regulation**
Mayer, Andreas (Germany)
- 10:15 - 10:30 **The bacteriophage GIL01 take-over mechanisms of the host's SOS response**
Pavlin, Anja (Slovenia)

09:00 - 11:00 Marmorna Hall B

Molecular Evolution and Phylogenetics

Symposia

Chairs: Damjan Franjevic (HR) William Martin (DE)

- 09:00 - 09:30 **A hydrogen dependent geochemical analog of primordial carbon and energy metabolism**
Martin, William (Germany)
- 09:30 - 10:00 **Evolutionary analysis of the Bacillus subtilis genome reveals new genes involved in sporulation**
Mijakovic, Ivan (Sweden)
- 10:00 - 10:30 **Phylogeny-Ontogeny Correlations: Lessons From Microbial Biofilms**
Domazet-Lošo, Tomislav (Croatia)
- 10:30 - 10:45 **Investigation of functional annotations to enzyme classes reveals an extensive annotation error**
Rembeza, Elzbieta (Sweden)
- 10:45 - 11:00 **Pre-LUCA protein evolution reconstructed from an imprint conserved within the genetic code**
Davis, Brian (United States)

09:00 - 11:00 Gallery Hall

Protein Biosynthesis and Expansion of the Genetic Code

Symposia

Chairs: Ita Gruic Sovulj (HR) Nediljko Budisa (CA)

- 09:00 - 09:30 **Keeping translation canonical: Lessons from aminoacyl-tRNA synthetases**
Gruic Sovulj, Ita (Croatia)
- 09:30 - 10:00 **Recent advances in genetic code engineering in Escherichia coli**
Budisa, Nediljko (Canada)
- 10:00 - 10:30 **Dynamic changes in tRNA modifications and abundance during T-cell activation**
Pilpel, Yitzhak (Israel)
- 10:30 - 10:45 **Deciphering the mechanism of action of the bacterial translational inhibitor synthesized by Actinoplanes sp. VKM Ac-2862**
Lisevich, Ira (Russia)
- 10:45 - 11:00 **Emerging noncanonical functions of plant aminoacyl-tRNA synthetase**
Rokov-Plavec, Jasmina (Croatia)

09:00 - 11:00 Povodni moč Hall

Protein Folding and Misfolding

Symposia

Chairs: Nataša Poklar Ulrih (SI) Franz-Ulrich Hartl (DE)

- 09:00 - 09:30 **Rational design of oligomer-specific antibodies as diagnostic tools for Alzheimer's and Parkinson's diseases**
Vendruscolo, Michele (United Kingdom)
- 09:00 - 09:30 **Protein folding stability in the cell and its possible implication for phase separation**
Ebbinghaus, Simon (Germany)
- 09:00 - 09:30 **Molecular chaperone functions in protein folding and proteome surveillance**
Hartl, Ulrich (Germany)

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10:30 - 10:45	Identification of pharmacological chaperones for human alanine:glyoxylate aminotransferase as therapeutic strategy for primary hyperoxaluria type I Pampalone, Gioena (Italy)	
10:45 - 11:00	A tryptophan 'gate' in the CRISPR-Cas3 nuclease controls ssDNA entry into the nuclease site in <i>Escherichia coli</i> Ivančić Baće, Ivana (Croatia)	
11:00 - 11:30	Other location Coffee Break	Coffee Break
11:30 - 12:30	Kocka Hall FEBS Sir Hans Krebs Lecture Chair: Frank Michelangeli (UK)	Plenary Lectures
11:30 - 12:30	RNA silencing, disease resistance and the inheritance of acquired characteristics Baulcombe, David C. (United Kingdom)	
12:30 - 14:30	Other location Lunch & Poster Sessions	Lunch & Poster Sessions
14:30 - 15:30	Kocka Hall EMBO Lecture Chair: Vaclav Paces (CZ)	Plenary Lectures
14:30 - 15:30	Autophagy as an aging decelerator Kroemer, Guido (France)	
15:30 - 16:00	Other location Coffee Break	Coffee Break
16:00 - 18:00	Kocka Hall Proteolytic Processing Chairs: Boris Turk (SI) Seamus J Martin (IE)	Symposia
16:00 - 16:30	Matrix remodeling as early pathophysiological biomarker Sagi, Irit (Israel)	
16:30 - 17:00	Extracellular cysteine cathepsins: from signalling to matrix degradation Turk, Boris (Slovenia)	
17:00 - 17:30	Neutrophil proteases: anti-microbial agents or key instigators of inflammation? Martin, Seamus (Ireland)	
17:30 - 17:45	From ubiquitin-independent degradation to ubiquitin degradation – A signature activity of emergency 20S proteasome in hypoxia Sahu, Indrajit (Israel)	
17:45 - 18:00	Identifying PRRSV CD8+ T cell epitopes using a tailored vector system Mötz, Marlene (Austria)	

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16:00 - 18:00 Marmorna Hall A

RNA Function

Symposia

Chairs: Štěpánka Vanáčová (CZ) Jernej Ule (UK)

- 16:00 - 16:30 **TDP-43 condensation properties specify its RNA binding and regulation**
Ule, Jernej (United Kingdom)
- 16:00 - 16:30 **Understanding tissue-specific protein composition of RNA-based enzymes**
Murn, Jernej (United States of America)
- 16:00 - 16:30 **The molecular mechanisms of cytoplasmic RNA quality control in human cells.**
Vaňáčková, Štěpánka (Czech Republic)
- 17:30 - 17:45 **NAD-capping: a universal RNA modification in Mycobacteria, Archaea and Escherichia coli**
Ruiz, Olatz (Czech Republic)
- 17:45 - 18:00 **New targets for drug design: Importance of nsp14/nsp10 complex formation for the 3'-5' exoribonucleolytic activity on SARS-CoV-2**
Saramago, Margarida (Portugal)

16:00 - 18:00 Marmorna Hall B

Epigenetics

Symposia

Chairs: Oliver Vugrek (HR) Christof Niehrs (DE)

- 16:00 - 16:30 **DNA demethylation and aging**
Niehrs, Christof (Germany)
- 16:30 - 17:00 **Mass spectrometry-based epigenetic mapping of clinical samples for biomarker discovery and (breast) cancer patient stratification**
Bonaldi, Tiziana (Italy)
- 17:00 - 17:30 **Epigenome deregulation in cancer**
Herceg, Zdenko (France)
- 17:30 - 17:45 **Investigating the link between DNA replication, chromatin change and transcriptional regulation during in vivo erythroid differentiation**
Beagrie, Robert (United Kingdom)
- 17:45 - 18:00 **Novel approach for genome-wide high-resolution profiling of 5-hydroxymethylcytosine and its application for neuroblastoma analysis**
Narmontė, Milda (Lithuania)

16:00 - 18:00 Gallery Hall

Protein Localization and Dynamics

Symposia

Chairs: Maja Herak Bosnar (HR) Anna Akhmanova (NL)

- 16:00 - 16:30 **ER-Golgi contact sites**
De Matteis, Maria Antonietta (Italy)
- 16:00 - 16:30 **Oscillatory dynamics of Rac1 activity in amoeboid cell motility**
Weber, Igor (Croatia)
- 16:00 - 16:30 **Control of microtubule organization and dynamics: Seeing proteins and drugs in action.**
Akhmanova, Anna (Netherlands)
- 17:30 - 17:45 **Self-organization in a Rab GTPase regulatory network**
Bezeliak, Urban (Austria)
- 17:45 - 18:00 **Ceramide chain length-dependent protein sorting into selective endoplasmic reticulum exit sites**
Rodriguez-Gallardo, Sofia (Spain)

16:00 - 18:00 Povodni mož Hall

FEBS Special Session on Research and Career Skills – Assessment of Research and Researchers

Special Sessions & Workshops

Chairs: Laszlo Fesus (HU) Mary Purton (UK)

