



PROGRAM, LIST OF ABSTRACTS & USEFUL LINKS

SCIENTIFIC COMMITTEE

Ivana Munitić & Miranda Mladinić Pejatović (Department of Biotechnology, University of Rijeka, Croatia)

Emanuele Buratti (ICGEB, Trieste, Italy)

Jasna Kriz & Jean-Pierre Julien (Laval University, Quebec, Canada)

Ervina Bilić (Clinical Hospital Center Zagreb, Croatia)

Vladimira Vuletić (Clinical Hospital Center Rijeka, Croatia)

Srećko Gajović & Dinko Mitrečić (University of Zagreb School of Medicine, Croatia)

Pavle Andjus (University of Belgrade, Serbia)

Jasenka Mršić-Pelčić (Faculty of Medicine, Rijeka, Croatia)

ORGANIZING COMMITTEE

Jelena Ban, Katarina Bulić, Marin Dominović, Josip Peradinović, Nikolina Prtenjača, Toni Franjkić, Zrinko Baričević, Ante Maslač, Sara Moržan & Marta Kolarić (Department of Biotechnology, University of Rijeka, Croatia)

Tomislav Pavlešić (University of Rijeka, Croatia)

Andrea Markovinović (King's College London, London, UK)

VENUE LOCATION

University Campus Rijeka, Lecture room 003 @ Faculty of Civil Engineering

THURSDAY, June 30

- 16.00 - 17.00** **Registration**
- 17.00 - 17.15** **Opening ceremony** (Introductory speeches by the Rectorate, organizers & ALS Society of Canada)
- 17.15 - 18.00** **Plenary talk by Michael J. Strong** (President of the Canadian Institutes of Health Research & Distinguished University Professor at Western University, London, Ontario, Canada): SARS-COV-2, global aging and neurodegeneration: Is this the perfect storm?
- 18.00 - 18.15** **NeuroArt Exhibition** (Jelena Ban & Sandra Debančić): Glowing Glia: A glue between Science & Art (location: BioTech, O-353)
- 18.15 - 22.00** **Welcome cocktails at the University campus** (location: Akvarij)

FRIDAY, July 1

- 8.30 - 9.00** **Registration, continued**
- 9.00 - 11.00** **Session 1** (Chairs: E. Buratti, P. Andjus): **ALS/FTD genetics and mechanisms**
- 9.00 - 9.25 **Pietro Fratta** (University College London, London UK): TDP-43 depletion and cryptic exons: a therapeutic opportunity for ALS
- 9.25 - 9.50 **Boris Rogelj** (Department of Biotechnology, Jozef Stefan Institute): C4G2 repeat RNA from ALS/FTD-associated mutation in C9orf72 disrupts translation
- 9.50 - 10.10 **Laura Pasetto** (Department of Neuroscience, Mario Negri Institute for Pharmacological Research, Milano, Italy): Defective cyclophilin A induces TDP-43 proteinopathy: implications for ALS and FTD
- 10.10 - 10.35 **Marco Baralle** (ICGEB, Trieste, Italy): Physiological tissue-specific and age-related reduction of mouse TDP-43 levels is regulated by epigenetic modifications
- 10.35 - 10.55 **Cristian Droppelmann** (Western University, London, Ontario, Canada): A fragment of the RNA-binding protein RGNEF suppresses TDP-43 toxic phenotype in an animal model of ALS
- 11.00 - 11.30** **Coffee break**
- 11.30 - 13.30** **Session 1, continued** (Chairs: E. Buratti & P. Andjus)
- 11.30 - 11.55 **Clotilde Lagier-Tourenne** (Harvard Medical School): Emerging therapeutic targets in TDP-43 proteinopathies
- 11.55 - 12.15 **Dragomir Milovanović** (German Center for Neurodegenerative Diseases, Berlin, Germany): The emerging roles of phase separation in the organization and dynamics of RNA-containing granules in ALS
- 12.15 - 12.40 **Metka Glavač-Ravnik** (Faculty of Medicine, University of Ljubljana, Slovenia): Genetic variability of inflammation and oxidative stress genes affects the progression of disease and survival of patients with ALS

