



Societat Catalana
de **BIOLOGIA**



XII SIMPOSI DE NEUROBIOLOGIA

Cap a la Medicina Traslacional



7 i 8 de Juny de 2022

Institut d'Estudis Catalans, Barcelona

Programa i resums de les comunicacions

Amb el patrocini de:





COMITÈ ORGANITZADOR

Carles A. Saura (Coordinador), Institut de Neurociències, Universitat Autònoma de Barcelona

Analía Bortolozzi, Institut d'Investigacions Biomèdiques de Barcelona (IIBB), CSIC-IDIBAPS

Francisco Ciruela, IDIBELL, Institut de Neurociències, Universitat de Barcelona

Joaquim Egea, Institut de Recerca Biomèdica de Lleida, Universitat de Lleida

Silvia Ginés, Institut de Neurociències, Universitat de Barcelona, IDIBAPS

Josep Saura, Institut de Neurociències, Universitat de Barcelona, IDIBAPS

SECRETARIA TÈCNICA

Maite Sánchez i Riera
Mariàngels Gallego i Ribó

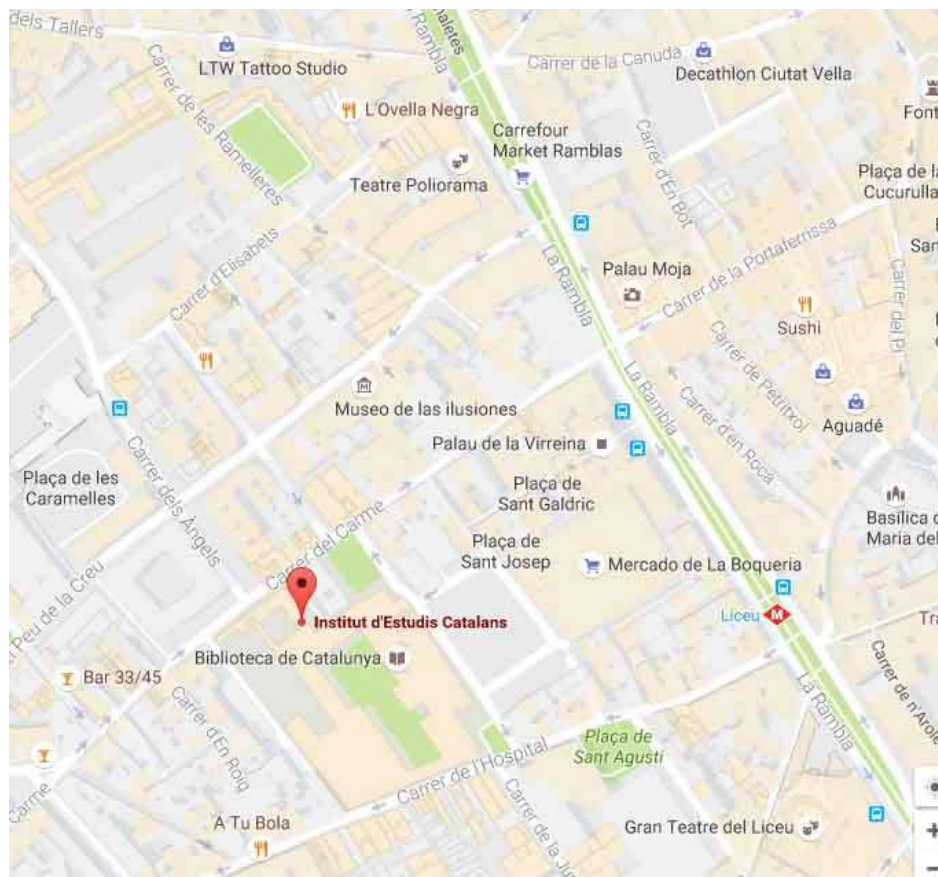
Societat Catalana de Biologia – Institut d'Estudis Catalans
C. del Carme 47
08001 Barcelona
Tel. +34 933 248 584
e-mail: scb@iec.cat
Web: scb.iec.cat