- 16:00 - 16:20 **Scientific impact and the quest for visibility**
Madsen, Ralitsa (United Kingdom)

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16:20 - 16:40	Current academic reward systems in relation to research integrity Fésüs, László (Hungary)
16:40 - 17:00	Assessment of scientists for hiring, promotion and tenure at German universities and research institutes Brunner, Michael (Germany)
17:00 - 17:10	Assessing research outputs: alternatives to the Journal Impact Factor Purton, Mary (United Kingdom)
17:10 - 18:00	Panel discussion

18:15 - 19:15 Marmorna Hall A

Speed Talk Session 1: Molecular Genetics , Education

Speed Talks

Chair: Damjana Rozman (SI)

18:15 - 18:20	Rearrangement of nuclear lamina complexes during stress – identification and quantification of lamin - associated proteome after heat shock induction Pałka, Marta (Poland)
18:20 - 18:25	Zinc-finger Associated Domain of Pita architectural protein forms tetramers Bonchuk, Artem (Russia)
18:25 - 18:30	DDIT4 gene expression is switched on by a new HDAC4 function in ataxia teleangiectasia Ricci, Anastasia (Italy)
18:30 - 18:35	tRNA 2'-O-methylation by TRM7/FTSJ1 proteins modulates small RNA silencing and tRNA fragmentation Dimitrova, Dilyana (France)
18:35 - 18:40	A novel method for reliable detection of somatic retroelement insertions Urazbakhtin, Shamil (Russia)
18:40 - 18:45	DNA hypomethylating drug induces oxidative stress in the mammalian embryo and placenta during gestation Bulic-Jakus, Floriana (Croatia)
18:45 - 18:50	Human chromatin reconstitution by cell-free translation for epigenetic modifier enzyme assays Nagy, Szilvia Krisztina (Hungary)
18:50 - 18:55	Riboregulation of human Serine Hydroxymethyltransferase activity in cellular metabolism Liberati, Francesca Romana (Italy)
18:55 - 19:00	Bringing a well-run lab book back into focus: Experience from the education workshop Sincic, Nino (Croatia)

18:15 - 19:15 Marmorna Hall B

Speed Talk Session 2: Protein Turnover, Organisms- Molecules Interactions

Speed Talks

Chair: Marko Dolinar (SI)

18:15 - 18:20	Post-transcriptional transfer RNA modifications as modulators of heterologous protein production Hotti, Hannu (Finland)
18:20 - 18:25	Reconstruction of multifactor human translation termination complex Egorova, Tatiana (Russia)
18:25 - 18:30	Altered autophagy-dependent c-Src/Fyn degradation in Huntington's Disease – impact on NMDAR activity Fão, Lígia (Portugal)
18:30 - 18:35	The role of N and M domains of Sup35 yeast protein in biomolecular condensate formation Gorsheneva, Natalia (Russia)
18:35 - 18:40	Development of a bio-active fluorescent inhibitor probe targeting the Rho kinase ROCK for monitoring inhibition action Corret, Justine (France)
18:40 - 18:45	Investigating the function of the Anaphase Promoting Complex ubiquitin ligase in the regulation of mitochondrial ATP synthase beta subunit Leite, Ana Cláudia (Portugal)

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18:45 - 18:50	Conformational flexibility and allosteric modulation in a heme-binding resurrected ancestral glycosidase Gutierrez Rus, Luis Ignacio (Spain)
18:50 - 18:55	Intercellular communication: new method to estimate the transnodal exchange of photometabolites in green algae Alova, Anna (Russia)
18:55 - 19:00	Characterization of recombinant protein components of the photoprotective system of marine cyanobacterium <i>Crocospaera watsonii</i> Botnarevskii, Viacheslav (Russia)
19:00 - 19:05	OCRL controls actin reorganization in spreading and activation of human platelets Bura, Ana (Croatia)

18:15 - 19:15 Gallery Hall

European Research Infrastructure and Initiatives Session

Special Sessions & Workshops

Chair: Irena Mlinaric Rašcan (SI)

18:15 - 18:45	EU-PEARL: Changing the paradigm of clinical trials in Europe Cash-Gibson, Lucinda (Spain)
18:45 - 19:15	ELIXIR Europe Smith, Andrew (United Kingdom)

18:15 - 19:15 Povodni moř Hall

Structural Biology Publications – How to improve results, presentation and write a better paper

Special Sessions & Workshops

Chair: Alexander Wlodawer (US)

18:15 - 18:35	How to publish and how not to publish structural results Wlodawer, Alexander (United States of America)
18:35 - 18:55	Application of the Mol* 3D Molecular Viewer to Proteopedia Sussman, Joel (Israel)
18:55 - 19:15	Jaime Prilusky, Rehovot, Israel

Monday, 2021/7/5

08:00 - 08:45 Gallery Hall

Early Bird Session II: How to Improve Immunotherapy of Cancer

Early Bird Sessions

Chair: Maja Cemařar (SI)

08:00 - 08:10	An enhanced CRISPR tool for treating chronic myelogenous leukemia Lainřček, Duřko (Slovenia)
08:10 - 08:20	Increasing natural killer cell cytotoxicity by targeting cystatin F Perisic Nanut, Milica (Slovenia)
08:20 - 08:30	Treatment induced upregulation of DNA sensing pathways as a mechanism for inducing anti-tumor immune response Jesenko, Tanja (Slovenia)
08:30 - 08:40	Amniotic membrane as a multimodal therapy of bladder cancer: targeting the growth and invasive potential of urothelial cancer cells Železnik Ramuta, Taja (Slovenia)

09:00 - 11:00 Kocka Hall

New Approaches in Structure Determination

Symposia

Chairs: Dusan Turk (SI) Wolfgang Baumeister (DE)

09:00 - 09:30	Structural Biology in situ: The Promise and Challenges of Cryo-Electron Tomography Baumeister, Wolfgang (Germany)
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|---------------|---|
| 09:00 - 09:30 | Serial crystallography with X-ray free-electron lasers
Chapman, Henry (Germany) |
| 09:00 - 09:30 | Eliminating specimen movement in electron cryomicroscopy of biological molecules
Russo, Christopher J (United Kingdom) |
| 10:30 - 10:45 | Determination of Intermediate State Structures in the Opening Pathway of SARS-CoV-2 Spike Using Cryo-Electron Microscopy
Brotzakis, Zacharias Faidon (United Kingdom) |
| 10:45 - 11:00 | Abolishing “structural blindness” in metalloproteins: PioC, a NOE-less protein structure
B. Trindade, Inês (Portugal) |

09:00 - 11:00 Marmorna Hall A

Neurobiochemistry

Symposia

Chairs: Zrinka Kovarik (HR) Jean-Pierre Changeux (FR)

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|---------------|---|
| 09:00 - 09:30 | Transcriptional regulation of acetylcholinesterase in different cell types: an enzyme in non-neuronal functions?
Tsim, Karl (China) |
| 09:00 - 09:30 | Modulation of synaptic signalling by adenosine and cannabinoids
Sebastiao, Ana (Portugal) |
| 09:00 - 09:30 | The nicotinic receptor modulation of higher brain functions: from chemistry to cognition
Changeux, Jean Pierre (France) |
| 10:30 - 10:45 | Altered Levels of Cholinesterase Splice Variants in Parkinson’s and Alzheimer’s Disease Brains
Gok, Muslum (Turkey) |
| 10:45 - 11:00 | Activation of the membrane receptor RAGE by its fragment 60-76 stimulates calcium signal in neurons
Kamynina, Anna (Russia) |

09:00 - 11:00 Marmorna Hall B

Imaging for Life: From Molecules to Organisms

Symposia

Chairs: Robert Zorec (SI) Ling-Gang Wu (US)