- 12.40 - 13.05** **Richard Robitaille** (Université de Montréal): Neuromuscular junctions a therapeutic target in ALS
- 13.05 - 13.25** **Andrea Markovinović** (Department of Basic and Clinical Neuroscience, King's College London, London, UK): There's something wrong with my MAM; ER-mitochondria signaling and ALS/FTD
- 13.30 - 15.00** **Lunch**
- 15.00 - 17.00** **Session 2** (Chairs: B. Rogelj & P. Fratta): **Proteinopathy in ALS/FTD**
- 15.00 - 15.25** **Emanuele Buratti** (ICGEB, Trieste, Italy): Importance of hnRNP proteins as ALS/TDP-43 disease modifiers
- 15.25 - 15.50** **Neil Cashman** (University of British Columbia, Canada): Novel Antibody and Intrabody therapeutics for ALS
- 15.50 - 16.10** **Heather Durham** (McGill University, Canada): Challenges with approaches to restoring proteostasis in ALS/FTD-online
- 16.10 - 16.30** **Christine Vande Velde** (CRCHUM & Université de Montréal, Canada): TDP-43 mediated regulation of RNA binding proteins in ALS-online
- 16.30 - 16.55** **Jean-Pierre Julien** (CERVO Brain Research Center & Department of Psychiatry and Neurosciences, Laval University, Quebec, Canada): Antibody approaches to target TDP-43 proteinopathy
- 17.00 - 19.00** **Poster session with coffee & cookies**
- 19.00 - 23.00** **Guided walk to Trsat castle & Dinner for invited speakers & organizing committee in Trsat** 🍁 **Canada day celebration with Canadian friends in Croatia!** 🍁

SATURDAY, July 2

- 9.00 - 11.00** **Session 3** (chairs: J-P. Julien & I. Munitić): **Immunity in ALS/FTD**
- 9.00 - 9.30** **Michal Schwartz** (Weizmann Institute of Science, Rehovot, Israel): A transformed view of brain-immune system relationships: Immunotherapy to harness the immune system to help defeating neurodegenerative disease
- 9.30 - 10.00** **Jasna Kriz** (CERVO Brain Research Center & Department of Psychiatry and Neurosciences, Laval University, Quebec, Canada): Translational regulation of innate immune response in ALS
- 10.00 - 10.30** **Severine Boillee** (INSERM U1127, CNRS UMR-7225; Sorbonne University, Brain and Spinal cord Institute, Paris, France): Implication of microglia and peripheral macrophages in ALS
- 10.30 - 10.55** **Giovanni Nardo** (Department of Neuroscience, Mario Negri Institute for Pharmacological Research, Milano, Italy): Immune response in the peripheral nervous system and skeletal muscles is pivotal to counteract ALS