LOCALITZACIÓ



INSTITUT D'ESTUDIS CATALANS
Carrer del Carme, 47
Barcelona 08001





Dia 1: 7 Juny de 2022

Dia 2: 8 Juny de 2022

8.45 h	Registre i recollida de material		
9.15 h	Benvinguda i presentació del simposi Sala: Prat de la Riba	9.00 h	Registre
9.30-11.00h	Sessió 1A Oral Cèl.lules glials i inflamació Sala: Prat de la Riba Sessió 1B Oral Desenvolupament del sistema nerviós i malalties relacionades Sala: Pere i Joan Coromines	9.30-11.00 h	Sessió 3A Oral Circuits neuronals i plasticitat cerebral Sala: Prat de la Riba Sessió 3B Oral Biomarcadors, mecanismes i teràpies Sala: Pere i Joan Coromines
11.00-12.30 h	Cafè i sessió de Pòsters	11.00-12.30 h	Cafè i sessió de Pòsters
12.30-13.30 h	Conferència plenària 1 Michael R. Kreutz Leibniz-Institute for Neurobiology, Germany «Protein transport from NMDA receptors to the nucleus in health and disease» Sala: Prat de la Riba	12.30-13.30 h	Conferència plenària 3 Víctor Borrell Instituto de Neurociencias de Alicante «Neurological diseases and the evolution of cortical development» Sala: Prat de la Riba



PROGRAMA

13.30-15.00h	Dinar i sessió de pòsters	13.30-15.00 h	Dinar i sessió de pòsters
15.00-16.30 h	Sessió 2A Oral Malalties neurodegeneratives Sala: Prat de la Riba Sessió 2B Oral Receptors de neurotransmissors i neurofarmacologia Sala: Pere i Joan Coromines	15.00-16.45 h	Sessió 4A Oral Desordres mentals i comportament Sala: Prat de la Riba Sessió 4B Oral Sistemes sensorial i motor Sala: Prat de la Riba
16.30-17.30 h	Conferència plenària 2 Josep Dalmau IDIBAPS, Hospital Clínic de Barcelona «Autoimmune synaptic diseases» Sala: Prat de la Riba	16.45-17.45 h	Conferència plenària 4 5th Ramón Turró Award Conference Prof. Guadalupe Mengod CIBERNED, IIBB, CSIC-IDIBAPS «Una història personal dels receptors de serotonina a Barcelona» Sala: Prat de la Riba
		17.45-18.00 h	Premis Millors Pòsters Clausura
		18.00	FESTA DE CLAUSURA

Day 1. June 7th, 2022

Day 2. June 8th, 2022

8.45 h	Registration		
9.15 h	Welcome presentation	9.00 h	Registration



PROGRAMA

	Room: Prat de la Riba		
9.30-11.00 h	<p>Session 1A Oral</p> <p>Glial cells and inflammation</p> <p>Room: Prat de la Riba</p> <p>Session 1B Oral</p> <p>Neurodevelopment and related diseases</p> <p>Room: Pere i Joan Coromines</p>	9.30-11.00 h	<p>Session 3A Oral</p> <p>Neural circuits and brain plasticity</p> <p>Room: Prat de la Riba</p> <p>Session 3B Oral</p> <p>Disease biomarkers, mechanisms and therapies</p> <p>Room: Pere i Joan Coromines</p>
11.00-12.30 h	Coffee and Poster session	11.00-12.30 h	Coffee and Poster session
12.30-13.30 h	<p>Plenary lecture 1</p> <p>Michael R. Kreutz</p> <p>Leibniz-Institute for Neurobiology, Germany</p> <p>«Protein transport from NMDA receptors to the nucleus in health and disease »</p> <p>Room: Prat de la Riba</p>	12.30-13.30 h	<p>Plenary lecture 3</p> <p>Víctor Borrell</p> <p>Instituto de Neurociencias, Alicante</p> <p>«Neurological diseases and the evolution of cortical development»</p> <p>Room: Prat de la Riba</p>
13.30-15.00 h	Lunch and poster session	13.30-15.00 h	Lunch and poster session
15.00-16.30	<p>Session 2A Oral</p> <p>Neurodegenerative diseases</p> <p>Room: Prat de la Riba</p> <p>Session 2B Oral</p>	15.00-16.45 h	<p>Session 4A Oral</p> <p>Mental and behavioral disorders</p> <p>Room: Prat de la Riba</p> <p>Session 4B Oral</p>