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|---------------|---|
| 09:00 - 09:30 | Super-resolution imaging of the nanoscale geometry and dynamics of the brain extracellular space in live tissue
Tonnesen, Jan (Spain) |
| 09:00 - 09:30 | Imaging the length of a single vesicular SNARE protein and its role in fusion pore regulation
Jorgacevski, Jernej (Slovenia) |
| 09:00 - 09:30 | Vesicle Shrinking and Enlargement Play Opposing Roles in the Release of Exocytotic Contents
Wu, Ling-Gang (United States of America) |
| 10:30 - 10:45 | Early fluorescent imaging of de novo synthesized proteins based on coiled-coils heterodimerization
Perfilov, Maxim (Russia) |
| 10:45 - 11:00 | Development of coumarin-based membrane probes for live-cell STED nanoscopy
Pajk, Stane (Slovenia) |

09:00 - 11:00 Gallery Hall

Membranes

Symposia

Chairs: Igor Križaj (SI) Christian Eggeling (DE)

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|---------------|--|
| 09:00 - 09:30 | Membrane dynamics at cellular lipid storage sites
Ikonen, Elina (Finland) |
| 09:00 - 09:30 | Lipid membranes modulate the activity of RNA through sequence-specific interactions
Saenz, James P. (Germany) |
| 09:00 - 09:30 | Dissecting molecular membrane organization - a super-resolution fluorescence spectroscopy story
Eggeling, Christian (Germany) |
| 10:30 - 10:45 | Advanced microspectroscopy enlightens membrane organisation in activating T cells
Urbančič, Iztok (Slovenia) |
| 10:45 - 11:00 | The unique story of Pleurotus aegerolysins: From specific lipid binding to potential biopesticides
Panevska, Anastasija (Slovenia) |

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09:00 - 11:00 Povodni moř Hall

Receptor–Ligand interactions

Symposia

Chairs: Kristina Sepcic (SI) David Craik (AU)

09:00 - 09:30 **Cyclotides: bioactive peptides from plants with applications in drug design and agriculture**

Craik, David (Australia)

09:00 - 09:30 **How animal toxins contribute to explore the role of ASIC channels in pain**

Diochot, Sylvie (France)

10:00 - 10:30 **Role of neuroendocrine signalling in early development of bivalve molluscs: interference by environmental stress**

Canesi, Laura (Italy)

10:30 - 10:45 **Translocation of protein antibiotics: How do Colicins B and D penetrate into E. coli?**

Cohen Khait, Ruth (United Kingdom)

10:45 - 11:00 **Functioning mechanisms of bitopic membrane proteins revealed by structural-dynamic studies of intra- and intermolecular interactions of their transmembrane domains**

Bocharov, Eduard (Russia)

11:00 - 11:30 Other location

Coffee Break

Coffee Break

11:30 - 12:30 Kocka Hall

FEBS 2021 Plenary Lecture

Plenary Lectures

Chair: Miguel de la Rosa (ES)

11:30 - 12:30 **Structural and mechanistic insights into eukaryotic protein synthesis**

Ban, Nenad (Switzerland)

12:30 - 13:30 Gallery Hall

Meet the Expert Session I

Meet the Expert

Chair: Aleř Berlec (SI)

12:30 - 13:00 **KEMOMED**

13:00 - 13:15 **NanoTemper: No more limitations in your research - measure the most challenging interactions with MST**

Natalia Kubisa

13:15 - 13:20 **Avantor/VWR**

13:20 - 13:25 **METTLER TOLEDO**

13:25 - 13:30 **Labtim**

12:30 - 14:30 Other location

Lunch & Poster Sessions

Lunch & Poster Sessions

14:30 - 15:50 Kocka Hall

FEBS/EMBO Women in Science Award Lectures

Plenary Lectures

Chairs: Cecilia Arraiano (US) Gerlind Wallon (DE)

14:30 - 15:10 **Defining Intrinsic Determinants of Regeneration Ability and Inability**

Tanaka, Elly (Austria)

15:10 - 15:50 **Exploring the interface between living and non living matter to transform health**

Stevens, Molly (United Kingdom)

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15:45 - 16:00 Other location

Coffee Break

Coffee Break

16:00 - 18:00 Kocka Hall

Bionanotechnology

Symposia

Chairs: Gregor Anderluh (SI) Giovanni Maglia (NL)

- 16:00 - 16:30 **Design and engineering nanopores for single-protein analysis and sequencing**
Maglia, Giovanni (Netherlands)
- 16:30 - 17:00 **Designing membrane proteins using DNA: From ion channels to lipid scramblases**
Keyser, Ulrich (United Kingdom)
- 17:00 - 17:30 **Towards the buildup of magic bullet: multifunctional nanostructures for cancer diagnostics and treatment**
Shipunova, Victoria (Russia)
- 17:30 - 17:45 **In situ rewiring of membrane receptors and signal transduction by light**
Sánchez, Maria Florencia (Germany)
- 17:45 - 18:00 **Genetic code expansion: Enhancing biological nanopores with novel chemistry**
Crnković, Ana (Slovenia)

16:00 - 18:00 Marmorna Hall A

Designed Regulatory Circuits and Genome Editing

Symposia

Chairs: Roman Jerala (SI) Martin Fussenegger (CH)

- 16:00 - 16:30 **Toward A World of ElectroGenetics**
Fussenegger, Martin (Switzerland)
- 16:30 - 17:00 **Unlocking CRISPR technology for precise and efficient genome editing**
Cereseto, Anna (Italy)
- 17:00 - 17:30 **Next-level riboswitch development - Implementation of Capture-SELEX allows fast and easy identification of new synthetic riboswitches**
Suess, Beatrix (Germany)
- 17:30 - 17:45 **Timing the cell: towards a synthetic bio-clock**
Lai, Giorgio (United Kingdom)
- 17:45 - 18:00 **Modulation of long non-coding RNA Gas5 splicing using CRISPR/Cas9 editing of small nucleolar RNA genes**
Matveeva, Anastasiya (Russia)

16:00 - 18:00 Marmorna Hall B

Structures of Nucleic Acids

Symposia

Chairs: Janez Plavec (SI) Harald Schwalbe (DE)

- 16:00 - 16:30 **G-quadruplexes recruit transcription factors to promote gene expression in human cells and viruses**
Richter, Sara (Italy)
- 16:00 - 16:30 **Quadruplexes are everywhere!**
Mergny, Jean-Louis (France)
- 16:00 - 16:30 **Conformational Dynamics of unusual DNA structures: Insights to G Quadruplex Folding Pathways by Real-Time NMR-spectroscopy**
Schwalbe, Harald (Germany)
- 17:30 - 17:45 **Pyrene modified analogues of thrombin binding aptamer exhibit unique structural features**
Kovačič, Matic (Slovenia)
- 17:45 - 18:00 **Cryo-EM reconstruction of the Candida Albicans 80S ribosome**
Zgadzay, Yury (France)

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16:00 - 18:00 Gallery Hall

FEBS Special Session on Science and Society - Plastic Revolution, Pollution and Substitution

Special Sessions & Workshops

Chairs: Emmanouil Fragkoulis (GR) Raffaele Porta (IT)

- 16:00 - 16:30 **Introduction**
Raffaele Porta (Italy)
- 16:30 - 17:00 **From plastics to microplastics and organisms**
Bajt, Oliver (Slovenia)
- 17:00 - 17:30 **The role of biotechnology in the transition from plastics to bioplastics**
Fabbri, Paola (Italy)
- 17:30 - 18:00 **Active biopackaging produced from by-products and wastes from food and marine industries**
Debeaufort, Frederic

16:00 - 18:00 Povodni moř Hall

FEBS Special Session on Gender Issues in Science

Special Sessions & Workshops

Chair: Cecilia Arraiano (US)

- 16:00 - 16:20 **Women in Science across Europe - North/West, South/East: Different backgrounds, same challenges**
Dumic, Jerka (Croatia)
- 16:20 - 16:40 **From the Bench to the Boardroom: Lessons learned**
Swanson, Michele (United States)
- 16:40 - 17:00 **Women in science: Is positive discrimination the right decision?**
Gallego, Carme (Spain)

