ISN International Society for Neurochemistry

4th ISN Latin American School of Advanced Neurochemistry

"BRAIN PATHOLOGIES AND NATURAL PRODUCTS"

October 16th to 28th, 2017.
Instituto de Investigaciones Biológicas Clemente Estable.
Montevideo, URUGUAY.

Program

Module I: Neurodegenerative Diseases

Monday 16 October

09:00-09:15 Welcome and Opening by Directors of the School. Federico Dajas and Cecilia Scorza (Uruguay).
09:15-10:00 Mental diseases and natural products: molecules and mechanisms. Federico Dajas (Uruguay).
10:00-11:00 Alzheimer's Disease: A Complex Multifactorial Disorder. Laura Morelli (Argentina).
11:00-11:30 Coffee break
11:30-12:30 Cognitive neuroscience and human neurodegeneration: Translational perspectives. Lucas Sedeño (Argentina).
12:30-14:30 Lunch break
14:30-19:00 Hands-on

Tuesday 17 October

09:00-10:00 Can Mitochondria-ER coupling, bioenergetics and intracellular Aβ be linked together in a common disease pathway with potential for a targeted therapy in Alzheimer? Laura Morelli (Argentina).
10:00-11:00 miRNAs and neuron connectivity: implications for Alzheimer Disease. Federico Dajas-Bailador (United Kingdom).
11:00-11:30 Coffee break
11:30-12:30 Progressive neurological dysfunction originating early in life. Mario Herrera-Marchitz (Chile).
12:30-14:30 Lunch break
14:30-19:00 Hands-on

Wednesday 18 October

09:00-10:00 Molecular imaging in the diagnosis of Alzheimer's disease and related disorders. Eduardo Savio (Uruguay).
10:00-11:00 A Role for astrocytes in ALS. Patricia Cassina (Uruguay).
11:00-11:30 Coffee break
11:30-12:30 Astrocyte role in CNS damage and protection. Silvia Olivera (Uruguay).
12:30-14:30 Lunch break
14:30-19:00 Hands-on

Thursday 19 October

09:00-10:00 Proteostasis impairment in neurodegenerative diseases. Claudio Hetz (Chile).
10:00-11:00 Pathophysiology of Alzheimer's Disease. Rob Williams (United Kingdom).
11:00-11:30 Coffee break
11:30-12:00 Pathophysiology of Parkinson's Disease. Giselle Prunell (Uruguay).
12:00-12:30 Citisinoids derivatives in Parkinson Disease. Andrés Abin Carriquiry (Uruguay).
12:30-14:30 Lunch break
14:30-19:00 Hands-on

Friday 20 October

09:00-10:00 Integration of signals at the axon growth cone: local protein translation and degradation. Federico Dajas-Bailador (United Kingdom).
10:00-11:00 Flavanol inhibition of amyloid beta and tau pathology: a dietary intervention for Dementia. Rob Williams (United Kingdom).
11:00-11:30 Coffee break
11:30-12:00 Neuronal protection by natural flavones against oxidative stress and its relationship with the molecular structure. Carolina Echeverry (Uruguay).
12:00-12:30 Modulation of cellular defenses as a putative mechanism involved in quercetin neuroprotection. Florencia Arredondo (Uruguay).
12:30-14:30 Lunch break
14:30-19:00 Hands-on

Saturday 21 October
Students work presentation

Sunday 22 October
Free

<u>Module II: Mood and substance abuse disorders</u>

Monday 23 October

09:00-10:00 Antidepressant molecules of natural origin. Federico Dajas (Uruguay).
10:00-11:00 Updates in depression neurobiology and treatment. Samia Joca (Brazil).
11:00-11:30 Coffee break
11:30-12:30 Antidepressant-like properties of natural products. Thereza de Lima (Brazil).
12:30-14:30 Lunch break
14:30-19:00 Hands-on

Tuesday 24 October

09:00-10:00 Antidepressant-like properties of natural products: mechanisms Thereza de Lima (Brazil)
10:00-11:00 Melanin concentrating hormone (MCH), role in sleep and depression. Pablo Torterolo (Uruguay).