PROGRAMA

	Neurotransmitter receptors and neuropharmacology Room: Pere i Joan Coromines		Sensory and motor systems Room: Pere i Joan Coromines
16.30-17.30 h	Plenary lecture 2 Josep Dalmau IDIBAPS, Hospital Clínic de Barcelona «Autoimmune synaptic diseases» Room: Prat de la Riba	16.45-17.45 h	Plenary lecture 4 5th Ramón Turró Award Conference Prof. Guadalupe Mengod CIBERNED, IIBB, CSIC-IDIBAPS «A personal story of serotonin receptors in Barcelona» Room: Prat de la Riba
		17.45-18.00 h	Best Posters Awards Closing remarks
		18.00 h	CLOSING PARTY

DAY 1: Tuesday, June 7th 2022

8.45-9.15	REGISTRATION
9.15	WELCOME PRESENTATION <i>Prat de la Riba Room</i> <u>Carles A. Saura</u>
9.30-11.00	ORAL SESSIONS Session 1A. GLIAL CELLS and INFLAMMATION <i>Prat de la Riba room</i> Chair: Coral Sanfeliu (Institut d'Investigacions Biomèdiques de Barcelona, CSIC)

	<p>O.1. Targeting microglia-neuron crosstalk in neurodegeneration. Puigdel·lívól M</p> <p>O.2. Characterization of microglia behavior (morphology and phagocytosis) in healthy and pathological conditions with image analysis tools. Petegnief V</p> <p>O.3. Dissecting the role of IFN type I signaling on microglial response in mitochondrial disease. González-Torres, M</p> <p>O.4. Lafora disease: neuroinflammation and autophagy in glycogen-induced neurodegeneration. Durán J</p> <p>O.5. Green tea and cocoa: Beneficial effects on age-associated regressive changes in the mouse neuromuscular System. Gras S</p> <p>O.6. Discovery of genes involved in the microglia-OPCs crosstalk during demyelination and remyelination. Enrich-Bengoa J</p> <p>Session 1B. DEVELOPMENT AND RELATED DISEASES <i>Pere i Joan Coromines Room</i></p> <p>Chair: Neus Pedraza (IRB Lleida, Universitat de Lleida)</p> <p>O.7. Specific contribution of Reelin expressed by Cajal-Retzius cells or GABAergic interneurons to cortical lamination. Mansó Y</p> <p>O.8. The role of the RNA-binding protein Staufén 2 during neurogenesis. Fernández Moya SM</p> <p>O.9. Artificial extracellular matrix scaffolds of mobile molecules enhance maturation of human stem cell-derived neurons. Ortega JA</p> <p>O.10. Indirect pathway lineage-specific alterations from early development in Huntington's disease zq175 embryos. Vila C</p> <p>O.11. Disrupted in schizophrenia 1 gene (DISC1) as a potential mediator of dermatoglyphic neurodevelopmental markers in schizophrenia. Sotero A</p> <p>O.12. Unravelling the endophenotypic characteristics of generated GRIN-related disorders Zebrafish models. Locubiche S</p>
11.00-12.30	☕ COFFEE BREAK and POSTERS
12.30-13.30	<p>PLENARY LECTURE <i>Prat de la Riba Room</i> Presented by: C. Saura</p> <p>«Protein transport from NMDA receptors to the nucleus in health and disease»</p>