18:15 - 19:15 Marmorna Hall A

Speed Talk Session 3: Signals, Membranes, Glycans and Lipids

Speed Talks

Chair: Ajda Taler-Vercic (SI)

- 18:15 - 18:20 **Structure and substrate specificity determinants of the taurine biosynthetic enzyme cysteine sulphinic acid decarboxylase**
Mahootchi, Elaheh (Norway)
- 18:20 - 18:25 **VEGF and VEGFR2 binding to fibronectin**
Mitsi, Maria (Switzerland)
- 18:25 - 18:30 **CHOLESTEROL STIMULATES PORE FORMING ACTIVITY OF BORDETTELLA ADENYLATE CYCLASE TOXIN PROMOTING OLIGOMERIZATION**
Amuategui, Jone (Spain)
- 18:30 - 18:35 **Identification of the physiological roles of the surface-exposed loops of chitin-uptake channel from the marine bacterium *Vibrio campbellii* type strain BAA 1116**
Suginta, Wipa (Thailand)
- 18:35 - 18:40 **Functional characterization of seven novel APOE variants found in patients with Primary Hypercholesterolemia**
Larrea, Asier (Spain)
- 18:40 - 18:45 **Role of Ceramide and ER Stress in the Antiproliferative Effects of Thymoquinone in MCF-7 and HepG2 Cancer Cells**
Aslan, Mutay (Turkey)
- 18:45 - 18:50 **Fungal extracellular particles and their relevance in adaptation to osmotic stress**
Lavrin, Teja (Slovenia)
- 18:50 - 18:55 **Tebuconazole induces apoptosis through ROS-mediated endoplasmic reticulum stress pathway**
Y. Ben Othmène (Tunisia)
- 18:55 - 19:00 **Assessment of a common food additive E407a toxicity**
Tkachenko, Anton (Ukraine)
- 19:00 - 19:05 **Glucose metabolism in cultured rat astrocytes**
Fink, Katja (Slovenia)

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18:15 - 19:15 Marmorna Hall B

Speed Talk Session 4: Structural Biology, Imaging, New drugs

Speed Talks

Chair: Marinka Drobnič Košorok (SI)

- 18:15 - 18:20 **Biosynthesis-assisted structural study of the gausemycins, novel lipoglycopeptide antibiotics**
Alferova, Vera (Russia)
- 18:20 - 18:25 **CryoEM structure of PSII assembly intermediate: insights into the role of auxiliary proteins**
Zabret, Jure (Germany)
- 18:25 - 18:30 **Development of nanobody-based probes as non-invasive tools for molecular imaging theragnosis of GBM**
Ruiz-López, Eduardo (Spain)
- 18:30 - 18:35 **Miscoding properties of abasic site adducts with methoxyamine, an antitumor base excision repair inhibitor**
Yudkina, Anna (Russia)
- 18:35 - 18:40 **Ru(III)-complexes as novel therapeutical approach in breast cancer: evaluation of triggered cell death pathways**
Ferraro, Maria Grazia (Italy)
- 18:40 - 18:45 **The development of new low-molecular-weight allosteric antagonists of thyroid-stimulating hormone receptor and their effect on the basal and thyroliberin-stimulated**
Bakhtyukov, Andrey (Russia)
- 18:45 - 18:50 **ATP-competitive dual DNA gyrase and topoisomerase IV inhibitors with broad spectrum antibacterial activity and low potential for resistance acquisition**
Durcic, Martina (Slovenia)
- 18:50 - 18:55 **Novel fluorescent and photosensitive colchicine derivatives for cancer theranostics and photodynamic therapy**
Škubník, Jan (Czech Republic)
- 18:55 - 19:00 **Mutually beneficial cooperation of MSC and HUVEC in the early steps of angiogenesis**
Beloglazova, Irina (Russia)
- 19:00 - 19:05 **Aging of multipotent stem cells (MSC) leads to specific changes in microRNAs secreted within extracellular vesicles potentially promoting insulin resistance**
Voinova, Elizaveta (Russia)

20:00 - 21:00 Other location

Host societies forum

Special Sessions & Workshops

Chair: Janko Kos (SI)

- >Bilateral and Regional Collaboration - Past, Present, Future >(Janko Kos, Jerka Dumič, Zrinka Kovarik, Marinka Drobnič Košorok) >- >Biochemical Education - Societies Actions >(Blaž Cigić, Aljoša Bavec, Nino Sinčič)>- >Biochemical Terminology in Local Languages >(Matjaž Zorko, Marko Dolinar)>- >General Discussion>

Tuesday, 2021/7/6

08:00 - 08:45 Gallery Hall

Early Bird Session III: New Approaches in Medicinal Chemistry

Early Bird Sessions

Chair: Iztok Turel (SI)

- 08:00 - 08:10 **Inhibiting cysteine cathepsins by targeting sites outside of the active site**
Novinec, Marko (Slovenia)
- 08:10 - 08:20 **Cathepsin X inhibition – new approach for improvement of cathepsin B directed antipeptidase therapy**
Mitrović, Ana (Slovenia)
- 08:20 - 08:30 **Potential of the antitumor effect of electrochemotherapy with bleomycin, cisplatin or oxaliplatin by immunostimulation with IL-12 gene electrotransfer depends on the tumor immune status**
Ursic, Katja (Slovenia)

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08:30 - 08:40 **PROTACS as tools for the modulation of pharmacological targets**
Sosič, Izidor (Slovenia)

09:00 - 11:00 Kocka Hall

Stem Cells and Regenerative Medicine

Symposia

Chairs: Miomir Knežević (SI) Stephen Minger (UK)

09:00 - 09:30 **Stem cell-based modelling of complex diseases**
Apati, Agota (Hungary)

09:00 - 09:30 **Understanding human liver development using single cell analyses and organoids**
Vallier, Ludovic (United Kingdom)

09:00 - 09:30 **Safe and Allo-Tolerated Pluripotent Stem Cell Line: A Global Source for Off-the-Shelf Therapeutic Cell Products**
Nagy, Andras (Canada)

10:30 - 10:45 **Single dose application IGF-1 and HGF Induced Bone Marrow Mesenchymal Stem Cells Reduced Proteinuria in Focal Segmental Glomerulosclerosis Model**
Sahan, Ozge Burcu (Turkey)

10:45 - 11:00 **New model for the study of mouse embryo implantation**
Izmaylova, Liubov (Russia)

09:00 - 11:00 Marmorna Hall A

Plant Biotechnology

Symposia

Chairs: Maja Ravnikar (SI) Mario Pezzotti (IT)

09:00 - 09:30 **Can in-field testing help us to better use crop protection products?**
Boonham, Neil (United Kingdom)

09:00 - 09:30 **Plasticity and GXE interaction in grapes**
Pezzotti, Mario (Italy)

10:00 - 10:30 **Design of plant biofactories using the Nicotiana chassis**
Orzaez, Diego (Spain)

10:30 - 10:45 **Developing insect sex pheromone production in plants with the support of transcriptomic data**
Juteršek, Mojca (Slovenia)

10:45 - 11:00 **Investigation of the Antioxidant Effects of Glycyrrhizin-containing Nanoemulsion Formulations in Streptozotocin-induced Diabetic Rats**
Duysak, Lale (Turkey)

09:00 - 11:00 Marmorna Hall B

Immunotherapy

Symposia

Chairs: Janoš Terzić (HR) Stefan Rose-John (DE)

09:00 - 09:30 **The role of the gut microbiota in drug response and toxicity**
Zimmermann, Michael (Germany)

09:30 - 10:00 **Interleukin-6 and ADAM17 in Inflammation and Cancer**
Rose-John, Stefan (Germany)

