Translating Research and drug discovery for Neurodegeneration: Challenges for Latinamerica

Seedings Neuroscience Workshop LARC-IBRO 2020

Proposed date of the event: January 27-29, 2020.

Place: Instituto de Investigaciones Científicas y Servicios de Alta Tecnología. INDICASAT-AIP. Panamá City.

General description of the event

It is known that the incidence of neurodegenerative disorders has augmented significantly in the world population due to an increase in life expectancy. The prevention and treatment of neurodegenerative disorders represents a significant economic burden, mainly in countries with emerging economies. Based on this situation, the search for low-cost therapeutic strategies is important.

The main goal of the workshop will be to congregate basic and clinical scientists from Latinamerica to promote research concerning the understanding the basic mechanisms associated with neurodegenerative disorders and design of new therapeutic strategies focused to prevent and control them.

It is important to indicate that the workshop is designed to promote neuroscience research in the less active countries in the region. We are organizing the first “Seeding Neuroscience” workshop in Panamá. This country has important institutions such as the “Instituto de Investigaciones Científicas y Servicios de Alta Tecnología” (INDICASAT-AIP). Panamá´s scientific institutions are focused to generate knowledge in different areas of interest to the country, including scientific research in biomedicine and technology transfer. INDICASAT-AIP performs an important work in clinical trials and provides specialized services in different areas of chemistry and biology.

In spite of this situation, the neuroscientific groups from Panamá have a low participation in the different programs supported by IBRO-LARC. Indeed, Panamá has not a representation in FALAN and IBRO because the lack of a Neuroscience Society in that country.

The organization of the first “Seeding Neuroscience” workshop in INDICASAT-AIP will promote the interaction of scientific groups of the region with different institutions from Panamá and other countries from Centroamérica. To accomplish this purpose, undergraduate and graduate students, basic scientists, neuropsychologists, physicists, neurologists, neuropsychiatrists and neurosurgeons from Panamá and closer countries will be invited to participate.

According to the economical, geographical and academic situation of Panamá, IBRO-LARC committee considers that the promotion of Neuroscience in this country will favors Centroamerica.

Target Audience

Ph.D. and medical students, basic scientists, medical doctors, nurses, physicists, neurologists, neuropsychiatrists and neurosurgeons from Panamá and countries of Centroamérica and Southamerica.

PRELIMINAR PROGRAM

January 27, 2020

MECHANISMS AND BIOMARKERS IN NEURODEGENERATION

1. Novel molecular pathways in the etiology and prevention of neurological disorders. Jagannatha Rao. INDICASAT-AIP. Panamá.

2. Neurodegeneration, neurogenesis and neuroplasticity: an integrated analysis in experimental models. Norberto Garcia-Cairasco. Ribeirão Preto School of Medicine. University of São Paulo, Brazil.

3. Biomarkers in neurodegenerative disorders. Alcibiades Villarreal. INDICASAT-AIP. Panamá.

4. Molecular characterization of alpha-synuclein mediated mitochondrial dysfunction in Parkinson's disease. Velmarini Vásquez. INDICASAT-AIP. Panamá.

5. Brain oscillations in neurodegenerative disorders. Gustavo Murer. Buenos Aires University. Argentina.

6. Inflammatory biomarkers associated with depressive symptoms in elderly people. Gabrielle B. Britton. INDICASAT-AIP. Panamá.

7. The role of hypoxia in neurodegenerative disorders. Alberto Lazarowski. Buenos Aires University. Argentina.

8. Round table: Neuroscience in Latinamerica: are we doing well? Lilia Morales Chacon and Gabrielle B. Britton.

January 28, 2020

NOVEL STRATEGIES TO CONTROL NEURODEGENERATION

1. α7 Nicotinic Receptors as target to control neurodegeneration. Cecilia Bouzat. Institute of Biochemistry Research in Bahía Blanca, Argentina

2. Progenitors in the ependyma of the spinal cord: A potential resource for self-repair after injury. Raúl Russo. Instituto Clemente Estable. Uruguay.

3. Transcranial magnetic stimulation and neuro-EPO as clinical therapeutic strategies in neurodegenerative disorders. Lilia Morales-Chacón. International Center for Neurological Restauration. Cuba.

4. Novel curcumin molecules as prevention of neurodegeneration. Johant Lakey Beitia. INDICASAT-AIP. Panamá.

5. Cannabinoids as novel therapy for neurodegenerative disorders. Luisa Rocha. Center for Research and Advanced Studies. México.

6. Microbioma and neurodegeneration. José Ortiz. Puerto Rico University. Puerto Rico.

7. Identification of new molecules with potential effect on Alzheimer's disease pathology. Patricia Llanes Fernández, INDICASAT-AIP. Panamá.

8. The role of pharmacokinetic interactions in the treatment of neurodegenerative disorders. Marta Vázquez. Fac. de Química. Universidad de la República Uruguay.

9. Roundtable Discussion: Can Neuroscience in Latinamerica go ahead? Noberto García-Cairasco and Raúl Russo.

January 29, 2020

EXPERIMENTAL APPROACHES TO IDENTIFY NEW NEUROPROTECTIVE THERAPIES

1. Experimental models of neurodegeneration. Norberto Garcia-Cairasco. Ribeirão Preto School of Medicine. University of São Paulo, Brazil.

3. Human brain as an experimental model. Luisa Rocha. Center for Research and Advanced Studies. México.

4. Zebra fish as a cheap approach to identify new drugs. José Ortiz. Puerto Rico University. Puerto Rico.

5. Experimental strategies to induce and avoid pharmacoresistance in neurodegenerative diseases. Alberto Lazarowski. Buenos Aires University. Argentina.

6. Experimental approaches to predict the brain penetration of new drugs. Marta Vázquez. Fac. de Química. Universidad de la República Uruguay.

7. Electrophysiology as a tool to identify new drugs. Cecilia Bouzat. Institute of Biochemistry Research in Bahía Blanca, Argentina.

8. Electrophysiology and biomarkers in neurodegenerative disorders. Gustavo Murer. Buenos Aires University. Argentina.

9. Stem cells as a potential resource for self-repair in neurodegeneration. Raúl Russo. Instituto Clemente Estable. Uruguay.

10. Closing remarks. Jagannatha Rao. Director. INDICASAT-AIP. Panamá. Cecilia Bouzat. President IBRO-LARC.