PROGRAMA


	<u>Michael R. Kreutz</u> (Leibniz-Institute for Neurobiology, Magdeburg. Center Molecular Neurobiology, Hamburg, Germany)
13.30-15.00	🍽️ LUNCH
15.00-16.30	<p>ORAL SESSIONS</p> <p>Session 2A. NEURODEGENERATIVE DISEASES <i>Prat de la Riba room</i></p> <p>Chair: Eulàlia Martí (Institut de Neurociències, Universitat de Barcelona, IDIBAPS)</p> <p>O.13. Single-cell transcriptomics of iPSC-derived neurons reveals functional changes in Alzheimer's disease. Gutierrez A</p> <p>O.14. Differential effects of amyloid-β and tau neuropathology on cognitive and emotional symptoms in novel Alzheimer's disease transgenic mice. Capilla-López MD</p> <p>O.15. Is RTP801/REDD1 involved in tRNA processing? Campoy G</p> <p>O.16. An extracellular small RNA biosignature in plasma identifies premanifest Huntington's disease. Herrero Lorenzo M</p> <p>O.17. In vivo reduction of age-dependent neuromelanin accumulation mitigates features of Parkinson's disease. Compte J</p> <p>O.18. The Y172-related protein: a new actor in motoneuron physiopathology. Gatius A</p> <p>Session 2B. NEUROTRANSMITTER RECEPTORS and NEUROPHARMACOLOGY <i>Pere i Joan Coromines Room</i></p> <p>Chair: Alex Bayés (Institut de Recerca, Hospital Santa Creu i Sant Pau)</p>




PROGRAMA

	<p>O.19. Position matters: a differential modulation of AMPARs depending on the auxiliary subunit location into the receptor complex. Soto D</p> <p>O.20. Comprehensive delineation and precision medicine of GRIN-related neurodevelopmental disorders, a primary disturbance of the NMDA receptor. Altafaj X</p> <p>O.21. Remote local photoactivation of morphine produces analgesia without opioid-related adverse effects. López-Cano M</p> <p>O.22. Experimental and computational analysis of biased agonism on full-length and a C-terminally truncated adenosine A2A receptor. Reyes-Resina I</p> <p>O.23. Screening of adenosine A1 receptor ligands as heteromer-selective ligands for the adenosine A1-dopamine D1 receptor oligomer. Llopart N</p> <p>O.24. Nutrient-mediated regulation of GLUA1 surface levels. Rojas R</p>
16.30-17.30	<p>PLENARY LECTURE <i>Prat de la Riba Room</i> Presented by: S. Ginés</p> <p>«Autoimmune synaptic diseases»</p> <p><u>Josep Dalmau</u> (IDIBAPS, Hospital Clínic de Barcelona)</p>

DAY 2: Wednesday, June 8th 2022

9.30-11.00	<p>ORAL SESSIONS</p> <p>Session 3A. NEURAL CIRCUITS and BRAIN PLASTICITY <i>Prat de la Riba Room</i></p> <p>Chair: Juan Nacher (Universitat de València)</p> <p>O.25. Young neurons for old cortex. Nacher J</p> <p>O.26. A Systems biology approach to decipher the synaptic molecular alterations underpinning the intellectual disability caused by SYNGAP1. Bayés A</p> <p>O.27. Role of neuron-derived extracellular vesicles in synaptic plasticity. Solana-Balaguer J</p> <p>O.28. CRTC1 regulates neuronal activity-dependent gene programs mediating synaptic plasticity and neuronal excitability. Parra-Damas A</p> <p>O.29. Hypothalamic pregnenolone mediates recognition memory in the context of metabolic disorders. Ramírez S</p> <p>O.30. Neurophysiological characterization of a mouse model of CPT1C deficiency: from synapses to behavior. Iborra-Lázaro G</p> <p>Session 3B. DISEASE BIOMARKERS, MECHANISMS AND THERAPIES <i>Pere i Joan Coromines Room</i></p> <p>Chair: Izquierdo-Serra M (Universitat de Barcelona)</p> <p>O.31. Novel Cav2.1-modulators to treat hemiplegic migraine. Izquierdo-Serra M</p> <p>O.32. Glycogen synthase kinase-3 inhibition affects dopamine metabolism by decreasing tyrosine hydroxylase activity. Hamdon S</p> <p>O.33. GPR37 N-terminal domain processing defines autaptic receptor signalling. Argerich J</p> <p>O.34. Role of SAC1 in neuronal mitochondrial fission regulation. Molins A</p> <p>O.35. Treatment of mitochondrial disorders: metabolic intervention for the treatment of complex I deficiencies based on their molecular profiles. García-Adán B</p> <p>O.36. Human brain aging induces changes region-specific in lipid profile. Mota-Martorell N</p>
11.00-12.30	<p> COFFEE BREAK and POSTERS</p>