10:00 - 10:30 **Neutrophils predict T-cell depletion and anti-PD1 treatment failure in NSCLC**
Kargl, Julia (Austria)

10:30 - 10:45 **Regulatory T cells for immunotherapy of autoimmune diseases**
Pohar, Jelka (Slovenia)

10:45 - 11:00 **IgE epitope-like peptides and their potential in immunotherapy of life-threatening allergies**
Lunder, Mojca (Slovenia)

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09:00 - 11:00 Gallery Hall

Pharmacogenomics and Biomarkers

Symposia

Chairs: Jerka Dumic (HR) Magnus Ingelman-Sundberg (SE)

- 09:00 - 09:30 **Mode of action and therapeutic potential of the ER stress regulating protein CDF**
Saarma, Mart (Finland)
- 09:00 - 09:30 **Diagnostic Proteomic Biomarkers to detect Kidney Diseases**
Ozben, Tomris (Turkey)
- 09:00 - 09:30 **Pharmacogenomic biomarkers for prediction of drug response: Recent method development and clinical importance**
Ingelman-Sundberg, Magnus (Sweden)
- 10:30 - 10:45 **Far upstream element binding protein 3 expression is associated with bone remodeling**
Lovsin, Nika (Slovenia)
- 10:45 - 11:00 **Insights into the biological role of thiopurine S-methyltransferase**
Urbančič, Dunja (Slovenia)

09:00 - 11:00 Povodni mož Hall

Biochemistry of Toxins

Symposia

Chairs: Maja Šegvic Klaric (HR) Isabelle Oswald (FR)

- 09:00 - 09:30 **The challenge of investigating the toxicity of mycotoxins**
Oswald, Isabelle (France)
- 09:30 - 10:00 **Cyanotoxins: Adverse effects beyond acute toxicity**
Žegura, Bojana (Slovenia)
- 10:00 - 10:30 **The booming field of Botulinum Neurotoxins**
Rossetto, Ornella (Italy)
- 10:30 - 10:45 **Molecular characterization of the FX174-E mediated cell lysis pathway**
Mezhyrova, Julija (Germany)
- 10:45 - 11:00 **Novel insights into pore-forming process of listeriolysin O using solution and solid-state NMR**
Kozorog, Mirijam (Slovenia)

11:00 - 11:30 Other location

Coffee Break

Coffee Break

11:30 - 12:30 Kocka Hall

IUBMB Lecture

Plenary Lectures

Chair: Alexandra Newton (US)

- 11:30 - 12:30 **Seeking non-coding RNA regulators of acetylcholine functioning**
Soreq, Hermona (Israel)

12:30 - 13:30 Gallery Hall

Meet the Expert Session II

Meet the Expert

Chair: Bojan Doljak (SI)

- 12:30 - 12:50 **ZEISS Microscopy: Discover(ing) the Subcellular Dynamics of Life**
Christine Strasser
- 12:50 - 12:55 **European Life Science Research Infrastructures: What are research infrastructures and how can they help me?**
Natalie Haley
- 12:55 - 13:15 **EU-OPENSREEN ERIC, Instruct—ERIC: European Research Infrastructure: Meet the infrastructures: Instruct-ERIC, EU-OPENSREEN, BBMRI-ERIC, Euro-BioImaging**
Claudia Alen Bahne Stechmann Jens Habermann Frauke Leitner
- 13:15 - 13:20 **Luminex**

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13:20 - 13:25	THE ROYAL SOCIETY PUBLISHING	
13:25 - 13:30	FUJIFILM Wako Chemicals Europe GmbH	
12:30 - 14:30	Other location Lunch & Poster Sessions	Lunch & Poster Sessions
14:30 - 15:30	Kocka Hall FEBS Education Plenary Lecture Chairs: Jerka Dumic (HR) Ferhan Sagin (TR)	Plenary Lectures
14:30 - 15:30	Why Science Education is More Important than Most Scientists Think Alberts, Bruce (United States of America)	
15:30 - 16:00	Other location Coffee Break	Coffee Break
16:00 - 18:00	Kocka Hall New Frontiers in Medicinal Chemistry Chairs: Marijeta Kralj (HR) Stanislav Gobec (SI)	Symposia
16:00 - 16:30	Novel tools and drugs for G proteins and G protein-coupled receptors Müller, Christa E. (Germany)	
16:00 - 16:30	Geometric Isomers of 4-Styrylpiperidine Discriminate between Monoamine Oxidase Isoforms A and B Gobec, Stanislav (Slovenia)	
16:00 - 16:30	Addressing Alzheimer's disease complexity with multi-target-directed ligands Bolognesi, Maria Laura (Italy)	
17:30 - 17:45	Novel potent PSMA ligands and their docetaxel conjugates: in vitro and in vivo evaluation Machulkin, Aleksei (Russia)	
17:45 - 18:00	Safety and efficacy of a promising cationic nucleolipid formulation for the nanodelivery in vivo of an anticancer ruthenium(III) complex in human preclinical models of breast cancer Piccolo, Marialuisa (Italy)	
16:00 - 18:00	Marmorna Hall A Molecular Machines Chairs: Brigita Lenarcic (SI) Kristina Djinović Carugo (AT)	Symposia
16:00 - 16:30	Towards molecular architecture of the muscle Z-disk assembly Djinovic Carugo, Kristina (Austria)	
16:00 - 16:30	Unveiling transcriptional and extra-transcriptional roles of the RNA Polymerase III machinery Vannini, Alessandro (United Kingdom)	
16:00 - 16:30	The structure of human thyroglobulin Löwe, Jan (United Kingdom)	
17:30 - 17:45	Gating movements and ion permeation in HCN4 pacemaker channels Saponaro, Andrea (Italy)	
17:45 - 18:00	Oligomeric self-assembly of a coiled-coil-based bipyramidal protein cage Lapenta, Fabio (Slovenia)	

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16:00 - 18:00 Marmorna Hall B

Mechanisms of Microbiome–Host Interactions

Symposia

Chairs: Maja Rupnik (SI) David Berry, Austria (AT)

- 16:00 - 16:30 **Exploring microbiome function using single-cell isotope probing**
Berry, David (Austria)
- 16:30 - 17:00 **Intestinal antibodies in the context of the gut ecosystem**
Slack, Emma (Switzerland)
- 17:00 - 17:30 **Health effects of microbiota mediated food transformations**
Rajilić-Stojanović, Mirjana (Serbia)
- 17:30 - 17:45 **Microbiota-derived short-chain fatty acids as modulators of intestinal serotonin transporter**
Latorre, Eva (Spain)
- 17:45 - 18:00 **Effect of per oral administration of the ŽP strain, a new potential probiotic, on intestinal microbiota and immune status of rat and chicken**
Starčič Erjavec, Marjanca (Slovenia)

16:00 - 18:00 Gallery Hall

FEBS/IUBMB Special Session on Education I

Special Sessions & Workshops

Chairs: Ferhan Sagin (TR) Angel Herráez (ES)

- 16:00 - 16:10 **Introduction**
- 16:10 - 16:50 **Exploring New Horizons in Education: Using Multiple Pathways to Enhance and Energize Science Instruction**
Zadina, Janet (United States of America)
- 16:50 - 17:30 **Implementing cognitive science research in the undergraduate science classroom**
Davidesco, Ido (United States of America)
- 17:30 - 18:00 **Q&A**

16:00 - 18:00 Povodni mož Hall

Bioinformatics and Computational Biology

Symposia

Chairs: Kristian Vlahovicek (HR) Petr Svoboda (CZ)