- 11.00 - 11.30** **Coffee break**
- 11.30 - 13.30** **Session 3, continued** (chairs: J-P. Julien & I. Munitić)
- 11.30 - 11.55 **Pavle Andjus** (Faculty of Biology, University of Belgrade, Belgrade, Serbia): Immunoglobulins G - from humoral factors to biomarkers in ALS
- 11.55 - 12.20 **Caterina Bendotti** (Department of Neuroscience, Mario Negri Institute for Pharmacological Research, Milano, Italy): Loss of C9orf72 impairs the peripheral nervous system and anticipates symptoms in ALS mice
- 12.20 - 12.55 **Ilija Brzić** (Center for Proteomics, Faculty of Medicine, University of Rijeka, Croatia): Glial cell adaptation to latent cytomegalovirus infection in the CNS
- 12.55 - 13.15 **Ali Jawaid** (BRAINCITY: Center of Excellence for Neural Plasticity and Brain Disorders, Nencki Institute of Experimental Biology, Warsaw, Poland): Putting Brains on a Diet: Targeting Pathological Aggregation in Neurodegenerative Disorders via Metabolism
- 13.15 - 13.30 **Gabór Mórotz** (King's College London, London, UK): Disruption of ER mitochondria tethering and signaling in C9orf72-associated FTD and ALS
- 13.30 - 15.00** **Lunch**
- 15.00 - 17.00** **Session 4** (chairs: N. Cashman & V. Vuletic):
Clinical studies, biomarkers & emerging therapies in ALS/FTD
- 15.00 - 15.20 **Angela Genge** (Montreal Neurological Institute and Hospital, Montreal, Canada): Update on Clinical Trials-online
- 15.20 - 15.50 **Letizia Mazzini and Fabiola De Marchi** (ALS Center, Department of Neurology, Eastern Piedmont University, Maggiore della Carità Hospital, Novara): Prospects for the Future of Stem Cells Therapy in ALS & Long-term survival of participants with the mesenchymal stromal stem cells transplantation in ALS (awarded talk) - online+live
- 15.50 - 16.15 **Stanley Appel** (Neurological Institute, Weill Cornell Medical College, Houston, USA): Regulatory T Lymphocytes Attenuate Peripheral Oxidative Stress and Acute Phase Proteins in ALS-online
- 16.15 - 16.40 **Robert Bowser** (Barrow Neurological Institute, Phoenix, USA): Challenges of measuring TDP-43 in human biofluids
- 16.40 - 17.00 **Zorica Stevic** (Clinic of Neurology University Clinical Centre of Serbia, Belgrade): Chitotriosidase in CSF as biomarker for ALS
- 18.30 - 20.00** **Swim & Walk for Brain Health @ Kostrena beach**
- 20.00 - 22.30** **Drinks and snacks in Kostrena Yacht Club Galeb**

SUNDAY, July 3

- 9.00 - 11.00** **Session 5** (chairs: J. Križ & A. Markovinović): **Related brain disorders**
- 9.00 - 9.25** **Jason Cannon** (Purdue University, USA): Role of environmentally induced mitophagy alterations in neurodegeneration
- 9.25 - 9.50** **Vladimira Vuletić** (Clinical Hospital Centre, Rijeka): The role of microbiota in Parkinson's disease
- 9.50 - 10.15** **Silva Katušić Hećimović** (Ruđer Bošković Institute, Zagreb, Croatia): Deciphering molecular links between Alzheimer's disease and Niemann-Pick type C disease
- 10.15 - 10.35** **Srećko Gajović** (Croatian Institute for Brain Research, University of Zagreb School of Medicine, Zagreb, Croatia): In vivo imaging of mice after ischemic brain lesion allows insight in time dependent processes of damage and repair
- 10.35 - 11.00** **Dinko Mitrečić** (Croatian Institute for Brain Research, University of Zagreb School of Medicine, Zagreb, Croatia): Transplantation of stem cells in animal model of stroke reduces cell death-online
- 11.00 - 11.30** **Coffee break**
- 11.30 - 12.30** **AWARDED YOUNG RESEARCHER TALKS** (chairs: C. Bendotti & J. Cannon)
- Marta Cozzi** (University of Milan, Italy): Investigating the molecular mechanisms involved in KIF5A-related neurodegeneration
- Jerneja Nimac** (Jožef Stefan Institute, Ljubljana, Slovenia): TDP-43 interactome changes induced by mislocalization
- Alp Yiğit Özdemir** (Charles University, Department of Physiology, Prague, Czechia): Comparison of the Different Isoforms of Vitamin E Against Amyloid Beta-induced Neurodegeneration
- Paride Schito** (San Raffaele Hospital, Milano): Diagnostic and prognostic performance of serum biomarker in upper motor neuron syndromes
- Sara Milani** (King's College London, London, UK): Targeting TDP-43 Autoregulation for Therapeutic Benefit In ALS-FTD
- Mubashshir Ali** (Jamia Hamdard University): N-Acetyl Cysteine ameliorates mitochondrial dysfunction in ischemic injury via attenuating Drp-1 mediated mitochondrial autophagy
- 12.30 - 13.00** **ONLINE SELECTED SPEED TALKS**
- Sandra Martin-Guerrero** (King's College London, London, UK): Essential role of the PTPIP51 coiled-coil domain in VAPB binding and ER-mitochondria signaling
- Cassandra Margotta** (Mario Negri Institute for Pharmacological Research, Milano, Italy): Compensatory myogenesis and acetylcholine receptor clustering delay symptoms onset and progression in SOD1 mutant mice
- Jessica D'Agostino** (Mario Negri Institute for Pharmacological Research, Milano, Italy): Contingent intramuscular boosting of P2XR7 axis improves motor function in transgenic ALS mice
- 13.00 - 13.30** **ROUNDTABLE: Meeting recap & Outstanding questions & challenges**

