

2nd International Conference on
**NEUROSCIENCE AND
NEUROLOGICAL DISORDERS**
April 11-12, 2019 | Barcelona, Spain

NEUROSCIENCE CONGRESS 2019



SCIENTIFIC TRACKS & ABSTRACTS
DAY 1

DAY 1 SESSIONS

APRIL 11, 2019

Neurology | Neuropsychiatry | Psychiatry | Neurological Disorders Neuroscience | Bipolar Disorders
Cognitive Neuroscience | Alzheimers Disease | Depression | Psychotherapy

SESSION CHAIR

Arthur Ernst van Woerkom
South Birmingham & Solihull Mental Health NHS Foundation Trust, UK

SESSION CO-CHAIR

Ann Marie Leonard-Zabel
Curry College, USA

SESSION INTRODUCTION

- Title:** Exploring the basis of neuroregeneration: Identification of key molecules with proteomics and functional assays in the mammalian spinal cord
Miranda Mladinic, University of Rijeka, Croatia
- Title:** Ablative functional neurosurgery in the treatment of movement disorders : CIREN experience, Cuba
Nelson Quintanal Cordero, International Center of Neurological Restoration, Cuba
- Title:** Adaptive sports medicine: Uniqueness and challenges of providing specialty care
Kenneth Lee, Clement J Zablocki Veterans Affairs Medical Center, USA
- Title:** Towards augmented cognition
Alice Marascu, Nokia Bell Labs, Ireland
- Title:** Immediate healing for personality development
Hadi Eltonsi, Cairo University Medical College, Egypt

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Miranda Mladinic, J Neurol Neurorehabil Res 2019, Volume 4

EXPLORING THE BASIS OF NEUROREGENERATION: IDENTIFICATION OF KEY MOLECULES WITH PROTEOMICS AND FUNCTIONAL ASSAYS IN THE MAMMALIAN SPINAL CORD

Miranda Mladinic
University of Rijeka, Croatia

One of the major challenges of modern biology concerns the inability of the adult mammalian central nervous system (CNS) to regenerate and repair itself after injury. Unlike the situation in adult mammals, lower vertebrates, such as fish and amphibians, and embryonal higher vertebrates can regenerate significant portion of their CNS. It is poorly understood why this potential is lost with evolution and development and becomes very limited in adult mammals. A preferred model to study and reveal the cellular and molecular basis of this loss is neonatal opossum (*Monodelphis domestica*). Opossums are marsupials that are born at very immature stage with unique possibility to successfully regenerate spinal cord after injury in the first two weeks of their life and thus offer an exceptional opportunity to study neuronal regeneration. We are analyzing the proteoms of the spinal tissue of the opossums of different age, looking for the molecules associated with regenerative axon growth and testing their functional role in neuronal regeneration using in vitro intact spinal cord cultures and advanced imaging. In parallel, we are developing opossum primary spinal cell cultures made from the animals of different age, to reveal dissimilarities in their cellular content (giving focus on stem cells) and metabolic characteristics related to regeneration. Our results are giving new insights into neuronal regeneration in mammals, but also provide candidate targets for future novel therapeutic interventions for neurodegenerative disorders..

BIOGRAPHY

Miranda Mladinic has completed her PhD in 1998 at SISSA, Trieste, Italy. She is the professor at the department of biotechnology of the University of Rijeka, Croatia and the head of the unit for molecular and systemic biomedicine. She is also a member of the council of the senate to the University of Rijeka and to the council for scientific research of the University of Rijeka. She is the member of the evaluation committee of the Croatian Science Foundation in the field of natural sciences – biology. She has over 30 publications that have been cited over 580 times, and her publication H-index is 17 and has been serving as reviewer of reputed journals and International scientific foundations.

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Note:

Nelson Quintanal Cordero, J Neurol Neurorehabil Res 2019, Volume 4

ABLATIVE FUNCTIONAL NEUROSURGERY IN THE TREATMENT OF MOVEMENT DISORDERS: CIREN EXPERIENCE, CUBA

Nelson Quintanal Cordero

International Center of Neurological Restoration, Cuba

Introduction: Effectiveness and safety of ablative surgery for movement disorders depend, among others, on the location of lesions in the nuclear regions of interest and the volume of these lesions.

