

Final Program

Sunday 28th of April 2019

01:30-02:00 PM – Registration

02:00-05:30 PM – Clinical Sessions (Chair.: Caroline Moreau)

- 02:00-03:30 PM - Peter Brown: Deep Brain Stimulation for Parkinson's disease: mechanisms and advances.

03:30-04:00 PM - Coffee Break

- 04:00-05:30 PM - David Devos: New therapeutic strategies in Parkinson's disease.

05:45-06:45 PM – EJN Publishing Workshop

07:00-08:00 PM – Opening Lecture: Hagai Bergman: Computational physiology of the basal ganglia, Parkinson's disease and DBS therapy.

08:15-11:30 PM – Welcome Party (Aquarium)

Monday 29th of April 2019

09:00-12:00 AM – Rethinking the loop (Chair.: Véronique Sgambato)

- 9:00-9:30 AM - Asier Aristieta-Arbelaiz: A functional dichotomous input organization in the external globus pallidus.

- 9:30-10:00 AM - Juan Mena-Segovia: Novel pathways linking the pedunculopontine nucleus and the basal ganglia.

- 10:00-10:30 AM - Genela Morris: Goal-relevant representation of the hippocampal cognitive map is shaped by local dopaminergic innervation.

10:30-11:00 AM - Coffee Break

- 11:00-11:30 AM - Nicolas A Morgenstern: Pyramidal tract corticostriatal inputs convey biphasic signals to medium spiny neurons through cholinergic interneurons.

- 11:30-12:00 AM - Ana Munoz-Manchado: Interneuron diversity in the dorsal striatum revealed by single-cell RNA-sequencing: the Pthlh.

12:00 AM-02:00 PM – Lunchtime and Poster Session 1: Topic 01 (Anatomical and Functional Connectivity), 06 (Motor Control) and 11 (Neurodegenerative processes).

02:00-04:00 PM – From boxes to modules (Chair.: Cristina Miguélez Palomo)

- 02:00-02:30 PM - Marcus Stephenson-Jones: Opposing contributions of GABAergic and glutamatergic ventral pallidal neurons to motivational behaviours.

- 02:30-03:00 PM - Jill Crittenden: Development and Degeneration of the Striosome-Dendron Bouquets.

- 03:00-03:30 PM - Funimo Fujiyama: Neuroanatomical analysis of the rodent basal ganglia network.

- 03:30-04:00 PM - Anna Tokarska: Characterization of a novel population of ChRNA2-expressing striatal interneuron.

04:00-04:30 PM – Coffee Break

04:30-07:00 PM – What's new about striatal plasticity and learning? (Chair.: Laurent Venance)

- **04:30-05:00 PM - David Lovinger:** Dopaminergic Mechanisms and Physiological Roles of Striatal Long-Term Depression.
- **05:00-05:30 PM - Nicole Calakos:** Novel role for the eIF2alpha protein synthesis regulatory pathway in striatal cholinergic interneurons.
- **05:30-06:00 PM - Raffaella Tonini:** Compartmentalized neuromodulatory signaling at striatal circuits: from synapse-specific regulatory control to behavior.
- **06:00-06:30 PM - Barbara Picconi:** Alpha-synuclein targets NMDA receptor subunit causing striatal synaptic dysfunction and visuo-spatial memory alteration.
- **06:30-07:00 PM - Nuné Martiros:** Inversely Active Striatal Projection Neurons and Interneurons Selectively Delimit Useful Behavioral Sequences.

Tuesday 30th of April 2019

09:30-12:00 AM – Interaction between the parallel circuits (Chair.: José Obeso)

- **09:30-10:00 AM - Bernard Balleine:** The thalamostriatal network mediates flexible encoding for goal-directed action.
- **10:00-10:30 AM - Shauna Parkes:** Neural bases of incentive learning and memory.

10:30-11:00 AM - Coffee Break

- **11:00-11:30 AM - Abbas Sadikot:** Creation of a novel 3-D atlas of the human basal ganglia based on a high resolution digitized data-set of cytoarchitecture.
- **11:30-12:00 AM - Atsushi Nambu:** Pathophysiology of L-dopa-induced dyskinesia.

12:00 AM-02:00 PM – Lunchtime and Poster Session 2: Topic 02 (Dopamine dependent plasticity), 03 (Learning), 08 (Idiopathic and Non Idiopathic Parkinson Disease).

