



2nd PRESTO COST Action CA21130 Meeting

P2X receptors a common route in different diseases: preclinical and clinical aspects

September 5, 2023

- 15:30 Registration
- 15:30-15:45 Welcome address: Luca Antonioli/Elena Adinolfi
- 15:45-16:30 Plenary lecture F. Di Virgilio
- 16:30-17:15 Plenary lecture G. Hasko
- 17:15-18:30 Aperitif

September 6, 2023

Session one chair Anna Lisa Giuliani

9:00-9:25	Francois Rassendren	Development of P2X receptor-based biosensor as tools for drug screening and monitoring extracellular ATP release
9:25-9:40	Claudia Verderio	Extracellular vesicles released upon P2X7-receptor activation from microglia: pathogenic players and diagnostic tools in neuroinflammatory diseases
9:40-9:55	Katrin Richter	P2X4 and P2X7 receptors in the expression and release of interleukin-1 β by mononuclear phagocytes
9:55-10:10	Anna Lisa Giuliani	The shed P2X7R (SP2X7R) is an index of adverse clinical outcome in COVID-19 patients
10:10-10:25	Veronika Grau	Inhibition of the P2RX7 by noncanonical nicotinic receptors of mononuclear phagocytes

10:30-11:00 Coffee break

Session two chair Enza Lacivita

11:00-11:25	Veronica Canovas	P2X7 receptor–induced NLRP3 inflammasome as a biomarker of prognosis in sepsis: Viva IVD approach
11:25-11:40	Cláudia Alexandra dos Santos Valente de Castro	NLRP3 inflammasome inhibition prevents A β - and pTau-driven neuroinflammation and neuronal death by pyroptosis in acute hippocampal slices
11:40-11:55	Jens Mikkelsen	Pharmacological characterization of the P2X7 receptor radioligand [3H]JNJ-64413739: Species differences and variation in a human population
11:55-12:10	Enza Lacivita	Towards a Positron Emission Tomography (PET) tracer for purinergic P2X7 receptor for molecular imaging of neuroinflammation
12:10-12:25	Maria Serbanescu	P2RX gene in PGC and ConLiGen studies of bipolar disorder and unipolar major depression

12:30-14:00 Lunch Break

Session three chair Carlos Matute

14:00-14:25	Shai Berlin	Rescuing Tri-Heteromeric NMDA Receptor Function: The potential of Pregnenolone-Sulfate in Loss-of-Function GRIN2B Mutations
14:25-14:40	Airi Rump	(Sex- dependent) expression levels of P2X4 and P2X7 in PBMC of multiple sclerosis patients
14:40-14:55	Carlos Matute	Translating the roles of P2X4 and P2X7 in demyelination and remyelination into multiple sclerosis therapies
14:55-15:10	Terezia Kiskova	Lichen metabolites as potential modulators of P2X receptors during depression-like states in laboratory animals
15:10-15:25	Pál Tod	The role of P2X7 receptor in mouse models of depression

15:30-16:00 Coffee break

Session four chair Gennady Yegutkin

16:00-16:15	Andjela Stekic	Brain-wide study of P2X7 expression in the progressive form of experimental autoimmune encephalomyelitis in the rat
16:15-16:30	Gennady Yegutkin	New insights into ATP metabolism and signaling in microglial cells
16:30-16:45	Valentina Vultaggio Poma	P2X7R: a key determinant of microparticles and mitochondria trafficking in mouse microglia
16:45-17:00	Chiara Bianca Maria Platania	Role of P2X7 receptor as intriguing pharmacological target in retinal neurodegenerations
17:00-17:15	Natalia Martínez-Gil	Cellular and animal models to study the role of P2X receptors in retinal degeneration

17:15-17:30 Elena Adinolfi Report on latest activities of the Action

17:30-18:45 Management Committee meeting

20:30 Social Dinner

September 7, 2023

Session five chair Silvana Morello

9:00-9:25	Gloria Lopez-Castejon	P2X7R activation by extracellular ATP rapidly regulates mitochondrial Pyruvate Dehydrogenase complex
9:25-9:40	Silvana Morello	Relevance of CD73 in melanoma as crucial checkpoint in the conversion of extracellular ATP into adenosine
9:40-9:55	Ning Wang	P2X4 and P2X7 receptors in prostate cancer bone metastasis
9:55-10:10	Mehmet Uğur	Possible Presence of P2X7R on Mammalian Cardiomyocytes
10:10-10:25	Sevin Guney	Talk to be confirmed

10:30-11:00 Coffee Break

Session six Chair Anna Solini

11:00-11:25	Lin Hua Jiang	ATP-induced purinergic calcium signalling and regulation of mesenchymal stem cells
11:25-11:40	Thomas Duret	Role of P2X4 receptor in extracellular vesicles (EVs) release from mammary cancer cells and consequences on aggressiveness
11:40-11:55	Todor Dudev	Macrocyclic cage molecules as delivery vehicles for drug substances - molecular modeling approach
11:55-12:10	Emel Baloglu	Hypoxia Aggravates Inhibition of Alveolar Epithelial Na-Transport by Lipopolysaccharide-Stimulation of Alveolar Macrophages
12:10-12:25	Chiara Rossi	Effect of high fat diet on brain areas involved in neurocognitive dysfunction: a multifaceted role of the P2X7 receptor (P2X7R)
12:25-12:40	Tobias Engel	Cell type-specific targeting of the P2X7 receptor for better seizure control in epilepsy

12:45-14:30 Lunch Break

Session seven chair Friedrich Koch-Nolte

14:30-14:45	Kris Sachsenmeier	Targeting Adenosine Signaling and Generation: What has and has not worked?
14:45-15:00	Ana Sebastião	Adenosine and seizures: going beyond A1 receptors
15:00-15:15	Hana Zemkova	The synthesis and P2X receptor pharmacology of endogenous steroids bearing an amide-based structural motif
15:15-15:30	Jasmina Trojchanec Pavlovska	P2X receptors: Early Stages of Clinical Development
15:30-15:45	Friedrich Koch-Nolte	Origin, distribution, and function of three frequent mutants of human P2X7
15:45-16:00	Murat Güney	Synthesis and biological evaluation of aminopyridine derivatives targeting P2X receptors

16:00 Concluding Remarks: Luca Antonioli/Elena Adinolfi