- 11.30 - 13.30 SATELLITE SYMPOSIUM: 3rd Meeting of Basic Researchers & Clinicians Working On ALS (Croatia/Slovenia); chair: Dr. Ervina Bilić**
- 11.30 - 11.45 Ervina Bilić** (Medical School University of Zagreb and Clinical Hospital Centre Zagreb, Croatia): Strategy and activities of ALS Centre Zagreb
- 11.45 - 12.00 Blaž Koritnik** (University Medical Centre Ljubljana, Slovenia): The impact of multidisciplinary care team on survival of Slovenian patients with amyotrophic lateral sclerosis
- 12.00 - 12.15 Mira Bučuk** (Department of Neurology, Clinical Hospital Center Rijeka, Faculty of Medicine, Rijeka): Amyotrophic lateral sclerosis: how to deal with it?
- 12.15 - 12.25 Katarina Vogelnik** (Institute of Clinical Neurophysiology, University Medical Centre Ljubljana): Analysis of involuntary movements in patients with ALS.
- 12.25 - 12.35 Hrvoje Bilić** (Department of Neurology Clinical Hospital Center Zagreb, University of Zagreb School of Medicine): "Are we becoming familiar with familial and young onset ALS?"
- 12.35 - 13.30 Roundtable: Dr. Janez Zidar & Dr. Ervina Bilić**
1. *How did we treat people with ALS before? What is the modern (multidisciplinary) approach?*
 2. *Where has most of the progress been made?*
 3. *What worries us the most?*
 4. *What future do we see for this field of neurology?*
 5. *How can CRO-SLO clinicians and scientists improve their collaborations (project proposals, articles, personnel exchanges, etc.)*

- 13.30 - 13.45 Award for best young researcher presentation & best NeuroArt Contest Artwork**
- Closing remarks by the organizers & chancellor of the University of Rijeka prof. dr. Snježana Prijčić - Samaržija**