- 16:00 - 16:30 **Evolution of small RNA pathways in rodents**
Svoboda, Petr (Czech Republic)
- 16:30 - 17:00 **Exascale biology: From genome to climate with a few stops along the way**
Jacobson, Daniel (United States of America)
- 17:00 - 17:30 **Computational modeling of RNA and RNP 3D structures, with the use of experimental data**
Bujnicki, Janusz Marek (Poland)
- 17:30 - 17:45 **The abundance of intrinsic disorder in proteins, associated with aging**
Manuylov, Vladimir (Russia)
- 17:45 - 18:00 **A rational approach for structure design based on a new architectural level**
Périn, Charlotte (France)

18:15 - 19:15 Marmorna Hall A

Speed Talk Session 5: Synthetic and System Biology, Bioinformatics and Biomarkers

Speed Talks

Chair: Aleš Berlec (SI)

- 18:15 - 18:20 **Method for controlling bacterial cell metabolism**
Panina, Julia (Russia)
- 18:20 - 18:25 **Design of a coiled-coil protein origami with controllable self-assembly**
Aupič, Jana (Slovenia)
- 18:25 - 18:30 **Programmable External Network based Compartmentalized Self-Replication (PEN CSR): a new method for in vitro directed evolution of enzymes**
Dramé-Maigné, Adèle (France)

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- 18:30 - 18:35 **De Novo Designed Minimal Blue Fluorescent Protein**
Prakash, Vivek (India)
- 18:35 - 18:40 **A platform for creating relevant models of hereditary diseases using human induced pluripotent stem cells and the CRISPR-Cpf1 system**
Malankhanova, Tuyana (Russia)
- 18:40 - 18:45 **Establishment of CRISPR/Cas9-mediated microRNA knock-out in potato**
Lukan, Tjaša (Slovenia)
- 18:45 - 18:50 **Ancient brothers of the human p53 tumour suppressor**
Brazda, Vaclav (Czech Republic)
- 18:50 - 18:55 **Exploring rare events of water transport in and out of buried active sites of hydrolytic enzymes**
Thirunavukarasu, Aravind Selvaram (Poland)
- 18:55 - 19:00 **THE IMPACT OF REPETITIVE SCUBA DIVES ON THE CARDIOVASCULAR, MUSCULAR AND IMMUNE SYSTEM FUNCTION AND INTEGRITY BIOMARKERS**
Žarak, Marko (Croatia)
- 19:00 - 19:05 **Decreased expression of N-cadherin in the plasma membrane of bladder cancer urothelial cells does not prevent their adhesion to the urothelium**
Kreft, Mateja Erdani (Slovenia)

18:15 - 19:15 Marmorna Hall B

Speed Talk Session 6: Molecular Medicine

Speed Talks

Chair: Maja Katalinic (HR)

- 18:15 - 18:20 **Modular approach to CAR-T regulation based on the barnase-barstar complex for therapy of oncological diseases**
Kalinin, Roman (Russia)
- 18:20 - 18:25 **miRNA assisted discriminative diagnosis between benign prostatic hyperplasia and localized prostate cancer via human blood examination**
Said, Harun Muayad (Turkey)
- 18:25 - 18:30 **Endothelial apoptosis after ionizing radiation mainly occurs in non-perfused vessels leaving vascular function intact**
Markelc, Bostjan (Slovenia)
- 18:30 - 18:35 **The role of the transcription factor Ets-2 in the pathogenesis of primary autoimmune thrombocytopenic purpura**
Aggeletopoulou, Ioanna (Greece)
- 18:35 - 18:40 **Evaluation of New Progestogen and Selective Estrogen Receptor Modulator Effect on Matrix Metalloproteinases Activity in Experimental Endometrioid Heterotopias**
Voronkina, Irina (Russia)
- 18:40 - 18:45 **Cell-to-cell transmission of SARS-CoV-2 is resistant to neutralizing antibodies**
Kruglova, Natalia (Russia)
- 18:45 - 18:50 **Implication of graded reductions in CLN6's anti-aggregate activity as a pathomechanism of the neuronal ceroid lipofuscinoses**
Shiro, Yuki (Japan)
- 18:50 - 18:55 **Human aquaporin-5 selectivity and peroxiporin activity modulate cell survival and cancer cell migration**
Pimpão, Catarina (Portugal)
- 18:55 - 19:00 **Deciphering redox-centered regulation of DJ-1 activity and its importance for DJ-1 neuroprotective mechanisms**
Anjo, Sandra (Portugal)
- 19:00 - 19:05 **miRNA-directed dendritic cell reprogramming**
Arh, Nejc (Sweden)

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18:15 - 19:15 Gallery Hall

FEBS Workshop – Networking for scientists: reasons, reservations, reinventions

Special Sessions & Workshops

Chair: Andreas Hartig (AT)

>In this workshop, two short talks – on ÇÇWhat role does and should networking play in science?ÇÇ and ÇÇThe pandemic and networking – what did we learn and what can we keep?ÇÇ>>> >->> will be followed by small-group discussions on aspects of networking to allow active participation of those who attend the session. The session will be in Zoom Meetings with use of breakout rooms and polling. >

19:15 - 20:15 Gallery Hall

FEBS YSF Bridge

Special Sessions & Workshops

Chairs: Irene Diaz-Moreno (ES) Maja Katalinić (HR)

A session aimed at PhD students and postdocs to present activities of the FEBS Working Group on the Careers of Young Scientists, particularly the FEBS Young ScientistsÇÇ Forum.

Wednesday, 2021/7/7

08:00 - 08:45 Gallery Hall

Early Bird Session IV: Molecular Toxicology and Environment

Early Bird Sessions

Chair: Marta Popovic (CR)

08:00 - 08:10 **Crosstalk of proteases in DNA-protein crosslink repair**

Popovic, Marta (Croatia)

08:10 - 08:20 **Mechanisms of rapid adaptation to changed environment**

Bilandžija, Helena (Croatia)

08:20 - 08:30 **New antimicrobial candidates - Quaternary ammonium compounds based on natural scaffold quinuclidine**

Šprung, Matilda (Croatia)

08:30 - 08:40 **Roles of Rrp6/EXOSC10-targeted lncRNAs in anti-cancer drug toxicity and cell wall architecture**

Stuparevic, Igor (Croatia)

09:00 - 11:00 Kocka Hall

Cancer Immunology and Immunotherapy

Symposia

Chairs: Janko Kos (SI) Wolf Herve Fridman (FR)

09:00 - 09:30 **Prognostic and predictive value of tumor-associated B cells and Tertiary Lymphoid Structures in human cancers**

Sautès-Fridman, Catherine (France)

09:00 - 09:30 **The role of MDSC in regulation of immune response**

Umansky, Viktor (Germany)

09:00 - 09:30 **Multiple Defects of Natural Killer Cells in Cancer Patients: Anarchy, Dysregulated Systemic Immunity, and Immunosuppression in Metastatic Cancer**

Jewett, Anahid (United States of America)

10:30 - 10:45 **Super-charged NK cells preferentially expand CD8+ T cells; Results from pancreatic cancer patients and tumor-bearing humanized-BLT mice**

Ko, Meng-Wei (United States)

10:45 - 11:00 **Antigen-specific stimulation and expansion of CAR-T cells using membrane vesicles as target cell surrogates**

Ukrainskaya, Valeriya (Russia)

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09:00 - 11:00 Marmorna Hall A

Cellular Organization

Symposia

Chairs: Iva Tolic (HR) Devrim Gozuacik (TR)

- 09:00 - 09:30 **Multiparametric imaging approaches to dissect the role of ROS and eNOS signaling pathways using chemogenetic tools and genetically encoded biosensors**
Eroglu, Emrah (Turkey)
- 09:00 - 09:30 **Architecture and dynamics of the mitotic spindle**
Tolic, Iva (Croatia)
- 09:00 - 09:30 **Autophagy as a key cellular stress response mechanism**
Gozuacik, Devrim (Turkey)
- 10:30 - 10:45 **The SNARE proteins vti1a and vti1b affect myogenesis**
Heitzig, Nicole (Germany)
- 10:45 - 11:00 **An ATM-Chk2-INCENP signaling pathway delays abscission to prevent chromatin bridge breakage in cytokinesis**
Petsalaki, Eleni (Greece)