Material and Methods: We describe the methods of radiofrequency ablation that are developed in the CIREN in the approach to the subthalamic nucleus (STN), internal globus pallidus (GPI) and ventralis intermedialis nucleus (VIM) of the thalamus, performed on patients diagnosed with Parkinson's disease (PD), dystonia and essential tremor. These methods efficacy and safety were evaluated by clinical findings and by checking post-operative lesions (location, shape and dimensions) by magnetic resonance images (MRI).

Results: A total of 1103 ablative surgeries were performed in 1015 patients over a twenty-year period, divided into 425 subthalamotomies, 549 pallidotomies and 129 VIM thalamotomies. The anatomical location method and electrophysiological confirmation were sufficient to perform the procedure. The subthalamic nucleus lesion was effective in controlling the cardinal manifestations of PD with predominantly contralateral and axial effects. The pallidotomy in PD was effective mainly for the control of rigidity and dyskinesias. Bilateral Pallidotomy in a single surgical time is effective in patients with generalized dystonia. VIM thalamotomy has good effect in the treatment of essential tremor and in PD with predominance of tremor.

BIOGRAPHY

Nelson Quintanal Cordero is a head and board member of neurosurgery at International Center of Neurological Restoration. (CIREN) Havana, Cuba.

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Kenneth Lee, J Neurol Neurorehabil Res 2019, Volume 4

ADAPTIVE SPORTS MEDICINE: UNIQUENESS AND CHALLENGES OF PROVIDING SPECIALTY CARE

Kenneth Lee

Clement J Zablocki Veterans Affairs Medical Center, USA

At one point in our lives we all played catch, kicked a ball, ran a race, or played in an organized sport. Sports are ingrained in our society and are part of being a human. Adaptive sports medicine includes the practice of disability medicine with sports medicine and incorporates the knowledge of the specific sports with their pattern of injuries and specialized equipment. In general, able body sports medicine works with healthy individuals who succumb to a temporary illness and/or acute injury. The athletes in this field tend to be in great physical condition with minimal underlying medical problems. Adaptive sports medicine athletes have significant underlying medical or traumatic conditions, and complications related to the individual disability. There are also unique injuries related to the adaptive and assistive equipment used in to compete.

All adaptive sports athletes have baseline medical status that defines their physical disability such as SCI, amputation, poly-trauma, and traumatic brain injury. Each condition is unique and requires understanding by the individual athlete as well the healthcare provider. For example, an athlete with a spinal cord injury would require special attention to the skin care below the level of injury, especially in tight fitting adaptive equipment and require periodic pressure releases in endurance sports events. Understanding SCI and the potential for skin complications along with equipment needs can prevent devastating pressure injuries leading to potentially prolonged recovery.

An example of the need for the understanding of unique complications of an underlying disability is autonomic dysreflexia. Autonomic dysreflexia (AD) is a medical emergency that occurs in patients with SCI above T6. It causes an imbalanced reflex sympathetic discharge, and if unrecognized, or left untreated, can lead to potentially life-threatening hypertension, seizures, pulmonary edema, myocardial infarction, cerebral hemorrhage and death.

Athletes involved in adaptive sports have conditions that can put them at higher risk than able body athletes. Many athletes with SCI have osteoporosis in their domain.

BIOGRAPHY

Kenneth Lee is manager and the Milwaukee Eagles are one of the nation's premier squads. Every year their Eagles host a home wheelchair lacrosse tournament at the Ozaukee Ice Center. Milwaukee Eagles is led by Kenneth Lee and Marquette University's lacrosse team.