AFTERNOON (optional): Trip to Kastav, Opatija & Kvarner Bay



POSTER PRESENTATIONS

1. **Monika Berecki** (Laboratory for Regenerative Neuroscience, Croatian Institute for Brain Research, University of Zagreb School of Medicine, Zagreb, Croatia): Lentivirus-mediated gene modifications in mouse brain neurons and astrocytes
2. **Danae Campos-Melo** (Molecular Medicine Group, Robarts Research Institute, Schulich School of Medicine & Dentistry, Western University, London, Ontario, Canada): CircRNAs in Amyotrophic Lateral Sclerosis and metabolic stress
3. **Elena Casarotto** (Dipartimento di Scienze Farmacologiche e Biomolecolari (DiSFeB), Department of Excellence 2018-2022, Università degli Studi di Milano, Milano, Italy): How PQC inhibition modulates miRNA loading in large and small extracellular vesicles
4. **Anna A. Chami** (CERVO Brain Research Centre, Laval University, Quebec, Canada): Intravenous injection of AAV encoding scFv antibody to target TDP-43 proteinopathy
5. **Andrea Saul Costa** (University of Eastern Piedmont, Novara, Italy): Identification of new variants in patients with ALS or other Neurodegenerative Disorders by whole genome sequencing data
6. **Urša Čerček** (Department of Biotechnology, Jožef Stefan Institute, Ljubljana, Slovenia & Graduate School of Biomedicine, Faculty of Medicine, University of Ljubljana, Ljubljana, Slovenia): ALS/FTD-associated C9orf72 C4G2 repeat RNA disrupts phenylalanine tRNA aminoacylation
7. **Toni Franjkić** (Department of Biotechnology, University of Rijeka, Rijeka, Croatia): Assessing pathogenicity of *OPTN* variants in ALS and glaucoma by bioinformatic analysis
8. **Ismail T. Gbadamosi** (Laboratory for Translational Research in Neuropsychiatric Disorders, Center of Excellence for Neuronal Plasticity and Brain Disorders, Institute of Experimental Biology Marcei Nencki, Warsaw, Poland): Role of Metabolism in TDP-43 Pathology and its Down-Stream Toxicity
9. **Dominik Hamer** (Croatian Institute for Brain Research, University of Zagreb School of Medicine, Zagreb, Croatia): “We can see clearly now the brain is washed” – Visualizing neurons and blood vessels in the cleared mouse brain using fluorescence microscopy
10. **Tamara Janković** (Department of Basic and Clinical Pharmacology and Toxicology, Faculty of Medicine, University of Rijeka, Croatia): Single moderate traumatic brain injury in mice induces transient acute changes in the cortical iNOS expression and its cytoplasmic co-localization with TDP-43
11. **Wenanlan Jin** (University College London, London, UK): Characterization of FUSdelta14-ALS mouse model
12. **Fran Krstanović** (Center for Proteomics, Faculty of Medicine, University of Rijeka): Differential role of neurons and glial cells in cytomegalovirus infection and immune control
13. **Antea Kršek** (Faculty of medicine, University of Rijeka, Rijeka, Croatia): Flail arm syndrome, a form of ALS with slow progression
14. **Rajka M. Liscic** (Neuro-Spinal Hospital Dubai, Science Park, Dubai, UAE): Molecular background of amyotrophic lateral sclerosis and frontotemporal dementia: Towards therapeutic targets
15. **Marta Medija** (Department of Biotechnology, University of Rijeka, Rijeka, Croatia): The effect of quercetin on the developmental consequences of methamphetamine in fruit fly