11:00-11:30 Coffee break

11:30-12: Melanin-Concentrating Hormone in the Dorsal Raphe and Locus Coeruleus nuclei: role in depressive-like behaviors. Jessika Urbanavicius (Uruguay).

12:30-14:30 Lunch break

14:30-19:00 Hands-on

Wednesday 25 October

09:00-10:00 Targeting cannabinoids as new treatment options in depression: preclinical evidence. Samia Joca (Brazil).

10:00-11:00 Mechanisms underlying Prefrontal Maturation during Adolescence. Kuei Y. Tseng (USA).

11:00-11:30 Coffee break

11:30-12:30 Ibogaine and addiction. Ignacio Carrera (Uruguay).

12:30-14:30 Lunch break

14:30-19:00 Hands-on

Thursday 26 October

09:00-10:00 Timing is everything when Cannabinoids meet your Frontal Lobe. Kuei Y. Tseng (USA).

10:00-11:00 Cortico-striatal mechanism involved in amphetamine sensitization. José Fuentealba (Chile).

11:00-11:30 Coffee break

11:30-12:30 Cortical-subcortical interactions altered by psychostimulants: from neuro-enhancement to addiction. Verónica Bisagno (Argentina).

12:30-14:30 Lunch break

14:30-19:00 Hands-on and preparation of oral presentation

Friday 27 October

09:00-10:00 Therapeutic profile of nootropics. Veronica Bisagno (Argentina).

10:00-10:30 Adulterants in drugs of abuse. Cecilia Scorza (Uruguay).

10:30-11:00 Coffee break

11:00-11:30 Cocaine and caffeine interaction in motivation. José Pedro Prieto (Uruguay).

11:30-12:30 Cocaine and caffeine interaction in sleep behavior. Pablo Torterolo (Uruguay).

12:30-14:30 Lunch break

14:30-19:00 Oral presentations of hands-on activities.

20:00 Closing dinner

Saturday 28 October

Mini-symposium "Phytoplant Research": an update of clinical benefit and risks of medical Cannabis

09:00-10:00. Special lecture. Endocannabinoids system and potential pharmacological targets. Lumir Hanus (Israel).

10:00-11:00 Endocannabinoid-CB1R signaling control of Prefrontal Cortex plasticity. Kuei Y.Tseng (USA)

11:00-11:30 Coffee break
11:30-12:00 Opioids and cannabinoids interactions. Xavier Nadal (Spain)
12:00-12:30 Neurophatic pain and cannabinoids: mechanisms. Raquel Peyraube (Uruguay)

12:30-14:30 Time free

14:30-15:10 Immunological system and cannabinoids. Leticia Cuñetti (Uruguay)
15:15-15:45 Methods on cannabis extraction. Xavier Nadal (Spain)
15:45-16:00 Coffee break
16:00-16:40 Pharmacognostic aspects of cannabis. Carlos García (Uruguay).
16:40-17:10 Analysis of cannabinoids and cannabinoids simils in products and biological matrices and quality assurance of them. Eleuterio Umpiérrez (Uruguay)
17:30-18:30 Closing by Raquel Peyraube and Cecilia Scorza (Uruguay).

Hands-on laboratory modules (October 16th to 25th)

1) Experimental approaches to evaluate new therapies in Parkinson´s disease.
Prunell G/Costa G.

2) In vivo approaches to study the mechanism of action of drugs of abuse
Scorza C/Fuentealba J/Tseng

3) Characterization of primary cultures from 3xTg Alzheimer's disease model through the use of microfluidic devices. Arredondo F/Dajas-BailadorF

4) Neurodegeneration and neuroprotection in culture (glia-neuron). Echeverry C/ Olivera S.

5) Effect of cocaine on sleep-awake cycle. Benedetto L/ TorteroloP

Foreign Faculty

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