12.30-13.30	<p>PLENARY LECTURE <i>Prat de la Riba Room</i> Presented by J. Egea «Neurological diseases and the evolution of cortical development» <u>Víctor Borrell</u> (Instituto de Neurociencias de Alicante)</p>
13.30-15.00	<p> LUNCH and POSTERS</p>
15.00-16.45	<p>ORAL SESSION</p> <p>Session 4A. MENTAL AND BEHAVIORAL DISORDERS <i>Prat de la Riba Room</i></p> <p>Chair: Raül Andero (Institut de Neurociències, Universitat Autònoma de Barcelona)</p> <p>0.37. PACAP-PAC1R modulates fear extinction via the ventromedial hypothalamus. Andero R</p> <p>0.38. Estrogens modulate food addiction signatures in females. Casadó-Anguera V</p> <p>0.39. Progressive behavioural and proteomic changes associated with stress and potential non-invasive therapeutic strategies. Sancho A</p> <p>0.40. Validation of APP/PS1 mice as a preclinical model of psychosis in Alzheimer's disease. Gómez-Acero L</p> <p>0.41. miR-135 as a new target for antidepressant therapy: preclinical study. Pavia R</p> <p>0.42. A zebrafish model of neurotoxicity by binge-like methamphetamine exposure. Bedrossiantz J</p> <p>0.43. Disentangling the impact of inhibitory hippocampal neurons in engram formation in Down syndrome. Sabariago M</p> <p>Session 4B. SENSORY AND MOTOR SYSTEMS <i>Pere i Joan Coromines Room</i></p> <p>Chair: Xavier Gasull (Institut de Neurociències, Universitat de Barcelona)</p> <p>0.44. Loss of TRESK background potassium channel enhances acute and chronic itch. Callejo G</p> <p>0.45 The interaction between carbon monoxide and hydrogen sulfide during chronic osteoarthritis pain in mice. Batallé G</p> <p>0.46. Cpt1a silencing in AgRP neurons improves physical performance via skeletal muscle remodeling. Serra D</p>



PROGRAMA

	<p>O.47. Cannabidiol ameliorates mitochondrial disease via the activation of PPARγ. Puighermanal E</p> <p>O.48. Mitochondrial dysfunction in Rett Syndrome: studying a neurological disorder from synaptic metabolism perspective to find new treatment options. Musokhranova U</p> <p>O.49. PKA-dependent SNAP-25 and Syn-1 phosphorylation are differently regulated by the neuromuscular activity. Polishchuk A</p> <p>O.50. Characterization of the autophagy flux in complex neuropediatric movement disorders to define new personalized therapies. Serradell A</p>
16.45-17.45	<p>5th RAMON TURRÓ AWARD honoring the most cited article in Neurobiology performed in Catalunya published in 1994-95: "Distribution of the serotonin 5-HT₂ receptor family mRNAs: comparison between 5-HT_{2A} and 5-HT_{2C} receptors". Mol Brain Res 23, 163-178 (1994)</p> <p><i>Prat de la Riba Room</i></p> <p>Presented by J. Saura ACCEPTANCE LECTURE</p> <p>«A personal story of serotonin receptors in Barcelona»</p> <p><u>Prof. Guadalupe Mengod</u> (CIBERNED, IIBB, CSIC-IDIBAPS, Barcelona)</p>
17.45-18.00	<p>BEST POSTERS AWARDS to the 3 best posters presented at the XII Symposium</p> <p><i>Prat de la Riba room</i></p> <p>CLOSING SPEECH</p> <p><u>Carlos A. Saura</u></p>
18.00-20.00	CLOSING PARTY



PROGRAMA