09:00 - 11:00 Marmorna Hall B

Molecular Interactions of Plants with the Environment

Symposia

Chairs: Kristina Gruden (SI) Wolfram Weckwerth (AT)

- 09:00 - 09:30 **Germplasm meets systems biology – the next green revolution in agroecology**
Weckwerth, Wolfram (Austria)
- 09:00 - 09:30 **Study of spatial responses in combination with network analysis reveals mechanisms of plant resistance to viruses**
Gruden, Kristina (Slovenia)
- 09:00 - 09:30 **Hormone-induced gene regulatory networks in plant defense**
Van Wees, Saskia (Netherlands)
- 10:30 - 10:45 **Omic insights into the molecular response of *Sargassum vulgare* to acidification at volcanic CO₂ vents**
Nonnis, Simona (Italy)
- 10:45 - 11:00 **How is salicylic acid perceived in potato?**
Tomaž, Špela (Slovenia)

09:00 - 11:00 Gallery Hall

Life on the Edge – Extremophilic/ Extremotolerant organisms

Symposia

Chairs: Ana Plemenitaš (SI) Elizaveta Bonch-Osmolovskaya (RU)

- 09:00 - 09:30 **Functional Metagenomics of Microbial Communities in Desert Soils**
Cowan, Don (South Africa)
- 09:00 - 09:30 **How archaea swim: the archaellum**
Albers, Sonja-Verena (Germany)
- 09:00 - 09:30 **New thermophilic prokaryotes with unusual metabolic pathways**
Bonch-Osmolovskaya, Elizaveta (Russia)
- 10:30 - 10:45 **Autocatalytic activation process of thermostable protease from the extremophilic archaeon *Aeropyrum pernix***
Bahun, Miha (Slovenia)
- 10:45 - 11:00 **The interaction between the F55 virus-encoded transcription regulator and the RadA host recombinase reveals a common strategy in Archaea and Bacteria to sense the UV-induced damage to the host DNA**
Iacobucci, Ilaria (Italy)

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09:00 - 11:00 Povodni moř Hall

Immune and Inflammatory Disorders

Symposia

Chairs: Bojan Polic (HR) Burkhard Becher (CH)

09:00 - 09:30 **The T cell/phagocyte interface in inflammation and immunopathology**

Becher, Burkhard (Switzerland)

09:00 - 09:30 **Clone wars: failure in self-antigen presentation leading to the autoimmune neurodegeneration**

Belogurov Jr., Alexey (Russia)

09:00 - 09:30 **Investigating the timing of NKT cell effector subset differentiation**

Schmidt-Supprian, Marc (Germany)

10:30 - 10:45 **Mice lacking DNA repair factor XLF and MRI show leaky severe combined immunodeficiency (SCID)**

Castaneda Zegarra, Sergio Miguel (Norway)

10:45 - 11:00 **Molecular mechanisms of NLRP3 inflammasome activation and its regulation**

Hafner Bratkovic, Iva (Slovenia)

11:00 - 11:30 Other location

Coffee Break

Coffee Break

11:30 - 12:00 Kocka Hall

FEBS Letters Award Lecture

Plenary Lectures

Chairs: Felix Wieland (DE) Michael Brunner (DE)

11:30 - 12:00 **Selective brain region vulnerability in Parkinson's Disease is governed by a-Synuclein conformations**

Bartels, Tim (United Kingdom)

12:00 - 12:30 Kocka Hall

FEBS Journal Prize Lecture

Plenary Lectures

Chairs: Johannes Buchner (DE) Seamus Martin (IE)

12:00 - 12:30 **Redox-sensitive mobile protein HIC-5: a guardian of anchorage-dependent cell growth and a fortress against tumor metastasis**

Shibanuma, Motoko (Japan)

12:30 - 13:30 Gallery Hall

Meet the Expert Session III

Meet the Expert

Chair: Jerica Sabotic (SI)

12:30 - 13:00 **NanoTemper: No more limitations in your research-measure the most challenging interactions with MST**

Neha Dhimole

13:00 - 13:20 **Polyplus-transfection: Efficient DNA transfection solutions for Life Science research and Recombinant Protein expression**

Maria Nicla LOVIGLIO

13:20 - 13:25 **KOBIS**

13:25 - 13:30 **Novartis: Opportunities at Novartis Technical R&D**

Ljerk LAH

12:30 - 14:00 Other location

Lunch & Poster Sessions

Lunch & Poster Sessions

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14:00 - 15:00 Kocka Hall

FEBS Datta Lecture

Chair: Piotr Laidler (PL)

Plenary Lectures

14:00 - 15:00 **Designing nature, from protein origami to cellular circuits**
Jerala, Roman (Slovenia)

15:00 - 15:15 Other location

Coffee Break

Coffee Break

15:15 - 16:15 Kocka Hall

PABMB Lecture

Chair: Bianca Zingales (BR)

Plenary Lectures

15:15 - 16:15 **The Oxygen Paradox in Human Biology and Medicine: Bioenergetics, Free Radicals and Oxidative Stress**
Radi, Rafael (Uruguay)

16:30 - 18:30 Kocka Hall

Cancer Initiation and Progression

Chairs: Tamara Lah Turnšek (SI) Geoffrey Pilkington (UK)

Symposia

16:30 - 17:00 **Cancer Stem cells (CSC). Genetic drivers and therapeutic targeting via CCR5**
Pestell, Richard (United States of America)

16:30 - 17:00 **Future pre-clinical drug testing in GBM; 3D, all-human, multiple cell type, in vitro systems accurately reflect in situ brain microenvironment and can assess differing cytotoxic pathways.**
Pilkington, Geoffrey (United Kingdom)

16:30 - 17:00 **Breast cancer-initiating cells: what we know and what we expect from them**
Daidone, Maria Grazia (Italy)

18:00 - 18:15 **Phenotype switching in melanoma cells resistant to targeted therapy**
Radic, Martina (Croatia)

18:15 - 18:30 **Adipocyte-derived extracellular vesicles as new modulators of prostate cancer progression**
Fontana, Fabrizio (Italy)

16:30 - 18:30 Marmorna Hall A

Aging Stress and Neurodegeneration

Chairs: Boris Rogelj (SI) Tihomir Balog (HR)

Symposia

16:30 - 17:00 **NFYB-1 regulates mitochondrial function and longevity via lysosomal prosaposin**
Antebi, Adam (Germany)

16:30 - 17:00 **Mechanisms controlling aberrant phase separation of neurodegeneration-linked RNA-binding proteins**
Dormann, Dorothee (Germany)

16:30 - 17:00 **Failures in Protein Clearance Partly Underlie Late Onset Neurodegenerative Diseases and Link Pathology to Genetic Risk**
Hardy, John (United Kingdom)

18:00 - 18:15 **Influence of the BCHE gene polymorphism on the inhibition of butyrylcholinesterase by bismarckates, a potential Alzheimer's disease drugs**
Matošević, Ana (Croatia)

18:15 - 18:30 **Inhibition of cathepsin X as a novel strategy for the treatment of neuroinflammation-associated diseases**
Pišlar, Anja (Slovenia)

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16:30 - 18:30 Marmorna Hall B

Redox Biology – Oxidative Stress Signalling

Symposia

Chairs: László Virág (HU) Ana Casas Guijarro (NL)

16:30 - 17:00

16:30 - 17:00 **NADPH oxidases in infection and inflammation**

Knaus, Ulla G (Ireland)

16:30 - 17:00

Network pharmacology approach for stroke therapy: Towards the end of medicine as we know it

Casas Guijarro, Ana (The Netherlands)

18:00 - 18:15

Oxidative stress-induced DNA damage signaling: the role of poly(ADP-ribose) polymerase 1

Virag, Laszlo (Hungary)