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Alice Marascu, J Neurol Neurorehabil Res 2019, Volume 4

TOWARDS AUGMENTED COGNITION

Alice Marascu

Nokia Bell Labs, Ireland

Technological advances are contributing like never before to the human innate desire for cognitive expansion. Understanding how we interact and communicate with our surroundings is crucial for pushing the boundaries of content assimilation. Neuroscience latest results open the door to understanding the human communication at more complex levels and more medical results are coming today to support a body holistic communication system. By modelling and monitoring hidden communication indicators, we aim to understand the cognitive best achievable performances. The large collections of big data and information available today at just 1-click away could become thus more cognitively “digestible”.

Human cognition can be mainly expanded at three levels: flow of data to which the human body is exposed, internal cognitive model that is processing the data and retaining the gems, and, finally, the visible behaviors that are materializing the internal decisions. In this work, we will primarily focus on the first two levels and explore new achievable cognition insights by mixing neuroscience knowledge with computational models from the computer science domain.

BIOGRAPHY

Alice Marascu is a senior research scientist at Nokia Bell Labs, Ireland. Previously, she was a research scientist at IBM Research-Ireland, and held post-doctoral research roles at University of Trento-Italy, and INRIA Rennes Bretagne Atlantique-France. Her research spans natural language processing, large scale streaming data processing, large scale complex pattern recognition and mining, time series analysis. She has given multiple talks to industrial and academic audiences and published results in main conferences in the areas of big data, data mining, machine learning, query answering (VLDB, PVLDB, SIGMOD, Big Data Conference, etc.).

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Hadi Eltonsi, J Neurol Neurorehabil Res 2019, Volume 4

IMMEDIATE HEALING FOR PERSONALITY DEVELOPMENT

Hadi Eltonsi

Cairo University Medical College, Egypt

Statement of the problem: Clients receiving psychotherapy require several sessions even if with drugs and use of will power over time.

Purpose of the treatment: Achieving immediate non medicinal effortless painless healing without complications for personality development, relief of neurotic disease, psychosomatic symptoms and diseases, treating emotional obesity and smoking.

Method: After joint analysis with client and definition of psychological and physical goals of treatment, the healer as a trained behavioral, cognitive and logo psychotherapist arrives with client to a new corrected understanding of the case and roots of conflicts in childhood, taking around 2 hours, then in less than an hour performs nonverbal interpersonal hypnosis with transfer of energy and telepathy to client till deep sleep when he implants the required personality, ideas, emotions, motives and attitudes into the subconscious embodying the required state. The subconscious and conscious mind will have same agreed upon analysis and targets for immediate results in that session of 3 hours.

Results: The healer got patent in Egypt 2016 for his discovery of the immediate healing for personality development and for mentioned purposes. Up till now treating more than 700 cases aging between 12 and 80 years with relief of more than 80% of cases either totally or mostly.

Conclusion: Immediate non medicinal revolutionary life transforming healing for a wide spectrum of cases achieving higher grades of maturity, insight, harmony and efficiency saving client time, effort, interests and complications. Also used to maturate community leaders to be a trouble shooter model efficient leaders with team spirit.

BIOGRAPHY

Hadi Eltonsi is a medical graduate trained in group psychotherapy, hypnosis, silva mind control, NLP, Reiki Master, pranic healing, life coach, mantra yoga meditation among others courses for psychic powers, family constellation through his medical study and practice then as a diplomat and ambassador. He performed many tv, radio interviews and seminars apart of two short american films about his work or inspired by his skills which were shown in International film festivals, the second got an award in Venice 2017.

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SCIENTIFIC TRACKS & ABSTRACTS
DAY 2

DAY 2 SESSIONS

APRIL 12, 2019

Neuropathic Pain | Cognitive Neuroscience | Autism | Neurology | Neuro Immunology |
Traumatic Brain Injury | Neurodiagnostic studies | Multiple Sclerosis | Mental Health | Neurosurgery
| Neuroprotective Measures

SESSION CHAIR

Ann Marie Leonard-Zabel
Curry College, USA

SESSION CO-CHAIR

Bob Gant
Institute for Clinical Neurosciences, USA

SESSION INTRODUCTION

Title: Strategy of petrous meningioma surgery

Mohamed Ahmed Fahmy Zeid and **Ahmed Gaber Marei**, Brain & Skull Egyptian Society, Brain & Skull Egyptian Society, Alexandria University, Egypt