02:00-04:00 PM – The Natural history of the Cortex-BG loop (Chair.: Arthur Leblois)

- **02:00-02:30 PM - Sten Grillner:** The dopamine system, the basal ganglia and "cortex"- a 500 million year perspective.
- **02:30-03:00 PM - Philippe Vernier:** A critical appraisal of theories about the evolution of basal ganglia in vertebrates.
- **03:00-03:30 PM - Suzanaerculano-Houzel:** Evolutionary scaling of numbers of neurons in cortical and subcortical structures: diversity, constraints and implications.
- **03:30-04:00 PM - Aude Retailliau:** Newts can learn but are not humdrum.

04:00-04:30 PM – Coffee Break

04:30-06:30 PM – Loop the loop: Dynamic properties of the Cortex-BG network (Chair.: Alexandre Eusebio)

- **04:30-05:00 PM - David Hansel:** Recurrent dynamics and competition in basal ganglia.
- **05:00-05:30 PM - Jonathan Rubin:** Reward-driven changes in striatal pathway competition shape evidence evaluation in decision-making.
- **05:30- 06:00 PM - Jyotika Bahuguna:** Exploring the role of striatal D1 and D2 medium spiny neurons in action selection using a virtual robotic framework.
- **06:00-06:30 PM – Petra Fischer:** Action-related modulation of cortico-basal ganglia gamma and beta coupling.

Wednesday 1st of May 2019

9:00-12:30 AM – Adaptive and maladaptive motor and cognitive control (Chair.: Jorge Guridi)

- 9:00-9:30 AM - **Veronica Alvarez**: Dopamine transmission in the striatum and the paradoxical effect of drugs of abuse.
- 9:30-10:00 AM - **David Robbe**: The dorsal striatum invigorates actions and decision making.
- 10:00-10:30 AM - **Christelle Baunez**: Subthalamic nucleus and maladaptive control of inhibition and its related pathologies.

10:30-11:00 AM - Coffee Break

- 11:00-11:30 AM - **Andres Lozano**: *To be Announced.*
- 11:30-12:00 AM - **Charlotte Piette & Sébastien Valverde**: Deep brain stimulation-guided optogenetic rescue of parkinsonian symptoms.
- 12:00-12:30 AM - **Ana Cruz**: Role of nigra projecting superior colliculus neurons in movement initiation.

12:30 AM-07:00 PM – Social Program

09:00-12:00 PM – Party Dinner (Biarritz Market)

Thursday 2nd of May 2019

9:00-10:00 AM – General Assembly, Election for IBAGS XV.

10:00-10:30 AM - Coffee break.

10:30-12:30 AM – What model for what question? (Chair.: Jose Lanciego)

- 10:30-11:00 AM - **Benjamin Dehay**: Primate-specific susceptibility to neurodegeneration and synucleinopathy induced by patient-derived α -synuclein extracts.
- 11:00-11:30 AM - **Iria Carballo-Carbajal**: Role of neuromelanin in Parkinson's disease.
- 11:30-12:00 AM - **Adriana Galvan**: The MPTP-treated monkey model as a model of parkinsonism: Advantages, shortcomings, and future directions.
- 12:00-12:30 AM - **Ayşe Ulusoy**: Modeling alpha-synuclein pathology in rodents using viral vectors.

12:30 AM-02:30 PM – Lunch time and Poster Session 3: Topic 05 (Dynamic properties), 07 (Cognitive Control), 09 (Dystonia), 10 (Other Movement Disorders), 12 (Addiction), 13 (Psychiatric disorders).

02:30-04:00 PM – The diversity of neurodegenerative processes (Chair.: Rosario Moratalla & Gilberto Fisone)

- 02:30-03:00 PM - **Joshua Goldberg**: Functionalizing the Braak hypothesis – a causal role for alpha-Synuclein in the dysautonomia of prodromal Parkinson's disease.
- 03:00-03:30 PM - **Ledia F. Hernandez**: Optodyskinesias: Shining a light into the striatum.
- 03:30-04:00 PM - **Maya Ketzef**: Sensory integration in the dopamine-depleted Striatum and Globus Pallidus.

04:00-05:00 PM – Transfer of presidency and End of the Meeting.