

The Brain Conferences

RNA Mechanisms and Brain Disease

20 – 23 October 2021

[Rungstedgaard](#), Denmark

PRELIMINARY PROGRAMME

Wednesday, 20 October 2021	
From 14:15	Arrival and registration
16:00-16:10	Welcome address from the Conference Chairs
RNA Splicing	
<i>Session Moderator:</i> Eric Klann	
16:10-16:50	Peter Scheiffele , University of Basel, Switzerland RNA SpliceCodes for Synapse Specification and Plasticity
16:50-17:10	Elena Avale , Argentina National Research Council, Argentina Regulation of tau mis-splicing prevents cognitive and motor deficits in a preclinical model of tauopathy
17:10-17:30	Maria Florencia Acutain , IBCN, UBA-CONICET, Argentina Increased seizure susceptibility and changes in alternative splicing of GluN1 NMDAR subunit in a GluN2A KD model
17:30-18:00	Afternoon snack
18:00-18:20	Julie Qiaojin Lin , University of Cambridge, United Kingdom Cold shock protein RBM3-mediated splicing program promotes synaptic structural plasticity
18:20-19:00	Jernej Ule , Francis Crick Institute, United Kingdom Condensation-driven RNP assembly and function
19:00-21:30	Welcome Drink & Dinner

Thursday, 21 October 2021

Ribosome Structure and Dynamics

Session Moderator: Antonella Riccio

09:00-09:20	Matthew Kraushar , Max Planck Institute for Molecular Genetics, Germany Timed global reorganization of protein synthesis during neocortex neurogenesis at codon resolution
09:20-09:40	Deepak Srivastava , King's College London, United Kingdom Estradiol regulates local synthesis of synaptic proteins through sex specific mechanisms
09:40-10:00	Lukas Langer , Max Planck Institute of Biochemistry, Germany Structural insights into the regulation and specificity of the nonsense-mediated mRNA decay kinase complex SMG1-8-9
10:00-10:20	Pauline Duc , IGMM, France Endogenous mRNA-specific ribosome factories in human iPSC-derived motor neurons, visualized and quantified by single molecule imaging combined with a deep learning approach.
10:20-10:50	Group Picture and Coffee Break
10:50-11:30	Roland Beckman , Gene Center Munich, Germany Meta levels of translation: how mRNAs manipulate ribosomes and how ribosomes strike back
11:30-11:50	Claudia Fusco , Max Planck Institute for Brain Research, Germany Neuronal Ribosomes exhibit dynamic and context-dependent exchange of ribosomal proteins
11:50-12:10	Sophia Häfner , University of Copenhagen, Denmark Dynamic ribosomal RNA modification patterns control cell fate decisions during early development
12:10-12:40	Q&A with EJM Editor-in-Chief John Foxe
12:40-14:00	Lunch

Regulation of RNA and Protein Synthesis in Neurons

Session Moderator: Peter Scheiffele

14:00-14:40	Erin Schuman , Max Planck Institute for Brain Research, Germany Protein Synthesis at Neuronal Synapses
14:40-15:00	Marina Vidaki , University of Crete, Greece The role of developmental regulators of axonal local translation in adult axons
15:00-15:20	Marie-Laure Baudet , University of Trento, Italy ncRNAs: a non-canonical mode of intracellular transport through organelle hitchhiking
15:20-16:15	Poster Spotlights I * (28 presentations, 90 seconds each)

16:15-18:15	Poster Session I with Afternoon Snack
18:15-18:55	Steven Goldman , University of Rochester, USA; University of Copenhagen, Denmark Dysregulated transcriptional repression in glial disease confers competitive disadvantage: A basis for cell replacement as a therapeutic strategy
19:00-22:00	Dinner

Friday, 22 October 2021

Brain RNAs in Disease

Session Moderator: Jernej Ule

09:00-09:40	Antonella Riccio , University College London, United Kingdom RNA metabolism in developing neurons
09:40-10:00	Julio Perez , Max Planck Institute for Brain Research, Germany Using single cell subcellular transcriptomics to profile the molecular diversity of compartments within neuronal circuits
10:00-10:20	Nitzan Samra , Weizmann Institute of Science, Israel Multiple localization motifs in mTOR UTRs control local translation and neuronal functions
10:20-10:40	Angelika Harbauer , Max Planck Institute for Neurobiology, Germany Local translation supports mitochondrial health maintenance in neurons
10:40-11:00	Francesca van Tartwijk , University of Cambridge, United Kingdom The influence of FUS protein variants on axonal architecture and local protein synthesis
11:00-11:30	<i>Coffee Break</i>
11:30-12:10	Eric Klann , New York University, USA Cell type-specific translation in memory and brain disorders
12:10-16:00	Lunch in-house, then outing to Frederiksborg (Tour start 13:45)

Session Moderator: Giovanna Mallucci

16:10-17:05	Poster Spotlights II ** (32 presentations, 90 seconds each)
17:05-19:05	Poster Session II with Afternoon Snack
19:05-19:45	End of the day: Group discussion: science and the covid crisis.
19:45-21:30	Dinner

Saturday, 23 October 2021

RNAs in Development and Disease I

Session Moderator: Kent Duncan

09:00-09:40	Marc-David Ruepp , King's College London, United Kingdom Direct FUS – snRNA interactions provide a molecular link between ALS and SM
09:40-10:20	Giovanna Mallucci , University of Cambridge, United Kingdom Translating translation in neurodegeneration
10:20-10:50	Coffee Break
10:50-11:10	Jimena Baleriola , Achucarro Basque Center for Neuroscience, Spain Local translation in Alzheimer's disease
11:10-11:30	Valérie Hilgers , Max Planck Institute of Immunobiology and Epigenetics, Germany The lncRNA mimi is essential for neuronal granule formation and function
11:30-12:10	Kent Duncan , Hamburg University, present address: Evotec, SE, Hamburg, Germany RNA-binding proteins in brain development and neurodegenerative disease
12:10-14:00	Lunch

RNAs in Development and Disease II

Session Moderator: Erin Schuman

14:00-14:20	Eran Perlson , Tel Aviv University, Israel Axonal TDP-43 Drives NMJ Disruption through Inhibition of Local Protein Synthesis
14:20-15:00	Danny Nedialkova , Max Planck Institute of Biochemistry, Germany Dynamics of human tRNA repertoires as a function of cell identity
15:00-15:20	Juliette Godin , IGBMC, France Modifying tRNAs: a key process to regulate brain development?
15:20-16:00	Erik Storkebaum , Donders Institute for Brain, Cognition and Behaviour, Netherlands tRNA sequestration as a pathogenic mechanism underlying peripheral neuropathy
16:00-16:30	Coffee Break
16:30-17:10	Tying it all together: Group Discussion & Closing Remarks Co-chairs
19:00-22:00	Gala Dinner & Poster Awards

Sunday, 24 October 2021: Breakfast, departure