Title: Investigating the anti-inflammatory effects of a novel nootropic in glial cells exposed to anti-retroviral therapy

Helena Isla Magrané, Brighton University, UK

Mohamed Ahmed Fahmy Zeid et al., J Neurol Neurorehabil Res 2019, Volume 4

STRATEGY OF PETROUS MENINGIOMAS SURGERY

Mohamed Ahmed Fahmy Zeid and **Ahmed Gaber Marei**

Brain & Skull Egyptian Society, Alexandria University, Egypt

Objective: Petrous meningioma is benign lesions; their total surgical excision is the only method for complete cure. However their excisions are confronted by deep location and critical anatomical relation and exact site of origin from the petrous bone. This study was conducted to plan a surgical strategy based on the site of attachment of the lesion in the petrous bone.

Methods: Twenty five (25) were studied pre-operatively by neuro-imaging especially magnetic resonance imaging (MRI). To classify the types of petrous meningioma all cases were studied operatively for the extent of the tumor removal while clinical status and the follow up and histopathological verification were evaluated.

Results: Radical surgical removal was achieved in eighteen patients (72%), subtotal removal in four cases (16%) and incomplete removal in another three cases (12%).

Conclusion: Complete surgical excision of the petrous meningioma can be planned pre-operatively depending on the exact site of the attachment to the petrous bone. There were four different zones on the surface of petrous bone on which different type of surgical approach can be used to achieve a better result as regards the safety of the patient and the extend of the excions of the petrous meningioma's.

BIOGRAPHY

Mohamed Ahmed Fahmy Zeid is a founder and chair of Brain & Skull Egyptian Society, full professor of neurosurgery, Alexandria University, Egypt. He is a specialized professor of neurosurgical department.

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Helena Isla Magrane, J Neurol Neurorehabil Res 2019, Volume 4

INVESTIGATING THE ANTI-INFLAMMATORY EFFECTS OF A NOVEL NOOTROPIC IN GLIAL CELLS EXPOSED TO ANTI-RETROVIRAL THERAPY

Helena Isla Magrane
Brighton University, UK

Neuroinflammation is a process that can be observed not only in neurodegenerative diseases but also as a result of infection alterations in the brain. The infection agent, or the drugs used to treat the pathology, can lead to neuroinflammation. The neuroinflammatory effects of different drugs used to treat HIV have not been investigated yet. The aim of this project is to test the inflammatory effects of anti retroviral drugs used to treat HIV patients in brain cell cultures. Once the cause of the inflammation is known, the decision on which drug to use, for each particular case, will be easier to make. In the case of patients with neuroinflammation, some anti-retroviral drugs – expected to be less inflammatory – can be used. Furthermore, a nootropic drug was tested. This could play an important role in helping to cope with the inflammation. To test the inflammatory effects of the drugs, we used microglia and astrocyte in vitro models. Glial cells and astrocytes can secrete or respond with a variety of cytokines. IL-1 β , IL-6 and TNF- α , are cytokines used as markers for inflammation. In this study, the ability of mixed glial cells and astrocytes to secrete IL-1 β , IL-6 and TNF- α in response to three anti-retroviral drugs (maraviroc, efavirenz and rilpivirine) has been examined. Loss of memory is one of the consequences in later stages in HIV. Sunifiram, a novel nootropic drug, is believed to help with inflammation and to improve cognition. The pro inflammatory or anti-inflammatory effect of Sunifiram on astrocyte cultures, combined with the anti-inflammatory drug treatments, was tested.

BIOGRAPHY

Helena Isla Magrane is a Biotechnologist who performed a master research bioscience in Brighton University (UK). Focused her master thesis on neuroscience area. Gained a lot of experience on research, investigated the anti-inflammatory effects of a novel nootropic drug in glial cells exposed to anti-retroviral therapy, carried out the project in collaboration with Imperial College of London. potential problem solver and very passionate on her work as she love science.

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