16. **Angelica Mele** (ALS Center, Neurology Unit, Department of Translational Medicine, University East Piedmont, Novara, Italy): Evaluation of plasmatic and cellular redox state parameters in patients affected by Amyotrophic Lateral Sclerosis
17. **Christian Memo** (SISSA, Trieste, Italy): Inflammatory exosomes transfer danger signal and induce glial dysfunctional calcium dynamics in naïve spinal cultured explants
18. **Tina Miloš** (Division of Molecular Medicine, Ruđer Boškovic Institute, Zagreb, Croatia): Brain-derived neurotrophic factor, amyloid β 1–42 and Apolipoprotein E genotype: Potential biomarkers for the differential diagnosis between frontotemporal dementia and Alzheimer's disease
19. **Helena Motaln** (Jožef Stefan Institute, Department of Biotechnology, Ljubljana, Slovenia): FUS interactome
20. **Veronica Noches Gallardo** (Molecular Medicine Group, Robarts Research Institute, Schulich School of Medicine & Dentistry, Western University, London, Ontario, Canada): The RRM2 domain of TDP-43 is essential for its interaction with the Leucine-rich domain of Rho Guanine Nucleotide Exchange Factor (RGNEF)
21. **Aneeqa Noor** (National University of Sciences and Technology, Islamabad, Pakistan): Prion-like characteristics of Amyloid- β deriving clinical variants of Alzheimer's disease.
22. **Josip Peradinović** (Department of Biotechnology, University of Rijeka, Rijeka, Croatia): Characterization of optineurin insufficiency mice during ageing
23. **Beatrice Piola** (University of Eastern Piedmont, Dept. of Health Sciences, Novara, Italy): Analysis of putative regulatory variants from whole genome sequencing data of 140 patients affected by neurodegenerative disorders by massively parallel reporter assay
24. **Amélie Poulin-Brière** (CERVO Brain Research Centre, Laval University, Quebec, Canada): Anti-TDP-43 antibody effect in models of sporadic ALS induced by ALS-patients CSF infusion
25. **Nikolina Prtenjača** (Department of Biotechnology, University of Rijeka, Rijeka, Croatia): Crosstalk of TDP-43 and Optineurin in myeloid cells
26. **Ana Rastija** (Division of Molecular Medicine, Ruđer Boškovic Institute, Zagreb): Endosomal fractionation of NPC1 mouse brain regions reveals sequestration of substrates of the Alzheimer's protease BACE1 within early endosomes - a mechanistic explanation for the amyloid-beta accumulation in NPC disease brains
27. **Tommaso Russo** (Department of Neurology & Neuropathology Unit, Institute of Experimental Neurology (INSPE), Division of Neuroscience, IRCCS San Raffaele Scientific Institute, Milan, Italy): NEK-1 variants in a cohort of Italian ALS patients
28. **Tea Sinožić** (Department of Biochemistry and Molecular and Structural Biology, J. Stefan Institute, Ljubljana, Slovenia): Structural aspects and functional effects of the mutations associated to Type B Kufs disease (CLN13)
29. **Veronika Stoka** (Department of Biochemistry and Molecular and Structural Biology, J. Stefan Institute, Ljubljana, Slovenia) Human cathepsin F: an unusual cysteine protease involved in Type B Kufs disease (CLN13)

30. **Pinky Sultana** (Department of Physiology Faculty of Science, Charles University, Prague, Czechia): Trappc9 deficiency in mice impairs learning and memory by causing imbalance of dopamine D1 and D2 neurons
31. **Robert Szabla & Brianna Kaplanis** (Western University, London, Canada): Structural characterization of the TDP43 / RGNEF heterooligomer in neuron inclusion bodies
32. **Barbara Tedesco** (Department of Pharmacological and Biomolecular Sciences, Department of excellence 2018-2022, University of Milan & Unit of Medical Genetics and Neurogenetics, Fondazione IRCCS Istituto Neurologico Carlo Besta, Milan, Italy): Mechanism of paroxetine-mediated autophagic induction in cell models of ALS/FTD
33. **Martina Tosi** (University of Eastern Piedmont UPO, Novara, Italy): A multi-omics approach to study monozygotic twins discordant for amyotrophic lateral sclerosis
34. **Lea Vidatic** (Ruder Boskovic Institute, Zagreb, Croatia): Genetic depletion of BACE1 alters neuroinflammation in a knock-in mouse model of Niemann-Pick type C disease
35. **Barbara Vuić** (Division of Molecular Medicine, Ruđer Bošković Institute, Zagreb, Croatia): TNF- α , IL-1 α and IL-10 - potential inflammatory biomarkers in Alzheimer's disease
36. **Lucija Vrbanić** (Biomolecular Structure and Function Group, Department of Biotechnology, Rijeka, Croatia) Computational Study of the Monoamine Oxidase B Mechanism-Based Irreversible Inhibitors
37. **Vera Župunski** (Faculty of Chemistry and Chemical Technology, University of Ljubljana, Slovenia): hnRNP in nuclear G4C2 foci and cytoplasmic stress granules of C9ORF72 ALS and FTD

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Symposium Logo & Visuals: Maro Pitarević

Program Editing & Design: Ivana Munitić & Marta Kolarić

Our special social events



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