18:15 - 18:30

Hydroxytyrosol treatment ameliorates reserpine-induced fibromyalgia: evaluation of pain, oxidative stress and inflammation

Di Paola, Rosanna (Italy)

16:30 - 18:30 Gallery Hall

Metabolic Engineering: Emerging Technologies for Industrial Process Development

Symposia

Chairs: Hrvoje Petkovic (SI) Diethard Mattanovich (AT)

16:30 - 17:00

Computational Enzyme Design for Metabolic Engineering

Damborsky, Jiri (Czech Republic)

17:00 - 17:30

Approaches towards innovative antibiotics from microbes

Mueller, Rolf (Germany)

17:00 - 17:30

An engineered Calvin cycle enables the yeast *Komagataella phaffii* to grow and produce organic acids from CO₂

Mattanovich, Diethard (Austria)

18:00 - 18:15

Improving the use of CRISPR-Cas12a (Cpf1) in cyanobacteria

Guevara Acosta, Flor Govinda (Spain)

18:15 - 18:30

Dye-decolorizing peroxidases from *Streptomyces coelicolor* show organosolv lignin remodeling activity

Pupart, Hegne (Estonia)

16:30 - 18:30 Povodni mož Hall

FEBS/IUBMB Special Session on Education II

Special Sessions & Workshops

Chairs: Jerka Dumic (HR) Jason Perret (BE)

16:30 - 16:40

Introduction

16:40 - 17:20

Expectations of professionalism in doctoral education in an ever-changing academic world

Harris, Robert (Sweden)

17:20 - 18:00

The postdoc experience - hopes, fears, expectations and reality

Hanin, Geula (United Kingdom)

18:00 - 18:30

Panel discussion

19:00 - 20:00 Kocka Hall

The FEBS Journal - Meet the Editor Seamus Martin (Ireland)

Special Sessions & Workshops

19:00 - 20:00 Marmorna Hall A

FEBS Letters - Meet the Editor Michael Brunner (Germany)

Special Sessions & Workshops

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19:00 - 20:00 Marmorna Hall B

FEBS Open Bio - Meet the Editor Miguel De La Rosa (Spain)

Special Sessions & Workshops

19:00 - 20:00 Gallery Hall

Molecular Oncology - Meet the Editor Kevin Ryan (UK)

Special Sessions & Workshops

Thursday, 2021/7/8

09:00 - 11:00 Kocka Hall

Structural and Functional Glycobiology

Symposia

Chairs: Gordan Lauc (HR) Serge Perez (FR)

09:00 - 09:30 **The Multiscale Architecture of Complex Carbohydrates**

Perez, Serge (France)

09:00 - 09:30 **Glycans as biomarkers and functional effectors in diabetes**

Gornik Kljaić, Olga (Croatia)

10:00 - 10:30 **Functional role of the glycan shield in the activation of the SARS-CoV-2 S protein**

Fadda, Elisa (Ireland)

10:30 - 10:45 **The plasticity of the beta-trefoil-type lectins from higher fungi**

Sabotič, Jerica (Slovenia)

10:45 - 11:00 **Individuals at increased risk of type 2 diabetes have increased branching and lower sialylation of alpha-1-acid glycoprotein N-glycans**

Keser, Toma (Croatia)

09:00 - 11:00 Marmorna Hall A

The Circadian Clock and Disease

Symposia

Chairs: Damjana Rozman (SI) Achim Kramer (DE)

09:00 - 09:30 **Circadian regulation of glucose and lipid homeostasis upon type 2 diabetes**

Dibner, Charna (Switzerland)

09:00 - 09:30 **Intercellular coupling between peripheral circadian oscillators by TGF- β signaling**

Kramer, Achim (Germany)

09:00 - 09:30 **Human clocks, sleep and metabolism**

Skene, Debra Jean (United Kingdom)

10:30 - 10:45 **Deletion of the clock gene period 2 from glial cells alters mood-related behavior in mice**

Martini, Tomaz (Switzerland)

10:45 - 11:00 **Genetic variations in clock controlled genes and sleep phase disorders**

Plavc, Laura (Slovenia)

09:00 - 11:00 Marmorna Hall B

Biomembranes and Lipid Mediators

Symposia

Chairs: Marija Heffer (HR) Raquel Marin (ES)

09:00 - 09:30 **Plasma membrane & nanoparticles: love, hate and immune regulation**

Bilyy, Rostyslav (Ukraine)

09:00 - 09:30 **Brain glycomics by novel mass spectrometry approaches based on ion mobility and chip-nanoelectrospray ionization**

Zamfir, Alina D. (Romania)

09:00 - 09:30 **Malfunctions in lipid rafts during menopause and Alzheimer's disease. A window to develop new biomarkers.**

Marin, Raquel (Spain)

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10:30 - 10:45	Skeletal muscle metabolomics post liraglutide and metformin treatments Heffer, Marija (Croatia)	
10:45 - 11:00	Nutrient sensing pathways and cytosolic pH regulate a transcriptional circuit for lipid droplet formation Costa, Vítor (Portugal)	
09:00 - 11:00	Gallery Hall Lipidomics Chairs: László Vigh (HU) Kim Ekroos (FI)	Symposia
09:00 - 09:30	Lipidomics of Phospholipase A2 Allosteric Regulation by Membranes Generating Mediators of Inflammation Dennis, Edward A. (United States of America)	
09:00 - 09:30	The International Lipidomics Society Ekroos, Kim (Finland)	
10:00 - 10:30	Zooming in on the Curious Case of a Key Cholesterol Synthesis Enzyme Brown, Andrew (Australia)	
10:30 - 10:45	Unusual membrane lipids with highly asymmetric acyl chains in a fission yeast: identification, synthesis and evolutionary consequences Balogh, Gábor (Hungary)	
10:45 - 11:00	Lipid droplets drive inflammatory lipid mediator production in cancer cells Petan, Toni (Slovenia)	
09:00 - 10:00	Povodni mož Hall European Research Council Session Chairs: Israel Pecht (IL) Vito Turk (SI)	Special Sessions & Workshops
09:00 - 10:00	How to apply for your next ERC grant Philippe Cupers, Belgium	
10:00 - 11:00	Povodni mož Hall Biochemistry: A Success Story Chairs: Israel Pecht (IL) Vito Turk (SI)	Symposia
10:00 - 10:30	Structural insights into tRNA modification enzymes Glatt, Sebastian (Poland)	
10:00 - 10:30	Multiple faces of the potato virus Y coat protein Podobnik, Marjetka (Slovenia)	
11:00 - 11:30	Other location Coffee Break	Coffee Break
11:30 - 12:30	Kocka Hall FEBS Theodor Bücher Lecture Chairs: Annette Beck-Sickinger (DE) Laszlo Fesus (HU)	Plenary Lectures
11:30 - 12:30	The biology of CRISPR-Cas Charpentier, Emmanuelle (Germany)	

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12:30 - 13:05 Kocka Hall

Closing ceremony

Social Program

12:30 - 12:40	Poster and Speed Talk Prize delivery Mary Purton (UK) Seamus Martin (Ireland) Michael Brunner (Germany) Miguel De la Rosa (Spain) Kevin Ryan (UK)
12:40 - 12:45	Short Report on the Congress, Acknowledgements Janko Kos (Slovenia)
12:45 - 12:50	YSF, short report on YSF Irene Diaz Moreno (Croatia) Maja Katalinić (Croatia)
12:50 - 12:55	Concluding remarks Piotr Laidler (Poland) Miguel Del a Rosa (Spain) Jerka Dumić (Croatia)
12:55 - 13:00	Presentation of Lisbon FEBS Congress Graca Soveral (Portugal) Miguel Castanho (Portugal)
13:00 - 13:05	FEBS Flag Ceremony Janko Kos (Slovenia) Graca Soveral (Portugal) Miguel Castanho (Portugal)